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TOWN PLANNING

Environmental Assessment Report

Ellis Beach Surf Life Saving Club

Proposed Ministerial Infrastructure Designation

Captain Cook Highway, Ellis Beach
Unallocated State Land adjacent (north-west) to Lot 22 on SP147762;
and across the road (north-east) to Lot 13 on NR5512

Prepared for
Ellis Beach Surf Life Saving Club Inc

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Infrastructure Entity Details

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

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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.

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Abbreviations

ACHA	*Aboriginal Cultural Heritage Act 2003*
ASTP	ADAMS + SPARKES Town Planning
The Council	Cairns Regional Council
DES	Department of Environment and Science
DSDILGP	Department of State Development, Infrastructure, Local Government and Planning
DTMR	Department of Transport and Main Roads
EAR	Environmental Assessment Report
EP Act	Environmental Protection Act 1994 (Qld)
FNQRP/Regional Plan	Far North Queensland Regional Plan
Guidelines	Cultural Heritage Duty of Care Guidelines
MGR	Minister Guidelines and Rules 2020 (Version 2)
MID	Ministerial Infrastructure Designation
Minister	Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning and Minister assisting the Premier on Olympic and Paralympic Games Infrastructure
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environment Significance
MSES	Matters of State environmental significance
PA	*Planning Act 2016*
Planning Scheme	*CairnsPlan 2016 v3.1*
RL	Regional Landscape and Rural Production Area
Regulations	*Planning Regulation 2017*
SARA	State Assessment and Referral Agency
SLSC	Surf Life Saving Club

1. Executive Summary

1. This Environmental Assessment report has been prepared by ADAMS + SPARKS Town Planning on behalf of Ellis Beach Surf Life Saving Club Inc and seeks approval from the Minister for State Development, Infrastructure, Local Government and Planning 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. The proposed Infrastructure Designation seeks to relocate the Ellis Beach Surf Life Saving Club into a new two (2) storey building on the eastern beach side of the Captain Cook Highway. The current location of the surf club on the opposite side of the highway creates a safety issue associated with crossing the highway to get to the beach. The calls for the club to be moved started in 2011, when nipper Asha Stevens was hit by a car while crossing the road with her friend Sophie Alcorn.

3. The total build cost of the project is expected to be approximately $3.0 - $3.5 million with the project having funds allocated under the Federal Government's Community Development Fund. It is noted that the project is time sensitive, given the timing of this funding.

4. 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 qualities of the area, surrounding properties, infrastructure networks, ecological features, or cultural heritage and native title considerations.

5. Overall, the proposed relocation of the Ellis Beach Surf Club will offer a community benefit by enhancing the safety of not only the club members, but the public, with direct accessibility to the patrolled beach. 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

6. 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 along Captain Cook Highway, Ellis Beach situated on unallocated State Land adjacent (north-west) to Lot 22 on SP147762 and across the road (north-east) to Lot 13 on NR5512.

7. This Environmental Assessment Report (hereafter; 'EAR') has been prepared for and on behalf of the Infrastructure Entity, Ellis Beach Surf Life Saving Club Inc. In accordance with Chapter 2, Part 5 of the *Planning Act 2016*, Ellis Beach Surf Life Saving Club Inc seeks approval from the Minister for State Development, Infrastructure, Local Government and Planning (hereafter; the 'Minister') to designate the site for the following types of infrastructure. The proposed infrastructure is the relocation of the Ellis Beach Surf Life Saving Club.

- Item 3: community and cultural facilities, including community centres, galleries, libraries and meeting halls.
- Item 17: sporting facilities

8. 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	Architectural Plans prepared by Clarke and Prince Architects
Appendix 2	Civil Engineering Plans prepared by Burchills
Appendix 3	Stormwater Management Plan prepared by Burchills
Appendix 4	Coastal Hazard Assessment prepared by Burchills
Appendix 5	Ecological Assessment prepared by Burchills
Appendix 6	Traffic Impact Statement prepared by Burchills
Appendix 7	Bushfire Hazard Assessment prepared by Eldon Bottcher Architect
Appendix 8	On-Site Wastewater Management Report prepared by Phase 3 Consulting
Appendix 9	Proposed Permanent Road Closure and Offer of Term Lease
Appendix 10	Surf Club Water Licence
Appendix 11	DSDILGP Pre-Lodgement Advice
Appendix 12	Cultural Heritage Register Search
Appendix 13	Endorsement Correspondence
Appendix 14	Surrounding Properties Consultation Map
Appendix 15	Council Preliminary Engagement Comments
Appendix 16	Hon Craig Crawford Preliminary Engagement Response
Appendix 17	Project Phases Relating to Funding
Appendix 18	Cultural Heritage Assessment Report

2.1 Legislative Context

9. 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.*

10. 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.

11. 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'*.

12. 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

13. 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)

14. The DSDILGP provided Pre-Lodgement Written Advice (**Appendix 11**) on 07 June 2023.

15. 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 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
Traffic Impact Assessment	Traffic Impact Statement – Burchills Engineering Solutions – **Appendix 6**
Bushfire Management Plan	Bushfire Hazard Assessment – Eldon Bottcher Architect – **Appendix 7**
Coastal Hazard Assessment	Coastal Hazard Assessment – Burchills Engineering Solutions – **Appendix 4**
Ecological Assessment	Ecological Assessment Report – Burchills Engineering Solutions – **Appendix 5**

Reporting Recommended	Provided Reporting
Stormwater Management Plan	Stormwater Management Plan – Burchills Engineering Solutions – **Appendix 3**
Acoustic Report, depending on hours of operation	Environmental Assessment Report – Refer to **Section 4.9** of this report – Acoustic Report not required.
Landscape Plans	Architectural Plans – Clarke and Prince Architects – **Appendix 1** – The landscape intent is shown on these plans.
Preliminary Engineering Services Report / Plans, including On-Site Wastewater Report	Civil Engineering Plans – Burchills Engineering Solutions – **Appendix 2**; and On-site Wastewater Management Report – Phase 3 Consulting - **Appendix 8**
Architectural Plans	Architectural Plans – Clarke and Prince Architects – **Appendix 1**

16. In addition to the above, the DSDILGP Written Advice requested the following details be provided with this MID proposal:

- Details of the lease arrangement for the land, as well as address any requirements / conditions of the lease arrangement including TMR road widening requirements and council servicing requirements. This is addressed in **Section 3.4.1** of this report**.**
- Details of timing for the delivery of the project phases as it relates to any funding. Refer to **Section 4.2** of this report and **Appendix 17**.

2.2.2 Preliminary Stakeholder Engagement

17. In accordance with DSDILPG Written Advice dated 07 June 2023, the following pre-engagement activities were required to be undertaken prior to requesting the Endorsement to Proceed:

i. Consultation with Cairns Regional Council;
ii. Consultation with the relevant Native Title / traditional owners for the area (Djabugay);
iii. Emails sent to Local, State and Federal elected members;
iv. Emails sent to identified adjoining landowners and affected residents; and,
v. Emails sent to surrounding business operators.

18. A list of identified landowners and affected residents was provided by Cairns Regional Council on 05 July 2023. Advice received from Alan Houston of DSDILGP on 12 July 2023 confirmed 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 independently sourced by ASTP.

19. No correspondence was received from stakeholders during the 10-business day preliminary stakeholder engagement phase. However, a response was received from Cairns Regional Council with preliminary comments (see **Appendix 15**) outside of the 10-business day period. A response addressing Council's comments has been provided in **Section 7.2.1** of this report.

20. A Preliminary engagement response was also received by the Office of the Hon Craig Crawford MP (see **Appendix 16**) providing complete support for the project.

21. Everick Heritage also undertook consultation with the Djabugay Nation Native Title Claim (DNNTC) party. Please refer to the Cultural Heritage Assessment Report (**Appendix 18**) for further details.

2.2.3 Pre-Lodgement Endorsement

22. After the completion of Initial Advice and Preliminary Stakeholder Engagement processes, a request was lodged with Queensland Treasury for an Endorsement to Proceed (02 August 2023). On 07 August 2023, Queensland Treasury confirmed the proposed project has been endorsed for the Infrastructure Designation assessment process (**Appendix 13**) and advised that the proponent may submit this MID Proposal.

3. Site Details

3.1 Site Overview

23. 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.

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

Table 2 Site Summary Table

Address	Captain Cook Highway, Ellis Beach
Property description	Unallocated State Land adjacent (north-west) to Lot 22 on SP147762 and across the road (north-east) to Lot 13 on NR5512
Site area	Proposed lot/lease area ~1,660m^2
Frontage	~63m to Captain Cook Highway
Local Government Authority	Cairns Regional Council
Zone	Adjacent the Tourist Accommodation Zone
Landowner	The State of Queensland
Tenure	Unallocated State Land – Road Reserve
Leases	The proponent will obtain tenure by way of a 'Permanent Road Closure and Term Lease' administered through the Department of Resources. Refer Offer of Term Lease in **Appendix 9**.
Easements/Encumbrances	Nil/Unknown
Notable site features	• The subject site is contained within the Ellis Beach Esplanade Park. • Site is currently Unallocated State Land / Road Reserve. • Site located on north-eastern side of Captain Cook Highway. • Cascade Creek is located to the Southeast of the site. • Ellis Beach Bungalows (Lot 22 SP147762 and Lot 2 AP8332) is located to the southeast of the site on opposite side of Cascade Creek. • The opposing side of the Captain Cook Highway contains commercial development (restaurants) and the existing Ellis Beach surf club. • To the north-west, the site is adjoined by access and parking infrastructure while to the north-east, the site adjoins the Ellis Beach foreshore.

	• Vehicular access to the site is provided by access and parking infrastructure which connects to the Captain Cook Highway. • The development footprint falls within a mostly cleared and existing developed area (carpark and driveway).

25. The subject site is depicted in **Figure 1** below.



Figure 1 Subject Site (Source QLD Globe 2023)

3.2 Regional Context

26. The site is located in Ellis Beach and is situated on a 5km stretch of coast between Cairns (to the south) and Port Douglas (to the north). As demonstrated in **Figure 2** below, Cairns is located approximately 30km south of the site and Port Douglas is approximately 33km north. Ellis Beach is best known for its beach foreshore, surf club, caravan park and adjacent bar and grill restaurant.

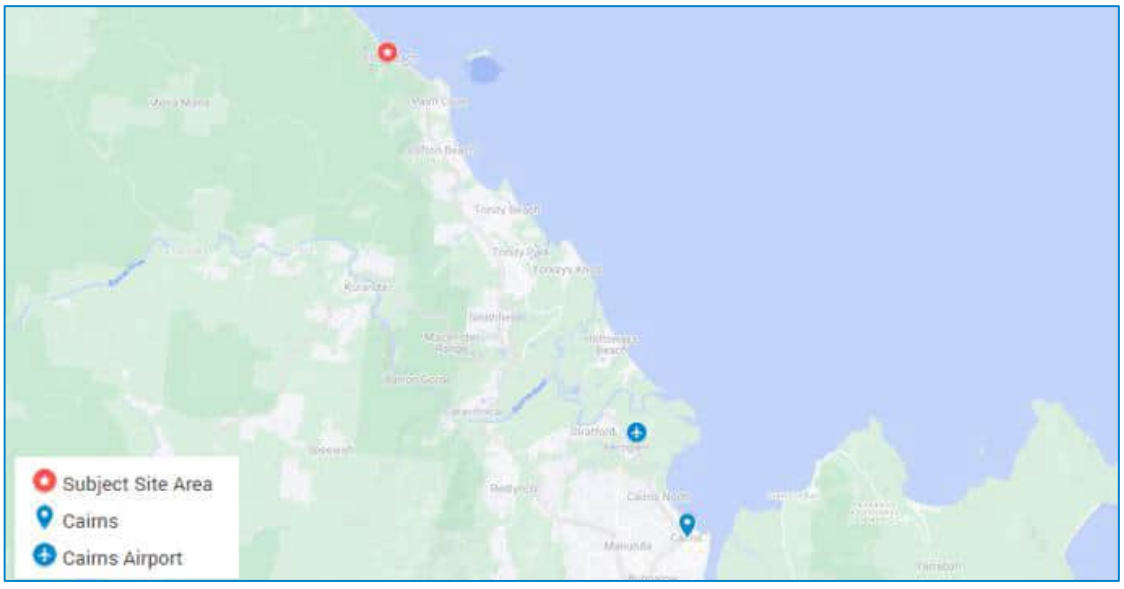


Figure 2 Regional context (Source: Google Map Data 2023)

3.3 Local Context

27. The subject site forms part of the Ellis Beach Esplanade Park, with the existing surf club located approximately 200m north on the opposite side of Captain Cook Highway (see **Figure 3** below). The site is located approximately 3.7km north-west of the township of Palm Cove, with the surrounding area including beach, national park, various tourist accommodation facilities, the Cairns Yacht Club, Outrigger Canoe Club, and bar and grill restaurant.



Figure 3 Local Site Context (Source: QLD Globe 2023)

3.4 Site Description

3.4.1 Site Tenure

28. As briefly mentioned above, the site is currently unallocated State land being road reserve adjacent the Captain Cook Highway. It is proposed that the area of road reserve to be occupied by the new Surf Club building will be permanently closed and a new lease area be established to accommodate the development.

29. The Department of Resources has provided a permanent road closure and term lease offer under the *Land Act 1994* to accommodate the proposal (refer **Appendix 9**). The lease offer refers to the proposed lease area as Lot A on TSV17014, confirms the lease area as ~1,660m² (to be determined by surveyor), and identifies that the proposed lease term is for 30 years.

30. The lease offer is subject to the terms, conditions and offer requirements set out in **Appendix 9**. Each of these requirements is identified in **Table 3** below along with the current due date to satisfy these requirements and a comment on how the requirements are intended to be met. It is noted that time extensions to satisfy the offer requirements can be made in writing to the Department of Resources.

Table 3 Lease Offer Requirements

Outstanding Offer Requirements	Due by	Comment
Evidence that EBSLC has development approval, including any development permits involving operational work associated with the project.	3 Nov 2023	This MID Proposal seeks the relevant approval / infrastructure designation to satisfy this requirement.

Outstanding Offer Requirements	Due by	Comment
Evidence from CRC and DTMR that their requirements have been met for continued use and / or replacement of existing public infrastructure controlled by CRC and DTMR that is affected by the proposed development within Lot A on TSV17014 and the DTMR road corridor, including infrastructure for vehicles, bicycles, and pedestrian access.	3 Nov 2023	Further consultation with CRC and DTMR is required through the MID process (refer **Section 7.3**). Their requirements for continued use and / or replacement of existing public infrastructure can be included in the MID Decision Notice.
Preparation of a survey plan over the area shown as Lot A on TSV17014. TMR also have survey requirements listed below: • The whole area of Lot A on TSV17014 is to the east of TMR's Road widening boundary as shown on TMR layout plan; and, • That the draft survey plan be forwarded to TMR for written approval to confirm setback requirements prior to registration of survey plan.	3 Nov 2023	A survey plan will be prepared once the MID is provided. As shown on page 5 of **Appendix 9**, the whole area of Lot A on TSV17014 is to the east of TMR's Road widening boundary. The location of Lot A on TSV17014 has been confirmed by a surveyor with the development designed in accordance with this location. Once prepared, the draft survey plan can be forwarded to TMR for written approval after the MID is approved.

3.4.2 Existing Uses / Site Condition

31. The subject site is located within the Ellis Beach Esplanade Park situated between the Ellis Beach foreshore and the Captain Cook Highway. The site grades east to the coastline. The highest point within the site is located on the western boundary at a height RL 4.82m AHD. The eastern side of the site is typically at levels below RL 3.00m AHD, with the lowest point located in the north-east corner at RL 2.38m AHD. The development footprint falls within a mostly cleared and existing developed area (carpark and driveway). To the north-west, the proposed lease area is adjoined by parking infrastructure and driveway access, which connects directly to the Captain Cook Highway. The context of the site is demonstrated in **Figures 4** and **5** below.



Figure 4 Looking towards lease area from north (Source: Burchills Ecological Assessment - Appendix 5)



Figure 5 Southern edge of lease area looking north (Source: Phase 3 Wastewater Report - Appendix 8)

3.4.3 Relevant Approval History

32. Given the site's current tenure as road reserve, there are no historic or existing approvals over the subject site.

3.4.4 Existing Infrastructure

33. 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 or is within the works footprint. The results are identified in the **Table 4** below. Commentary in relation to existing transport infrastructure available to the site is also provided in **Table 4**.

Table 4 Existing Infrastructure

Water	The site does not have access to Council's reticulated town water supply. The existing Ellis Beach Surf Club does however have a Water Licence to take watercourse water from Spring Creek (refer **Appendix 10**).
Sewer	The site does not have access to Council's reticulated town sewer network. There is a private sewer rising main (SRM) from the Bar and Grill located on the opposite side of the Highway that discharges through the subject site. It is required to realign and retain the SRM through the subject site as shown in the Engineering Plans (**Appendix 2**).
Stormwater	Site stormwater runoff is not currently managed by any formal stormwater infrastructure. Stormwater runoff for the site discharges at the north-eastern corner and eastern boundary as sheet flow into the Coral Sea.
Telecommunications	The site is not connected to any existing telecommunications infrastructure. Please refer to page 10 of **Appendix 9** where Telstra confirms that there are no Telstra assets within the area of the proposed works.
Electricity	Overhead electrical infrastructure is located along the property frontage on the opposing side of Captain Cook Highway. As shown on the Engineering Plans (**Appendix 2**), underground electrical conduits run through the development footprint to existing public infrastructure such as BBQ shelters and park lighting.
Transport – Road Network	The subject site is adjacent to Captain Cook Highway, which provides a connection to Cairns and Palm Cove to the south and Port Douglas / Mossman to the north. The speed limit adjacent to the subject site is 60km/h and the carriageway is two-lane, two-way with an approximate width of 8m including the shoulders.
Transport – Public and Active Transport	There are two (2) bus stops in close proximity to the subject site, however, the public bus network no longer services this area. There is an existing pedestrian median crossing on Captain Cook Highway adjacent to site's access connecting to the existing restaurant. There are no formalised footpaths on either side of Captain Cook Highway.
Transport – Existing Access and Parking	Existing access and parking currently consists of a left-in, left out access onto Captain Cook Highway with informal parking areas.

4. Designation Proposal

4.1 Intent of Designation

34. 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*

35. 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.'*

36. As discussed below in **Section 4.2**, and in accordance with **Appendix 17**, the infrastructure will satisfy government funding commitments for the proposed infrastructure. As discussed in **Section 4.2**, the efficient and timely delivery of the proposed infrastructure is sought in response to a significant safety concern in relation to nippers and other club members crossing the Highway to get to the beach.

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

4.2 Project History

38. Ellis Beach Surf Life Saving Club has been proudly patrolling Ellis Beach and successfully competing at local, State and national carnivals for over 60 years. At the time the club was originally established Captain Cook Highway was much less busy. The Department of Main Roads figures show almost 6,500 cars now drive past the surf club every day.

39. The current location of the surf club (Lot 20 on NR7199) creates a safety issue associated with crossing the highway to get to the beach. It is proposed to relocate the Ellis Beach Surf Life Saving Club into a new building on the eastern side of the highway to remove this safety concern. The calls for the club to be moved started in 2011, when nipper Asha Stevens was hit by a car while crossing the road with her friend Sophie Alcorn. Asha escaped serious injury.

40. Works for the project are intended to commence in the months following the receipt of Infrastructure Designation by the Minister, with the project targeted for completion by the end of 2024. The total build cost of the project is expected to be approximately $3.0 - $3.5 million with the project having funds allocated under the Federal Government's Community Development Fund. It is noted that the project is time sensitive, given the timing of funding. As requested by DSDILGP Pre-lodgement Advice, the details of timing for the delivery of the project phases as it relates to funding is provided in **Appendix 17**.

41. Overall, the proposed relocation of the Ellis Beach Surf Club will offer a community benefit by enhancing the safety of not only the club members, but the public, with direct accessibility to the patrolled beach. Whilst also proposing to improve the visual amenity and functionality of the club, so as to create an enhanced experience for the community.

4.3 Proposal Overview

42. It is proposed to relocate the Ellis Beach Surf Life Saving Club into a new two (2) storey building on the eastern side of the Captain Cook Highway. The current location of the surf club creates a safety issue associated with crossing the highway to get to the beach.

43. The new surf club building will include ground floor facilities associated with surf life saving activities as well as an upper floor ancillary caretaker's residence. Please refer to the proposed Building Design Plans prepared by Clarke and Prince Architects in **Appendix 1**. In brief, the proposal comprises of the following layout:

- Ground floor – Function /Training Space, Canteen, Amenities, Patrol room and first aid room, Change rooms and Equipment and vehicle store (surf boats, IRBs, paddle boards, Ski's etc);
- Upper floor – 105m^2 self-contained caretaker's accommodation;
- Provision of 14 car parks, including six (6) within the lease area and the formalisation of eight (8) spaces adjacent the driveway access;
- Other hardstand areas for set-down and vehicle manoeuvring;
- Provision of two (2) vehicle crossovers, including retention of the existing driveway and one (1) new exit only crossover closer to the clubhouse;
- Demolition and reconstruction of the existing driveway access to current standards;
- Relocation of existing public infrastructure ending shelters, as required;
- On-site effluent disposal area and water treatment and storage facilities; and,
- Landscape areas that surround the proposed surf club.

44. The development will comprise a member only surf club for a maximum of 200 members per day. The proposed operating hour are 7:00am to 4:00pm 7 days a week.

4.4 Architectural Design and Built Form

45. The proposed Architectural Design and built form are depicted in the Architectural Plans enclosed as **Appendix 1**.

46. The proposal has a maximum height of ~8.2m, a total ground floor area of 456m² and a total first floor area of 105m². The proposed built form is setback a varying distance of ~21.8 – 28.6m meters from the pavement of the Highway to the south-west. A setback of ~46.2m is achieved between the proposed surf club building and the closest cabin within the adjacent holiday park to the south-east. No other setbacks are relevant given the subject site adjoins foreshore areas to the north-west and Ellis Beach to the north-east.

47. As demonstrated by the 3D perspective in **Appendix 1** and **Figures 6** and **7** below, the development represents a high-quality Architectural design. Ample articulation is achieved through the provision of wide eaves, open deck and balcony spaces, and steps and recesses in the building profile. The proposal includes large windows, bifold doors, deck and balcony areas that are favourably orientated to the north-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.



Figure 6 Perspective Image Looking from Northeast



Figure 7 Perspective Image Looking from Northwest

4.5 Landscaping

48. The proposed landscape intent is illustrated by the Architectural Plans in **Appendix 1**. A wastewater irrigation area is proposed in the northwestern corner of the lease area, and accordance with the On-site Wastewater Management Report (**Appendix 8**), this area will be densely planted with suitable tropical, water tolerant species. An additional landscape node is proposed in the southeastern corner of the lease area as well as feature landscaped planters as part of the entry ramp design in the northeastern corner of the lease area. In addition to the landscaping proposed, the lease area will be surrounded by existing mature vegetation including riparian vegetation adjacent to Cascade Creek, coastal vegetation adjacent to Ellis Beach, buffering vegetation adjacent to the highway and vegetation within the Ellis Beach Esplanade Park. Any minor clearing of trees required for the proposed works will be mitigated through a replacement planting program using a compensatory planting ratio of 1:3 (refer **Appendix 5**). The proposed development will be established in a landscaped and highly vegetated environment to provide ample shade and amenity.

4.6 Transport, Access and Parking

49. Based on the assessment contained within the Traffic Impact Statement (**Appendix 6**), it has been determined to adopt an intermediate access solution until Transport and Main Roads (TMR) undertake upgrades of Captain Cook Highway adjacent to the site and can provide a signalised intersection arrangement. We understand that ultimately, the Captain Cook Highway will be upgraded on the site frontage and there is a desire from TMR to avoid major intersection upgrades so the department can

plan, design and construct any future upgrades. It is proposed to formalise the existing left-in, left-out driveway intersection with the Highway by extending the existing concrete median to physically restrict right turns into and out of the site and improve line-marking and signage. A second right turn exit only is also proposed for north-bound traffic, clear of the left-in / left out arrangement. Swept path diagrams have been prepared for the proposed intersection arrangements and demonstrates appropriate design vehicle access and egress for the site (refer **Appendix 2**). We understand that TMR were contacted in relation to the future Captain Cook Highway upgrades, however, there were no details or information available for the section of the highway adjacent to the site.

50. The proposed development with provide a formalised car parking arrangement including provision of 14 car parking spaces, including six (6) within the lease area and the formalisation of eight (8) spaces adjacent the driveway access. This car parking provision is found to be sufficient to service the proposed surf club by the Traffic Impact Statement in **Appendix 6**.

51. The new Ellis Beach SLSC is proposed to be located to the north-eastern side of Captain Cook Highway in order to minimise conflicts between pedestrians travelling from the existing clubhouse on the western side of the highway to Ellis Beach (i.e. Nippers and SLSC members) and vehicular movements on the road. A protected pedestrian median crossing on Captain Cook Highway adjacent to the site access is provided to facilitate safe pedestrian access across the highway. Limiting the Surf Club's primary vehicle access to a left-in / left out arrangement will minimise conflicts with the pedestrian crossing.

52. The enclosed Traffic Impact Statement (**Appendix 6**) finds that the development will provide non-worsening of traffic vehicle movements as the SLSC has a membership cap and will be a relocation of the existing clubhouse. Further, the proposed improvements in traffic conditions to and from the site due to the formalisation of the intersection arrangements, will help improve existing traffic conditions in the immediate area.

4.7 Servicing and Refuse Management

53. Bins will be stored in the equipment and vehicle store and will be manoeuvred to the new vehicle turnaround area at the northern end of the lease area for collection. Service vehicle manoeuvring is demonstrated within the Engineering Plans in **Appendix 2**.

4.8 Water Supply and Effluent Management

54. The site will be supplied water via on-site roof water collection. Please refer to the rainwater collection calculations provided on drawing 1531-SD A115 of the Architectural Plans (**Appendix 1**). It is estimated that 3,280L of water per day or 1,077,480L of water per year will be required to support the development. Based on an annual rainfall rate of ~2,000L per m² it is estimated that 538m² of roof area connected to rainwater tanks would be required to support the development. The proposed surf club has a roof area of ~750m². As indicated on the Architectural Plans 415,000L of water storage volume is proposed underneath the building to supply the development. Roof water collection may be supplemented during the dry season by water drawn from an existing local supply in Spring Creek. Please refer to the Surf Club's existing water license in **Appendix 10**.

55. It is proposed to substantially reduce the wastewater flows by installing waterless composting toilets throughout the development and utilising external beach showers instead of providing internal showering. Handbasins with time-controlled push button taps will be the only wastewater producing fixtures within the club, with the exception of the caretakers' residence, which will utilise a composting toilet with standard plumbing fixtures. The development is expected to generate approximately 760

litres of greywater per day which will be treated and irrigated on-site. All wastewater produced by the canteen will be directed to a holding tank for regular pump-out by a licensed liquid waste contractor. A minimum irrigation area of 152m^2 is therefore required based on the anticipated hydraulic loading and identified soil conditions. The proposed land application area is shown on the Architectural Plans in **Appendix 1**. Please refer to the On-Site Wastewater Management Report in **Appendix 8** for further detailed analysis of the proposals wastewater requirements.

4.9 Amenity and Nuisance

56. The DSDILGP Pre-lodgement advice states that an Acoustic Report in support of the application may be required depending on the proposed hours of operation. The proposed operating hours are 7:00am to 4:00pm 7 days a week. This is outside the sensitive time periods of the early morning, evening and nighttime periods. The only sensitive land use in proximity to the site is the caravan park to the southeast. A setback of ~46.2m is achieved between the proposed surf club building and the closest cabin within the holiday park. This setback contains riparian vegetation on both sides of Cascade Creek. The proposed development will not result in any unreasonable amenity or nuisance impacts on surrounding sensitive land uses. An Acoustic Report is therefore not considered necessary and has not been provided as part of this EAR.

5. Compliance with Legislative Requirements (Local and State)

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

- *Planning Act 2016;*
- *State Planning Policy;*
- *Far North Queensland Regional Plan; and,*
- *CairnsPlan 2016*

5.1 Planning Act 2016

58. **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.

59. **Table 5** below provides comment on the development's compliance with the relevant criteria contained within **Section 36** of the *Planning Act 2016*.

Table 5 Compliance with Section 36 of the Planning Act

Criteria	Response
(1) 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.*	As discussed in **Section 4.2** and in accordance with **Appendix 17**, the infrastructure will satisfy government funding commitments for the proposed infrastructure. As discussed in **Section 4.2**, the efficient and timely delivery of the proposed infrastructure is sought in response to a significant safety concern in relation to nippers and other club members crossing the Highway from the existing clubhouse to get to the beach.
(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.	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. Consultation will be undertaken in accordance with the requirements listed within Schedule 4, Part 7 of the Ministers Guidelines and Rules. Refer to **Section 7.3** 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.

Criteria	Response
(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.
(7) To make or amend a designation, a designator must have regard to— *(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* *(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.*	a) **T**his 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)

60. 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.

61. **Table 6** below details all State Interest Policies contained within Part E of the SPP and identifies the policies relevant to this EAR.

Table 6 State Interest Policies

Sate Interest Policy	Applicability
Liveable Communities and Housing	
Housing Supply and Diversity	Not Applicable
Liveable Communities	Not Applicable
Economic Growth	
Agriculture	Not Applicable
Development and Construction	Not Applicable
Mining and Extractive Resources	Not Applicable
Tourism	Not Applicable
Environment and Heritage	
Biodiversity	Addressed in **Section 5.2.1.1** below
Coastal Environment	Addressed in **Section5.2.1.2** below

Sate Interest Policy	Applicability
Cultural Heritage	Not Applicable
Water Quality (Water Resource Catchments)	Addressed in **Section 5.2.1.3** below
Safety Resilience and Hazards	
Emissions and Hazardous Activities	Not Applicable
Natural Hazards, Risk and Resilience (Erosion Prone Area, Medium Storm Tide Inundation Area)	Addressed in **Section 5.2.1.4** below
Infrastructure	
Energy and Water Supply	Not Applicable
Infrastructure Integration	Not Applicable
Transport Infrastructure	Addressed in **Section 5.2.1.5** below
Strategic Airports and Aviation Facilities	Not Applicable
Strategic Port	Not Applicable

62. Compliance with the relevant State Interest Policies identified in **Table 6** above is discussed in the following sections of this report.

63. 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 Ellis Beach Area.

5.2.1.1 State Interest Policy – Biodiversity

64. 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.

65. The Ecological Assessment Report prepared by Burchills (**Appendix 5**), 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 *CairnsPlan 2016*.

66. As indicated within the Ecological Assessment Report, the footprint for the proposed development falls within a mostly cleared and developed area at the southern end of the site. The Ecological Assessment Report finds the following in relation to MNES, MSES and MLES:

- *The proposed development is unlikely to result in a significant impact on MNES in accordance with the MNES Significant Impact Guidelines 1.1 (Commonwealth of Australia 2013). Impacts have been avoided and minimised to the greatest extent possible.*
- *The relevant MSES to consider are High Ecological Value (HEV) Wetland mapping, Marine Plants, Threatened Wildlife and Regulated Vegetation:*
  - *The (HEV) wetland mapping is indicated along the entire far north Qld coastline. The proposal avoids and minimises impacts on HEV wetland values.*
  - *No marine plants (as defined under the Qld Fisheries Act) were detected within the study area and the works are not expected to impact on marine plants or fish habitat.*
  - *No conservation significant threatened flora or fauna species were detected within the study area and the works are not expected to impact on conservation significant threatened flora or fauna species.*

- *Vegetation in the project area is highly modified and inclusive of hardstand areas (road and cul-de-sac head) with existing vegetation dominated by Mango trees and not representative of the mapped preclearing regional ecosystem (RE 7.3.44). The footprint for the proposed development falls within a mostly cleared area. The design has been located to avoid clearing of native vegetation in a 10m setback to Cascade Creek. Clearing of trees required for the proposed works will be mitigated through a replacement planting program using a compensatory planting ratio of at least 1:3.*

- *The site is partly located within a waterway trigger area identified in the CairnsPlan (MLES) associated with Cascade Creek. The proposed development has been designed to avoid clearing of native vegetation in a 10m setback to Cascade Ck. It is not expected that further development in this area will compromise the existing riparian values of Cascade Creek.*

67. Given the above, the proposal is seen to comply with the Biodiversity State Interest Policy.

5.2.1.2 State Interest Policy – Coastal Environment

68. 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.

69. A Coastal Hazard Assessment has been prepared by Burchills Engineers and is enclosed as **Appendix 4**. The report provides an assessment of the potential coastal hazards impacts upon the future Surf Life Saving Club as a result of erosion, storm tide inundation and the site's location within a Coastal Management District. The assessment determines that the works can be undertaken without:

- Negatively impacting upon coastal processes;
- 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.

70. The Coastal Assessment (**Appendix 4**) concludes that the proposed development won't have negative impacts upon the local marine environment or coastal processes. The assessment (**Appendix 4**) demonstrates that the proposed development can comply with all relevant statutory requirements in relation to coastal hazards and the coastal environment.

71. Given the above, the proposal is seen to comply with the Coastal Environment State Interest Policy.

5.2.1.3 State Interest Policy – Water Quality

72. Queensland is home to a diverse range of waters. The SPP aims to ensure any development be conducted in a way that protects environmental values and maintains or enhances water quality.

73. A Stormwater Management Plan prepared by Burchills Engineers is enclosed as **Appendix 3**. The report provides details in relation to the proposed stormwater management strategy for the development. An upstream swale is proposed to capture and divert stormwater flows away from the development footprint. Flows will be discharged to an infiltration/surcharge pit to mitigate concentrated flows and return flows back to sheet flow at the site boundary.

74. As the lawful points of discharge are directly to the beach and the Coral Sea, it is not considered necessary to include on-site detention. 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. The Stormwater Management Plan demonstrates a compliant stormwater strategy for the proposed development.

75. Given the above, the proposal is seen to comply with the Water Quality State Interest Policy.

5.2.1.4 State Interest Policy – Natural Hazards, Risk and Resilience

76. 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.

77. The SPP also identifies the site as being within a bushfire potential impact buffer. Please refer to the Bushfire Mitigation Report in **Appendix 7**. The report recommends that a minimum 10,000L firefighting water supply be provided, a pedestrian fire trail be established around the site and low flammable landscape species be utilised. The proposed development is able to comply with these requirements, and it is requested that any future decision of this MID be appropriately conditioned.

78. In addition to the above, the site is also mapped within an erosion prone area and partially located within a medium storm tide inundation area. This is addressed in **Section 5.2.1.2** above and the Coastal Hazard Assessment in **Appendix 4** which finds that the proposed development won't have negative impacts upon the local marine environment or coastal processes and can appropriately mitigate all coastal hazards.

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

5.2.1.5 State Interest Policy – Transport Infrastructure

80. As detailed within the policy, the State aims to provide a system of transport infrastructure that is safe, structurally sound, and reliable. Development can affect the safety and integrity of state transport infrastructure if it is not appropriately located, designed, constructed and maintained. Captain Cook Highway is a State Controlled Road and the potential impact of the development on the highway needs to be appropriately considered.

81. Please refer to the Traffic Impact Statement in **Appendix 6**. Whilst there are no specific Assessment Benchmarks for Transport Infrastructure under the SPP (aside from strategic ports and airports), the development complies with the State interest policy statements, with the development:

- Utilising the existing access location to the highway.
- Providing improved safety by formalising the existing left-in, left-out driveway intersection to physically restrict right turns into and out of the site as well as improve line-marking and signage.
- Resulting in improved pedestrian safety by minimising conflicts between pedestrians and vehicles by relocating the clubhouse to the beach side of the Highway.
- Improving pedestrian safety by minimising conflicts with the Highway pedestrian crossing by physically restricting right turns into and out of the site.
- Providing non-worsening of traffic vehicle movements as the SLSC has a membership cap and the proposed development is for a relocation of the existing clubhouse. There will be no net increase in traffic movements.

82. We understand that TMR were contacted in relation to the future Captain Cook Highway upgrades however there were no details or information available for any upgrades adjacent to the site. It has been determined to adopt an intermediate access solution until TMR undertake upgrades of Captain Cook Highway adjacent to the site and can provide a signalised intersection arrangement. We understand that ultimately the Captain Cook Highway will be upgraded on the site frontage and there is a desire from TMR to avoid major intersection upgrades so the department can plan, design and construct any future upgrades.

83. Given the above, the development complies with the Transport Infrastructure State Interest Policy.

5.2.2 Far North Queensland Regional Plan

84. The Far North Queensland Regional Plan (hereafter; FNQRP) has been prepared by the State to provide a framework for the management and development of FNQ to 2031. As with the existing Surf Club site, the subject site is located within the 'Regional Landscape and Rural Production Area' (RLRPA) designation of the FNQRP (refer **Figure 8**) below.

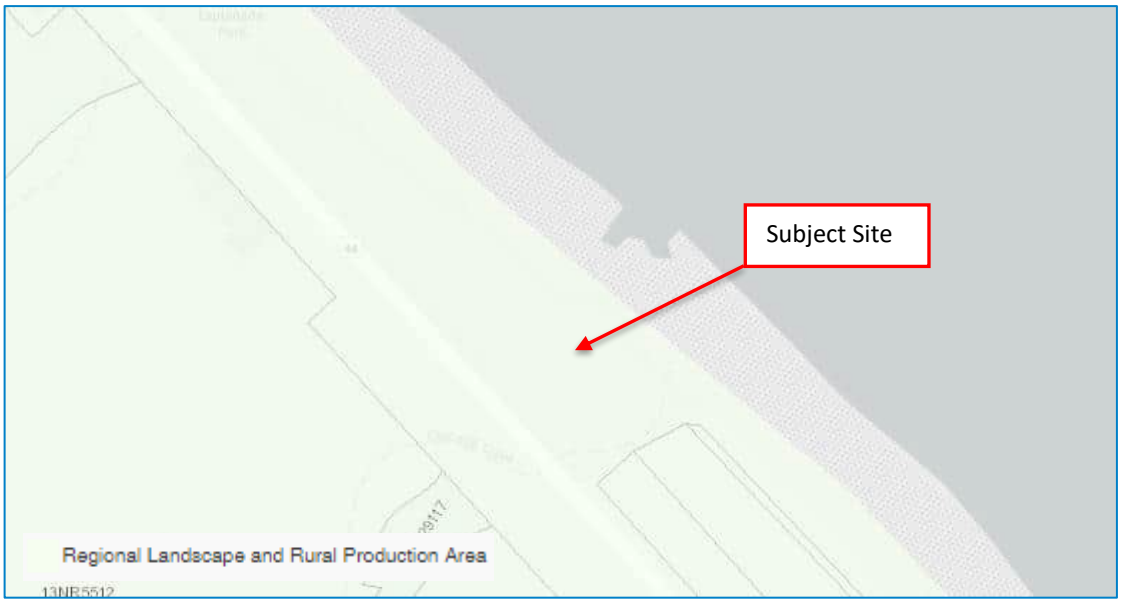


Figure 8 FNQRP Designation (Source: DAMS Mapping System 2023)

85. According to the FNQRP, land within the RLRPA intends for lands that have regional landscape, rural production or other non-urban values, to be protected from encroachment by inappropriate development, particularly urban or rural residential development. The RLRPA includes land that is a beach, island or is located within other coastal areas and is or includes outdoor recreation and regional open space areas.

86. Further, the FNQRP supports diversification of rural economies by allowing a range of developments including:

- small to medium scale tourist activities
- small scale industry, business and community activities
- sport and recreation facilities

87. The proposed development is consistent with the Regional Plan by providing a community / sport and recreation facility within the RLRPA.

5.3 State Development Assessment Provisions – Referral Agency

88. A review of the Development Assessment Mapping System (DAMS) confirms the below mapping layers apply to the site:

- Coastal Protection – Coastal management district
- Coastal Protection – Coastal Area – Erosion Prone Area
- Coastal Protection – Coastal Area – medium storm tide inundation area
- Native Vegetation Clearing - Category R on the regulated vegetation management map
- Native Vegetation Clearing - Category X on the regulated vegetation management map
- Native Vegetation Clearing - Coastal bioregions and sub-regions
- State Transport Corridor – State-controlled Road

89. 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 9, Division 4, Subdivision 2, Table 4, Item 1 – State Code 1: Development in a State-Controlled Road Environment
- Schedule 10, Part 17, Division 3, Table 6 – State Code 8: Coastal Development and Tidal Works.

90. **Table 7** below details the referral trigger, applicable state code, and the applicable specialist report which addresses the relevant state code.

Table 7 Referral Trigger Assessment

Referral Trigger	Applicable State Code	Code Response Detail
Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1.	State Code 1: Development in a State-Controlled Road Environment.	**Appendix 6** – Traffic Impact Statement prepared by Burchills.
Schedule 10, Part 17, Division 3, Table 6.	State Code 8: Coastal Development and Tidal Works.	**Appendix 4** – Coastal Hazard Assessment prepared by Burchills (Appendix D).

5.4 Local Government - *CairnsPlan 2016*

91. The subject site is located within the Cairns Council Local Government Area, with the *Cairns Plan 2016* forming the local government planning scheme, which applies to the subject 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

92. **Table 8** below provides a breakdown of the planning scheme particulars which relate to the subject site and proposed development.

Table 8 Planning Scheme Particulars

Planning Instrument	*CairnsPlan 2016 v.3*
Zone	Adjacent to the Tourist Accommodation Zone
Local Area / Precinct	Not applicable

Overlays	◗ Acid Sulfate Soils Overlay ◗ Bushfire Hazard Overlay ◗ Coastal Processes Overlay ◗ Landscape Values Overlay ◗ Natural Areas Overlay ◗ Transport Network Overlay

5.4.2 Use Definition

93. Under the Planning Scheme, the proposed land use is defined as a 'Club', which is specifically defined as:

> '*Premises for (a) an association established for social, literary, political, sporting, athletic or other similar purposes; or (b) preparing and selling food and drink, if the use is ancillary to the use in paragraph (a)'*.

5.4.3 Strategic Framework

94. 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.

95. 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 theme;
- Natural areas and features theme;
- Economy theme; and,
- Infrastructure theme.

96. Each theme comprises strategic outcomes, elements that refine and further describe the strategic outcomes, specific outcomes sought for the elements, and land use strategies for achieving these outcomes.

97. 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.

98. An assessment of all relevant overlay codes is provided in **Section 5.4.4**, an assessment of the zone code is provided in **Section 5.4.5** and an assessment of all applicable development codes is provided in **Sections 5.4.6 – 5.4.12**. The subject site is not in a local plan area and is therefore not subject to any local plan codes. 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.

99. As shown on **Figure 9** below, the subject site is located within an 'Environmental Area', as per *Strategic Framework Map 1 Settlement Pattern* (SFM1).

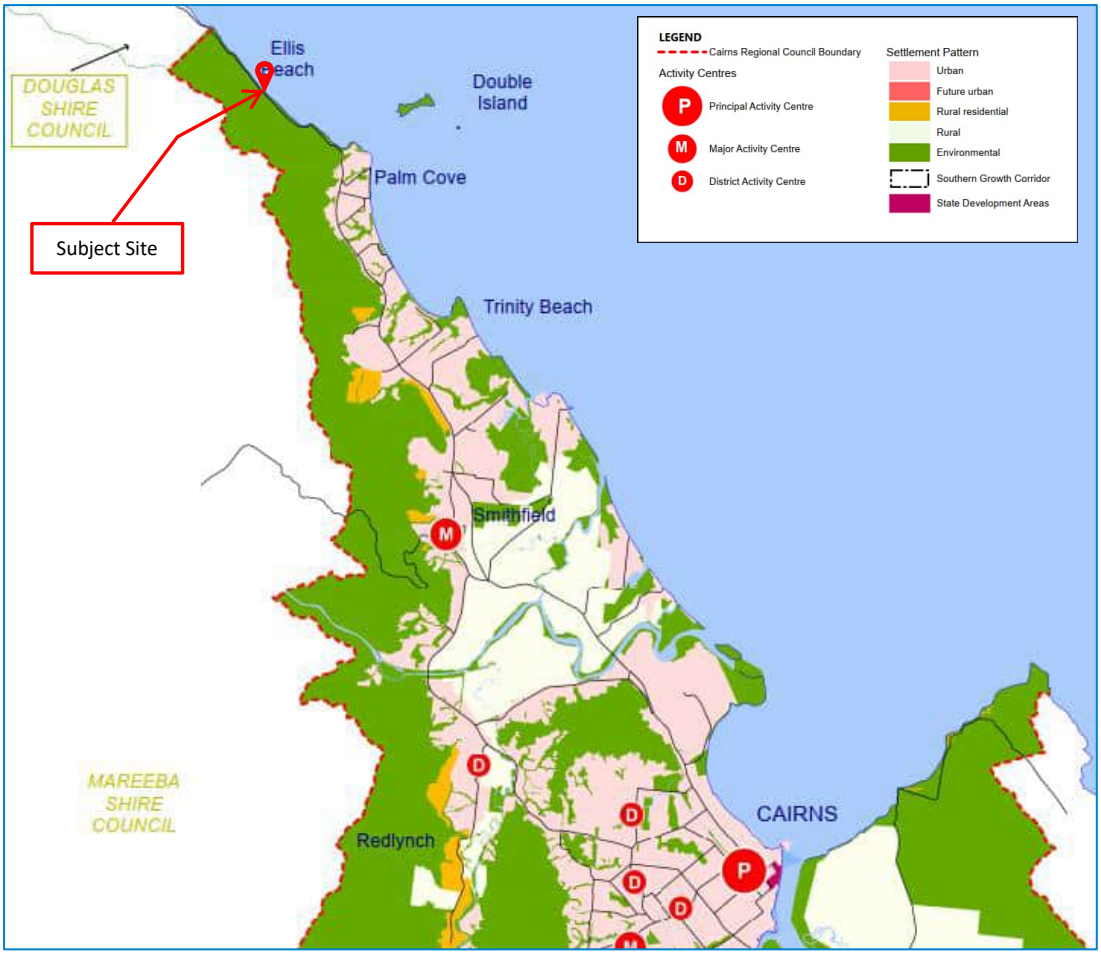


Figure 9 Extract of Strategic Framework Map 1 – Settlement Pattern (Source: Cairns Regional Council)

100. As shown above in **Figure 9**, the 'Environmental Areas' include coastal areas. Specific Outcome (1) of Section 3.4.6.1 of the Strategic Framework permits coastal-dependant development to occur within coastal areas vulnerable to natural hazards. 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 Surf Club is coastal-dependant development and, in accordance with the Strategic Framework, is suitably located within a coastal area of the 'Environmental Areas' shown on SFM1.

101. An assessment of the most relevant parts of the strategic framework themes is provided below in **Table 9**.

Table 9 Strategic Framework Assessment

Settlement Pattern Theme	
3.3.2.1 Specific Outcome (7) *Development of centre activities is of a design, scale and intensity that does not compromise the existing and ongoing hierarchy of centres by:* *(a) competing with and compromising the economic viability of centres;*	**Complies** – 'Club' is defined as a centre activity. The proposal isn't for a typical centre use such as 'shop' or 'food and drink outlet' that generally should be located in a consolidated centre. The proposal doesn't include large restaurant or dining facilities. The proposal will not compromise the centres network.

(b) adversely affecting the achievement of consolidated centres.	
3.3.9.1 Specific Outcome (1) *Urban design and built form in the region creates an attractive, tropical, cohesive, positive and memorable identity and reflects the qualities of good urban places and tropical urbanism.*	**Complies** – Refer to **Appendix 1** and **Section 4.4**. The development represents a high-quality Architectural design. The proposal includes large windows, bifold doors, deck and balcony areas that are favourably orientated to the north-east, which will present with a high level of openness and provide a 'lightweight' appearance to the built form.
3.3.9.1 Specific Outcome (5) *Development respects and complements the character and history of the region's many communities and promotes community pride and sense of place.*	**Complies** – Ellis Beach Surf Life Saving Club has been proudly patrolling Ellis Beach and successfully competing at local, State and national carnivals for over 60 years. Allowing for the continuation of the club by safely relocating it to the eastern side of the Highway will continue the history of the surf club at Ellis Beach ensuring an enduring sense of place.
3.3.11.1 Specific Outcome (6) *Community and educational facilities are provided close to the communities they serve.*	**Complies** – The proposal is located close to the existing surf club such that it can continue to service the Ellis Beach area and surrounding local community.
Natural Areas and Features Theme	
3.4.1 Strategic Outcome (1) *The region's natural environment, resources, ecological processes and biodiversity values are protected, enhanced and rehabilitated in a manner that ensures their continuation as ecological, social, tourism and economic assets for present and future generations.*	**Complies** – Please refer to the Ecological Assessment Report in **Appendix 3**. The report finds that the proposal appropriately avoids and minimises impacts on the natural environment, resources, ecological processes and biodiversity values
3.4.4.1 Specific Outcome 1 *Development protects, maintains and enhances the region's landscape values.*	**Complies** – An assessment of the Landscape Values Overlay is included in **Section 5.4.4** and is further addressed in **Section 7.2.1** in response to Council's preliminary stakeholder engagement comments. The proposal protects, maintains and enhances the region's landscape values.
3.4.5.1 Specific Outcome (1) *Coastal resources, processes and areas, including foreshores, coastal wetlands, marine ecosystems, fish habitat areas and sand dunes are protected, managed and where appropriate rehabilitated.*	**Complies** – Please refer to the Coastal Hazard Assessment in **Appendix 4**. Among other things, the assessment finds that the development will not have negative impacts upon the local marine environment or coastal processes within the Ellis Beach locality.
3.4.5.1 Specific Outcome (2) *The scenic amenity of the coastal areas is protected from inappropriate development that is visually dominant or visually intrusive.*	**Complies** – Please refer to the assessment of visual impacts in **Section 6.2.1** of this report. The development is a relatively small, low height building proposed within a vegetated and landscaped environment and proposes setbacks from the beach and highway consistent with that of the adjacent holiday park. The site also sits lower than the highway, with mature vegetation located between the proposed building and the road. The proposal is not

	visually dominant or visually intrusive and will protect the scenic amenity of the coastal area.
3.4.5.1 Specific Outcome (3) *Opportunities for public access to foreshore areas are maintained or enhanced and the use of foreshore areas occurs in a way that protects public safety and coastal resources.*	**Complies** – The proposal will enhance safe access to the Ellis Beach foreshore for nippers and club members by avoiding these pedestrians having to cross the highway from the existing clubhouse to the beach.
3.4.6.1 Specific Outcome (1) *Development, other than coastal-dependent development, avoids areas that are vulnerable to natural hazards and avoids putting people and property at risk from natural hazards.*	**Complies** – In accordance with the 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 Surf Club is coastal-dependant development and is suitably located within a coastal area.
3.4.6.1 Specific Outcome (8) *Coastal processes, such as erosion and accretion, are allowed to occur without intervention or the use of complex engineering solutions. Development in tidal and coastal areas is only established where it is for maintaining and enhancing safe access to the foreshore and coastal waters. Coastal protection works are only undertaken as a last resort where erosion poses an imminent threat to public safety and property.*	**Complies** – Please refer to the Coastal Hazard Assessment in **Appendix 4**. Among other things, the assessment finds that the development will not have negative impacts upon coastal processes. In accordance with the Coastal Hazard Assessment (**Appendix 4**) and as shown on the Architectural Plans (**Appendix 1**) foundations (piles) will be sunk a minimum of 300mm into the bedrock layer to ensure the stability of the development. This is not a complex engineering solution. As detailed above, the proposal is for coastal-dependant development and is suitably located within a coastal area. No coastal protection works are proposed.
Economy Theme	
3.5.1 Strategic Outcome (3) *Economic benefits and opportunities are maximised through the promotion of appropriate land uses, minimisation of land use conflicts and the protection of significant infrastructure.*	**Complies** – The proposal represents a $3.5 million dollar investment in the local community. The development represents an appropriate land use, that avoids land use conflicts and will not result in an adverse impact to infrastructure as detailed throughout this EAR.
Infrastructure Theme	
3.6.1 Strategic Outcome (8) *Suitable land, facilities and improvements are provided to meet the sport and recreation needs of the community.*	**Complies** – The relocation of the surf club represents an improvement to the existing facility that meets the needs of the community for a safe surf club facility on the beach side of the highway.

102. Given the above, the proposed development complies with the relevant parts of the Planning Scheme's Strategic Framework.

5.4.4 Overlays

103. **Table 10** below will demonstrate 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 10 Overlay Code Assessment

Overlay	Response
Acid Sulfate Soils Overlay	
	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. Earthworks are proposed within the overlay area. 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. The proposed development can comply with the Acid Sulfate Soils Overlay.
Bushfire Prone Area Overlay	
	The subject site is identified as being located within a Potential Impact Buffer of a Bushfire Prone Area. Please refer to the Bushfire Mitigation Report in **Appendix 7**. The report recommends that a minimum 10,000L firefighting water supply be provided, a pedestrian fire trail be established around the site and low flammable landscape species be utilised. The proposed development will comply with these requirements. These requirements can be included in the MID Decision Notice. The proposed development will comply with the Bushfire Prone Area Overlay.

Overlay	Response
Coastal Processes Overlay	
 Erosion Prone Area	The subject site is identified as being within the Erosion Prone Area (EPA) of the Coastal Processes Overlay. Please refer to the Coastal Hazard Assessment in **Appendix 4,** 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 with the EPA. Surf Clubs are defined as coastal-dependent development by the SDAP, as detailed in **Section 5.4.3** above. The proposed development complies with the Coastal Processes Overlay Coder.
Landscape Values Overlay	
 Coastal scenery High landscape values	The subject site is identified as being within the Coastal Scenery Area of the Landscape Values Overlay. The proposed development is for a relatively small, low height building within a vegetated and landscaped environment. The dominance of the natural character of the coast will be maintained or enhanced when viewed from the foreshore. Proposed setbacks from the foreshore are consistent with that of adjoining buildings and structures. As discussed in **Appendix 5**, vegetation clearing is avoided and minimised. Clearing of trees required for the proposed works will be mitigated through a replacement planting program using a compensatory planting ratio of 1:3. The proposed development complies with the Landscape Values Overlay.
Natural Areas Overlay	
 MLES - Non-urban waterway trigger area	The subject site is identified as being within a non-urban waterway trigger area, containing category R regulated vegetation and being adjacent a high ecologically significant wetland by the Natural Areas Overlay. Please refer to the Ecological Assessment Report in **Appendix 5**. The report finds that: • The (HEV) wetland mapping is indicated along the entire far north Qld coastline. The proposal avoids and minimises impacts on HEV wetland values.

Overlay	Response
	• Existing Vegetation is highly modified dominated by Mango trees and not representative of the preclearing regional ecosystem (RE 7.3.44). The footprint for the proposal falls within a mostly cleared area. Any clearing will be mitigated through replacement planting using a compensatory planting ratio of at least 1:3. • The proposed development has been designed to avoid clearing of native vegetation in a 10m setback to Cascade Ck. It is not expected that the development will compromise the existing riparian values of Cascade Creek. The proposed development complies with the Natural Areas Overlay.
Transport Network Overlay	
	The site is located within a major transport corridor buffer area of the Transport Network Overlay. Please refer to the Traffic Impact Statement in **Appendix 6** and the comments provided in **Section 5.2.1.5** of this report. The proposal is for the relocation of the Surf Club with a membership cap and therefore will not result in an increase in traffic movements. The highway is a State Controlled Road. The proposed development is located outside the proposed TMR road widening boundary (refer **Appendix 9**). The development retains and enhances existing vegetation between the development and a major corridor. The proposed development complies with the Transport Network Overlay.

104. The proposed development complies with all relevant overlay codes of the Planning Scheme.

5.4.5 Planning Scheme Zone

105. As mentioned above, the proposed location for the new SLSC is currently unallocated State land/road reserve and as such is not included in any zone category by the *Cairns Plan 2016* zone mapping (refer **Figure 10** below).



Figure 10 Zone Mapping (Cairns Plan 2016)

106. Section 1.3.4 of the *Cairns Plan 2016* states the following with respect to zones for roads, closed roads, waterways, foreshores and reclaimed land:

> *(a) If adjoined on both sides by land in the same zone - the road, closed road, waterway, foreshore or reclaimed land is in the same zone as the adjoining land;*
> *(b) If adjoined on one side by land in a zone and adjoined on the other side by land in another zone - the road, closed road, waterway, foreshore or reclaimed land is in the same zone as the adjoining land when measured from a point equidistant from the adjoining boundaries;*
> *(c) If the road, closed road, waterway, foreshore or reclaimed land is adjoined on one side only by land in a zone - the entire road, closed road, waterway, foreshore or reclaimed land is in the same zone as the adjoining land; or*
> *(d) If the road, closed road, waterway, foreshore or reclaimed land is covered by a zone then that zone applies.*

107. As shown on **Figure 10** above, the road reserve area to accommodate the proposed development is adjoined on one side (south-eastern side) by land included in the Tourist Accommodation Zone. Therefore, in accordance with Part (c) above, the site is considered to be in the Tourist Accommodation Zone.

108. The development of a 'Club' is Impact Assessable within the Tourist Accommodate Zone, however, as demonstrated by **Table 11** below and **Section 5.4.3** above, the proposal complies with the Tourist Accommodation Zone Code and the Planning Scheme's Strategic Framework. On that basis, and the other detailed assessment within this report, the proposal is an appropriate land use for the site.

109. An assessment of the Tourist Accommodation Zone Code is included in **Table 11** below.

Table 11 Zone Code Assessment

Performance Outcomes	Acceptable Outcomes	Response
For accepted development subject to requirements and assessable development		
Height		
PO1 The height of all buildings and structures is in keeping with the tourist and residential character and amenity of the area. Note – A visual impact assessment may be required where a proposed development exceeds the height stated in AO1.1 or AO1.2. Planning scheme policy – Landscape values provides guidance on undertaking a visual impact assessment. Note – The site coverage stated in AO2.1 and AO2.2 corresponds with the heights stated in AO1.1 and AO1.2. Where a proposed development exceeds the height stated in AO1.1 or AO1.2, the proposed development will also be assessed against PO2.	**AO1.1** Buildings and structures are not more than 15metres and 4 storeys in height; or **AO1.2** Within Tourist accommodation precinct 1 – Islands, building and structures are not more than 8.5 metres and 2 storeys in height. Note – Height is inclusive of the roof height.	**Complies** – the proposal is ~8.2m and 2 storeys in height. The site is not within Tourist accommodation precinct 1.
Site coverage		
PO2 The site coverage of all buildings and structures is in keeping with the tourist and residential character and amenity of the area.	**AO2.1** The site coverage is not more than 50%. or **AO2.2** Where for Multiple dwellings, the site coverage is not more than 40%.	**Complies** – the proposal has a lease area site cover of ~45.2%. The proposal is not for multiple dwellings.
For assessable development		
Uses and other development		
PO3 Development is consistent with the purpose and overall outcomes sought for the zone and the outcomes sought for the relevant precinct.	**AO3.1** No acceptable outcomes are provided.	**Complies** – The overall outcomes for the zone support non-residential uses where they *'serve the local community, do not detract from the residential amenity of the area and do not adversely impact on the role and function of centres within the hierarchy of centres'.* The proposed Surf Club will serve the local community by provide a safe, patrolled beach and will not adversely impact the amenity of the area as discussed in detail in **Sections 4.9 and 5.4.7**. The proposal isn't for a typical centre use such as 'shop' or 'food and drink outlet' that generally should be located in a consolidated centre. The proposal doesn't include large restaurant or dining facilities. The

Performance Outcomes	Acceptable Outcomes	Response
		proposal will not compromise the centres network. The site is not within a zone precinct.
PO4 Non-residential uses that serve the local community are established in appropriate locations and subject to detailed development requirements including: (a) being located in highly accessible locations; (b) their proximity with other similar uses; (c) providing for the identified convenience needs of the local community; (d) not impacting on the role and function of the hierarchy of centres within the region; (e) resulting in positive economic and social benefits for the local community; (f) small scale extensions to existing non-residential uses. Note – For code assessable development, the role and function of centres within the hierarchy of centres is outlined in Schedule 6. Note – For Impact assessable development, the role and function of the hierarchy of centres is described 3.3.2 Element – Centres and centre activities within Part 3 Strategic framework in addition to Schedule 6.	**AO4.1** No acceptable outcomes are provided.	**Complies** – a) The site is highly accessible with direct access to the Captain Cook Highway. b) The site is proximate to the existing surf club and the bar and grill restaurant. c) The proposed Surf Club will serve the local community by provide a safe, patrolled beach. d) The proposal doesn't include large restaurant or dining facilities or other typical centre activities. The proposal will not compromise the centres network. e) The proposal represents a $3.5 million dollar investment in the local community and will provide improved and safe surf life saving facilities for the local community. f) The proposal is for the relocation of an existing facility.
Setbacks		
PO5 Buildings and structures are set back to: (a) maintain the character of the area; (b) achieve separation from neighbouring buildings and frontages	**AO5.1** No acceptable outcomes are provided.	**Complies** – The development proposes setbacks from the beach and the highway generally consistent with those of the adjoining holiday park to the south-east. The proposed built form is setback a varying distance of ~21.8 – 28.6m meters from the pavement of the Highway to the south-west. A setback of ~46.2m is achieved between the proposed surf club building and the closest cabin within the adjacent holiday park. No other setbacks are relevant given the subject site adjoins foreshore areas to

Performance Outcomes	Acceptable Outcomes	Response
		the north-west and Ellis Beach to the north-east.
Site constraints		
PO6 Development is located, designed, operated and managed to respond to the characteristics, features and constraints of the site and its surrounds. Note – Planning scheme policy – Site assessments provides guidance on identifying the characteristics, features and constraints of a site and its surrounds.	**AO6.1** No acceptable outcomes are provided	**Complies** – Please refer to the assessment of all relevant overlay constraints within **Section 5.4.4**. The proposed development complies with all relevant overlay codes of the Planning Scheme.
Amenity		
PO7 Development does not adversely affect the tropical, tourist and residential character and amenity of the area in terms of traffic, noise, dust, odour, lighting or other physical or environmental impacts.	**AO7.1** No acceptable outcomes are provided.	**Complies** – Please refer to the assessment of the Environmental Performance Code in **Section 5.4.7**. The proposed development will not adversely affect the character and amenity of the area.

110. The above assessment demonstrates that the proposed development complies with the Tourist Accommodation Zone Code.

111. The applicable Tables of Assessment identify the following 'Other Development Codes' as applicable assessment benchmarks that should be considered by this EAR. The below codes have been addressed in the following sections of this report.

- Centre Design Code
- Environmental performance code
- Excavation and filling code
- Infrastructure works code
- Landscaping code
- Parking and access code
- Vegetation management code

5.4.6 Centre Design Code

112. This section of the EAR provides an assessment against the *Assessment benchmarks and requirements* of the Centre Design Code in **Table 12** below.

Table 12 Assessment of Centre and Design Code

Performance Outcomes	Acceptable Outcomes	Response
Change of use within existing building or facilities		
PO1 Development that involves a change of use within an existing building ensures:	**AO1.1** Changes of use within an existing building containing centre activities ensure:	**Not applicable** – The proposal is not within an existing building.

Performance Outcomes	Acceptable Outcomes	Response
(a) changes to floor space of the centre activity results in only minor expansion of floor area; (b) the appropriate design and amenity standards for the centre activity is maintained.	(a) that any increase in GFA does not exceed 10% or 50m2, whichever is the lesser; (b) the increase in GFA does not result in a loss of existing landscaping or landscaped area on the site; (c) where located within the District centre zone, Major centre zone and Principal centre zone, the development does not result in a loss of existing on-site car parking spaces; or (d) (d) for all other development the total number of car parking spaces to meet the demand of the whole development :is as per Table 9.3.7.3.b and Table 9.3.7.3.c within the Parking and access code. Note – The whole development means the entire building or activity on a site (or sites) where shared parking areas are utilised.	
PO2 Building plant or equipment cannot be viewed from public places.	**AO2.1** Where plant or equipment is visible from public places, it is appropriately screened from view using a design feature.	**Not applicable** – The proposal is not within an existing building.
Site requirements		
PO3 Development is located within: (a) an existing Centre zone; (b) Mixed use zone precinct 1 – Commercial; (c) Mixed use zone precinct 2 – trades and services; or (d) a building containing an existing centre activity; or (e) an identified centre precinct within a Local plan.	**AO3.1** No acceptable outcomes are provided.	**Not applicable** – This site is not subject to zoning under the Planning Scheme. Please refer to **Section 5.4.5** above.
PO4 A centre activity is only established outside an appropriately identified area where:	**AO4.1** No acceptable outcomes are provided.	**Complies –** a) There is a community need to relocate the club for safety reasons. Refer **Section 4.2** above.

Performance Outcomes	Acceptable Outcomes	Response
(a) community need is demonstrated for the centre activity; (b) the centre activity does not compromise the establishment of consolidated centres with distinct roles and functions across the Region; (c) the centre activity does not compromise the role and function of centres within the established hierarchy of centres for the Region; (d) the centre activity is located in a highly accessible place within the community it serves, not on the periphery; (e) the centre activity does not compromise the character and integrity of surrounding areas. Note – An appropriately identified area includes: (a) an existing Centre zone or Mixed use zone (Precincts provide further clarity); or (b) building containing an existing centre activity; or (c) an identified centre precinct within a Local Plan area. Note – For code assessable development, the role and function of centres within the hierarchy of centres is outlined in Schedule 6. Note – For Impact assessable development, the role and function of the hierarchy of centres is described 3.3.2 Element – Centres and centre activities within Part 3 Strategic framework in addition to Schedule 6. Note – Refer to the definition of Centre zone contained in Schedule 1.2 Note – Guidance on demonstrating compliance with the Performance Outcome is outlined within Planning scheme policy – Activity centres.		b) Ellis Beach is remote from any consolidated centres. The surf club is required in this location to patrol Ellis Beach. The proposal isn't for a typical centre uses such as 'shop' or 'food and drink outlet' that generally should be located in a consolidated centre. The proposal will not compromise the centres network. c) Refer response above. d) The new surf club is required to be in proximity to the existing club but on the beach side of the highway to safely patrol Ellis Beach and serve the local community. e) The proposed development is for a relatively small, low height building within a vegetated and landscaped environment. The predominate character of the area will be maintained.
Design		

Performance Outcomes	Acceptable Outcomes	Response
PO5 The design contributes to the character and amenity of streets and adjoining premises by establishing a built form that: a) ensures buildings are closely related to streets, public spaces and pedestrian routes; b) has areas free of buildings and enclosed spaces to facilitate external pedestrian movement, vehicular circulation, landscaping and other functions associated with the building. Note – Guidance on demonstrating compliance with the Performance Outcome is outlined within Planning scheme policy – Activity centres.	**AO5.1** No acceptable outcomes are provided.	**Complies** – The building is appropriately located and designed in relation to the context of the site and the nature of the proposal. The proposed building is closely related to the public foreshore area, while still maintaining the character of the locality. The proposed design provides for required pedestrian and vehicle movement, landscaping and other required building functions. Refer to the Architectural Plans in **Appendix 1**.
PO6 Design actively contributes to the safety of users of the development. Note – Guidance to demonstrating compliance with the Performance Outcome is outlined in Planning scheme policy – Crime prevention through environmental design (CPTED).	**AO6.1** Crime prevention through environmental design principles are integrated into the form and design of the development.	**Complies –** the proposal includes large windows, sliding doors, decks and balconies to facilitate casual surveillance of public areas.
External Appearance		
PO7 Building facades are articulated and finished in ways that respond to notable, attractive elements of surrounding buildings, and enhances existing streetscape character.	**AO7.1** Building facades are articulated and finished with design elements such as: (a) variations in plan shape, such as curves, steps, recesses or projections; (b) variations in treatment and patterning of windows, sun protection devices, or other elements of the facade; (c) elements of finer scale than the main structural framing; (d) planting at any or all levels; (e) murals and artworks.	**Complies** – Refer to the Architectural Plans in **Appendix 1**. The development represents a high-quality Architectural design. Ample articulation is achieved through the provision of wide eaves, open decks and balcony spaces, and steps and recesses in the building profile. The proposal includes large windows, bifold doors, deck and balcony areas favourably orientated to the north-east that will present a high level of openness and a 'lightweight' appearance to the built form. Variation in materials, architectural treatments and integration of landscaping are also evident on the Architectural Plans.
PO8 Top levels of buildings and roof forms are shaped to provide visually attractive skyline silhouettes to screen mechanical plant from view.	**AO8.1** No acceptable outcomes are provided.	**Complies** – Refer to the Architectural Plans in **Appendix 1**. An articulated roof from has been proposed.

Performance Outcomes	Acceptable Outcomes	Response
Frontages		
PO9 Buildings located in prominent positions are designed to express or emphasise the importance as landmarks and assist in place making and way finding, where they are located: (a) at an identified gateway; or (b) on a corner of two high order streets; or (c) have direct frontage to major public spaces; or (d) at the terminus of important vistas	**AO9.1** No acceptable outcomes are provided.	**Not applicable** – the site is located in the relatively remote area of Ellis Beach and is set amongst mature trees and landscaping. The site also sits lower than the highway. It is not considered that the site is in a particularly prominent position.
PO10 Development results in an active streetscape that: (a) contributes to a high level of amenity for patrons and pedestrians; (b) facilitates interactions between the public and private realm through active frontages	**AO10.1** Ground floor levels of buildings (particularly of shopping centres, or buildings within the Principal centre zone and Major centre zone) incorporates activities that are likely to foster casual, social and business interaction for extended periods (such as shops, food and drink outlets and the like).	**Not applicable** – the proposal is not in a shopping centre and is not in the Principal centre zone or Major centre zone.
	AO10.2 Where a building has frontage to a public street or other public or semi-public space, an active frontage is provided which includes a minimum of 50% of the facade consisting of transparent or semi-transparent windows and glazed doors	**Complies** – the proposal includes large windows, sliding doors, decks and balconies orientated to address the public foreshore areas.
	AO10.3 Frontages to public streets or other public or semi-public spaces are articulated with vertical elements to emphasise a finer-grain and human scale to the building frontage.	**Complies** – Refer to the Architectural Plans in **Appendix 1**.
	AO10.4 Where buildings are constructed up to the road alignment, a cantilever awning is to be provided over the footpath, to the full frontage of the site, with a setback of 1 metre from the face of the kerb, and:	**Not applicable** – The building is not proposed up to the road alignment.

Performance Outcomes	Acceptable Outcomes	Response
	(a) with a maximum height of 3 metres from the footpath level to the underside of the awning; or (b) at a height consistent with, or stepping up/down to, the awning structures on buildings on adjacent sites	
	AO10.5 A pedestrian footpath is provided for the full frontage of the site. The footpath is constructed in accordance with the design guidelines set out in the infrastructure works code.	**Not applicable** – The site is located in Ellis Beach Esplanade Park
	AO10.6 Noise mitigation is achieved through architectural attenuation of the built form.	**Not applicable** – The proposal is not for a sensitive land use.
	AO10.7 Noise mitigation does not involve an acoustic barrier or acoustic fence between the front façade of the building and the street.	**Complies** - an acoustic barrier or acoustic fence is not required.
Access		
PO11 Development is located and designed such that the safety and efficiency of the road network, access and internal vehicle and pedestrian movements are not adversely impacted upon.	**AO11.1** For sites less than 1,500m^2, vehicular access is gained from a collector or higher order road; or	**Not applicable**
	AO11.2 For sites on land greater than 1,500m2, the centre activity is supported by a traffic management and impact report demonstrating the development's location, design and access does not adversely impact upon: (a) the safety and function of the road network; (b) operation of the centre activity with respect to pedestrians, cyclists and the types of vehicles accessing and servicing the development.	**Complies** – Please refer to the Traffic Impact Statement in **Appendix 6.**

Performance Outcomes	Acceptable Outcomes	Response
	AO11.3 Clear and safe universal pedestrian access is gained from the local road network. Note – Guidance to preparing a traffic management and impact report is contained within Planning scheme policy – Parking and access	**Not applicable** – the site does not have access to the local road network. The Highway is a State controlled road.
PO12 Public or semi-public spaces are integrated into the centre activity's movement system. Note – Guidance on demonstrating compliance with the Performance Outcome is outlined within Planning Scheme Policy – Parking and access	**AO12.1** Public and semi-public spaces are located to ensure pedestrian movement flows through the site and connects with frontages.	**Complies** – Refer to the Architectural Plans in **Appendix 1**.
	AO12.2 Pedestrian arcades, laneways or enclosed thoroughfares are a minimum of 6m wide, provide a direct line of sight to a major pedestrian destination (major tenancy, car park, public place, etc.), and are not dead ends, narrow or circuitous.	**Not applicable** – Pedestrian arcades, laneways or enclosed thoroughfares are not proposed.
Landscaping		
PO13 Development provides for the site to be attractively landscaped in a manner that is consistent with the function, location and setting of the development.	**AO13.1** A minimum of 10% of the site is landscaped.	**Complies –** the site has an area of ~1,660m2 and ~250m2 of the site is proposed as landscaping.
	AO13.2 Landscaping is provided on site in accordance with the following: (a) a mixture of shade trees and low planting is provided along street frontages where buildings are set back from the boundary; (b) shade trees are provided in car parks; (c) a landscaped area is provided between the centre activity, associated car parking and any adjacent residential use or zone which: (i) has a minimum width of 2 metres and is not used for storage or mechanical plant;	**Complies -** The proposed landscape intent is illustrated by the Architectural Plans in **Appendix 1**. A wastewater irrigation area is proposed in the northwestern corner of the lease area. In accordance with the On-site Wastewater Management Report (**Appendix 8**), this area will be densely planted with suitable tropical, water tolerant species. An additional landscape node is proposed in the southeastern corner of the lease area and feature landscaped planters are proposed as part of the entry ramp design in the northeastern corner of the lease area. In addition to the landscaping proposed, the lease area will be surrounded by existing mature vegetation including riparian vegetation adjacent Cascade Creek, coastal vegetation adjacent Ellis Beach, buffering vegetation adjacent the highway and vegetation within Ellis Beach Esplanade Park. The proposed development will be established in a landscaped and vegetation

Performance Outcomes	Acceptable Outcomes	Response
	(ii) is planted with a variety of screening trees and shrubs; (iii) incorporates a minimum 1.8 metre high solid screen fence where acoustic attenuation is required. (d) planting is provided on top of podium levels and on the roof or roof level of car parking structures.	environment to provide ample shade and amenity.
External Dining		
PO14 Areas used for food and dining activities external to the main building allows for the safe and efficient movement of pedestrians	**AO14.1** No acceptable outcomes are provided.	**Not Applicable** – no external dining areas are proposed.
Additional requirements for Adult stores		
PO15 An Adult store is located to satisfy reasonable community expectations in relation to location and accessibility	**AO15.1** The distance between the boundary of the land occupied by the sensitive land use and the entrance of a proposed adult store is: (a) more than 200 metres according to the shortest route a person may lawfully take, by vehicle or on foot; or (b) more than 100 metres measured in a straight line.	**Not Applicable**
PO16 The presentation of the adult store satisfies reasonable community expectations.	**AO16.1** The display window of the adult store is completely screened to prohibit viewing into the interior of the development where goods are displayed.	**Not Applicable**
Additional requirements for centre activities with a GFA greater than 1500m²		
PO17 Development is designed to be adaptive to the needs of the community over time by: (a) planning for active streets through a range of retail, commercial and community activities and spaces which can change with minimal intervention;	**AO17.1** No acceptable outcomes are provided	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Response
(b) sleeving larger format retail and commercial activities behind active street fronts; (c) allowing for interim uses that can be changed over time and be added to with minimal interventions. Note – Guidance on demonstrating compliance with the Performance Outcome is outlined within Planning scheme policy – Activity centres.		

113. As demonstrated above, the proposal complies with the relevant parts of the Centre Design Code

5.4.7 Environmental Performance Code

114. The proposed development complies with the Environmental Performance Code, as follows:

- The use does not operate outside daylight hours. ~50m of distance and vegetation is located between the proposal and the caravan park. Lighting will not cause an adverse impact on the amenity of adjacent sensitive land uses – **PO1**;
- The proposed Surf Club is not considered an odour causing activity or otherwise an activity that would emit other harmful airborne particles or emissions – **PO2 & PO4**;
- The proposed operating hours are 7:00am to 4:00pm 7 days a week. This is outside the sensitive time periods of the early morning, evening and nighttime periods. ~50m of distance and vegetation is located between the proposal and the caravan park being the only nearby sensitive land use. The proposal will not result in any unreasonable noise impacts – **PO3 & PO7**;
- Bins will be stored in the equipment and vehicle store and will be manoeuvred to the new vehicle turnaround area at the northern end of the lease area for collection. The proposed waste storage and collection arrangement will avoid adverse amenity / nuisance impacts and allow for the safe and efficient collection of waste and recycling – **PO5**;
- Development activities are designed to ensure stormwater is directed to a lawful point of discharge and has a no worsening effect on downstream or upstream properties. Refer to the Stormwater Management Plan in **Appendix 3** – **PO8**;
- The proposed development is exempt from Stormwater quality objectives under the SPP – **PO9**;
- The site is located in an existing foreshore park area. The site does not contain unacceptable levels of contaminants – **PO10**;
- The proposal does not involve hazardous materials, chemicals, dangerous goods, flammable or combustible substances – **PO11**; and,
- Pest plants will be removed from the works area – **PO12**;

115. Given the above, the proposed development complies with the Environmental Performance Code.

5.4.8 Excavation and Filling Code

116. Proposed Excavation and Filling is shown on the Civil Engineering Plans prepared by Burchills in **Appendix 2**. The proposed development complies with the Excavation and Filling Code, as follows:

- Changes in ground level generally don't exceed 1m, batters do not exceed 3.6m in height and retaining walls do not exceed 1.8m in height – **PO1 & PO5**;
- Earthworks batters don't exceed a grade of 1 in 2 (50%) or a height of more than 1.5 metres – **PO2**;
- Excavation and filling will not have a detrimental impact on Public Utilities – **PO3**;
- The surface treatment of retaining walls will have a subdued and non-reflective palette – **PO4**;
- Excavation or filling does not adversely impact on other premises as a result of stormwater drainage flows or flooding. Refer to the Stormwater Management Plan in **Appendix 3** – **PO6**;
- Excavation or filling does not result in a reduction of the water quality of receiving waters. Refer to the Erosion and Sediment Control Plan in **Appendix 2** – **PO7**; and,
- Contaminated material will not be used as fill – **PO8**;

117. Given the above, the proposed development complies with the Excavation and Filling Code.

5.4.9 Infrastructure Works Code

118. The proposed development complies with the Infrastructure Works Code, as follows:

- The development does not impede the function of the road and ensures the safe and efficient movement of vehicles, pedestrians and cyclists to and from the site and adjacent to the site. Refer to the Traffic Impact Statement in **Appendix 6** – **PO1**;
- Development activities are designed to ensure stormwater is directed to a lawful point of discharge and has a non-worsening effect on downstream or upstream properties. Refer to the Stormwater Management Plan in **Appendix 3** – **PO4**;
- The proposed development is provided with an adequate, safe and reliable supply of potable, firefighting and general use water. Refer to **Section 4.8** and the Architectural Plans in **Appendix 1** – **PO5 & PO15**;
- The development provides for adequate treatment and disposal of wastewater. Please refer to the On-Site Wastewater Management Report in **Appendix 8** – **PO6**;
- Any damage to existing infrastructure or works will be repaired following construction – **PO7**;
- The stormwater drainage system is appropriately designed. Refer to the Stormwater Management Plan in **Appendix 3** – **PO9 & PO11**;
- The development can provide road and park lighting in accordance with the relevant standards contained in Planning Scheme Policy - FNQROC Regional Development Manual D8 Utilities, where necessary – **PO11**;
- The development will utilise the existing active transport network – **PO12**;
- All infrastructure and works have been appropriately designed as demonstrated by the Civil Engineering Plans in **Appendix 2** – **PO13 & PO14**; and,
- All works will be undertaken in accordance with a Construction Management Plan **PO16-PO18**.

119. Given the above, the proposed development complies with the Infrastructure Works Code.

5.4.10 Landscaping Code

120. The proposed landscaping intent is demonstrated on the Architectural Plans in **Appendix 1**. The proposed development complies with the Landscaping Code, as follows:

- More than 10% of the site is landscaped – **PO1**;

- The proposed landscaping contributes to a sense of place, is functional to the surroundings and enhances the streetscape and visual appearance of the development – **PO2**;
- Existing vegetation on site is retained and incorporated into the site design, wherever possible. Mature vegetation on the site that is removed or damaged during development is proposed to be replaced at a ratio of 1:3. Landscaping will consist of suitable tropical, water tolerant species – **PO3**;
- Plant species will be selected with consideration to the scale and form of development, screening, buffering, streetscape, shading and the locality of the area – **PO4 & PO5**;
- Landscaped areas will be designed in order to allow for efficient maintenance – **PO6**;
- No podium planting is proposed – **PO7**;
- Weeds will be removed from the works area – **PO8**; and,
- Landscaping design will consider CPTED principles and the location of utilities and services – **PO9 & PO10**.

121. Given the above, the proposed development will comply with the Landscaping Code.

5.4.11 Parking and Access Code

122. A Traffic Impact Statement prepared by Burchills Engineering Solutions is enclosed as **Appendix 6**. The proposed development complies with the Parking and Access Code, as follows:

- The Traffic Impact Statement finds that the car parking provision proposed to be sufficient. There is ample space within the lease area to accommodate two (2) bicycle parking spaces – **PO1**;
- Vehicle parking spaces are designed and constructed in accordance with relevant standards. Please refer to the Engineering Plans in **Appendix 2** – **PO2**;
- Vehicular access is designed to operate safely and efficiently and to accommodate the anticipated type and volume of vehicles. Importantly, the intermediate access solution has been designed to not adversely impact upon future road intersection improvements to be undertaken by TMR. Please refer to the Traffic Impact Statement and the Engineering Plans in **Appendices 2 and 6** for further information – **PO3**;
- The proposed car parking areas have been designed as a low-speed environment to allow for shared use by cyclists and pedestrians. Furthermore, pedestrian access to the clubhouse building has been provided separately from the vehicle manoeuvring area to avoid conflicts. The proposal doesn't involve large expanses of car parking and will be consistent with the character and amenity of the area – **PO4 & PO5**;
- No on-street parking is proposed or required – **PO6**;
- End of trip facilities have been provided with bathrooms, changerooms and showers proposed **PO7**;
- Service vehicle turn paths and arrangements are demonstrated by the Engineering Plans in **Appendix 2** – **PO8**;
- Ample queuing distance into the site is provided by the length of the driveway – **PO9**;

123. Given the above, the proposed development will comply with the Parking and Access Code.

5.4.12 Vegetation Management Code

124. An Ecological Assessment Report prepared by Burchills is enclosed as **Appendix 5**. The proposed development complies with the vegetation Management Code, as follows:

- The footprint for the proposed development falls within a mostly cleared area. The design has been located to avoid clearing of native vegetation to the greatest extent possible. The regions biodiversity and ecological values will be maintained and protected. Refer to the Ecological Assessment Report in **Appendix 5** for further information – **PO1**;
- All works, including those involving vegetation, will be managed in accordance with a Construction Management Plan to avoid unreasonable nuisance – **PO2**;
- Vegetation in the project area is highly modified, inclusive of hardstand areas (road and cul-de-sac head), with existing vegetation dominated by Mango trees. No significant trees will be removed from the streetscape – **PO3**; and,
- The site is not within the Neighbourhood character overlay or the Places of significance overlay – **PO4 & PO5**.

125. Given the above, the proposed development will comply with the Vegetation Management Code.

6. Environmental Assessment

6.1 Outline

126. 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.*

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

128. 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

129. 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

130. As demonstrated by the 3D perspective within the Architectural Plans in **Appendix 1**, the development represents a high-quality Architectural design. Ample articulation is achieved through the provision of wide eaves, open deck and balcony spaces, and steps and recesses in the building profile. The proposal includes large windows, bifold doors, deck and balcony areas favourably orientated to the north-east that will present a high level of openness and a 'lightweight' appearance to the built form. Variation in materials, architectural treatments and integration of landscaping are also evident on the Architectural Plans (**Appendix 1)**.

131. The proposed development is for a relatively small, low height building proposed within a vegetated and landscaped environment. The development also proposes setbacks from the beach and the highway generally consistent with those of the adjoining holiday park to the south-east. This will maintain the visual continuity and pattern of buildings within the locality. As demonstrated by **Figure 11** below, the site also sits lower than the highway, with mature vegetation between the proposed building and the road. This will significantly reduce the visual prominence of the building when viewed from the Highway.

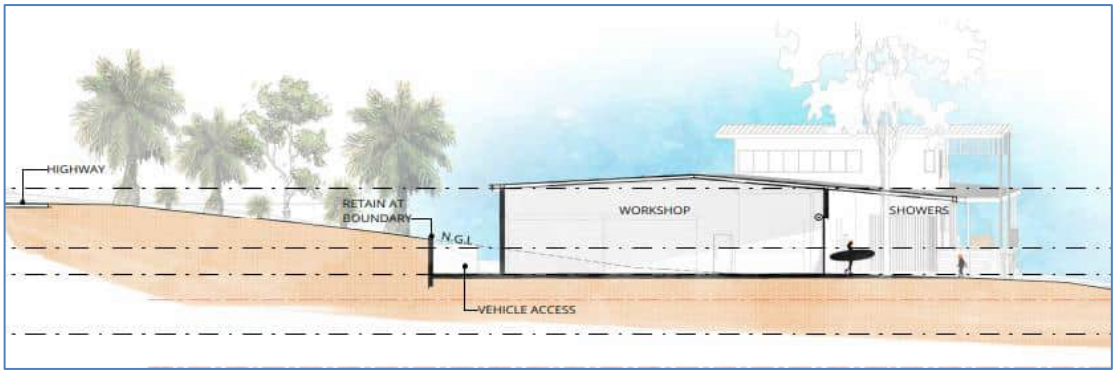


Figure 11 Section Demonstrating Relationship with the Highway

132. The development is proposed within a vegetated and landscaped environment. In accordance with the On-site Wastewater Management Report (**Appendix 8**), the 152m² wastewater irrigation area is proposed to be densely planted with suitable tropical, water tolerant species. An additional landscape node is proposed in the southeastern corner of the lease area and feature landscaped planters are proposed as part of the entry ramp design in the northeastern corner of the lease area. In addition to the landscaping proposed, the lease area will be surrounded by existing mature vegetation including riparian vegetation adjacent to Cascade Creek, coastal vegetation adjacent to Ellis Beach, buffering vegetation adjacent to the highway and vegetation within Ellis Beach Esplanade Park. The footprint for the development falls within a mostly cleared area, however, any minimal clearing of vegetation will be mitigated through a replacement planting program using a compensatory planting rate of 1:3 within the lease area, therefore resulting in a net increase in native vegetation. The vegetated and landscaped environment that the proposed building will be located in will further ensure the reduced prominence of the built form and contribute to maintaining the character of the Ellis Beach area.

133. The proposed built form will provide a positive contribution to the character of the Ellis Beach area and won't result in any visual amenity impacts on surrounding property or the local area more broadly.

6.2.2 Acoustic, Lighting and Odour Impacts

134. The DSDILGP Pre-lodgement advice states that an Acoustic Report in support of the application may be required depending on the proposed hours of operation. The proposed operating hours are 7:00am to 4:00pm 7 days a week. This is outside the sensitive time periods of the early morning, evening and nighttime periods. The only sensitive land use in proximity to the site is the caravan park to the southeast. A setback of ~50m is achieved between the proposed surf club building and the closest cabin within the holiday park. This setback contains riparian vegetation on both sides of Cascade Creek. The proposed development will not result in any unreasonable noise impacts on surrounding sensitive land uses and an Acoustic Report is not considered necessary.

135. As indicated above, the Surf Club activity will not operate outside daylight hours and therefore will only involve minimal nighttime lighting associated with the caretaker's residence and for the security of the premises. ~50m of distance and vegetation is located between the proposal and the caravan park, being the only proximate sensitive land use. Lighting will not cause any adverse impacts on the amenity of adjacent land uses.

136. The proposed Surf Club is not considered an odour causing activity or otherwise an activity that would emit other harmful airborne particles or emissions. Bins will be stored in the equipment and vehicle store and will be manoeuvred to the new vehicle turnaround area at the northern end of the lease area

for collection. The proposed waste storage and collection arrangement will avoid adverse amenity / nuisance impacts.

6.3 Off Site Impacts

137. 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

138. Based on the assessment contained within the Traffic Impact Statement (**Appendix 6**), it has been determined to adopt an intermediate access solution until Transport and Main Roads (TMR) undertake upgrades of Captain Cook Highway adjacent to the site and can provide a signalised intersection arrangement. We understand that ultimately the Captain Cook Highway will be upgraded on the site frontage and there is a desire from TMR to avoid major intersection upgrades so the department can plan, design and construct any future upgrades. It is proposed to formalise the existing left-in, left-out driveway intersection with the Highway by extending the existing concrete median to physically restrict right turns into and out of the site and improve line-marking and signage. A second right turn exit only is also proposed for north-bound traffic, clear of the left-in / left out arrangement. Swept path diagrams have been prepared for the proposed intersection arrangements and demonstrate appropriate design vehicle access and egress for the site (refer **Appendix 2**). We understand that TMR were contacted in relation to the future Captain Cook Highway upgrades, however there were no details or information available for upgrades adjacent to the site.

139. The proposed development with provide a formalised car parking arrangement including provision of 14 car parking spaces, including six (6) within the lease area and formalisation of eight (8) spaces adjacent the driveway access. This car parking provision is found to be sufficient to service the subject development, as detailed in the Traffic Impact Statement in **Appendix 6**.

140. The new Ellis Beach SLSC is proposed to be located to the north-eastern side of Captain Cook Highway in order to minimise conflicts between pedestrians travelling from the existing clubhouse on the western side of the highway to Ellis Beach (i.e. Nippers and SLSC members) and vehicular movements on the road. A protected pedestrian median crossing on Captain Cook Highway adjacent to site access is provided to facilitate safe pedestrian access across the highway. Limiting the Surf Club's primary vehicle access to a left-in / left out arrangement will minimise conflicts with the pedestrian crossing.

141. The enclosed Traffic Impact Statement (**Appendix 6**) finds that the development will provide non-worsening of traffic vehicle movements as the SLSC has a 200 person membership cap and will be a relocation of the existing clubhouse. Further, improvements in traffic conditions are proposed to and from the site due to the formalisation of the intersection arrangements.

6.3.2 Services Network – Stormwater, Water and Sewer Infrastructure

142. A Stormwater Management Plan prepared by Burchills Engineers is enclosed as **Appendix 3**. The report provides details in relation to the proposed stormwater management strategy for the development. An upstream swale is proposed to capture and divert stormwater flows away from the development footprint. Flows will be discharged to an infiltration/surcharge pit to mitigate concentrated flows and return flows back to sheet flow at the site boundary. As the lawful points of discharge are directly to

the beach and the Coral Sea, it is not considered necessary to include on-site detention. 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. The stormwater management infrastructure for the development starts at the upstream swale and ends at the surcharge pit which then lawfully discharges to the beach. As such the development is not connected to external stormwater infrastructure networks and therefore will not impact on existing stormwater infrastructure.

143. The site will be supplied water via on-site roof water collection which may be supplemented during the dry season by water drawn from an existing local supply in Spring Creek. Please refer to the Surf Club's existing water license in **Appendix 10**. Please refer to **Section 4.8** of this report for further details regarding water supply. The development is expected to generate approximately 760 litres of greywater per day which will be treated and irrigated on-site. All wastewater produced by the canteen will be directed to a holding tank for regular pump-out by a licensed liquid waste contractor. Please refer to the On-Site Wastewater Management Report in **Appendix 8** for further information. As the development will not be connected to Council's reticulated water and sewer infrastructure it will not have an impact on these existing infrastructures. It is noted that there is an existing private sewer rising main (SRM) from the Bar and Grill located on the opposite side of the Highway that discharges through the subject site. It is proposed to realign and retain the SRM through the subject site as shown in the Engineering Plans (**Appendix 2**).

6.3.3 Services Network – Telecommunications and Electricity Infrastructure

144. Please refer to page 10 of **Appendix 9,** where Telstra confirms that there are no Telstra assets within the area of the proposed works. The proposed development will not impact existing telecommunications infrastructure. Suitable telecommunication services will be provided to the proposed surf club.

145. Overhead electrical infrastructure is located along the property frontage on the opposing side of Captain Cook Highway. It is expected that the development can be supplied off this infrastructure. As shown on the Engineering Plans (**Appendix 2**), underground electrical conduits run through the development footprint to existing public infrastructure such as BBQ shelters and street/park lighting. Existing public facilities including access to electricity will be relocated as necessary.

6.4 Construction Impacts

146. 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

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

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

6.5.1 Ecology

148. The Ecological Assessment Report prepared by Burchills (**Appendix 5**), 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 *CairnsPlan 2016*.

149. As indicated within the Ecological Assessment Report, the footprint for the proposed development falls within a mostly cleared and developed area at the southern end of the site. The Ecological Assessment Report finds the following in relation to MNES, MSES and MLES:

- *The proposed development is unlikely to result in a significant impact on MNES in accordance with the MNES Significant Impact Guidelines 1.1 (Commonwealth of Australia 2013). Impacts have been avoided and minimised to the greatest extent possible.*
- *The relevant MSES to consider are High Ecological Value (HEV) Wetland mapping, Marine Plants, Threatened Wildlife and Regulated Vegetation:*
    - *The (HEV) wetland mapping is indicated along the entire far north Qld coastline. The proposal avoids and minimises impacts on HEV wetland values.*
    - *No marine plants (as defined under the Qld Fisheries Act) were detected within the study area and the works are not expected to impact on marine plants or fish habitat.*
    - *No conservation significant threatened flora or fauna species were detected within the study area and the works are not expected to impact on conservation significant threatened flora or fauna species.*
    - *Vegetation in the project area is highly modified and inclusive of hardstand areas (road and cul-de-sac head) with existing vegetation dominated by Mango trees and not representative of the mapped preclearing regional ecosystem (RE 7.3.44). The footprint for the proposed development falls within a mostly cleared area. The design has been located to avoid clearing of native vegetation in a 10m setback to Cascade Creek. Clearing of trees required for the proposed works will be mitigated through a replacement planting program using a compensatory planting ratio of at least 1:3.*
- *The site is partly located within a waterway trigger area identified in the CairnsPlan (MLES) associated with Cascade Creek. The proposed development has been designed to avoid clearing of native vegetation in a 10m setback to Cascade Ck. It is not expected that further development in this area will compromise the existing riparian values of Cascade Creek.*

150. The proposed development will not result in any significant residual impacts on MNES, MSES or MLES.

6.5.2 Acid Sulfate Soils

151. The subject site is identified as being subject to Cairns Regional 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.

152. 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

153. The subject site is identified as being within an Erosion Prone Area on the Queensland Government's Development Assessment Mapping System as well as Cairns Regional Council's overlay mapping. A Coastal Hazard Assessment has been prepared by Burchills Engineers and is enclosed as **Appendix 4** 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 from Coastal Erosion, the Coastal Hazard Assessment finds that the development will not increase the severity of coastal erosion either on or off site.

6.6 Heritage and Native Title

6.6.1 Historical Heritage

154. 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

155. 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

156. 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.

157. A Cultural Heritage Assessment Report prepared by Everick Heritage is enclosed as **Appendix 18**. The report details the results of consultation with the Djabugay Nation Native Title Claim (DNNTC) being the relevant Cultural Heritage Party for the area, desktop assessment and field survey with DNNTC representatives.

158. The report finds that there are no registered Aboriginal cultural heritage sites within the Study Area or within a buffer of 1000 m of the Study Area. Further, no archaeological sites or features were identified during the field survey with DNNTC representatives, however, mature vegetation was identified as holding cultural value to the DNNTC.

159. The Cultural Heritage Assessment Report (**Appendix 18**) provides cultural heritage management strategies to be implemented during the design and construction stages of the project, in compliance with the Aboriginal Cultural Heritage Act 2003 (Qld) (ACH Act). The recommendations aim to provide a management framework that demonstrates that reasonable and practicable measures to meet obligations under the ACH Act have been taken and will continue to be taken. The recommendations include the following:

- DNNTC representatives are engaged as cultural heritage monitors during the ground disturbing phases of the project;
- All mature vegetation is to be avoided, or, if avoidance of is not possible, additional consultation be undertaken with appropriate Elders; and,
- The report acknowledges that a degree of vegetation removal will be required to allow for the proposed project activities. The report recommends that DNNTC be provided with the opportunity to have input on the selection of the vegetation removal contractor with selection of a local Aboriginal-owned business being preferred.

7. Consultation Strategy

160. 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

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

- Government Departments
  - Cairns Regional Council
  - Department of State Development, Infrastructure, Local Government and Planning
- Elected Representatives
  - Local Councillor - Cr Brett Olds – Cairns Regional Council (Division 9)
  - State Member for Barron River: Mr Craig Crawford MP
  - Federal Member for Leichardt Mr Warren Entsch MP
- Other Stakeholders
  - Adjoining landowners
  - Surrounding landowners
  - Local operators/businesses
- Cultural Heritage Party
  - Yirrganydji Gurabana Aboriginal Corporation
  - Djabugay Aboriginal Corporation

7.2 Preliminary Stakeholder Engagement

162. In accordance with DSDILGP's Written Advice dated 07 June 2023, the following Preliminary Stakeholder Engagement activities were required to be undertaken prior to requesting the Endorsement to lodge a MID proposal:

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

163. As outlined in **Section 2.2.2** (Preliminary Stakeholder Engagement) of this EAR, Cairns Reginal Council issued preliminary comments (refer **Appendix 15**) outside of the Preliminary Stakeholder Engagement period. A response to Council's comments has been provided below in **Section 7.2.1** of this report. Additionally, further correspondence was received from the office of Mr. Craig Crawford MP, State Member for Barron River in support of the proposal (refer **Appendix 16**), noting that this too was received after the Preliminary Stakeholder Engagement period had concluded. Everick Heritage also undertook consultation with the Djabugay Nation Native Title Claim (DNNTC), being the relevant Cultural Heritage Party for the area. Please refer to the Cultural Heritage Assessment Report (**Appendix 18**) for further details.

7.2.1 Response to Cairns Regional Council Preliminary Comments

164. **Table 13** below includes Council's preliminary comments received on 04 August 2023 as well as a response to each comment:

Table 13 Response to Council Preliminary Stakeholder Engagement Comments

Council Comment	Response
Ellis Beach Foreshore Council is currently preparing the Ellis Beach foreshore and Landscape Improvement Plan which considers the existing needs at Ellis Beach and the future impacts of the Wangetti Trail (Section 1 will be in Ellis Beach). The proposal plans for the relocation of the Ellis Beach Surf Lifesaving Club present some conflicts with the draft plans prepared by Council. It is recommended that the developer engages with Council's Project Management Office on the design of the proposed development to ensure it complements the Foreshore and Landscape Improvement Plans.	Representatives of Ellis Beach Surf Club attended a Council meeting during the consultant phase for the foreshore and landscape improvement plan. Council presented their draft plan for the area; however, no copies of any documentation was provided to the club. We understand that it was requested at the meeting that Council hatch / cloud their drawings to illustrate the proposed lease area for the Surf Club and make notation that future development is planned. We understand the plans for the Surf Club were shared with Council who were excited by the design and overall proposal. It is noted that the Ellis Beach Foreshore and Landscape Improvement Plan is in draft format only. As previously detailed, the proposed relocation of the Surf Club is critical for public safety reasons and the proposed Surf Club can be accommodated in the adopted version of the Ellis Beach Foreshore and Landscape Improvement Plan.
Coastal Processes Overlay Council raises concerns regarding the ability of the development to reduce risk/minimise exposure to people and property from coastal processes. The development is within an erosion prone area and would result in the intensification of development within an erosion prone area. Additionally, it is not considered to be coastal dependent development nor is it temporary or readily relocatable. Further information is requested detailing how the development will manage the risks from being within an erosion prone area and detail if any coastal protection works are required as a result of the development. Should the development proceed, the development must maintain the amenity and use of the beach and take into consideration the need to allow for natural fluctuations of the coast, including allowances for climate change and sea level rise.	A Coastal Hazard Assessment has been prepared by Burchills Engineers and is enclosed as **Appendix 4**. The report provides an assessment of potential coastal hazard impacts upon the future Surf Life Saving Club as a result of erosion, storm tide inundation and the site's location within a Coastal Management District and Council's Coastal Processes Overlay. The report finds that the development can be undertaken without ssignificant risk or impacts to people or property. A full assessment demonstrating compliance with the Coastal Processes Overlay Code is provided within the Coastal Hazard Assessment. 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 proposed Surf Club is coastal-dependent development. The development maintains the amenity and use of the beach. The proposed development will enhance the use of the beach by providing an improved surf club to contribute to the safe use of Ellis Beach.

Council Comment	Response
Landscape Values The proposed location of the building is within the Coastal Scenery Zone. The purpose of the Landscape Values Overlay Code requires that the landscape values of the Coastal Scenery Zone are managed to integrate and limit the visual impact of the development and that the coastal landscape character is predominantly natural and undeveloped in appearance to retain the natural landscape character. Development should also be consistent with the prevailing landscape character of its setting and be neither visually dominant nor visually intrusive. It is recommended that a Visual Impact Assessment is prepared in accordance with the Planning Scheme Policy – Landscape Values to demonstrate compliance with Performance Outcomes PO3 and PO4 and the Landscape Values Overlay Code more broadly.	Compliance with PO3 is achieved by meeting acceptable outcomes AO3.1 and AO3.2. AO3.1 requires the dominance of the natural character of the coast to be maintained or enhanced when viewed from the foreshore. The proposed development is for a relatively small, low height building proposed within a vegetated and landscaped environment. The footprint for the development falls within a mostly cleared area that is highly modified with driveway, car parking, cul-de-sac head and other public infrastructure. Vegetation is dominated by Mango trees and not representative of the preclearing regional ecosystem (refer **Appendix 5**). The site will be landscaped with suitable tropical, water tolerant species. The proposal complies with AO3.1. AO3.2 requires setbacks from the foreshore consistent with that of adjoining buildings and structures. The proposal is setback consistent with existing structures in the adjoining holiday park and is therefore complaint with AO3.2. PO4 requires development to maximise opportunities to maintain and/or enhance natural landscape values through the maintenance and restoration of vegetated buffers between development and coastal waters where practicable. Vegetation clearing is avoided and minimized (refer **Appendix 5**). Any minimal clearing of vegetation required for the proposed works will be mitigated through a replacement planting program using a compensatory planting ratio of 1:3 within the lease area. The proposal complies with PO4. A Visual Impact Assessment has not been provided; however, the proposed development complies with the Landscape Values Overlay.
Natural Areas The development is within an area identified as MLES – Non-urban waterway trigger area, MSES – regulated vegetation (Category R) and is adjacent to high ecological value waters (wetland). The development should be accompanied by an Ecological Assessment Report to demonstrate that there will be no direct and indirect adverse impacts on areas of environmental significance (both on-site and off-site) or the quality and integrity of water in the	Please refer to the Ecological Assessment Report in **Appendix 5**. The footprint for the development falls within a mostly cleared area that is highly modified with driveway, car parking, cul-de-sac head and other public infrastructure. Vegetation is dominated by Mango trees and not representative of the preclearing regional ecosystem. Please also refer to the proposed stormwater management strategy detailed in **Appendix 3**.

Council Comment	Response
Great Barrier Reef World Heritage Area, that the ecological and hydrological functions of waterways, wetlands and waterway corridors are maintained and rehabilitation of degraded areas of environmental significance is undertaken and to offset the impacts of the development. *Planning Scheme Policy – Natural Environment* provides guidance on preparing an ecological assessment report.	
Geotechnical Requirements While the development would be outside of the Potential Landslip Hazard Overlay area, any earthworks on the site should be supported by a Geotechnical Report that demonstrates the stability of the in-situ material (sand).	Please refer to **Appendix 8**. Six (6) boreholes were undertaken at the site to a maximum depth of 1.0m below the ground surface. In a number of the boreholes, rock was encountered 0.2m – 0.7m below ground surface. In addition, Council's storm tide mapping identifies that the site is situated in close proximity to mapped bedrock. In accordance with the Coastal Hazard Assessment (**Appendix 4**) and as shown on the Architectural Plans (**Appendix 1**) foundations (piles) will be sunk a minimum of 300mm into the bedrock layer to ensure the stability of the development.
Water and Sewerage A water supply connection is required to service the development so that it has an adequate, safe and reliable supply of potable, firefighting and general use water. It is noted that the Ellis Beach area is not serviced by Council's reticulated water supply network. As such, on-site water storage tank(s) must be supplied and installed with sufficient capacity to service the development. Additionally, the Ellis Beach area is not serviced by sewer infrastructure and an on-site sewage facility or similar is required for treating and disposing of sewage. An On-Site Sewerage Disposal Report should be prepared in accordance with the Plumbing and Drainage Act 2018 and any relevant requirements of the FNQROC Development Manual to ensure the development is provided with an adequate facility for treatment and disposal of wastewater. Additionally, a grease trap will be required to capture water-borne waste (liquid) discharged from the premises. The development will need to be designed to be serviced by bulk bins for both waste and recycling and be collected by a private waste contractor. The bulk bin storage facilities must be designed, located and managed to avoid adverse impacts on the development, the neighbouring development and	The site will be supplied water via on-site roof water collection which may be supplemented during the dry season by water drawn from an existing local supply in Spring Creek. Please refer to the Surf Club's existing water license in **Appendix 10**. Please refer to **Section 4.8** of this report for further details. The development is expected to generate approximately 760 litres of greywater per day which will be treated and irrigated on-site. All wastewater produced by the canteen will be directed to a holding tank for regular pump-out by a licensed liquid waste contractor. Please refer to the On-Site Wastewater Management Report in **Appendix 8** for further information. Bins will be stored in the equipment and vehicle store and will be maneuvered to the new vehicle turnaround area at the northern end of the lease area for collection. Service vehicle maneuvering is demonstrated within the Engineering Plans in **Appendix 2**.

Council Comment	Response
public spaces and allow for safe and efficient collection of the bins.	
Traffic The land achieves direct access from a State-Controlled Road and it is acknowledged that the Department of Transport and Main Roads will address requirements for traffic matters. The driveway must be designed and constructed in accordance with the Planning Scheme and FNQROC Development Manual to a commercial/industrial standard. The development must provide on-site carparking and bicycle spaces not less than the minimum rates outlined in Table 9.3.7.3.b and Table 9.3.7.3.c of the Parking and Access Code in the Planning Scheme. Where there is a shortfall of carparking and/or bicycle spaces, it should be demonstrated that there are sufficient spaces to accommodate the demand generated by the development. The carparking spaces and layout must be designed in accordance with the AS2890.1:2004 Parking Facilities – Off-Street Car Parking, AS2890.6:2009 – Parking Facilities Off-street Parking for People with Disabilities, Austroads and good engineering design. Space must be provided on-site for vehicles to turn around so that all vehicle(s) anticipated to utilise the development (including service and refuse collection vehicles) can enter and exit in a forward direction. It is suggested that vehicle swept path plan(s) be prepared to demonstrate that this can occur. Swept paths should also be provided for the ingress/egress to the site and demonstrate that manoeuvring/circulation clearances are not encroached. All parking, queuing, loading, servicing, unloading and vehicle manoeuvring areas must be provided within the development's use area.	Please refer to the Traffic Impact Statement in **Appendix 6** and the Engineering Plans in **Appendix 2**. The Driveway and car parking has been appropriately designed as demonstrated by the Engineering Plans in **Appendix 2**. The Traffic Impact Statement finds the car parking provision proposed to be sufficient. There is ample space within the lease area to accommodate two (2) bicycle parking spaces. Vehicle swept paths are provided within the Engineering Plans in **Appendix 2**.
Drainage & Flooding Council's flood searches indicate that the site is located within the 1% AEP storm surge flood event. The estimated 1% AEP storm surge level in the general area is approximately 3.7 metres AHD to 3.9 metres AHD. Where located within the flood and inundation area, the finished floor level of all buildings must be a minimum of 300mm above the defined inundation event level. All car parking areas must be at or above the 5% AEP defined inundation event level. The Applicant/Developer must prepare a Drainage Plan for the land and associated design which provides for a stormwater point of discharge. The Drainage Plan must	As shown on the Architectural Plans in **Appendix 1**, the ground floor level is proposed at 4.6m AHD, which is greater than 300mm above the 1% AEP. The levels of the proposed car parking areas are shown on the Engineering Plans in **Appendix 2** and provide appropriate flood immunity. A Stormwater Management Plan prepared by Burchills Engineers is enclosed as **Appendix 3**. An upstream swale is proposed to capture and divert stormwater flows away from the development footprint. Flows will be discharged to an infiltration/surcharge pit to mitigate concentrated flows and return flows back to sheet flow at the site

Council Comment	Response
address the following: (a) All internal and external contributing catchment boundaries; (b) Provide flow paths and grading of the site, demonstrating that it is free draining; (c) Demonstrate any work (including grading of the site) required to direct runoff to a lawful point of discharge. The Drainage Plan (and associated site levels/grading plan) must demonstrate that all necessary drainage management is designed in accordance with Section D4 of the FNQROC Development Manual.	boundary. As the lawful points of discharge are directly to the beach and the Coral Sea, it is not considered necessary to include on-site detention. The *State Planning Policy (2017)* assessment benchmarks don't require water quality treatment for the proposed development. A Stormwater Drainage Layout Plan, Long Section and Details are also provided within the Engineering Plans in **Appendix 2**.

7.3 Proposed Consultation Strategy

165. **Tables 14 and 15** 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 14 Consultation Strategy

Activity	Description	Affected party
Sign on Land	• Place sign on the site. • Sign Notice will be in accordance with the template provided by DSDILGP and will outline: - 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.	• Cairns local community.
Webpage/Social Media	• ASTP webpage/social media will outline: - 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 Cairns Regional Council's and DSDILPG to upload on their respective websites	• General community
Publish Public Notice	• Digitally publish public notice in the local newspaper (eg. Cairns Post). • 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 DSDILGP, and will outline:	• Cairns local community

Activity	Description	Affected party
	- 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.	
Letter to Stakeholders	• Notice to be sent via Registered Mail or publicly available email to the identified stakeholders (refer to **Table 15**) • The Letter will be in accordance with the template provided by DSDILGP and will outline: - 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	• All parties identified in **Table 15**
Consideration of Submissions	• 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.	• All

Table 15 Stakeholders for Consultation

Stakeholder	Description
Surrounding landholders and affected entities	The plan within **Appendix 14** 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: ○ Local Councillor - Cr Brett Olds – Cairns Regional Council (Division 9). ○ State Member for Barron River: Mr Craig Crawford MP. ○ Federal Member for Leichardt Mr Warren Entsch MP.
Native title party/ Traditional owners	The following will be sent letters via publicly available email or via registered post: ○ Yirrganydji Gurabana Aboriginal Corporation; and ○ Djabugay Nation Native Title Claim

166. In addition to the above, the Minister will also undertake consultation by writing to Cairns Regional Council and landowners inviting submission on the MID. DSDILGP will also seek comments from the relevant State Agencies.

8. Conclusion and Recommendations

167. The Infrastructure Entity for the proposed Ministerial Infrastructure Designation is the Ellis Beach Surf Life Saving Club Inc. This EAR has been prepared by ADAMS + SPARKES Town Planning for and on behalf of the Infrastructure Entity.

168. In accordance with Section 2, Part 5 of the *Planning Act 2016*, Ellis Beach Surf Life Saving Club Inc seeks approval from the Minister for the Department of State Development, Infrastructure, Local Government and Planning to designate the portion of land situated on unallocated State Land adjacent (north-west) to Lot 22 on SP147762 and across the road (north-east) to Lot 13 on NR5512, for the purpose of '*community and cultural facilities, including community centres, galleries, libraries and meeting halls*' and '*sporting facilities*'.

169. 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, Far North Queensland Regional Plan, State Development Assessment Provisions; and,
- Local Government – CairnsPlan 2016.

170. In addition, this EAR details known and anticipated impacts that may occur as a result of the development, with the findings indicating that the relocation of the Ellis Beach SLSC to the proposed site 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.

171. 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

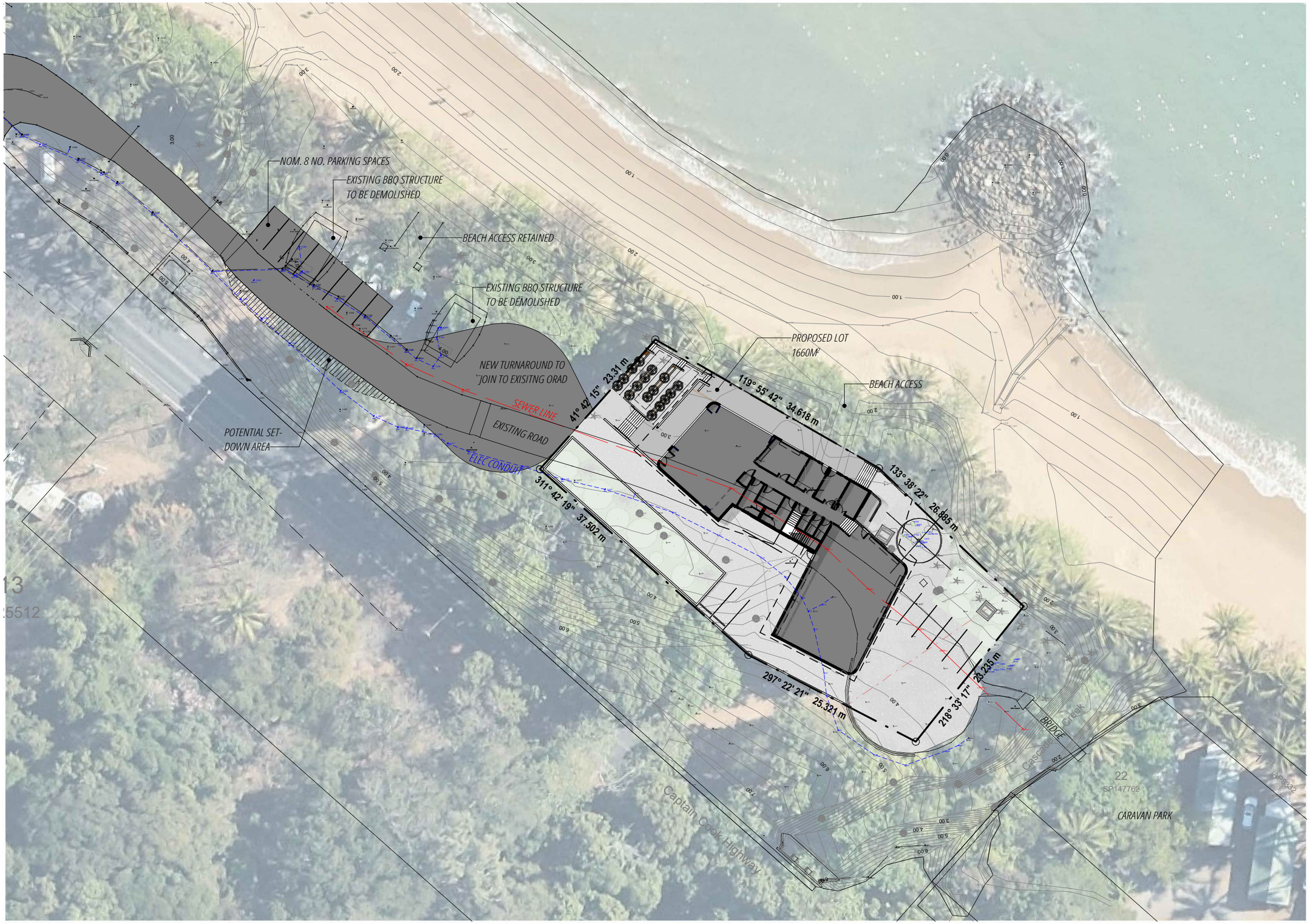


Adam Seaton
SENIOR TOWN PLANNER

Appendix 1

Architectural Plans prepared by Clarke and Prince Architects

adams+sparkes
TOWN PLANNING



1 A109 **SITE PLAN**
SCALE - 1 : 500

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	06-04-2023
P2	CLIENT ISSUE	04-05-2023
P3	FOR DISCUSSION	20-06-2023

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DRAWN	BM	SCALE 1 : 500	SIZE A3
APPROVED	DI	DATE MARCH 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE PLAN**
DWG No. **1531-SD A101** | STAMP PRELIMINARY | ISSUE **P3**

EQUIPMENT

A. SURFBOAT (2 NO.)
B. IRB (3 NO.)
C. DOUBLE SKI (4 NO.)
D. SINGLE SKI (20 NO.)
E. ATV (1 NO.)
F. RACING PADDLE BOARD (MAL) (30 NO.)
G. NIPPER BOARDS (30 NO.)
H. FOAM BOARDS (30 NO.)



2 0 2 4 6 8 10M
SCALE 1:200 AT A3

1 A109.1 **FLOOR PLAN - GROUND FLOOR**
SCALE - 1 : 200

ROOMS

01. FUNCTION SPACE
02. CANTEEN
03. TRAINING STORE
04. MALE BATHROOM
05. PWD
06. FEMALE BATHROOM
07. PATROL
08. FIRST AID
09. STORE
10. CHANGE ROOM 1
11. CHANGE ROOM 2
12. CHANGE ROOM 3
13. STAIRS
14. EQUIPMENT AND VEHICLE STORE
15. HOT WATER/MSB
16. SHOWERS
17. RAMP
18. ENTRY STAIRS
19. TRANSPIRATION
20. CLEANER'S

GROUND FLOOR AREA SCHEDULE

CANTEEN	24 m²
PWD	8 m²
MALE BATHROOM	10 m²
FEMALE BATHROOM	10 m²
TRAINING STORE	9 m²
FUNCTION SPACE	115 m²
PATROL	13 m²
FIRST AID	13 m²
STORE	12 m²
EQUIPMENT STORE	208 m²
CHANGE ROOM 1	3 m²
CHANGE ROOM 2	3 m²
CHANGE ROOM 3	3 m²
SHOWERS	8 m²
CLEANER'S	2 m²
STAIRS	12 m²

TOTAL APPROX. 456 m²
* NOT INCLUDING WALLS OR CORRIDOR

AMENDMENTS		DATE
P2	PRELIMINARY ISSUE	12-04-2023
P3	PRELIMINARY ISSUE	17-04-2023
P4	PRELIMINARY ISSUE	19-04-2023
P5	CLIENT ISSUE	04-05-2023
P6	PRELIM ISSUE	06-10-2023

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APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **FLOOR PLAN - GROUND**
DWG No. **1531-SD A106** | STAMP PRELIMINARY | ISSUE **P6**



2 0 2 4 6 8 10M

SCALE 1:200 AT A3

ROOMS

01. DINING
02. KITCHEN
03. LAUNDRY
04. LIVING
05. CORRIDOR
06. BEDROOM 1
07. BATHROOM
08. BEDROOM 2
09. STORE
10. DECK

FIRST FLOOR AREA SCHEDULE	
BED 1	14 m²
DINING	6 m²
LAUNDRY	8 m²
BATHROOM	6 m²
CORRIDOR	19 m²
BED 2	12 m²
KITCHEN	11 m²
LIVING	6 m²
STORE	3 m²
DECK	20 m²
TOTAL APPROX.	* 105 m²

* NOT INCLUDING WALLS OR STAIRS

3 / A109 **FLOOR PLAN - FIRST FLOOR**

SCALE - 1 : 200

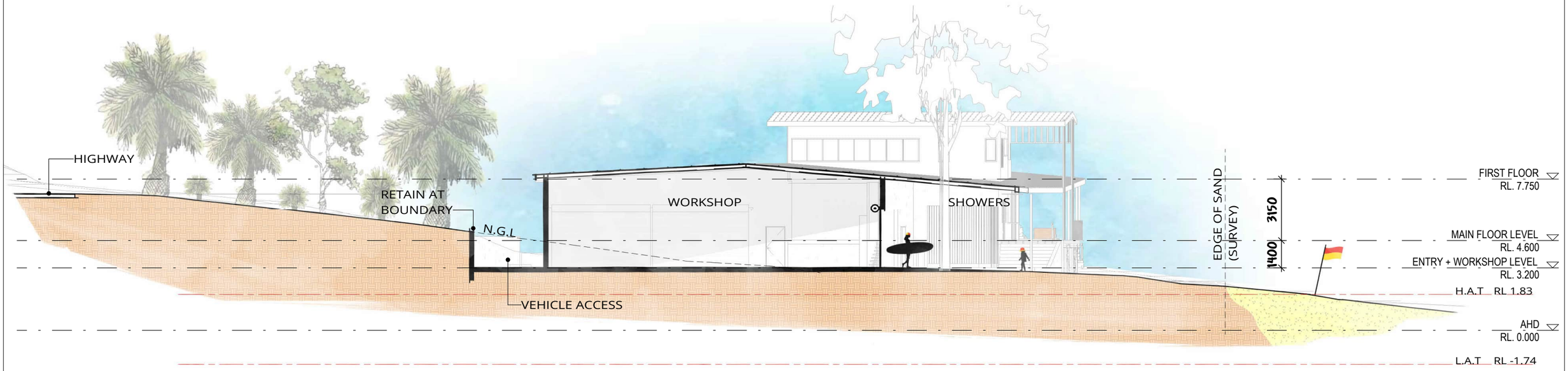
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P2	PRELIMINARY ISSUE	17-04-2023
P3	PRELIMINARY ISSUE	19-04-2023
P4	CLIENT ISSUE	04-05-2023

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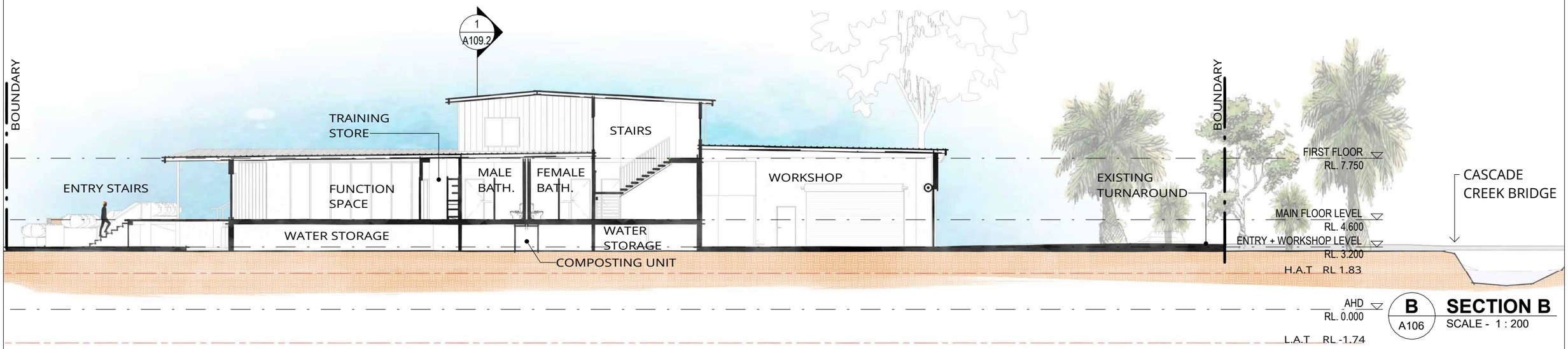
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APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **FLOOR PLAN - FIRST FLOOR**
DWG No. **1531-SD A107** | STAMP PRELIMINARY | ISSUE **P4**



A A106 **SECTION A**
SCALE - 1 : 200



B A106 **SECTION B**
SCALE - 1 : 200

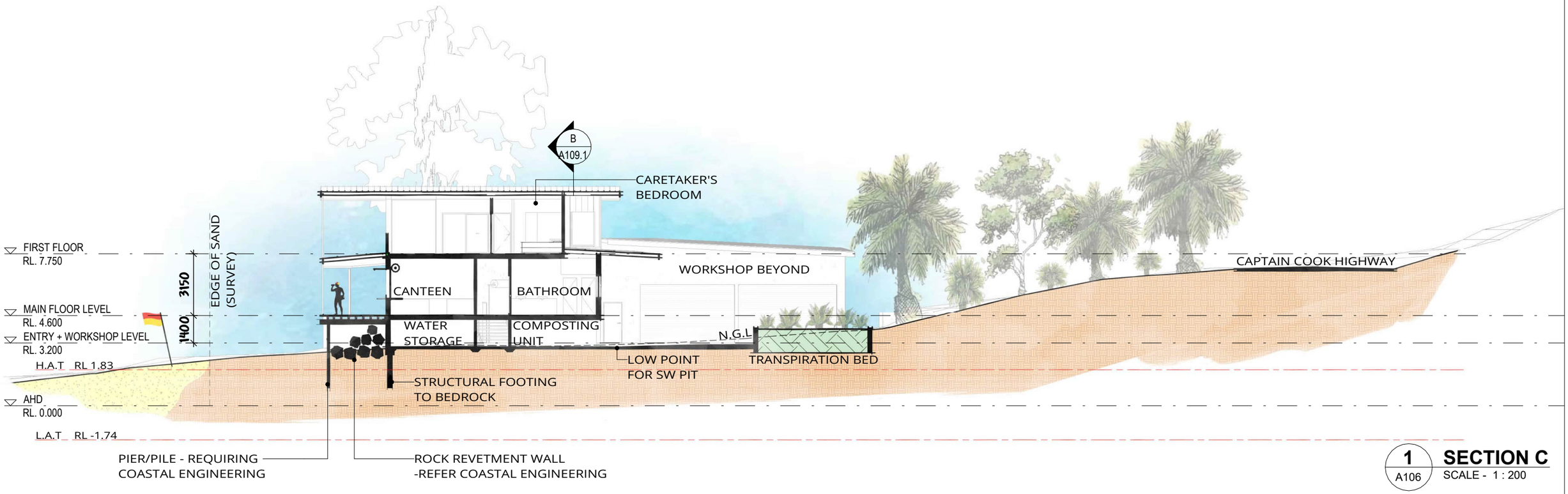
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	19-04-2023
P2	CLIENT ISSUE	04-05-2023
P3	TIDE LEVELS ADDED	21-09-2023

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APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE SECTIONS**
DWG No. **1531-SD A109.1** | STAMP PRELIMINARY | ISSUE **P3**



1 / A106 **SECTION C**
SCALE - 1 : 200

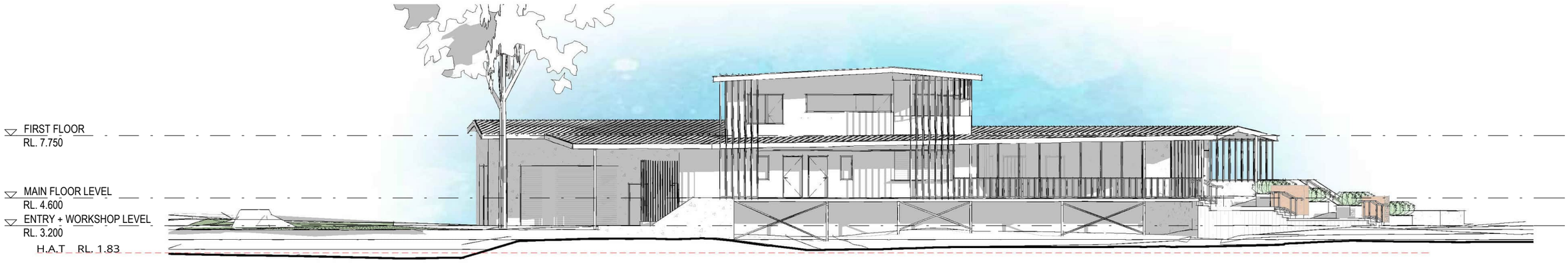
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	19-04-2023
P2	CLIENT ISSUE	04-05-2023
P3	TIDE LEVELS ADDED	21-09-2023

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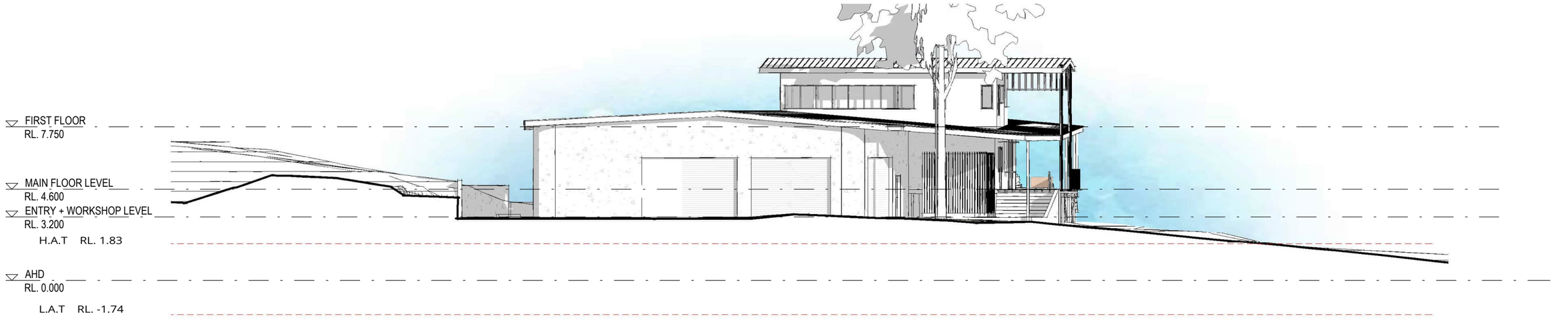
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PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE SECTIONS**
DWG No. **1531-SD A109.2** | STAMP PRELIMINARY | ISSUE **P3**



1 / A106 **ELEVATION A**
SCALE - 1 : 200



2 / A106 **ELEVATION B**
SCALE - 1 : 200

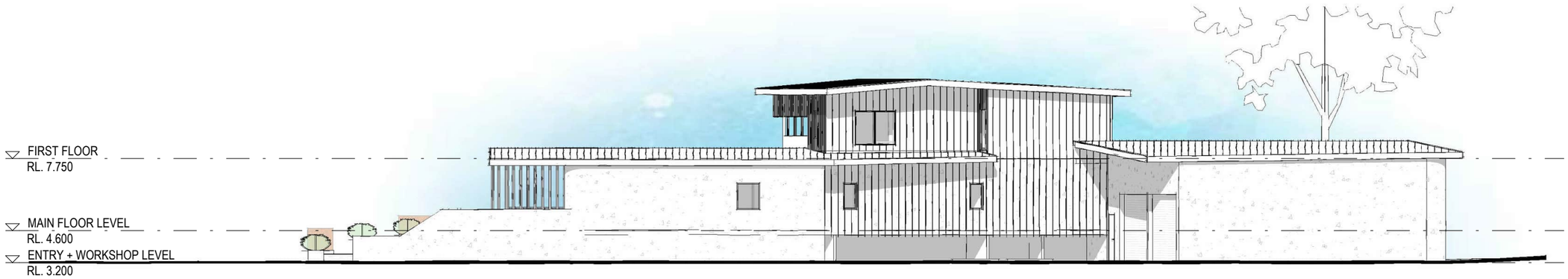
AMENDMENTS		DATE
P1	CLIENT ISSUE	04-05-2023
P2	TIDE LEVELS ADDED	21-09-2023

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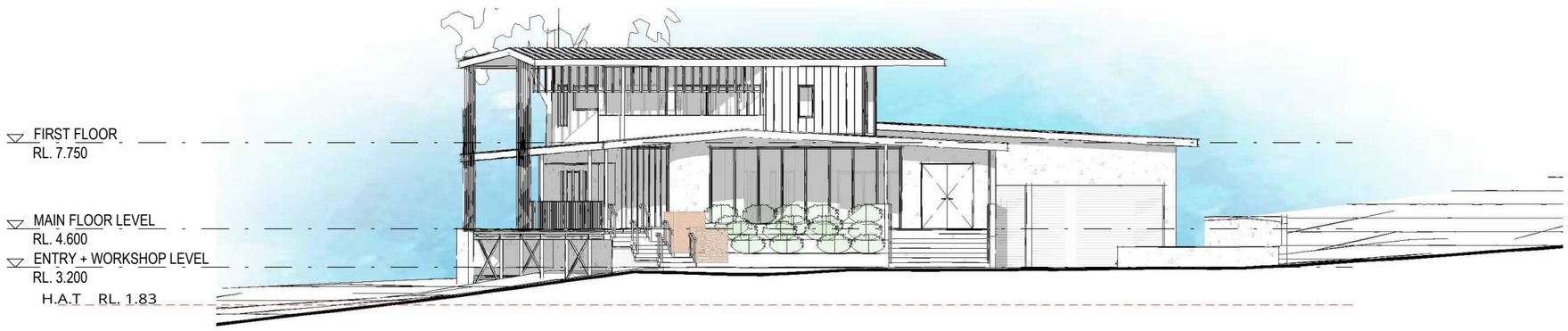
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APPROVED	DI	DATE	MAY 2023

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **ELEVATIONS**
DWG No. **1531-SD A110.1** | STAMP PRELIMINARY | ISSUE **P2**



1 / A106 **ELEVATION C**
SCALE - 1 : 200



2 / A106 **ELEVATION D**
SCALE - 1 : 200

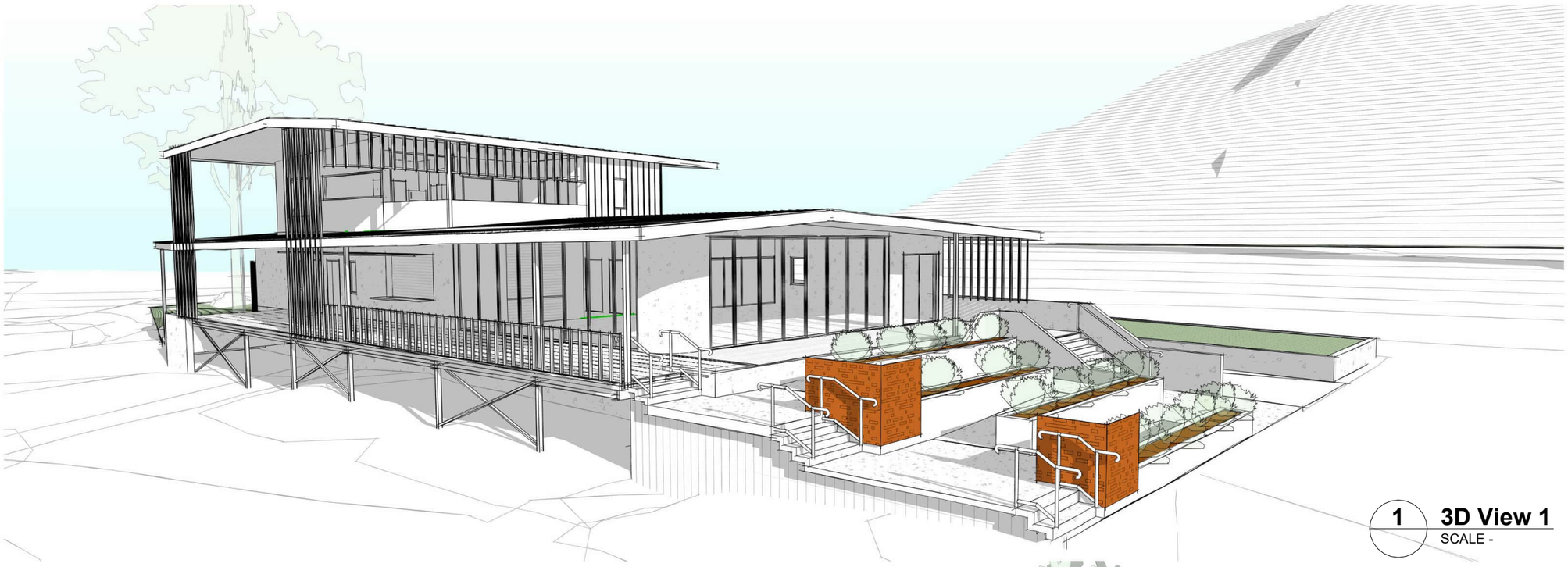
AMENDMENTS	DATE
P1 TIDE LEVELS ADDED	21-09-2023

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APPROVED DI	DATE MAY 2023		

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **ELEVATIONS**
DWG No. **1531-SD A110.2** | STAMP PRELIMINARY | ISSUE **P1**



1 **3D View 1**
SCALE -



2 **3D VIEW 2**
SCALE -

AMENDMENTS	DATE
P1 CLIENT ISSUE	04-05-2023

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APPROVED	DI	DATE	MAY 2023

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **3D PERSPECTIVES**
DWG No. **1531-SD A111** | STAMP PRELIMINARY | ISSUE **P1**



1 A109 **MASTERPLAN**
SCALE - 1 : 1000

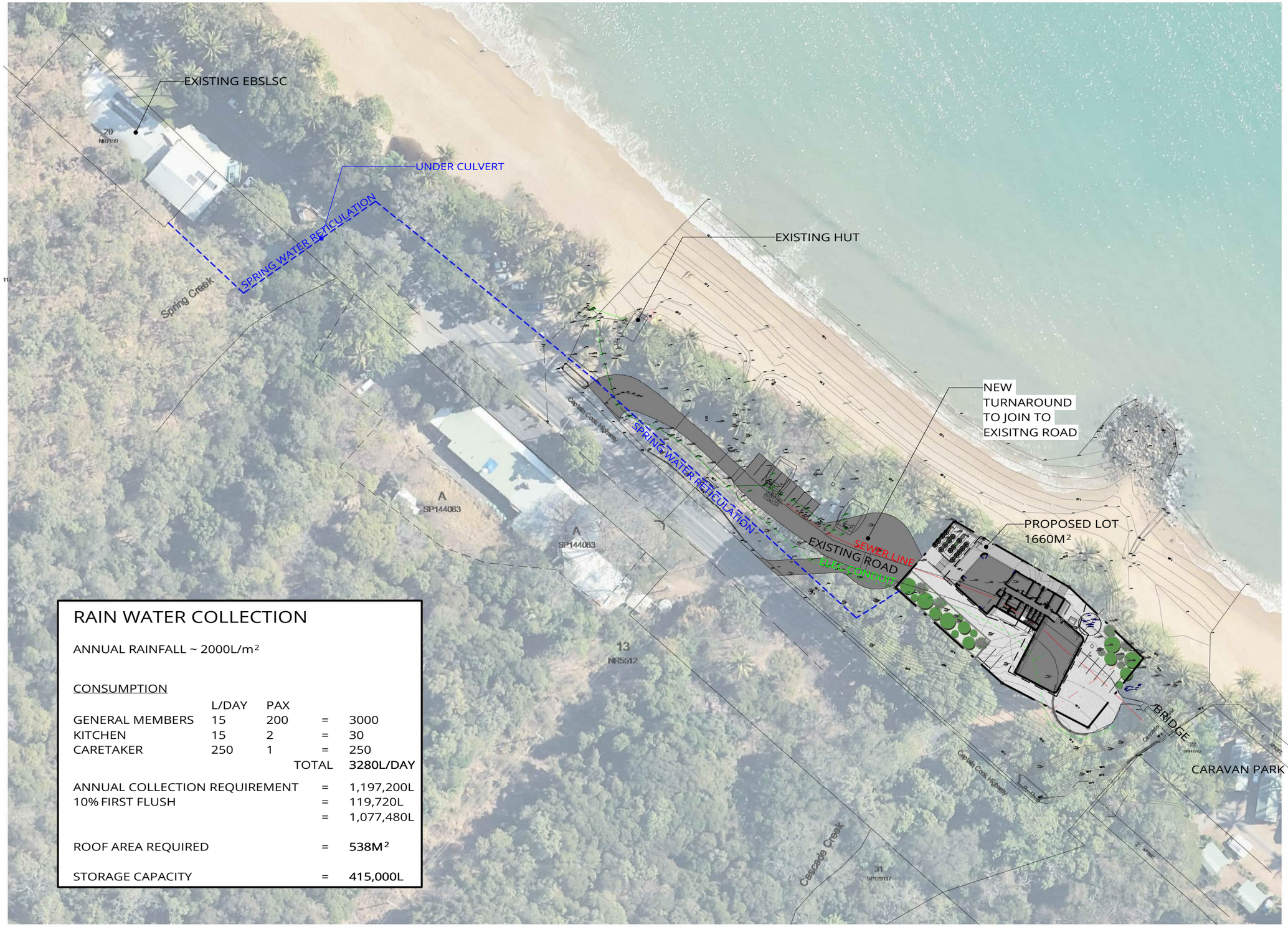
AMENDMENTS		DATE
P1	FOR DISCUSSION	20-06-2023
P2	INTERSECTION UPDATE	30-06-2023

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APPROVED	DI	DATE MARCH 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **MASTERPLAN**
DWG No. **1531-SD A113** | STAMP PRELIMINARY | ISSUE **P2**



RAIN WATER COLLECTION

ANNUAL RAINFALL ~ 2000L/m²

CONSUMPTION

	L/DAY	PAX		
GENERAL MEMBERS	15	200	=	3000
KITCHEN	15	2	=	30
CARETAKER	250	1	=	250
			TOTAL	3280L/DAY
ANNUAL COLLECTION REQUIREMENT			=	1,197,200L
10% FIRST FLUSH			=	119,720L
			=	1,077,480L
ROOF AREA REQUIRED			=	538M²
STORAGE CAPACITY			=	415,000L

1 / A109.1 **WATER RETIC.**
SCALE - 1 : 1000

AMENDMENTS	DATE
P1 PRELIM ISSUE	06-10-2023

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DRAWN	BM	SCALE 1 : 1000	SIZE A3
APPROVED	DI	DATE	OCT 2023

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **WATER RETICULATION**
DWG No. **1531-SD A115** | STAMP PRELIMINARY | ISSUE **P1**

Appendix 2

Civil Engineering Plans prepared by Burchills

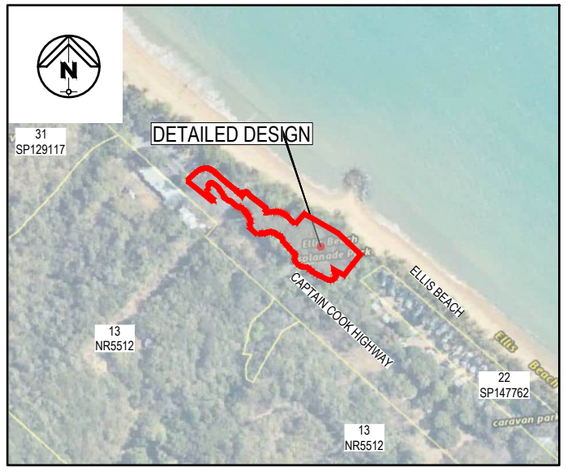
adams+sparkes
TOWN PLANNING

PROPOSED DEVELOPMENT,
AT ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH, QUEENSLAND

ROADWORKS AND CIVIL SERVICES
DETAILED DESIGN

GENERAL NOTES:

1. CONTRACT DOCUMENTATION
   ALL DRAWINGS UNDER THIS CONTRACT ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATION.
2. SURVEY INFORMATION
   CONTROL SURVEY INFORMATION WILL BE ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   ALL LEVELS SHOWN ON DRAWINGS ARE A.H.D. (DERIVED).
4. EXISTING SURVEY CONTROL STATIONS
   THE CONTRACTOR IS TO ENSURE THAT SURVEY CONTROL STATIONS ARE NOT DAMAGED OR DISTURBED IN ANY WAY BY CONSTRUCTION ACTIVITIES.
5. EXISTING SERVICES
   EXISTING SERVICES LOCATIONS WHERE SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL CONTACT THE RELEVANT AUTHORITIES AND UNDERTAKE A DIAL-BEFORE-YOU-DIG SEARCH TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING SERVICES.
6. SITE ACCESS
   THE CONTRACTOR SHALL GAIN ACCESS TO THE SITE AT LOCATIONS APPROVED BY THE SUPERINTENDENT. FREEDOM OF ACCESS TO OTHER WORK AREAS ON THE SITE SHALL BE MAINTAINED AT ALL TIMES.
7. PROVISION FOR TRAFFIC
   PROVISION FOR TRAFFIC ON LOCAL ROADS IS TO BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND LOCAL AUTHORITY REQUIREMENTS.
8. WORK BOUNDARIES
   THE CONTRACTOR IS TO RESTRICT ACTIVITIES TO THOSE AREAS DESIGNATED AS WORK AREAS UNDER THIS CONTRACT. AT NO TIME SHALL THE CONTRACTOR ENTER ADJOINING PROPERTIES OR CONTRACT WORK AREAS ON THE SITE WITHOUT WRITTEN AUTHORISATION FROM THE SUPERINTENDENT.
9. TOPSOIL STRIPPING
   ALL TOPSOIL STRIPPED FROM WORK AREAS SHALL BE STOCKPILED FOR LATER RE-SPREADING TO ALL FOOTPATHS, BATTERS AND ALLOTMENTS.
10. EARTHWORKS (GENERAL)
    ALL FILL MATERIAL PLACED SHALL BE COMPACTED AND TRIMMED TO FINAL EARTHWORKS LEVELS AND PROFILES SHOWN ON THE CONTRACT DRAWINGS AND TESTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
    ALL COMPACTION TESTING UNDER THIS CONTRACT IS TO BE CARRIED OUT TO AS3798 LEVEL 1 STANDARD BY A NATA-ACCREDITED TESTING AUTHORITY. CERTIFICATION FOR ALL EARTHWORKS CONSTRUCTION AND TESTING IS TO BE PROVIDED BY A REGISTERED PROFESSIONAL ENGINEER QUEENSLAND (RPEQ) ENGAGED BY THE CONTRACTOR.
11. COMPACTION STANDARDS
    ALL FILL MATERIAL PLACED UNDER THIS CONTRACT SHALL BE COMPACTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND CURRENT COUNCIL STANDARDS.
12. STORMWATER DRAINAGE
    LOCATION AND ALIGNMENT OF ALL STORMWATER DRAINLINES IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO EXCAVATION. THE DESIGN SURFACE LEVELS OF MANHOLES AND OTHER STRUCTURES ARE TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT. ALL DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH COUNCIL STANDARD DRAWINGS AND SPECIFICATION.
13. SEWERAGE RETICULATION
    THE DESIGN SURFACE LEVELS OF SEWER MANHOLES ARE TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION. ALL SEWERAGE RETICULATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT CAIRNS REGIONAL COUNCIL AND FNQROC SEWERAGE RETICULATION SPECIFICATIONS AND ASSOCIATED STANDARD DRAWINGS.
14. ELECTRICAL RETICULATION
    ALIGNMENTS OF ALL CONDUIT CROSSINGS ARE TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO EXCAVATION. ALL TRENCHING AND CONDUIT WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT CONSULTANT'S DRAWINGS AND ENERGEX SPECIFICATION "UNDERGROUND DISTRIBUTION CONSTRUCTION."
15. TESTING
    ALL TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND COUNCIL STANDARDS.
16. "AS CONSTRUCTED" SURVEY
    "AS CONSTRUCTED" SURVEY SHALL BE CARRIED OUT BY THE PRINCIPAL'S SURVEYOR AS WORK PROCEEDS.
17. MAINTENANCE OF SITE CONDITION
    AT THE COMPLETION OF WORKS THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT AND RELEVANT COUNCIL REPRESENTATIVE.



LOCALITY PLAN

N.T.S.

SURVEY	
PROVIDED BY:	[MD LAND SURVEYS] P/L
REPORT No:	[1284/10]
DATE:	04-08-2023
SYSTEM:	[CONFIRM FROM REPORT]

DRAWING INDEX

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103	EARTHWORKS SECTIONS
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250	EROSION AND SEDIMENT CONTROL PLAN
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PREPARED FOR

SURF LIFE SAVING
QUEENSLAND

PREPARED BY

BURCHILLS
ENGINEERING SOLUTIONS

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ABN 76 166 942 365

DATE : 25-08-23

PROJECT No.:	DRAWING No. :	VERSION:
BE220596	000	A

GENERAL EARTHWORKS NOTES:

1. ALL EARTHWORKS CONSTRUCTION UNDER THIS CONTRACT IS TO BE PERFORMED STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY THE PRINCIPAL'S GEOTECHNICAL CONSULTANT.
2. ALL COMPACTION TESTING UNDER THIS CONTRACT IS TO BE CARRIED OUT TO AS3798 LEVEL 1 STANDARD BY A NATA-ACCREDITED TESTING AUTHORITY. CERTIFICATION FOR ALL EARTHWORKS CONSTRUCTION AND TESTING IS TO BE PROVIDED BY A REGISTERED PROFESSIONAL ENGINEER QUEENSLAND (RPEQ) ENGAGED BY THE CONTRACTOR.
3. ALL DESIGN LEVELS SHOWN ON THE CONTRACT DRAWINGS ARE FINISHED SURFACE LEVELS FOLLOWING TOPSOIL REPLACEMENT.
4. ALL STRUCTURAL FILL MATERIAL PLACED SHALL BE COMPACTED TO THE FOLLOWING MINIMUM DENSITY IN ACCORDANCE WITH THE SPECIFICATION AND THE GEOTECHNICAL REPORT:

a) 95% DENSITY RATIO FOR GENERAL STRUCTURAL FILL (COHESIVE MATERIAL)
b) 98% DENSITY RATIO FOR THE TOP 300mm DEPTH BELOW PAVEMENT SUBGRADE LEVEL (COHESIVE MATERIAL)

5. FILL MATERIAL USED IN WETLAND BATTERS IS TO BE STIFF TO HARD CLAYS OR OTHER SUITABLE MATERIAL AS DIRECTED BY GEOTECHNICAL ENGINEER.
6. ALL EARTHWORKS BATTERS STEEPER THAN 1 IN 4 ARE TO BE LANDSCAPED IN ACCORDANCE WITH LANDSCAPE ARCHITECTS PLANS.
7. EXISTING DAMS ARE TO BE DE-WATERED AND CLEANED-OUT. ALL UNSUITABLE OR SATURATED MATERIAL IS TO BE REMOVED AND REPLACED WITH SELECTED ON-SITE STRUCTURAL FILL MATERIAL AND COMPACTED AS SPECIFIED.
8. PROVIDE CONDITION SURVEY OF ADJACENT RESIDENTIAL BUILDINGS FOR ALL PROPERTIES LOCATED WITHIN NOMINAL 100m OF EARTHWORKS OPERATIONS. CONDITION SURVEY TO BE UNDERTAKEN BY QUALIFIED PERSONNEL WITH BUILDING EXPERIENCE.

RETAINING WALL NOTES:

1. RETAINING WALLS, FOOTINGS, DRAINAGE, BACKFILL AND CONNECTION OF AGGREGATE DRAINS TO STORMWATER DRAINAGE SYSTEM TO BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR AND CERTIFIED BY AN SUITABLY QUALIFIED RPEQ
2. THESE DRAWINGS IDENTIFY SURFACE PROFILES, RETAINING WALL LOCATIONS, AND SETOUT INFORMATION ONLY. REFER TO CONTRACTOR SUPPLIED DRAWINGS FOR RPEQ STRUCTURAL DETAILS, WALL MATERIALS AND COMPACTION SPECIFICATIONS AND CONSTRUCTIBILITY INFORMATION.
3. RETAINING WALL DESIGN ENGINEER TO PROVIDE RPEQ FORM 15 STRUCTURAL CERTIFICATE INCLUDING GEOTECHNICAL GLOBAL STABILITY CERTIFICATION BY GEOTECHNICAL ENGINEER. WALL DESIGN TO ASSUME SURCHARGE LOADING BEHIND WALL. DESIGN TO BE IN ACCORDANCE WITH AS4678 INCLUDING ALL REQUIRED DESIGN LOAD CASES AND COMBINATIONS.
4. RETAINING WALLS TO BE DESIGNED TO CONSIDER ALL LOADS INCLUDING CONSTRUCTION LOADS AND OPERATIONAL LOADS.
5. ANY GEOTECHINCAL INFORMATION PROVIDED BY THE PRINCIPAL OR THE SUPERINTENDENT SHALL BE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR AND THE RETAINING WALL DESIGN ENGINEER SHOULD SATISFY THEMSELVES OF THE DESIGN SOIL PARAMETERS AND UNDERTAKE AND ADDITIONAL GEOTECHNICAL INVESTIGATION DEEMED NECESSARY BY THE DESIGN ENGINEER.
6. THE CONTRACTOR SHALL ENSURE THAT ANY CONFLICT BETWEEN THESE PROJECT DRAWINGS AND THE RETAINING WALL DRAWINGS PREPARED BY THE RETAINING WALL DESIGN ENGINEER IS RESOLVED WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCING.
7. A COPY OF THE RETAINING WALL DESIGN DRAWINGS, INCLUDING CONNECTION OF AGGREGATE DRAINS TO THE STORMWATER DRAINAGE SYSTEM, DESIGN PARAMETERS AND CERTIFICATION BE PROVIDED TO THE SUPERINTENDENT AT THE PRE-START MEETING PRIOR TO CONSTRUCTION COMMENCING.
8. ANY RETAINING WALL AND BATTER EXCEEDING THE HEIGHT OF 1.5m, THE CONTRACTOR SHALL UNDERTAKE A THIRD PARTY RPEQ REVIEW OF THE PROPOSED DESIGN.

ROADWORKS NOTES:

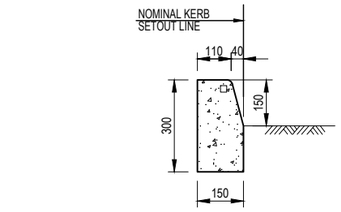
1. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES. ANY DAMAGE TO EXISTING SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RECTIFIED AT HIS EXPENSE.
2. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH R.V.C STANDARD SPECIFICATIONS AND DRAWINGS.
3. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION PLANS AND ALL RELEVANT CURRENT R.V.C & IPWEA STANDARD DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES DURING THE CONSTRUCTION PHASE.
4. THE CONTRACTOR SHALL MAINTAIN 300mm MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING UTILITIES WHERE CROSSINGS OCCUR.
5. DESIGN CONTOURS SHOWN FOR FINISHED ALLOTMENTS AND ROADS.
6. THE CONTRACTOR'S CONSTRUCTION TRAFFIC MANAGEMENT PLAN IS TO MAINTAIN VEHICULAR ACCESS TO ALL EXISTING ALLOTMENTS DURING THE COURSE OF THE WORKS. ANY DISRUPTIONS TO NORMAL ACCESS TO BE MINIMIZED AS MUCH AS POSSIBLE.
7. ALL ROAD CENTRELINES TO BE PEGGED BY THE PRINCIPAL'S SURVEYOR.
8. SAW-CUT AND MATCH NEATLY TO EXISTING KERB AT LIMITS OF WORKS.
9. CONCRETE FOOTPATHS IN ACCORDANCE WITH IPWEA RS-080.

PAVEMENT NOTES:

1. SUBGRADE TESTS SHALL BE UNDERTAKEN TO DETERMINE EXISTING CBR VALUES.
2. THE CONTRACTOR SHALL UNDERTAKE A PAVEMENT DESIGN BASED ON THE SITE SUBGRADE TESTING TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES. ANY DAMAGE TO EXISTING SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RECTIFIED AT THEIR EXPENSE.
4. ALL WORKS COMPLETED WITHIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND DRAWINGS.
5. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION PLANS. ALL RELEVANT CURRENT STANDARD SPECIFICATIONS AND DRAWINGS AND ALL PROJECT SPECIFICATIONS ON SITE AT ALL TIMES DURING THE CONSTRUCTION PHASE.
6. THE CONTRACTOR SHALL MAINTAIN MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING UTILITIES WHERE CROSSINGS OCCUR.
7. THE CONTRACTOR'S CONSTRUCTION TRAFFIC MANAGEMENT PLAN IS TO MAINTAIN VEHICULAR ACCESS TO ALL EXISTING ALLOTMENTS DURING THE COURSE OF THE WORKS. ANY DISRUPTIONS TO NORMAL ACCESS TO BE MINIMISED AS MUCH AS POSSIBLE.

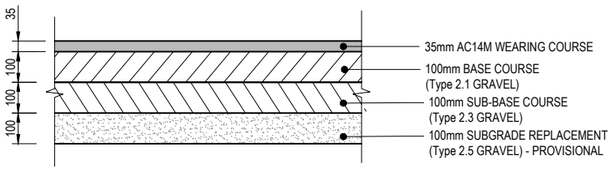
LINEMARKING AND SIGNAGE NOTES :

1. LINE-MARKING AND SIGNAGE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
2. ALL SIGNAGE TO BE SIZE "A" UNLESS NOTED.
3. EXTENT OF LINE-MARKING IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.
4. RETRO-REFLECTIVE RAISED PAVEMENT MARKERS (RRPM's) TO BE :
a) WHITE: LANE LINE MARKING (SPACING = 5m c/c)
b) WHITE: MEDIAN, CHEVRON MARKING (SPACING = 5m c/c)
c) YELLOW: BARRIER LINE MARKING (SPACING = 12m c/c)
5. EXACT LOCATION OF ALL SIGNS IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.
6. ALL REDUNDANT LINE MARKING TO BE REMOVED BY ABRASIVE BLASTING.



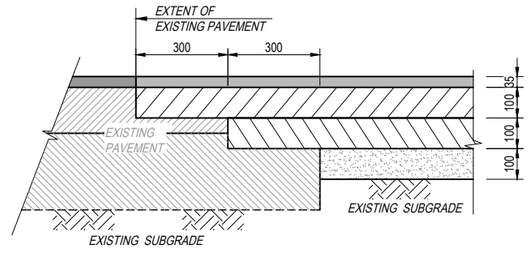
BARRIER KERB TYPE B2

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1 : 10 (FULL SIZE)



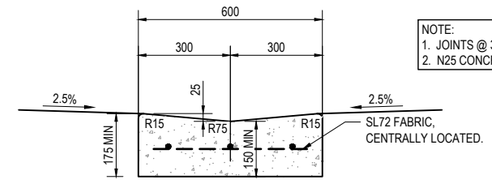
ASPHALT PAVEMENT DETAIL

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1 : 10 (FULL SIZE)



PAVEMENT TIE-IN DETAIL

SCALE 0.1 0 0.1 0.2 0.3 0.4 0.5 (metres)
1 : 10 (FULL SIZE)



NOTE:
1. JOINTS @ 3m CRS.
2. N25 CONCRETE

600mm WIDE CONCRETE CHANNEL

SCALE 0.1 0 0.1 0.2 0.3 0.4 0.5 (metres)
1 : 10 (FULL SIZE)

LEGEND

- EXISTING CONTOUR
- EXISTING BOTTOM OF BANK
- EXISTING TOP OF BANK
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING WATER POTABLE
- EXISTING FENCE TO BE REMOVED
- EXISTING UNDERGROUND ELECTRICITY
- EXISTING LIGHT POLE
- EXISTING UNDERGROUND TO BE REMOVED
- EXISTING SEWER MAIN
- EXISTING SEWER MAIN TO BE REMOVED
- PROPOSED DN150 SEWER MAIN AND HOUSE CONNECTION
- PROPOSED RETAINING WALL
- PROPOSED INTERNAL WALL
- PROPOSED KERB
- PROPOSED CONCRETE CHANNEL
- PROPOSED BATTER
- DESIGN CONTOURS
- PARKING LOT
- PROPOSED TURFED AREA
- PROPOSED CONCRETE FOOTPATH - 125mm THICK WITH SL72 MESH CENTRALLY PLACED
- PROPOSED ASPHALT PAVEMENT
- PROPOSED TIMBER VIEWING DECK (BY OTHERS)
- PROPOSED CONCRETE CHANNEL
- PROPOSED DUMPED ROCK
- DESIGN SURFACE LEVEL
- WHEEL STOP
- WORKS BOUNDARY

PAVEMENT-MARKING LEGEND

CODE	LINE TYPE	LINE LENGTH	GAP	WIDTH
DBL	BARRIER LINE (TWO WAY)		80mm	80mm
LL	LANE-LINE (BROKEN)	3.0m	9.0m	100mm
EL	EDGE LINE	-	-	150mm
CL	CONTINUITY LINE	1.0m	3.0m	200mm
GWL	GIVE-WAY LINE	0.6m	0.6m	200mm
SL	STOP LINE	-	-	300mm
-	PAVEMENT ARROWS	REFER M.U.T.C.D. FOR DETAILS		

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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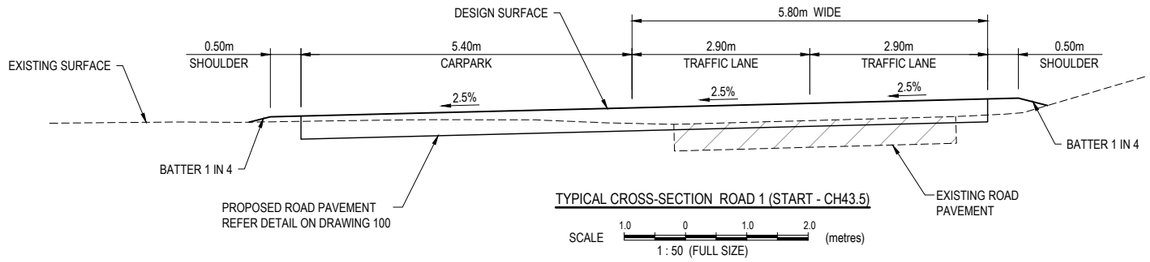
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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :
GENERAL NOTES, LEGEND AND TYPICAL DETAILS

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT
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.: BE220596	DRAWING No. : 100 / VERSION: A

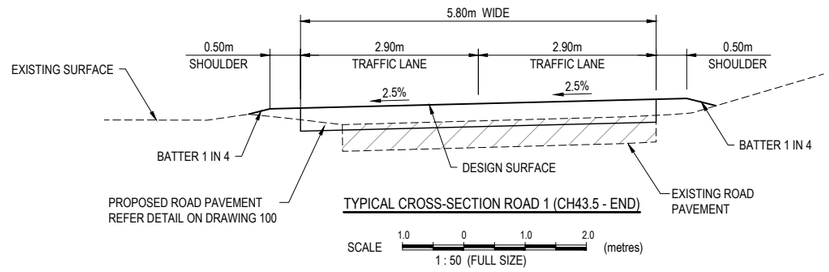
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TYPICAL CROSS-SECTION ROAD 1 (START - CH43.5)

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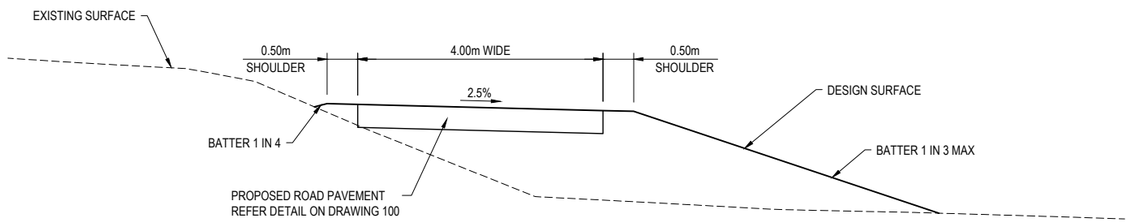
1 : 50 (FULL SIZE)



TYPICAL CROSS-SECTION ROAD 1 (CH43.5 - END)

SCALE 1.0 0 1.0 2.0 (metres)

1 : 50 (FULL SIZE)



TYPICAL CROSS-SECTION ROAD 2

SCALE 1.0 0 1.0 2.0 (metres)

1 : 50 (FULL SIZE)

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

TYPICAL ROAD SECTIONS

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.:	DRAWING No. :	VERSION:
BE220596	101	A

PLOTTED: 28.08.2023 at 10:49 FILENAME: N:\LOCAL\1_PROJECTS\2023\019 BE220596 - Ellis Beach Design\Acad\BE220596-101.dwg

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

OVERALL LAYOUT PLAN

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER : DEREK WALTON	
DESIGNER : NHUNG NGUYEN	
DRAFTSPERSON : NHUNG NGUYEN	
CHECKED : MADISON ELLIOTT	

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.: BE220596	DRAWING No. : 102	VERSION: A

ELLIS BEACH
SHEET 1
SHEET 2
SHEET 3
ROAD 1
ROAD 2
CAPTAIN COOK HIGHWAY
CASCADE CREEK
13 NR5512
A SP144063
31 SP129117

LEGEND

SITE BOUNDARY

SITE EXTENTS

DENOTES LAYOUT PLAN AT 1:400

OVERALL LAYOUT PLAN

SCALE 4 0 4 8 12 16 20 (metres)
1 : 400 (FULL SIZE)

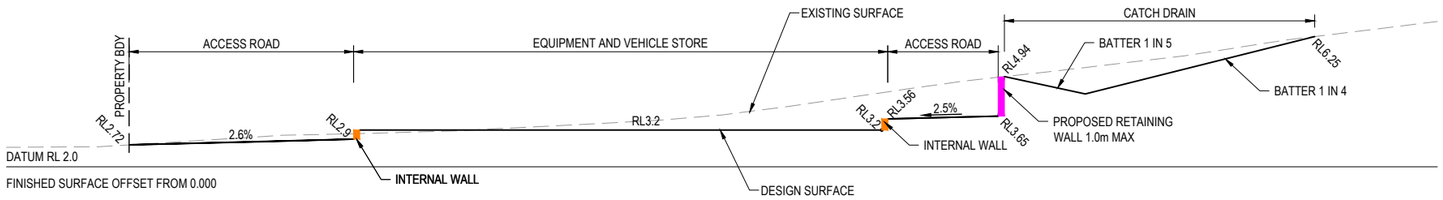
WARNING : UNDERGROUND SERVICES

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NOTE :

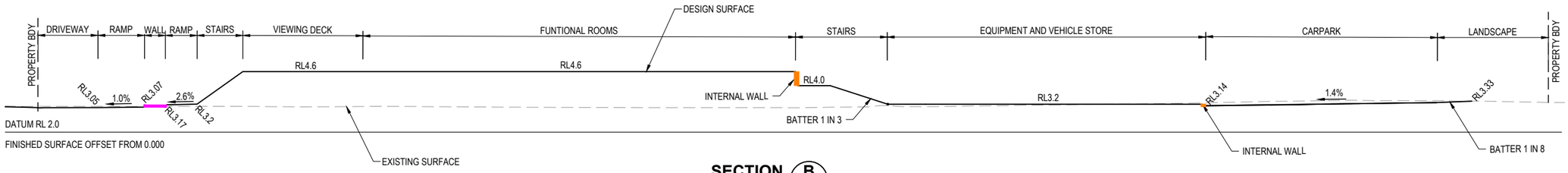
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PLOTTED 29.09.2023 at 10:49



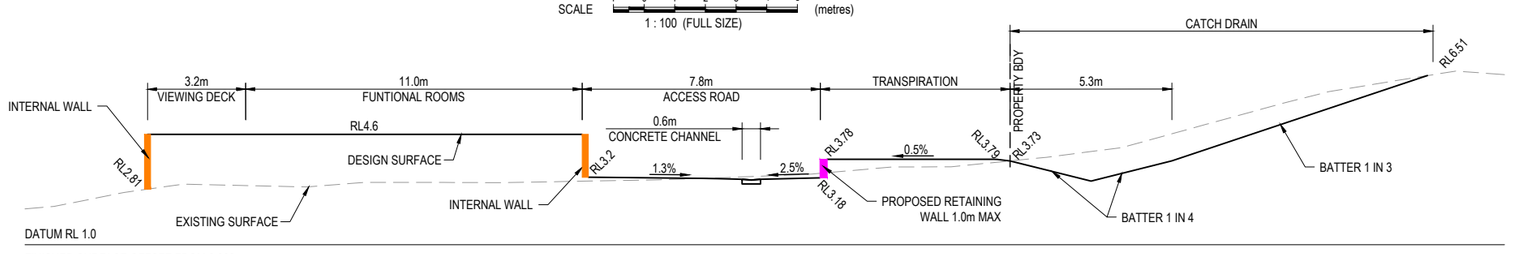
SECTION A 200

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)



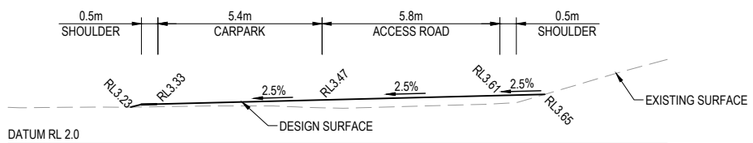
SECTION B 200

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)



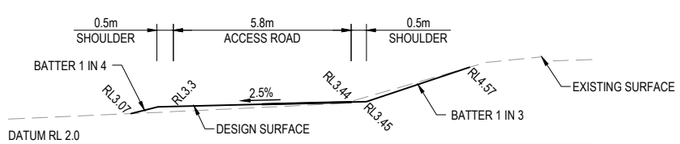
SECTION C 200

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)



SECTION D 200

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)



SECTION E 200

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

SURVEY
PROVIDED BY: [MD LAND SURVEYS] P/L
REPORT No: [1284/10]
DATE: 04-08-2023
SYSTEM: [CONFIRM FROM REPORT]

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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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:
ELLIS BEACH SURF LIFESAVING CLUB

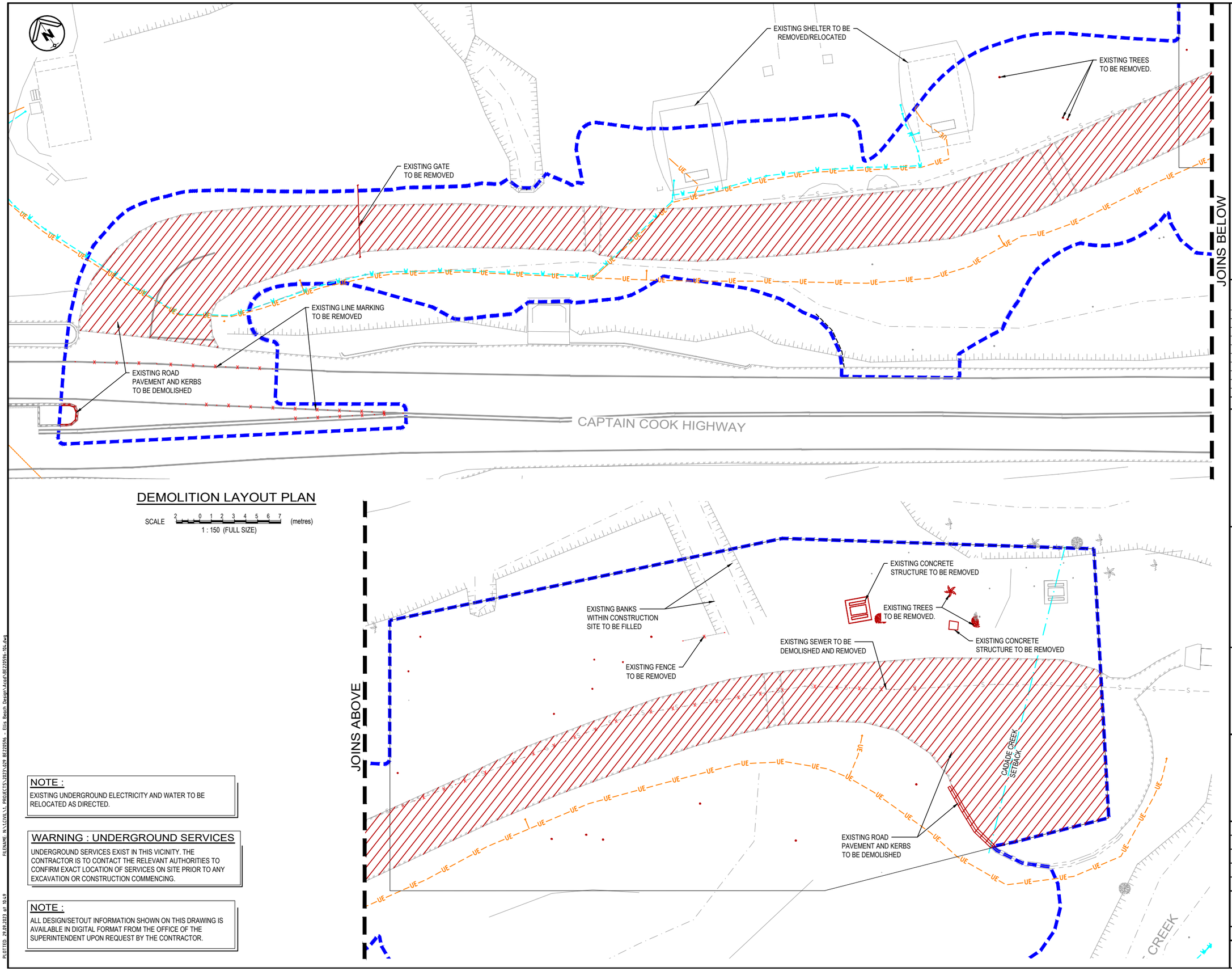
DRAWING TITLE :
EARTHWORKS SECTIONS

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.:	DRAWING No. :	VERSION:
BE220596	103	A



DEMOLITION LAYOUT PLAN

SCALE 2 0 1 2 3 4 5 6 7 (metres)
1 : 150 (FULL SIZE)

NOTE :
EXISTING UNDERGROUND ELECTRICITY AND WATER TO BE RELOCATED AS DIRECTED.

WARNING : UNDERGROUND SERVICES
UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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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:
ELLIS BEACH SURF LIFESAVING CLUB

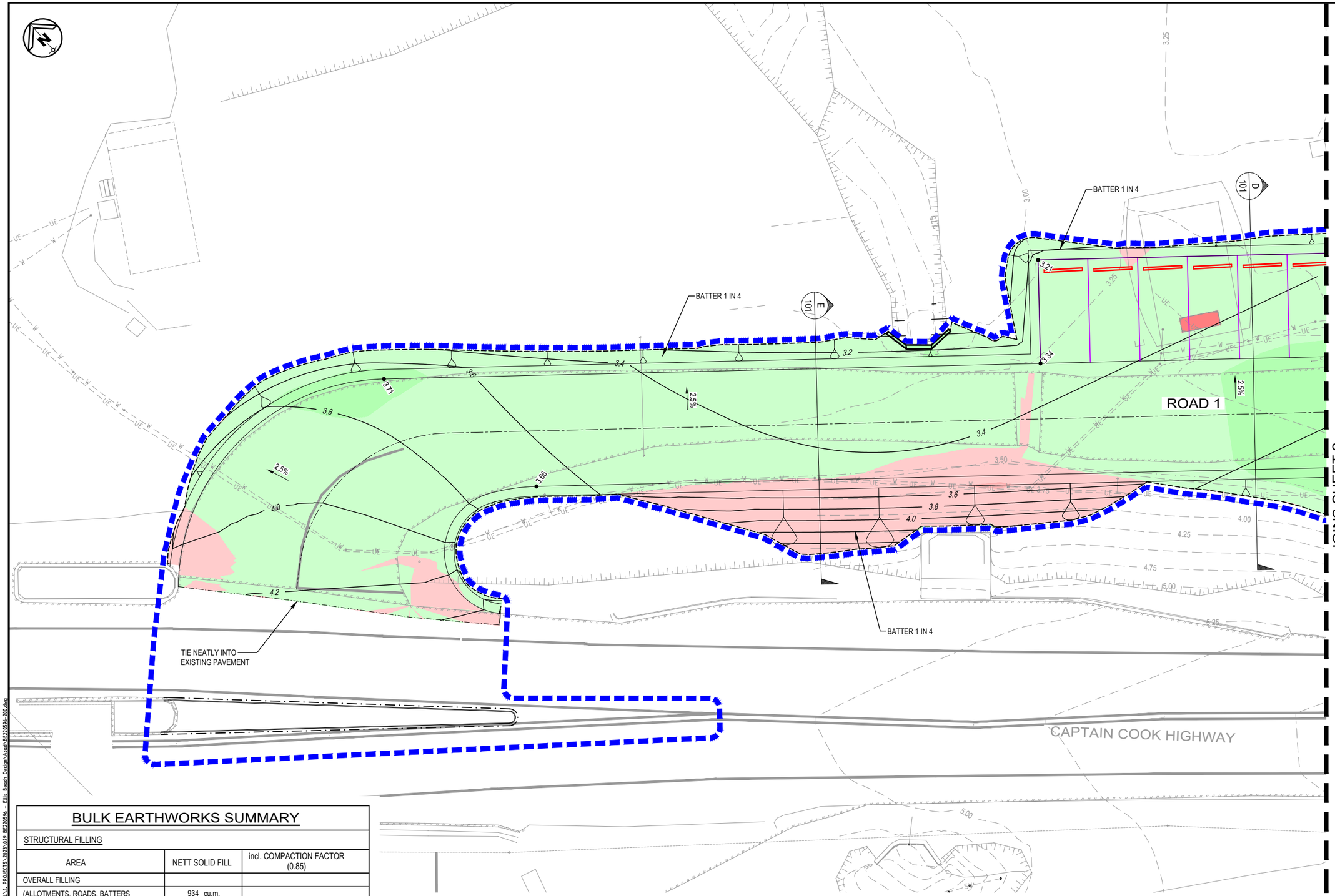
DRAWING TITLE :
DEMOLITION LAYOUT PLAN

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.:	DRAWING No. :	VERSION:
BE220596	104	A



BULK EARTHWORKS SUMMARY

STRUCTURAL FILLING

AREA	NETT SOLID FILL	incl. COMPACTION FACTOR (0.85)
OVERALL FILLING		
(ALLOTMENTS, ROADS, BATTERS	934 cu.m.	
TOTAL FILL REQUIRED	934 cu.m.	

EXCAVATION

AREA	NETT CUT	
OVERALL EXCAVATION	807 cu.m.	
INCLUDING ROAD BOX	388 cu.m.	
TOTAL CUT	807 cu.m.	686 cu.m.

SUMMARY:
TOTAL MATERIAL ON LEADS (NETT CUT) = 807 cu.m.
i.e. 934 - 686 cu.m. = 248 cu.m. COMPACTED FILL IN PLACE.

EARTHWORKS LAYOUT PLAN

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

CUT/FILL LEGEND

- FILL 0.0m to 0.25m
- FILL 0.25m to 0.50m
- FILL 0.50m to 0.75m
- FILL 0.75m to 1.00m
- FILL 1.00m to 1.25m
- FILL 1.25m to 1.50m
- FILL 1.50m to 1.75m
- FILL 1.75m to 2.00m
- FILL 2.00m to 2.25m
- CUT -1.50m to -1.25m
- CUT -1.25m to -1.00m
- CUT -1.25m to -1.00m
- CUT -1.00m to -0.75m
- CUT -0.75m to -0.50m
- CUT -0.50m to -0.25m
- CUT -0.25m to 0.00m

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :
BULK EARTHWORKS PLAN SHEET 1 OF 3

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.:	DRAWING No. :	VERSION:
BE220596	200	A

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PLOTTED: 29.08.2023 at 10:49

JOINS SHEET 1

JOINS SHEET 3

BATTER 1 IN 4

BATTER 1 IN 3 MAX

ROAD 1

ROAD 2

CAPTAIN COOK HIGHWAY

NOTE:

REFER DWG. 200 FOR CUT/FILL LEGEND AND BULK EARTHWORKS SUMMARY.

WARNING : UNDERGROUND SERVICES

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EARTHWORKS LAYOUT PLAN

SCALE 1 0 1 2 3 4 5 (metres)

1 : 100 (FULL SIZE)

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

BULK EARTHWORKS PLAN SHEET 2 OF 3

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

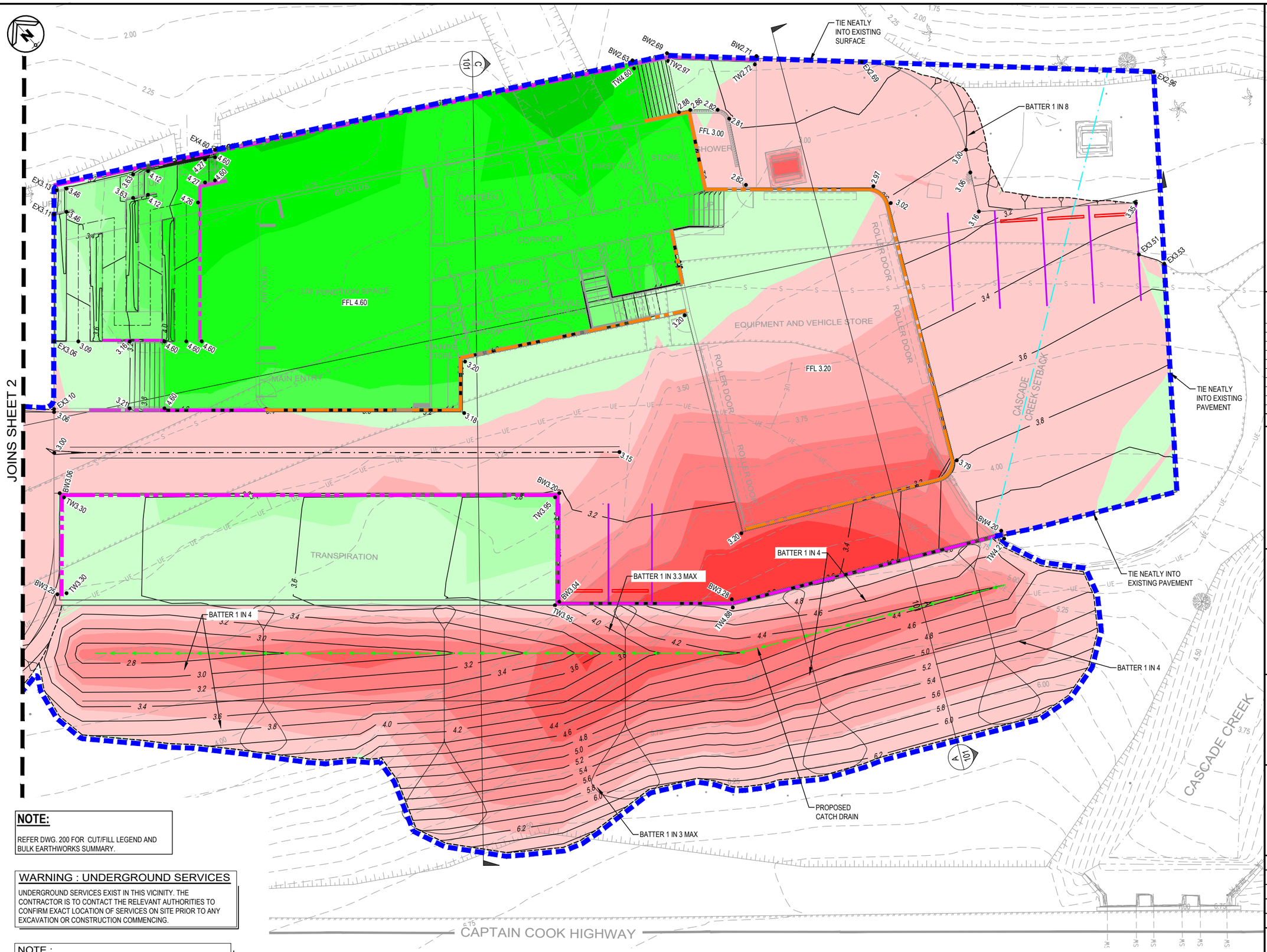
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RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

PROJECT No.:	DRAWING No. :	VERSION:
BE220596	201	A

JOINS SHEET 2



NOTE:

REFER DWG. 200 FOR CUT/FILL LEGEND AND BULK EARTHWORKS SUMMARY.

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EARTHWORKS LAYOUT PLAN

SCALE 1 0 1 2 3 4 5 (metres)

1 : 100 (FULL SIZE)

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

BULK EARTHWORKS PLAN SHEET 3 OF 3

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

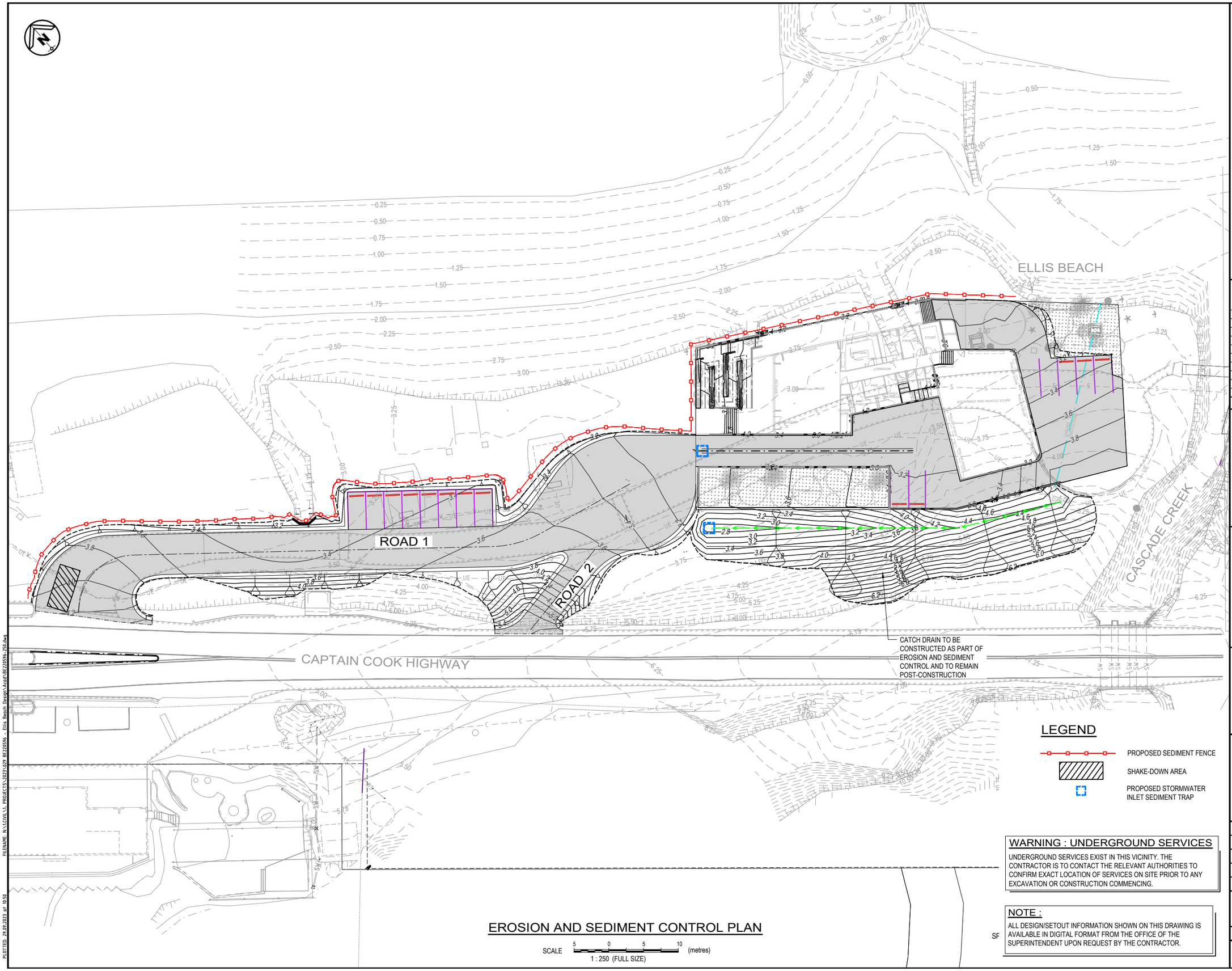
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RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

PROJECT No.:	DRAWING No. :	VERSION:
BE220596	202	A

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FILENAME: N:\LOCAL_PROJECTS\2023\829 BE220596 - Ellis Beach Design\Acad\BE220596-200.dwg



PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

EROSION AND SEDIMENT CONTROL PLAN

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.:	DRAWING No. :	VERSION:
BE220596	250	A

EROSION AND SEDIMENT CONTROL PLAN

SCALE 5 0 5 10 (metres)
1 : 250 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

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NOTE :

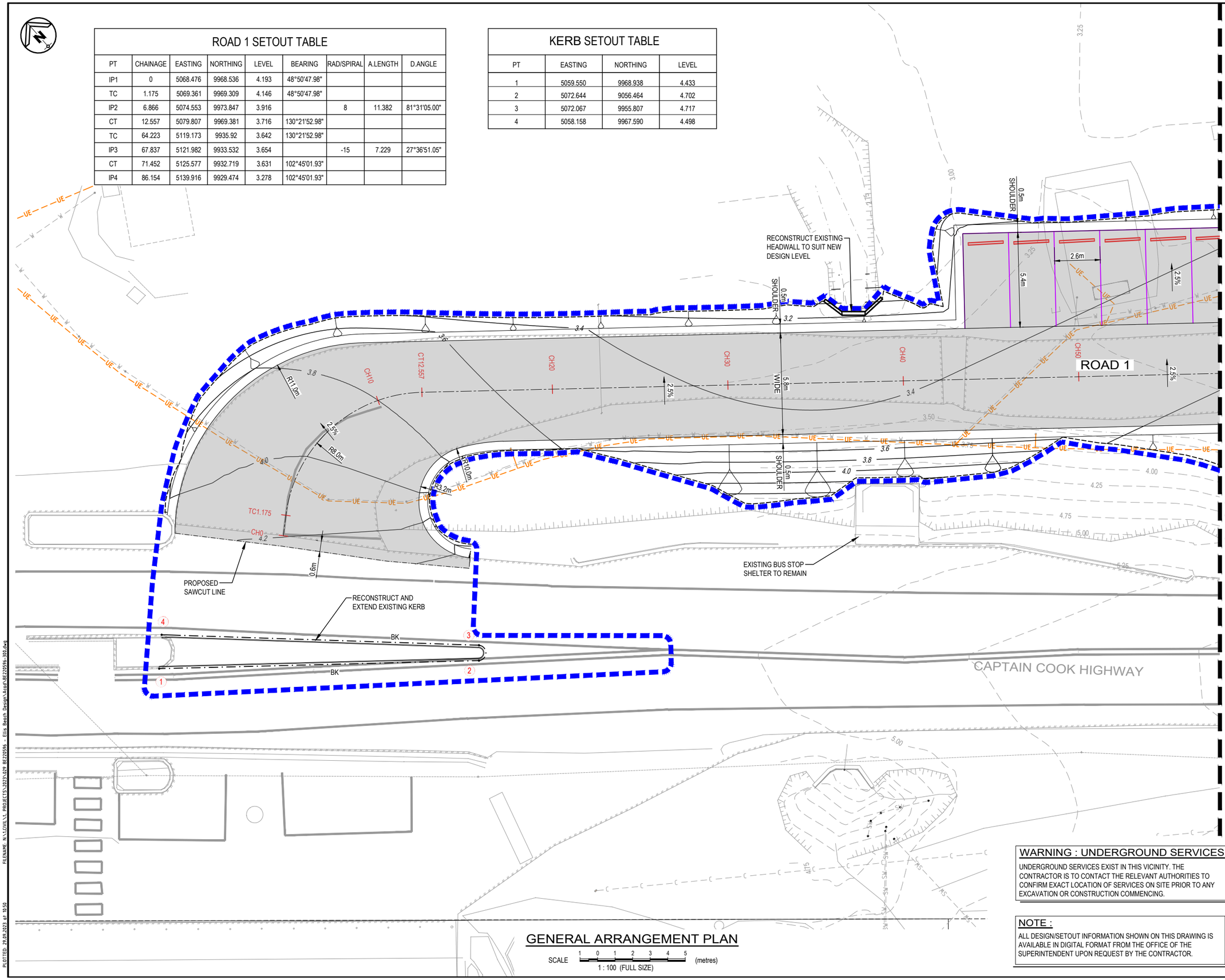
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SF

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FILENAME: N:\LOWLVL PROJECTS\2023\028 BE220596 - Ellis Beach Design\Acad\BE220596-250.dwg

ROAD 1 SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING	RAD/SPIRAL	A.LENGTH	D.ANGLE
IP1	0	5068.476	9968.536	4.193	48°50'47.98"			
TC	1.175	5069.361	9969.309	4.146	48°50'47.98"			
IP2	6.866	5074.553	9973.847	3.916		8	11.382	81°31'05.00"
CT	12.557	5079.807	9969.381	3.716	130°21'52.98"			
TC	64.223	5119.173	9935.92	3.642	130°21'52.98"			
IP3	67.837	5121.982	9933.532	3.654		-15	7.229	27°36'51.05"
CT	71.452	5125.577	9932.719	3.631	102°45'01.93"			
IP4	86.154	5139.916	9929.474	3.278	102°45'01.93"			

KERB SETOUT TABLE			
PT	EASTING	NORTHING	LEVEL
1	5059.550	9968.938	4.433
2	5072.644	9056.464	4.702
3	5072.067	9955.807	4.717
4	5058.158	9967.590	4.498



GENERAL ARRANGEMENT PLAN

SCALE 1 0 1 2 3 4 5 (metres)

1 : 100 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

GENERAL ARRANGEMENT PLAN SHEET 1 OF 3

DEVEL. APPLIC. No. :		DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON	
DESIGNER :	NHUNG NGUYEN	
DRAFTSPERSON :	NHUNG NGUYEN	
CHECKED :	MADISON ELLIOTT	

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.: BE220596	DRAWING No. : 300	VERSION: A

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PLOTTED: 29.08.2023 at 10:50

ROAD 2 SETOUT TABLE					
PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING
IP1	0	5129.927	9925.785	3.645	260°25'42.85"
IP2	14.779	5115.353	9923.327	5.566	260°25'42.85"

JOINS SHEET 1

JOINS SHEET 3

INFILTRATION PIT SYSTEM

PROVIDE NEW 600x600 FIELD INLET

ROOFWATER STUB TO CONNECT INTO PROPOSED PIT

INV

INSTALL NEW 375mm DIAMETER DRAINAGE PIPE

WHEEL STOPS TO BE SET OUT IN ACCORDANCE WITH AS2890.1

2.6m @ 8 CARPARKS

ROAD 1

ROAD 2

PROVIDE NEW 600x600 FIELD INLET

TIE NEATLY INTO EXISTING PAVEMENT

CAPTAIN COOK HIGHWAY

BIFOLDS

GENERAL ARRANGEMENT PLAN

SCALE 1 0 1 2 3 4 5 (metres)

1 : 100 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

NOTE :

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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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:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

GENERAL ARRANGEMENT PLAN SHEET 2 OF 3

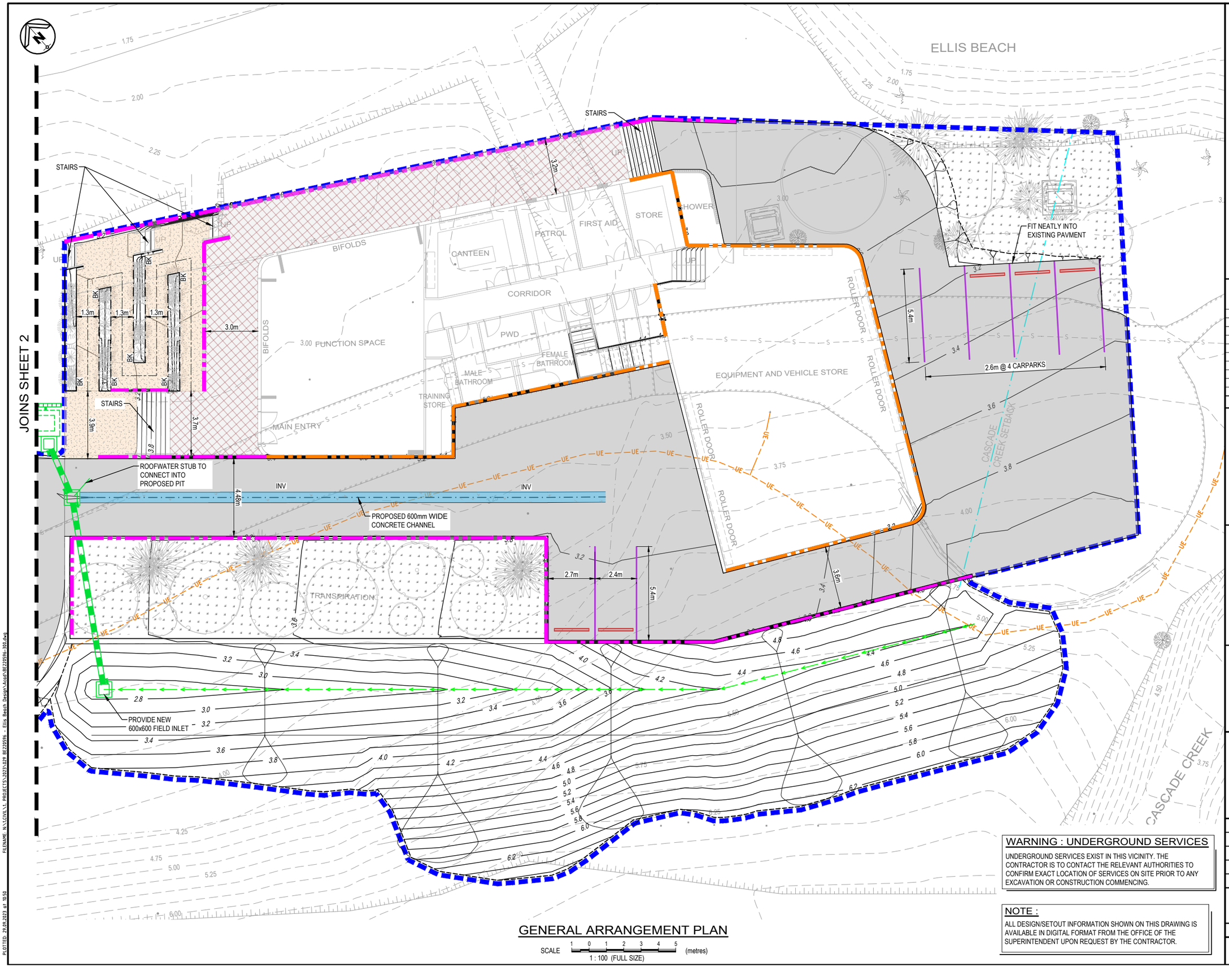
DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.: BE220596	DRAWING No. : 301	VERSION: A

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PLOTTED: 29.08.2023 at 10:50



GENERAL ARRANGEMENT PLAN

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

GENERAL ARRANGEMENT PLAN SHEET 3 OF 3

DEVEL. APPLIC. No. :		DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON	
DESIGNER :	NHUNG NGUYEN	
DRAFTSPERSON :	NHUNG NGUYEN	
CHECKED :	MADISON ELLIOTT	

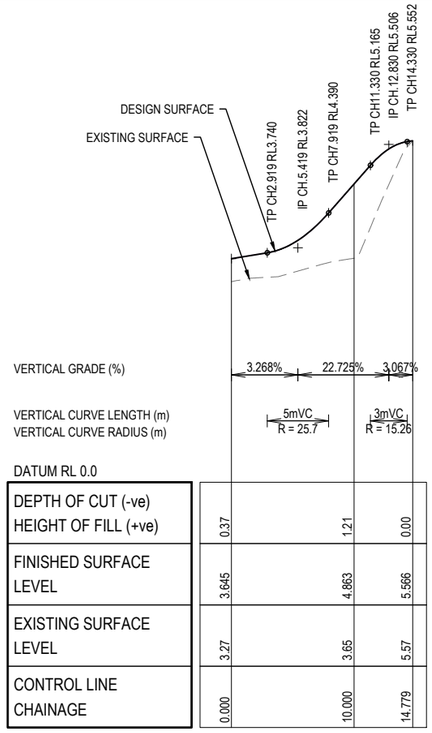
APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

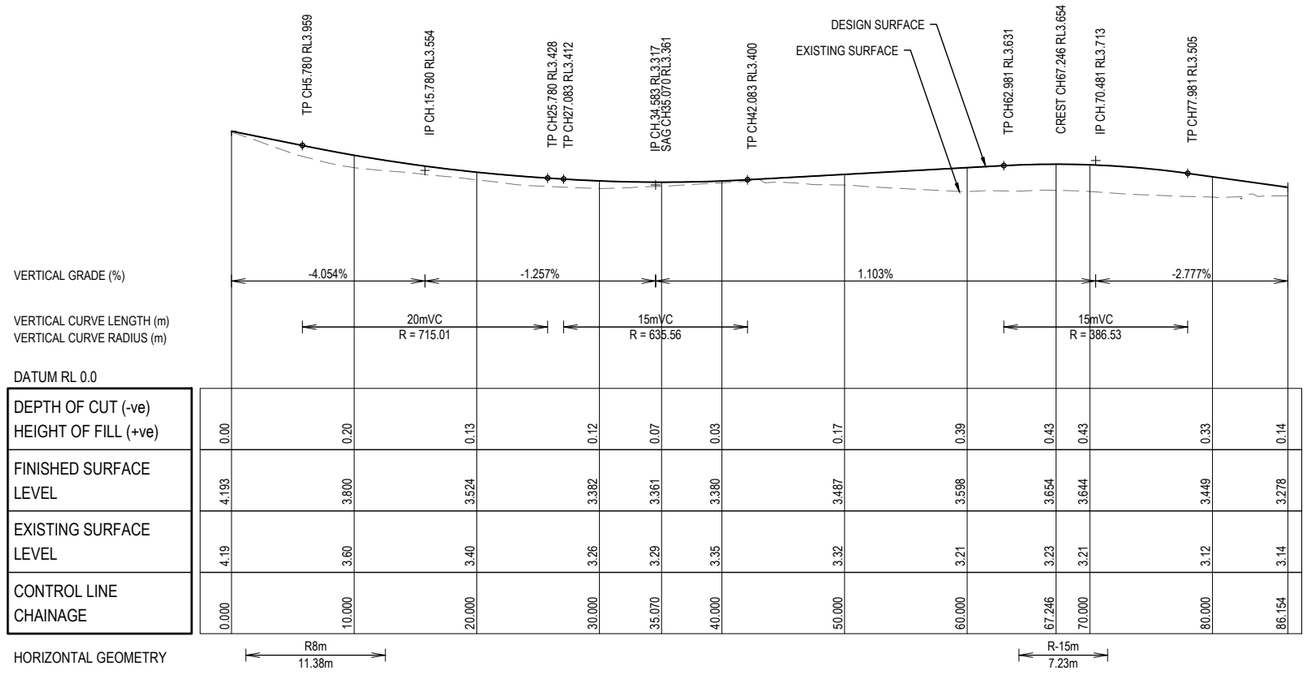
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BE220596	302	A

PLOTTED: 29.09.2023 at 10:50
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LONGITUDINAL SECTION ROAD 2

SCALES
5 0 5 10 15 20 25 — 1 : 250 HORIZ.
0.5 0 0.5 1.0 1.5 2.0 2.5 — 1 : 50 VERT. (FULL SIZE)
(metres)



LONGITUDINAL SECTION ROAD 1

SCALES
5 0 5 10 15 20 25 — 1 : 250 HORIZ.
0.5 0 0.5 1.0 1.5 2.0 2.5 — 1 : 50 VERT. (FULL SIZE)
(metres)

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :
ROADWORKS LONGITUDINAL SECTIONS

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

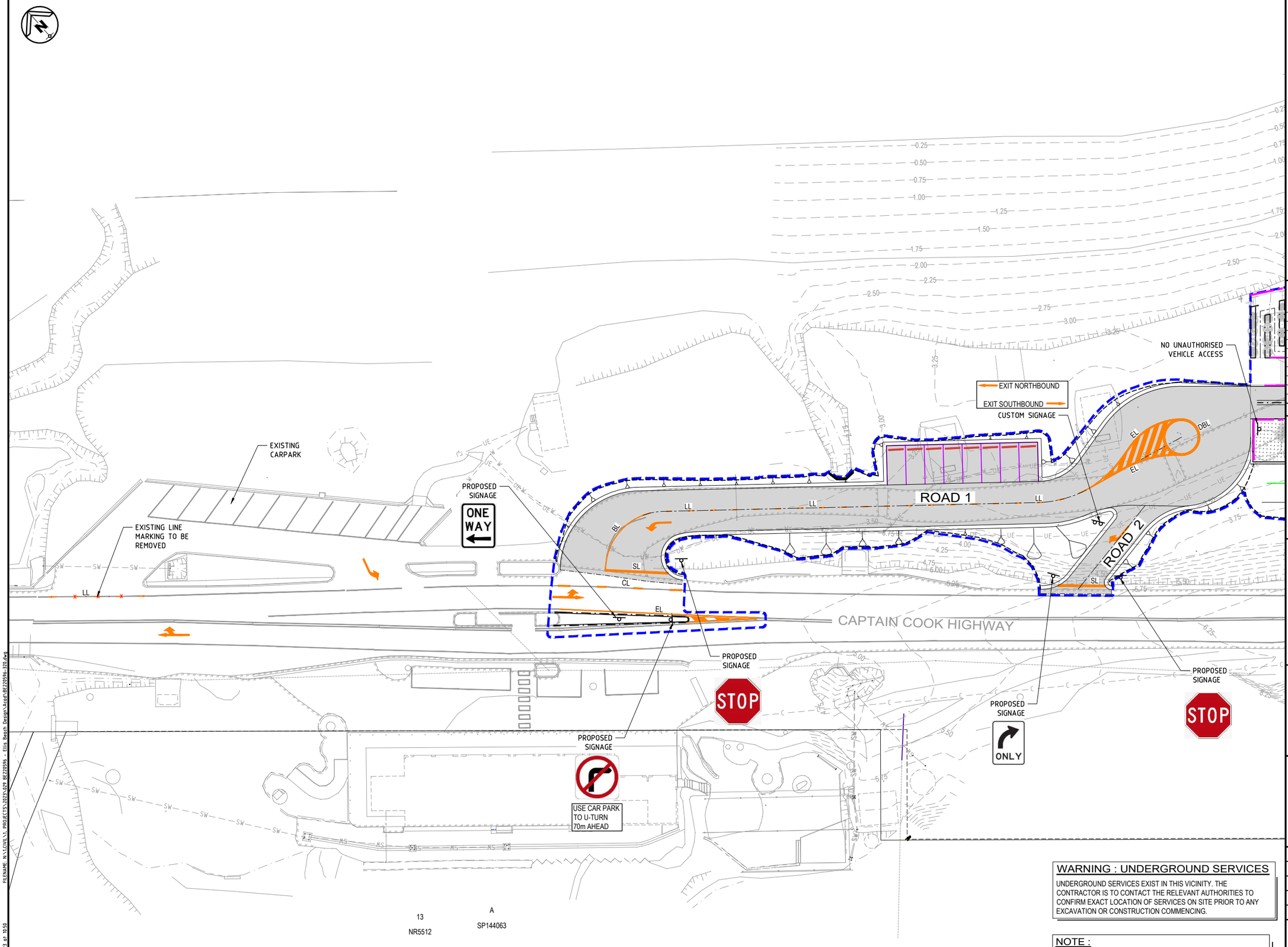
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RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

PROJECT No.:	DRAWING No. :	VERSION:
BE220596	310	A

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13 A
NR5512 SP144063

SIGNAGE AND LINEMARKING LAYOUT PLAN

SCALE 5 0 5 10 (metres)
1 : 250 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :
SIGNAGE AND LINEMARKING LAYOUT PLAN

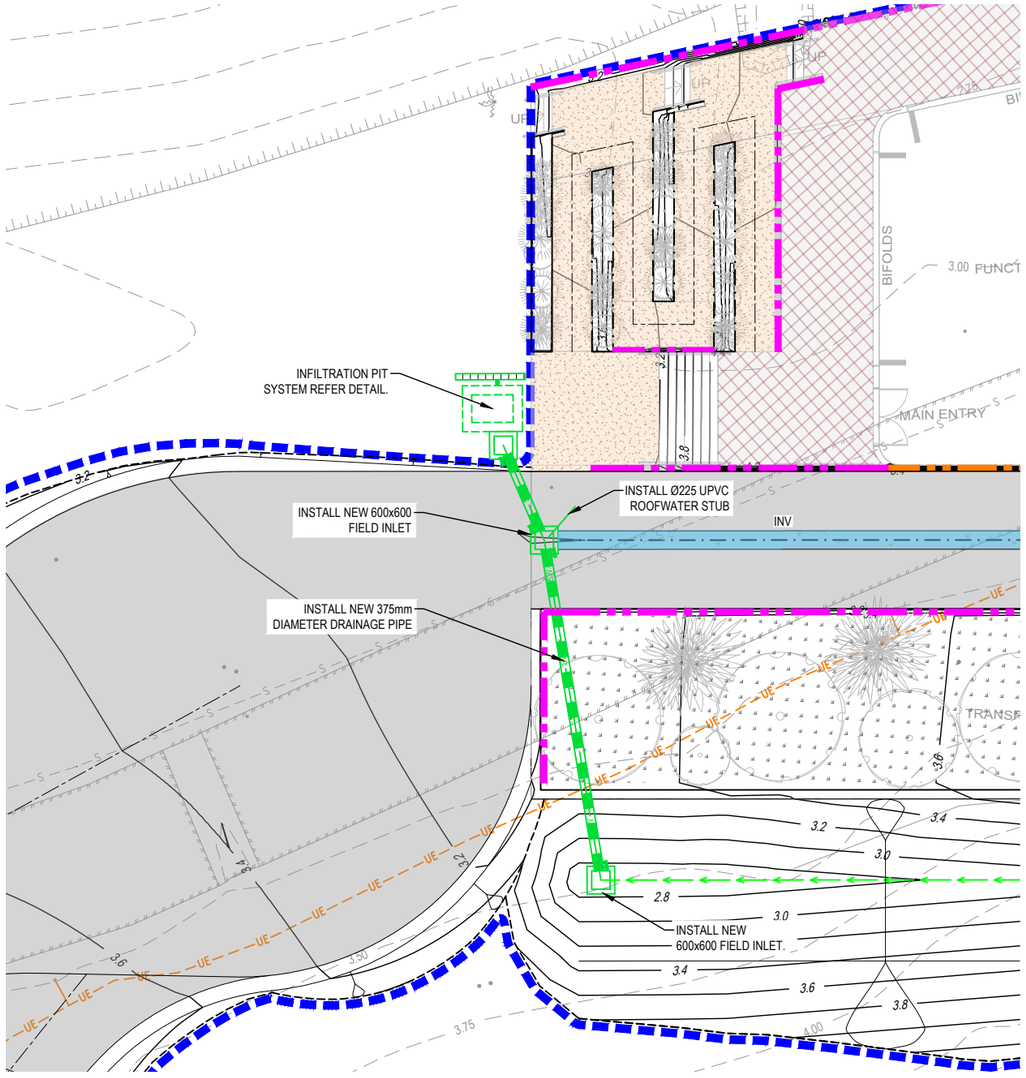
DEVEL. APPLIC. No. :		DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON	
DESIGNER :	NHUNG NGUYEN	
DRAFTSPERSON :	NHUNG NGUYEN	
CHECKED :	MADISON ELLIOTT	

APPROVED FOR AND ON BEHALF OF
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RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

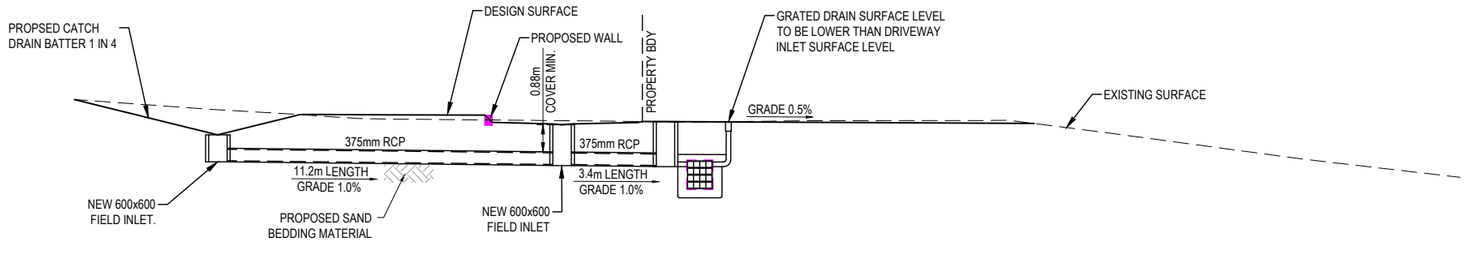
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BE220596	320	A

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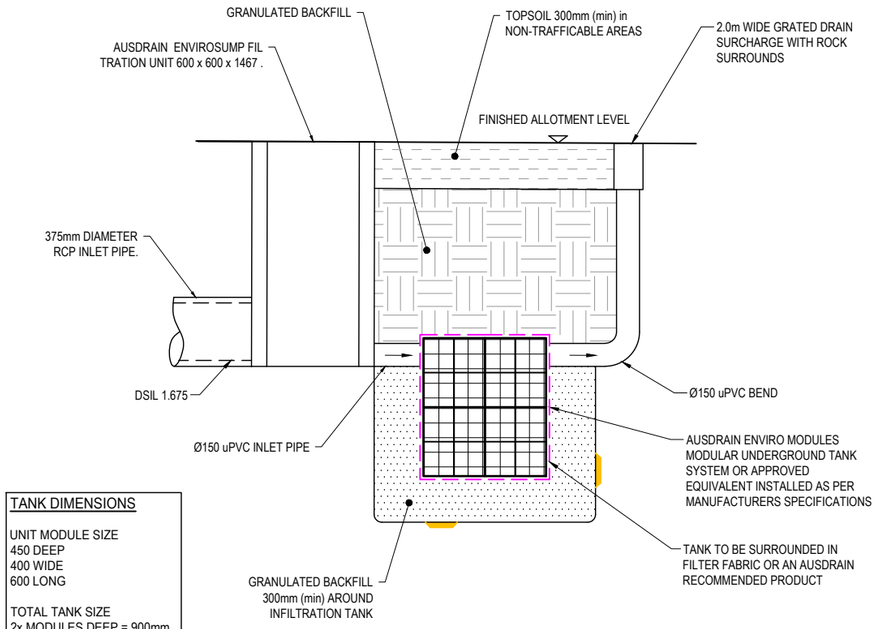
STORMWATER DRAINAGE LAYOUT

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)



LONGITUDINAL SECTION - DETAIL

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)



TANK DIMENSIONS

UNIT MODULE SIZE
450 DEEP
400 WIDE
600 LONG

TOTAL TANK SIZE
2x MODULES DEEP = 900mm
2x MODULES WIDE = 800mm
3x MODULES LONG = 1350mm

INFILTRATION PIT SYSTEM

SCALE 0.2 0 0.2 0.4 0.6 0.8 1.0 (metres)
1 : 20 (FULL SIZE)

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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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:
ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :
STORMWATER DRAINAGE LAYOUT, LONG SECTION AND DETAILS

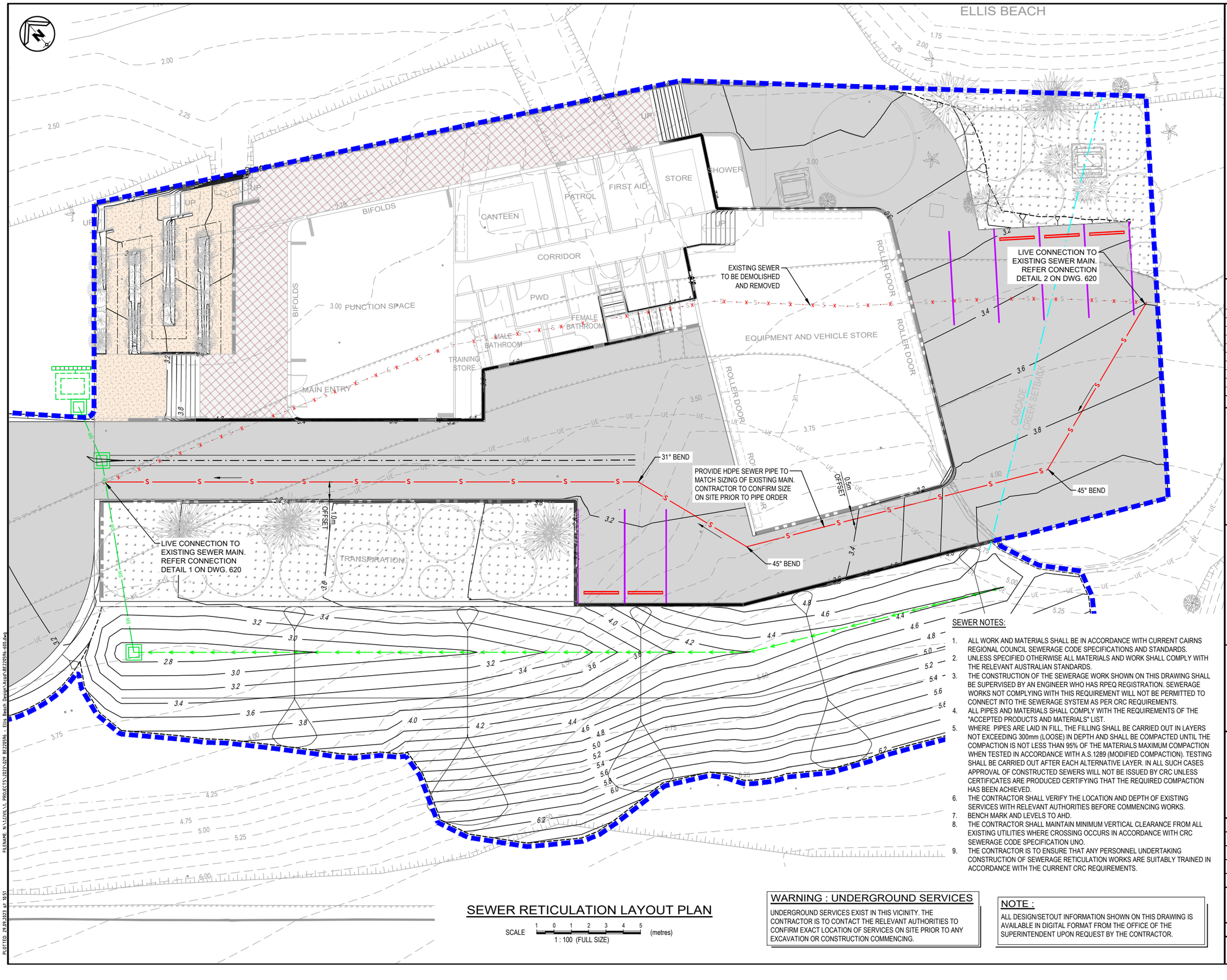
DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON
DESIGNER :	NHUNG NGUYEN
DRAFTSPERSON :	NHUNG NGUYEN
CHECKED :	MADISON ELLIOTT

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.:	DRAWING No. :	VERSION:
BE220596	400	A

PLOTTED: 28.08.2023 at 10:56
FILENAME: N:\LOCAL\1. PROJECTS\2023\028 BE220596 - Ellis Beach Design\Acad\BE220596-400.dwg



SEWER NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT CAIRNS REGIONAL COUNCIL SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEWERAGE SYSTEM AS PER CRC REQUIREMENTS.
4. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
5. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S.1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATIVE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY CRC UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
6. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
7. BENCH MARK AND LEVELS TO AHD.
8. THE CONTRACTOR SHALL MAINTAIN MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING UTILITIES WHERE CROSSING OCCURS IN ACCORDANCE WITH CRC SEWERAGE CODE SPECIFICATION UNO.
9. THE CONTRACTOR IS TO ENSURE THAT ANY PERSONNEL UNDERTAKING CONSTRUCTION OF SEWERAGE RETICULATION WORKS ARE SUITABLY TRAINED IN ACCORDANCE WITH THE CURRENT CRC REQUIREMENTS.

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

SEWER RETICULATION LAYOUT PLAN

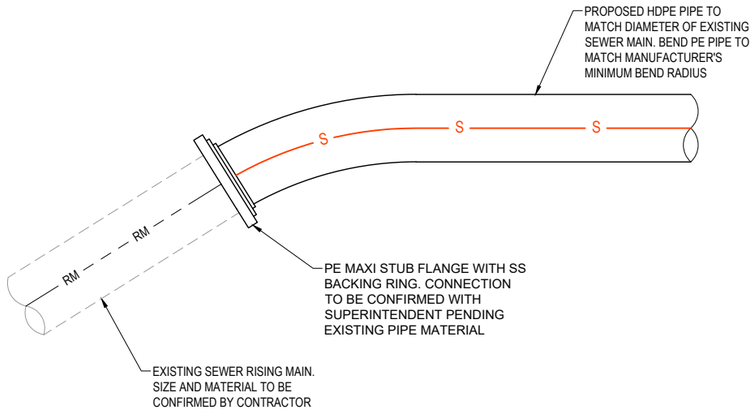
DEVEL. APPLIC. No. :		DATE : 25-08-23
PROJECT LEADER :	DEREK WALTON	
DESIGNER :	NHUNG NGUYEN	
DRAFTSPERSON :	NHUNG NGUYEN	
CHECKED :	MADISON ELLIOTT	

APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

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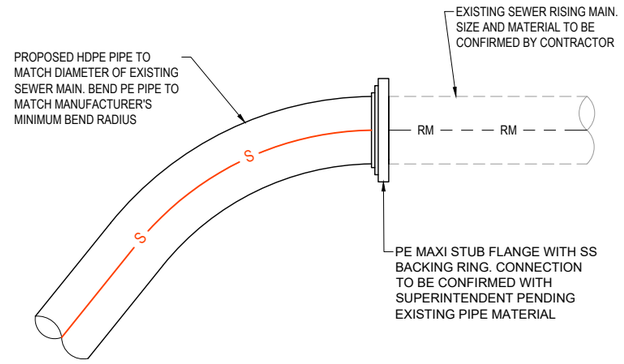
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PLOTTED: 29.09.2023 at 10:51



LIVE CONNECTION DETAIL 1

NTS



LIVE CONNECTION DETAIL 2

NTS

WARNING : UNDERGROUND SERVICES

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PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

LIVE CONNECTION DETAILS

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER : DEREK WALTON	
DESIGNER : NHUNG NGUYEN	
DRAFTSPERSON : NHUNG NGUYEN	
CHECKED : MADISON ELLIOTT	

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No. :

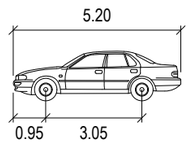
SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

PROJECT No.:	DRAWING No. :	VERSION:
BE220596	620	A

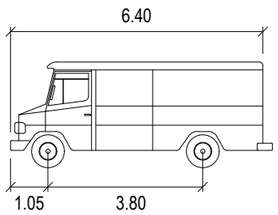
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LEGEND SWEPT PATH

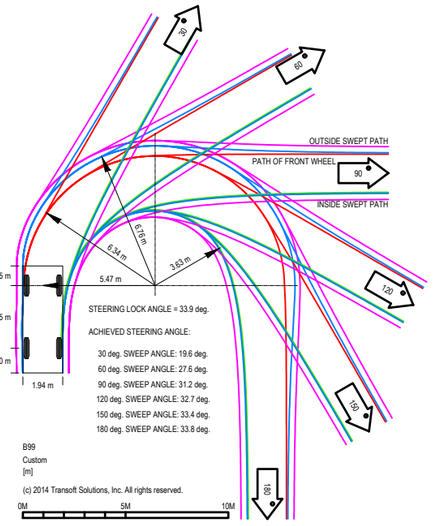
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- VEHICLE BODY ENVELOPE
- WHEELS SWEPT PATH

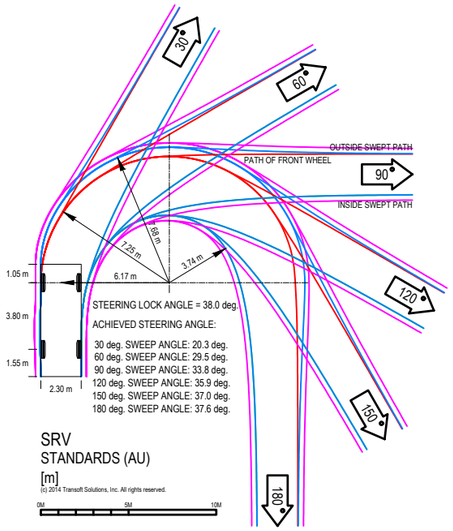


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Lock to Lock Time	: 6.0
Steering Angle	: 33.9



SRV	meters
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Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.0





VEHICLE TURNING PATH

SCALE 1 0 1 2 (metres)

1 : 125 (FULL SIZE)

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

VEHICLE TURNING PATH SHEET 1 OF 2

DEVEL. APPLIC. No. :	DATE : 25-08-23
PROJECT LEADER : DEREK WALTON	
DESIGNER : NHUNG NGUYEN	
DRAFTSPERSON : NHUNG NGUYEN	
CHECKED : MADISON ELLIOTT	

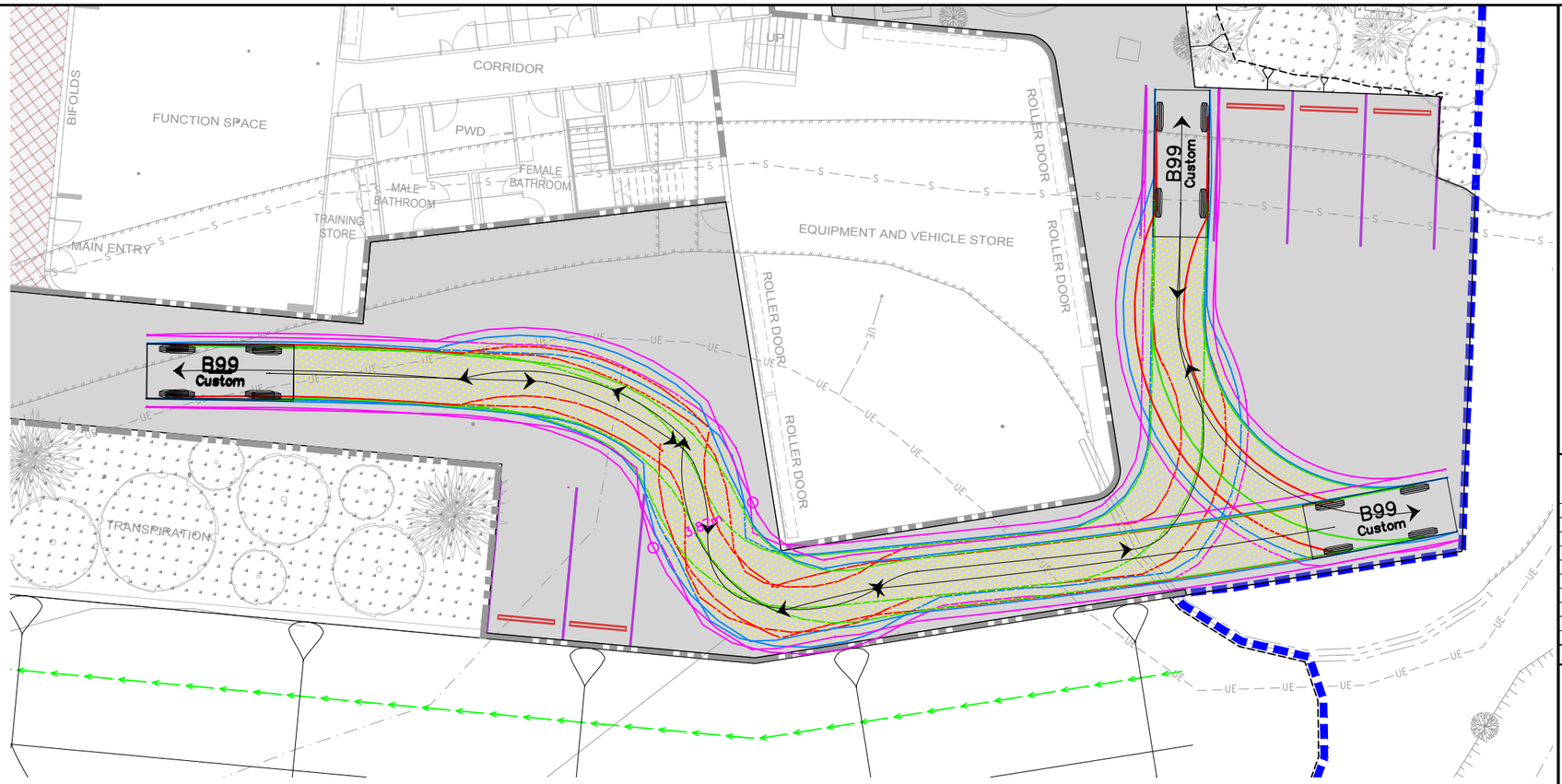
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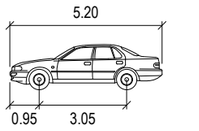
RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

PROJECT No.:	DRAWING No. :	VERSION:
BE220596	800	A

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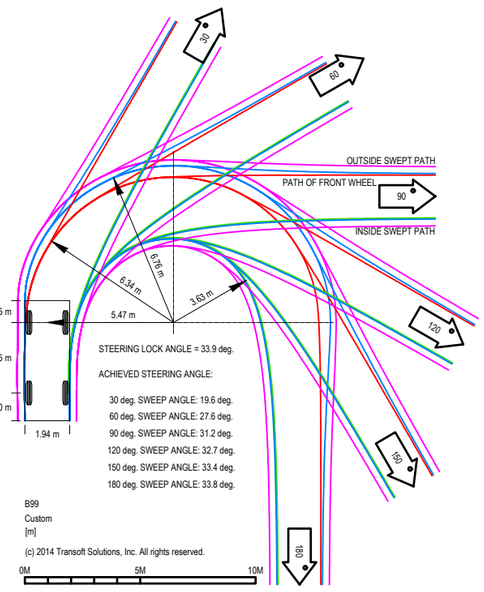


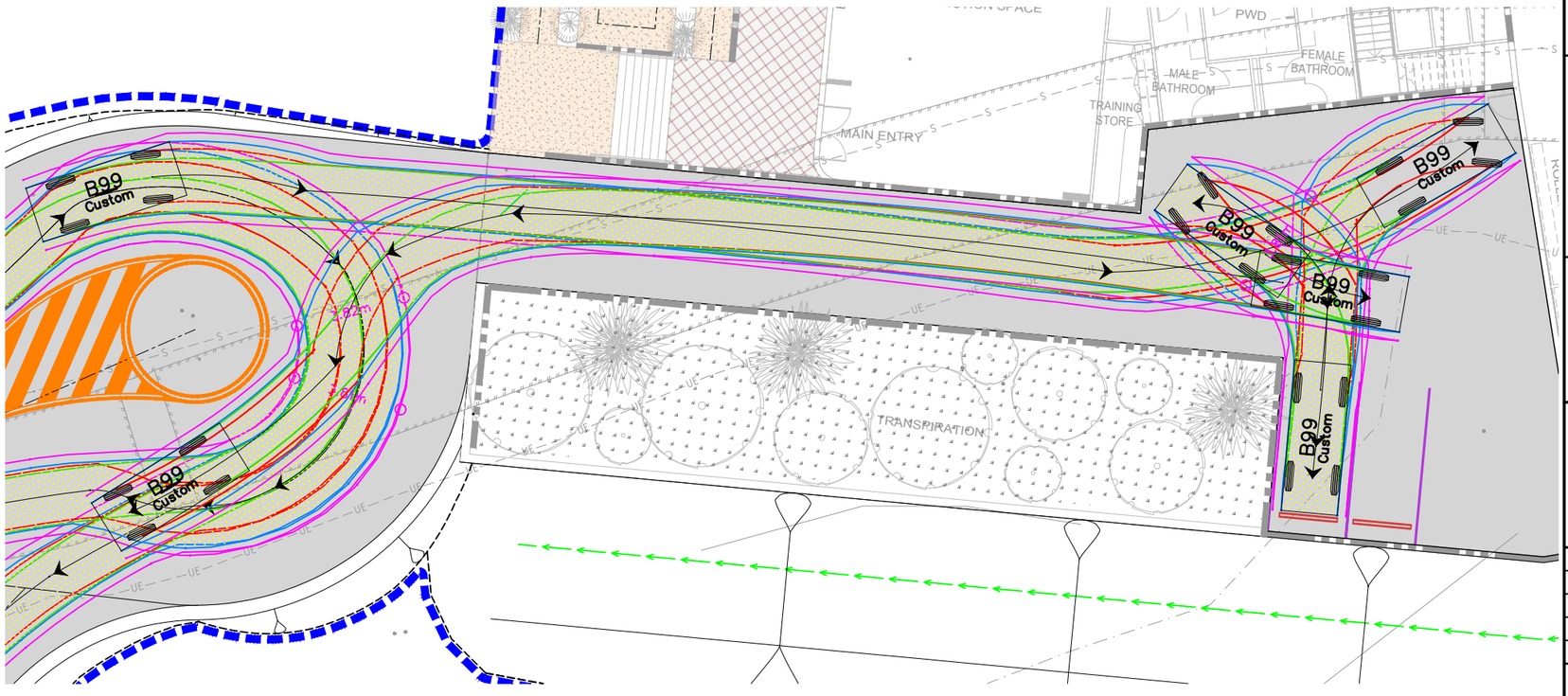


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Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

LEGEND SWEPT PATH

- 300mm CLEARANCE
- VEHICLE BODY ENVELOPE
- WHEELS SWEPT PATH





VEHICLE TURNING PATH

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

PROPOSED DEVELOPMENT

ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH

FOR

SURF LIFE SAVING QUEENSLAND

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	25-08-23

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PROJECT:

ELLIS BEACH SURF LIFESAVING CLUB

DRAWING TITLE :

VEHICLE TURNING PATH SHEET 2 OF 2

DEVEL. APPLIC. No. :	DATE : 25-08-23
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RPEQ No. :

SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1

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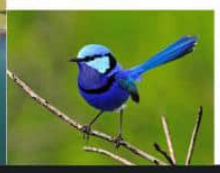
Appendix 3

Stormwater Management Plan prepared by Burchills

adams+sparkes
TOWN PLANNING

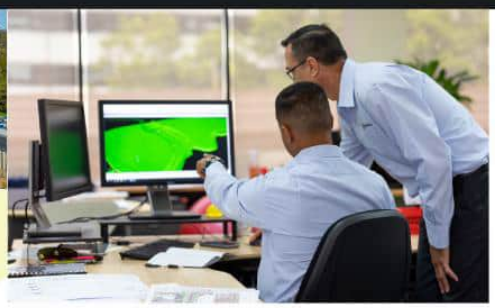
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Ellis Beach SLSQ

Stormwater Management Plan

Client: Surf Life Saving Queensland
Project No: BE220596
Document No: BE220596-RP-SMP-04

October 2023

Document Control Record

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03	Final Issue	28/02/2023	ME	JW
04	MID Issue	9/10/2023	JM	LF

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1. Introduction

Burchills Engineering Solutions (Burchills) has been engaged by Surf Life Saving Queensland to undertake a Stormwater Management Plan (SMP). This report is to be considered as part of a development feasibility for the Ellis Beach Life Saving Club located in Cairns Regional Council local government area.

1.1 Purpose

The main objectives of this SMP have been established from the criteria set out in the Cairns Regional Council 9.3.2 Environmental Performance Code (CRC, 2016) and are summarised as follows:

AO8.1
Stormwater associated with development is discharged to:

a) a lawful connection provided from the premises to Council's stormwater network; or
b) land under Local Government control that has a lawful drainage function immediatelyadjoining to the premises; or
c) an easement for drainage purpose immediately adjoining to the premises; or
d) where the site cannot discharge to a, b or c, stormwater is discharged from the site in a manner that does not result in:
    i. change to the location of stormwater discharge;
    ii. an increase to peak flow velocity or volume;
    iii. a concentration in stormwater discharge.

AO8.2
Stormwater discharge must have a no worseningeffect on downstream or upstream properties, associated with the following:

a) diversion of stormwater;
b) concentration of stormwater flows;
c) changes in other flow characteristics;
d) changes that affect the future use of land.

1.2 Scope of Report

To achieve the above-mentioned objectives, this SMP details the following:

- Site description including:
    - Topography;
    - Locality
    - Establishment and detailing of all Lawful Point/s of Discharge (LPD) for the proposed development;
- Stormwater Quantity:
    - Control measures to ensure no net increase in peak discharge from the subject site (up to the 1% Average Exceedance Probability (AEP));
    - Determination and interrogation of any external catchments, including detailing the management of external flows in the post-developed condition;
- Stormwater Quality:
    - Methods to ensure quality objectives of the receiving waters are achieved, and the existing hydrological regime is maintained to an acceptable level.

- Details on the use of Water Sensitive Urban Design in accordance with Council Deemed to comply requirements and liaison with the project Architect;

2. Site Details

2.1 Location

The SLSQ development site is located in Ellis Beach, a coastal locality in the Cairns region. Ellis Beach is a neighbouring village to Palm Cove and is located approximately 27 kilometres north of Cairns City. Directly to the west of the site lies Captain Cook Highway, a state-controlled road between Cairns and Port Douglas. To the east lies the Coastal Waters of the Great Barrier Reef in the Coral Sea.



Figure 1 Site Location

2.2 Existing Topography

The site is located immediately adjacent to Ellis Beach to the east and grades east to the coastline. The highest point within the site is located on the western boundary at a height RL 4.82m above sea level. The whole eastern side of the site is typically levels below RL 3.00m above sea level, with the lowest point located in the north-east corner at RL 2.38m.

2.3 Downstream Environment

Stormwater runoff from the site's internal and external catchments discharges the site at its north-eastern corner and eastern boundary. The entire site catchment areas discharge to the eastern side to the coastline and into the Coral Sea.

2.3.1 Rainfall

The 2022 annual rainfall for the site has been recorded as 2,406.1mm from the data set obtained from the nearest Bureau of Meteorology (BOM) station number 31036 at Kuranda Railway Station.

3. Proposed Development

The proposed development site is described as Lot 22 on SP147762, Lot 2 on AP8332 and Lot 13 on NR5512. The proposed lot is 1,659m^2 with the proposal to construct a Surf Life Saving Club facility. The proposed development will deliver a new low scale two storey building which includes a small café, workshop, boat / jet ski storage area and ancillary amenities on the ground floor and caretakers facility on the first floor.

Figure 2 provides an extract of the site plan prepared by Clarke and Prince Architects which depicts the development site plan.



Figure 2 Ellis Beach SLSC Floor Plan (Courtesy: Clarke and Prince Architects)

4. Stormwater Management Plan

4.1 Lawful Points of Discharge

Lawful points of discharge have been identified along the eastern side of the site towards the ocean. Although discharge rates are increased due to increasing the sites impervious percentage, the runoff is not likely to cause any flooding or have any effect on neighbouring properties. The indicative catchment plan and lawful points of discharge are shown on Figure 3.

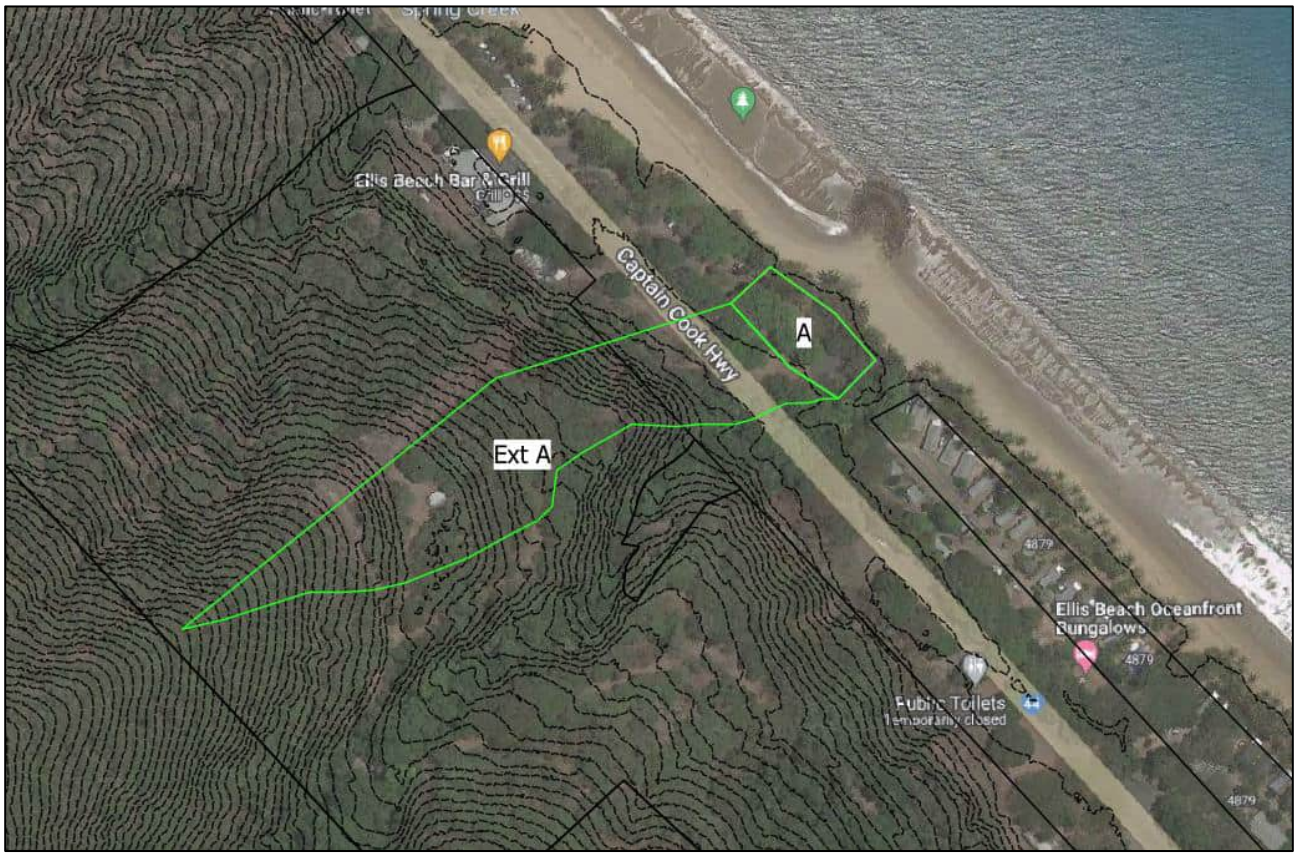


Figure 3 Indicative Catchment Plan and LPD's

4.2 Stormwater Quantity

The surveyed site is approximately 1,659m^2, however the external catchment is approximately 1.3 ha. Post development, a swale drain running south-north will be placed between the Captain Cook Highway and the proposed development site to divert flows from this external catchment area. The flow from the southern portion of the site will discharge directly to Ellis Beach, roofwater and runoff from remainder of the site will be conveyed into an internal stormwater drainage system and infiltration pit system which will eventually discharge to Ellis Beach.

Drainage catchments have been delineated using site survey, aerial imagery and development plans in the posted developed scenario. Pre and post development catchment parameters are summarised in Table 1.

Table 1 Catchment Parameters

Scenario	Catchment ID	Total Area (ha)	Impervious %	Catchment Slope %
Pre-developed	EXT A	1.14	0	10
	PRE A	0.16	30	7
Post-developed	EXT A	1.14	0	10
	POST A	0.16	70	5

4.3 Conveyance of Flows

The Rational Method has been used to gain an initial understanding of the relative impact of the proposed development on peak flow rates at the site's LPD. The Rational Method is a basic method for assessing peak flow rates and is considered suitable given the catchment area is less than 500 ha and the time of concentration within the contributing catchments is less than 30 minutes (IPWEA, 2017).

The analysed catchments showed that an external catchment of 1.14ha to the west impacts the site..

The peak flows for the 1% AEP scenario have been summarised in Table 2.

Table 2 Pre and Post Development Flows (1%AEP)

Scenario	Catchment ID	Rational Method Flow (Q100)	Difference in Peak Discharge
Pre-developed	EXT A	0.45 m^3/s	
	PRE A	0.09 m^3/s	
Post-developed	EXT A	0.45 m^3/s	0%
	POST A	0.12 m^3/s	+ 40.9%

As shown above, the post-development case increases the development catchment flows by approximately 41%. As the lawful points of discharge are directly to the beach and the Coral Sea, it is not considered necessary to include on-site detention to mitigate the increase in discharge.

4.3.1 Proposed Swale Drain

Shown below in Table 3 are the proposed diversion swale details and shown in Figure 4 Stormwater Layoutis the proposed location of the diversion swale.

Table 3 Diversion Swale Parameters

Parameter	Value
Bottom Width	0 m
Side Slopes	1:4
Mannings	0.035
Channel Slope	1%
Flow Depth	0.36 m
Capacity	0.46 m^3/s
1% AEP Design Flow	0.45 m^3/s

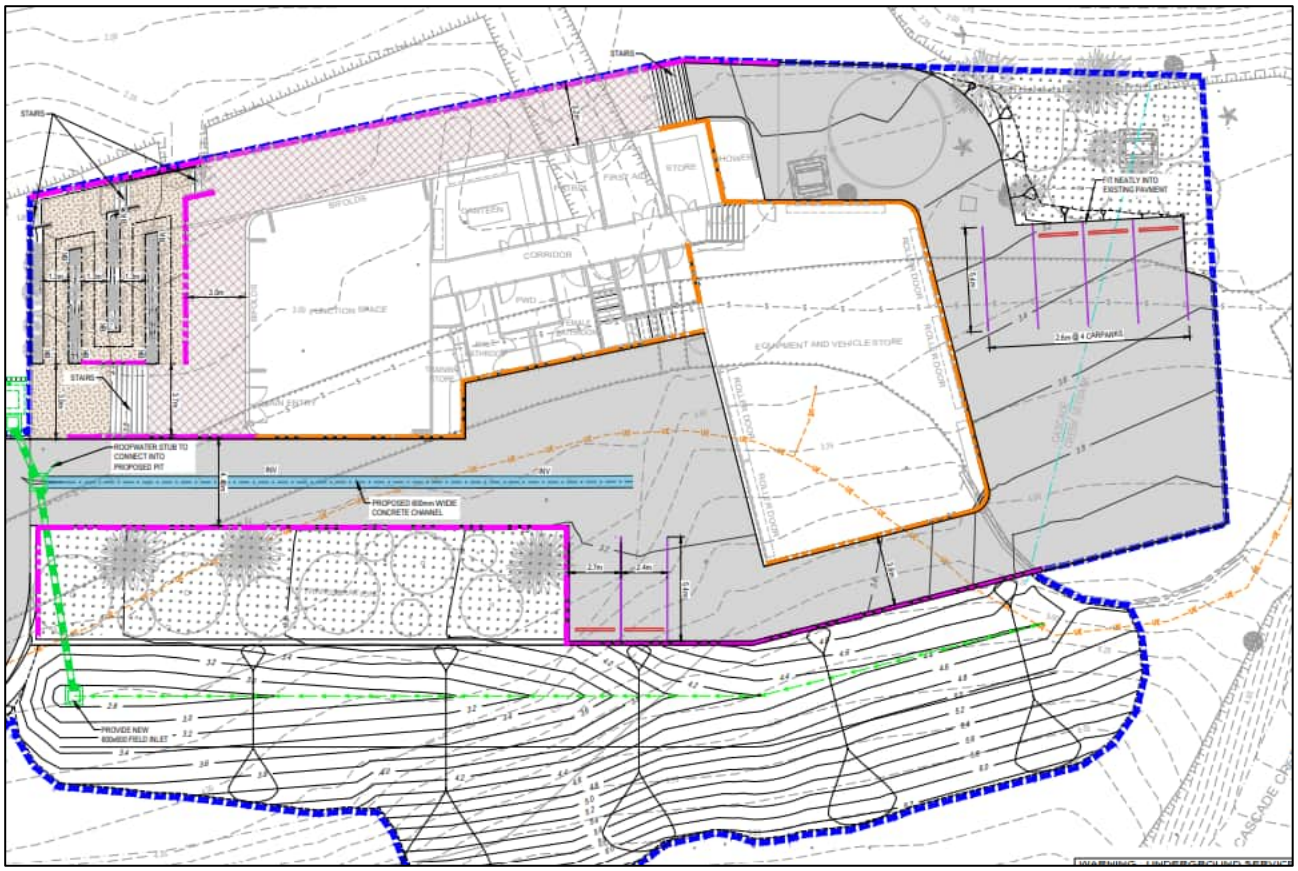


Figure 4 Stormwater Layout

An on-lot infiltration/surcharge pit has been proposed to mitigate concentrated flows and return flows back to sheet flow at the site boundary. Shown below in Figure 5 is excerpt from the civil plans of the proposed surcharge pit location. A detail of the proposed pit is shown below in Figure 6.

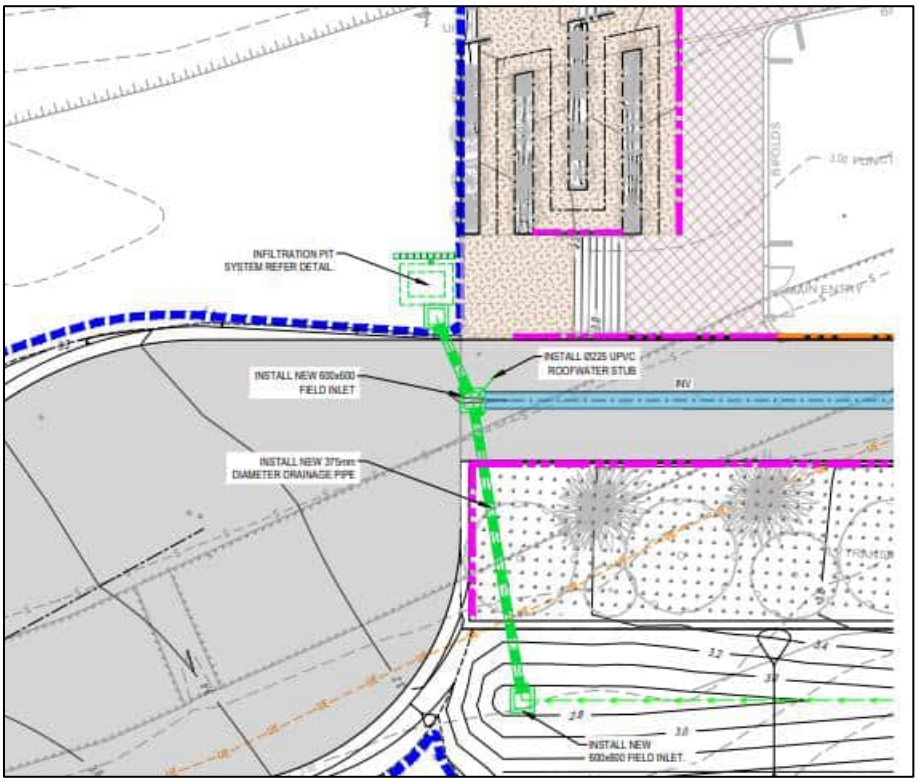


Figure 5 On Lot Infiltration/Surcharge Pit Location

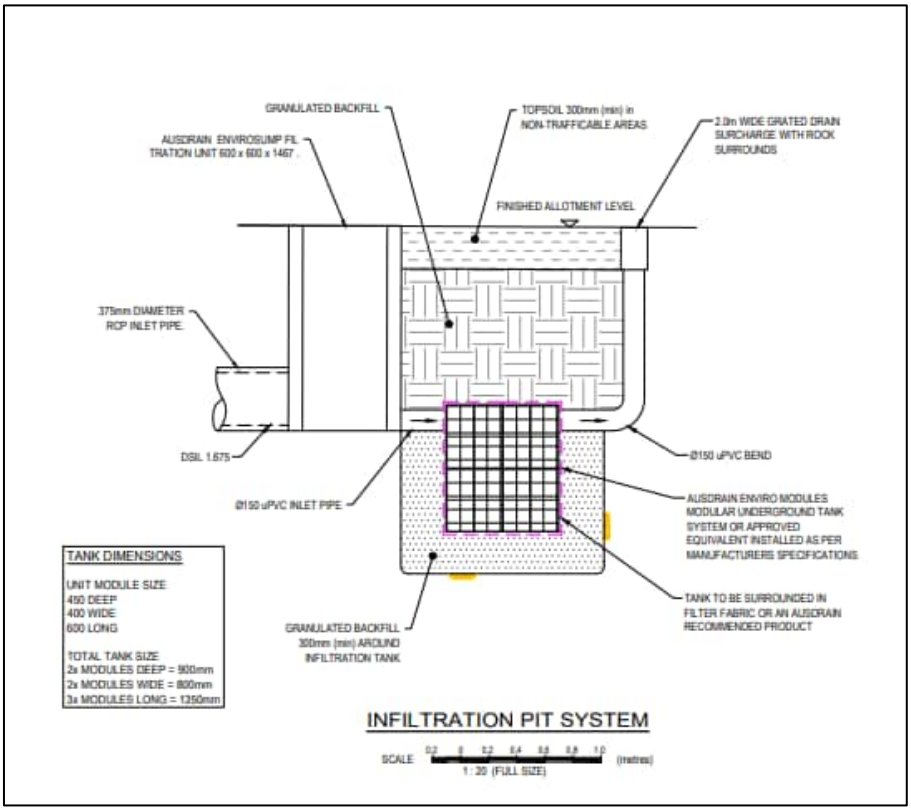


Figure 6 On Lot Infiltration/Surcharge Pit Detail

4.4 Water Quality

No water quality treatment is being proposed for the development as the proposed site is less than 2,500m^2. 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 2,500m^2.

5. Conclusion and Recommendations

No stormwater detention is being proposed for the development as it is unlikely to cause nuisance as a result of the increase in flow at the sites discharge location.

A swale drain has been designed along the western boundary to convey overland flows from the external catchments and avoid sheet flow through the site.

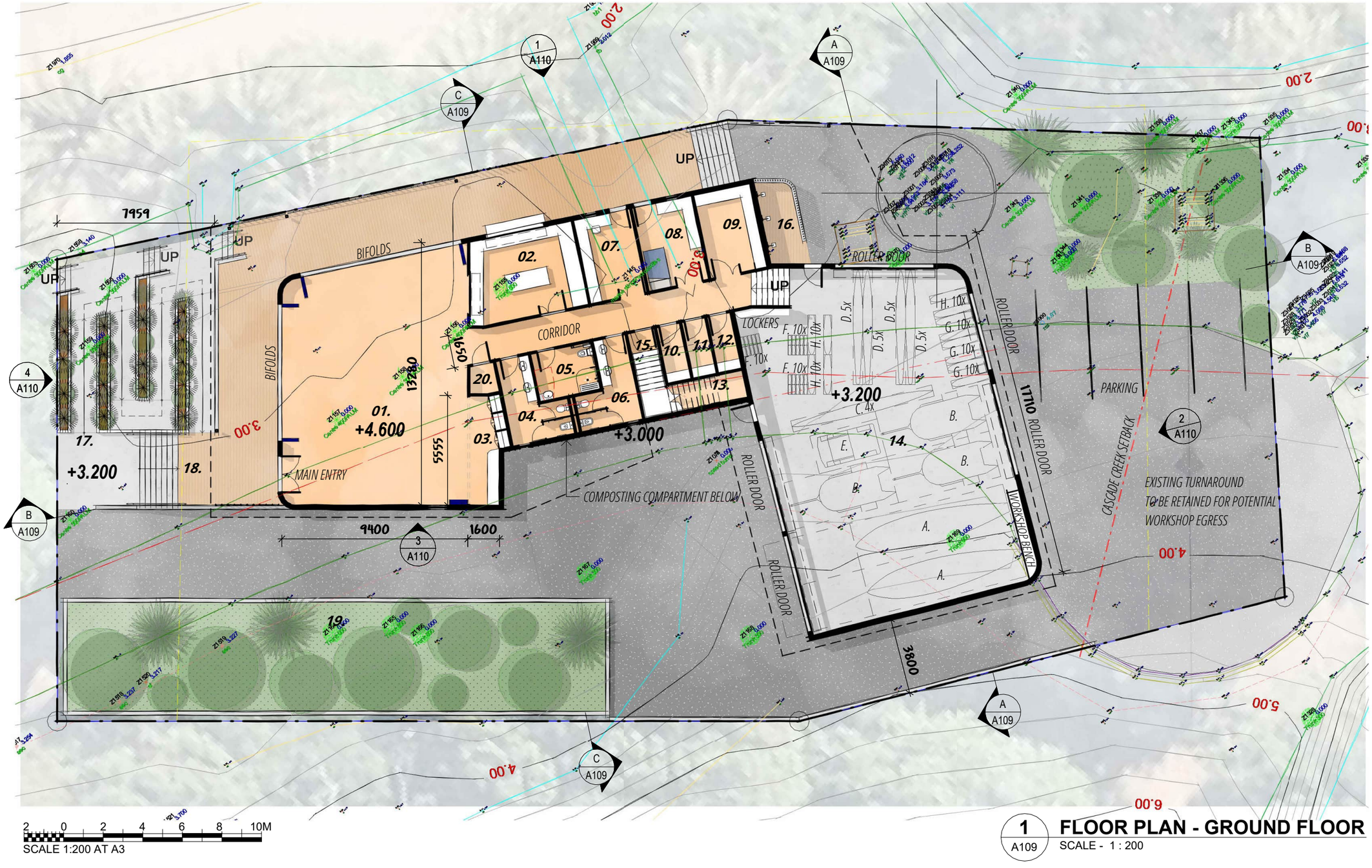
Provisions such as surcharge pit on the sites eastern boundary has been included in the design to ensure concentrated flow is returned to sheet flow at the sites discharge location.

No stormwater quality treatment is being proposed for the site as the proposed development is less than 2,500m^2 in area.

Appendix A – Architectural Drawings

EQUIPMENT

A. SURFBOAT (2 NO.)
B. IRB (3 NO.)
C. DOUBLE SKI (4 NO.)
D. SINGLE SKI (20 NO.)
E. ATV (1 NO.)
F. RACING PADDLE BOARD (MAL) (30 NO.)
G. NIPPER BOARDS (30 NO.)
H. FOAM BOARDS (30 NO.)



2 0 2 4 6 8 10M
SCALE 1:200 AT A3

1 A109 FLOOR PLAN - GROUND FLOOR

SCALE - 1 : 200

ROOMS

01. FUNCTION SPACE
02. CANTEEN
03. TRAINING STORE
04. MALE BATHROOM
05. PWD
06. FEMALE BATHROOM
07. PATROL
08. FIRST AID
09. STORE
10. CHANGE ROOM 1
11. CHANGE ROOM 2
12. CHANGE ROOM 3
13. STAIRS
14. EQUIPMENT AND VEHICLE STORE
15. HOT WATER/MSB
16. SHOWERS
17. RAMP
18. ENTRY STAIRS
19. TRANSPIRATION
20. CLEANER'S

GROUND FLOOR AREA SCHEDULE

CANTEEN	24 m²
PWD	8 m²
MALE BATHROOM	10 m²
FEMALE BATHROOM	10 m²
TRAINING STORE	9 m²
FUNCTION SPACE	115 m²
PATROL	13 m²
FIRST AID	13 m²
STORE	12 m²
EQUIPMENT STORE	208 m²
CHANGE ROOM 1	3 m²
CHANGE ROOM 2	3 m²
CHANGE ROOM 3	3 m²
SHOWERS	Not Enclosed
CLEANER'S	2 m²
STAIRS	* 12 m²
TOTAL APPROX.	447 m²

* NOT INCLUDING WALLS OR CORRIDOR

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	06-04-2023
P2	PRELIMINARY ISSUE	12-04-2023
P3	PRELIMINARY ISSUE	17-04-2023
P4	PRELIMINARY ISSUE	19-04-2023
P5	CLIENT ISSUE	04-05-2023

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DRAWN	BM	SCALE As indicated	SIZE A3
APPROVED	DI	DATE APRIL 2023	

PROJECT ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR ELLIS BEACH SURF LIFESAVING CLUB
DWG FLOOR PLAN - GROUND
DWG No. 1531-SD A106 | STAMP PRELIMINARY | ISSUE P5

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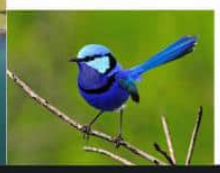
Appendix 4

Coastal Hazard Assessment prepared by Burchills

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TOWN PLANNING

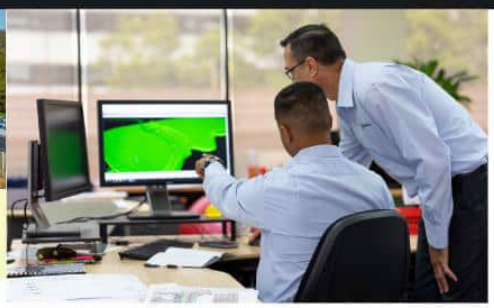
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Ellis Beach Surf Life Saving Club

Coastal Hazard Assessment

Client: Surf Life Saving Queensland
Project No: BE220596
Document No: BE220596-RP-CHA-02

September 2023

Document Control Record

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Date:	23.03.2023

Version No.	Description	Date	Prepared	Approved
01	Initial Issue	23.03.2023	NM	PB
02	Amended Design Drawings	21.09.2023	NM	PB

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Executive Summary

Burchills Engineering Solutions were engaged by Surf Life Saving Queensland to prepare a Coastal Hazard Assessment for a new Surf Life Saving Club development proposed to be established at Ellis Beach, on land parcels properly described as Lot 22 on SP147762, Lot 2 on AP8332 and Lot 13 on NR5512 which are situated within the Cairns Regional Council local government area.

The Coastal Hazard Assessment has been prepared as part of a Development Application package which proposes the establishment of a new two (2) storey Surf Life Saving Club and ancillary facilities.

A review of relevant State and Local Government map products has been undertaken as part of this assessment including:

- Cairns Plan (Version 3.1);
- State Planning Policy Interactive Mapping System; and
- Development Assessment Mapping System.

Investigations identified that while the subject site was mapped as being impacted by the Cairns Regional Council's *Coastal Processes Overlay*, the site was mapped by the SPP interactive mapping system as being located within the 'Coastal Area' within a 'Coastal Management District' (CMD). The SPP mapping also identifies that the development site is mapped as being situated within a *Erosion Prone Area* and is subject to *Medium & High Storm Tide Inundation*.

The assessment has determined that infrastructure designed as part of the proposed Surf Life Saving Club development will need to consider:

- Exposure to erosive processes driven by the fluctuation of the tidal prism;
- Scour from wave action generated by cyclonic storm conditions; and
- Hydrostatic and hydrodynamic forces exerted upon infrastructure during storm tide events;

It is recommended that the proposed development be designed in accordance with the following criteria:

- Forces exerted by a maximum wave height of 2m generated by extreme weather events;
- Forces exerted by a probable maximum storm tide depth of 3.8m AHD;
- The design of car parking facilities be developed in accordance with *Australian Standard AS2890.1-2004 Parking Facilities Off-Street Car Parking*;
- A building be setback as far as practicable from the top of the dune in order to reduce exposure to the impacts of wave impact / scour;
- The building be established no further seaward than adjoining coastal development (Ellis Beach Bungallows)

- Piled foundations for the proposed buildings (and boardwalk) are to be sunk at a minimum 500mm below the Lowest Astronomical Tide level (LAT) or where bedrock is present, piles are to be sunk 300mm into the rock;
- The finished floor level of the future development be established 300mm above the prescribed Probable Maximum Storm Tide level for the site.
- A detailed geotechnical investigate be completed prior to the commencement of detailed design to determine subsurface conditions.
- Future buildings should be designed in accordance with AS4997 Guidelines for the design of Maritime Structures and AS1170 Guidelines for Wind Actions Part 2.
- The proposed surf club building be established no further seaward than adjoining coastal development (Ellis Beach Bungalows);
- Rock armouring of a minimum size of 650mm is to be placed below the building undercroft to prevent scour underneath the building during extreme weather events.
- The design of the proposed surf lifesaving club be undertaken to reduce (where practicable) the extent of vegetation disturbed by development works (particularly on banks / dunes subject to erosive processes) to ensure bank / dune stability is maintained;
- Vegetated areas impacted by construction works are reinstated to pre-construction levels (where practical);

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Appendix C – CRC Planning Scheme Code Response
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1. Introduction

Burchills Engineering Solutions were engaged by Surf Life Saving Queensland to prepare a Coastal Hazard Assessment for a new Surf Life Saving Club development proposed to be established at Ellis Beach, on land parcels properly described as Lot 22 on SP147762, Lot 2 on AP8332 and Lot 13 on NR5512 which are situated within the Cairns Regional Council local government area.

A review of relevant State and Local Government map products has been undertaken as part of this assessment including:

- Cairns Plan 2016 (Version 3.1);
- State Planning Policy Interactive Mapping System; and
- Development Assessment Mapping System.

The assessment has determined that infrastructure designed as part of the proposed Surf Life Saving Club development will need to consider:

- Exposure to erosive processes driven by the fluctuation of the tidal prism;
- Scour from wave action generated by tropical lows (cyclones) off the north Queensland Coast;
- Hydrostatic and hydrodynamic forces exerted upon infrastructure during storm tide events;

1.1 Site Description and Characteristics

The subject site is located within the Ellis Beach Esplanade Park which is located between the Ellis Beach foreshore and the Captain Cook Highway. The site is located on land which is within the Captain Cook Highway road reserve and is identified as Unallocated State Land.

The site is located adjacent to Lot 22 on SP147762 and Lot 2 on AP8332, and Lot 13 on NR5512 which is situated on the western side of the highway. The subject site has an area of <<TBC>>m^2 and is not encumbered by zoning prescribed by the Cairns Plan Version 3.1. The site is located to the north-east of the Ellis Beach Bungalows (Lot 22 SP147762 and Lot 2 AP8332) while to the south-west the site adjoins the Captain Cook Highway. The opposing side of the Captain Cook Highway contains commercial development (restaurants) and the existing Ellis Beach surf club. To the north-west, the site is adjoined by parking infrastructure while to the north-east, the site adjoins the Ellis Beach foreshore. Vehicular access to the site is provided by parking infrastructure which connects to the Captain Cook Highway.

The subject site is contained within the Ellis Beach Esplanade Park and is devoid of any buildings or structures. This site is currently used however for parking and contains a maintained covering of grass and mature trees and shrubs.

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



Figure 1.1 Locality Plan (Courtesy: SPP)



Figure 1.2 Aerial Photograph (Courtesy: Nearmap)

1.2 Proposed Development

The proposed development seeks to provide a new surf life saving club. The proposed development will deliver a new low scale two storey building which includes a small café, workshop, boat / jet ski storage area and ancillary amenities on the ground floor and caretakers facility on the first floor.

Figure 1.3 below provides an extract of the site plan prepared by Clarke and Prince Architects which depicts the developments ground floor. For further details, please refer to the full set of architectural design drawings contained in Appendix A of the report.



Figure 1.3 Ellis Beach SLSC Survey Plan (Courtesy: Clarke and Prince Architects)

2. Desktop Review

2.1 Cairns Plan (Version 3.1)

The *Cairns Plan (Version 3.1)* provides a planning framework for the assessment and determination of future development occurring within the Cairns Regional Council local government area.

As such, consideration has been given to the Cairns Plan as part of this assessment. Interrogation of the City Plan's interactive mapping has identified that the subject site is constrained by the *Coastal Processes Overlay* layer (Erosion Prone Area) contained within the scheme's mapping. Figure 2.1 below provides an extract of the Coastal Processes Overlay depicting the extents of the overlay in relation to the property.

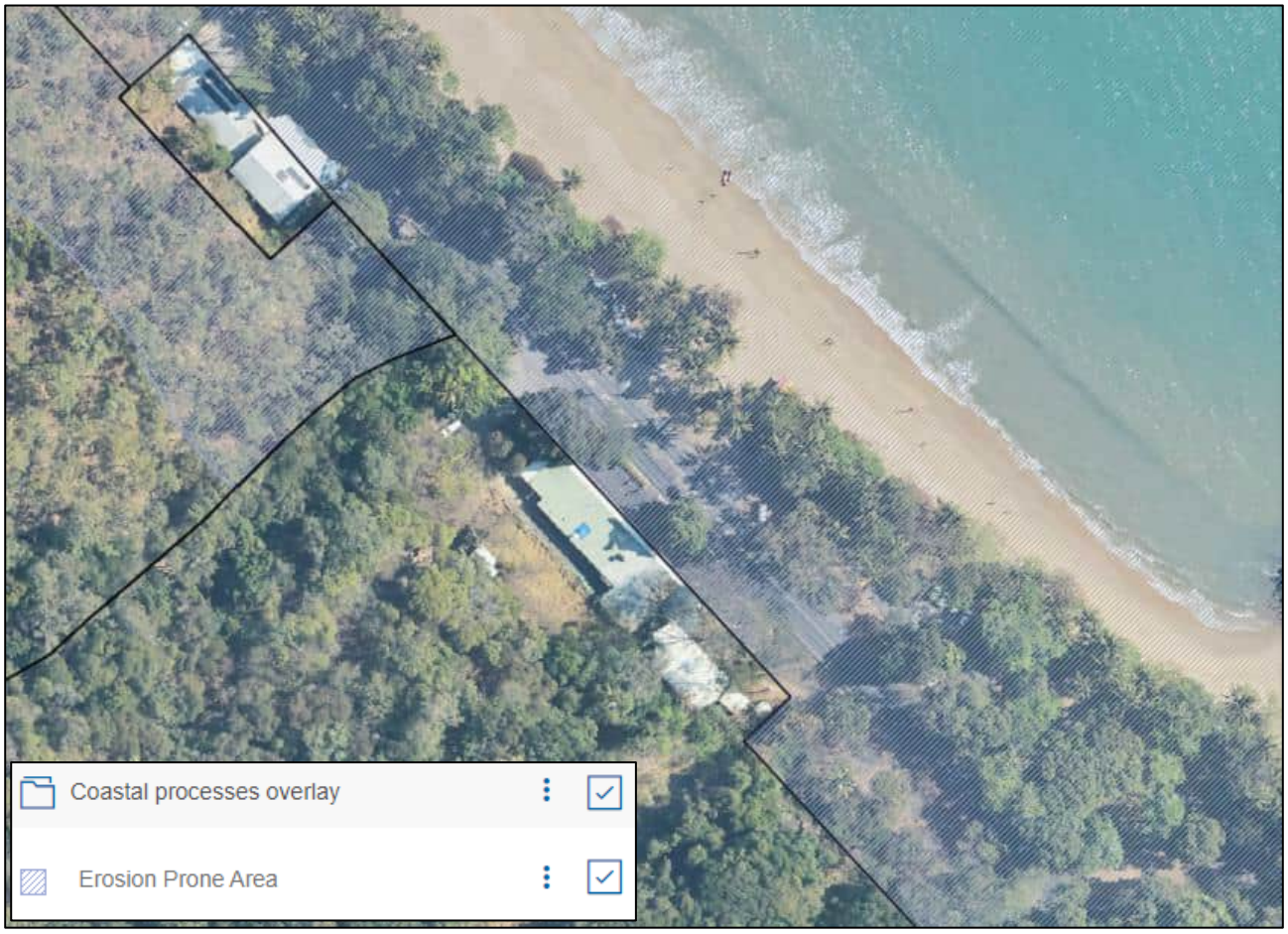


Figure 2.1 Cairns Plan Coastal Processes Overlay Extract (Courtesy CRC)

2.2 Palm Cove + Ellis Beach Draft Local Adaptation Plan

The Palm Cove + Ellis Beach Draft Local Adaptation Plan identifies that the subject site is vulnerable to erosion or inundation from high tide / storm tide if sea levels were to rise by 0.8 metres by 2100 as predicted. The plan identifies that community infrastructure such as the Ellis Beach Bungalows and the Surf Lifesaving Infrastructure will be at risk from the impacts of coastal erosion and storm tide inundation (assuming no adaptation action being undertaken).

While it is identified that Ellis Beach is relatively stable, the beach in this vicinity is relatively narrow, providing a limited buffer to coastal processes (storm tide, wave impact, scour etc.).

The document identifies that in the Ellis Beach locality, foreshore park assets will be improved to be more resilient to the impacts of coastal processes / hazards, while the preference is to establish new public assets outside of the mapped coastal hazard areas (western side of the highway).

2.3 Development Assessment Mapping System

An interrogation of the Development Assessment Mapping System has identified that the subject site is located within the Coastal Zone and is identified as being located within an erosion prone area and is partially located within the Medium Storm Tide inundation area. It is also important to note that the site is situated within the Coastal Management District (CMD).

Figures 2.2, 2.3 and 2.4 below provide extracts of SPP Mapping depicting the extents of the mapped natural hazards overlays. Copies of the coastal hazard maps have been provided in Appendix B.

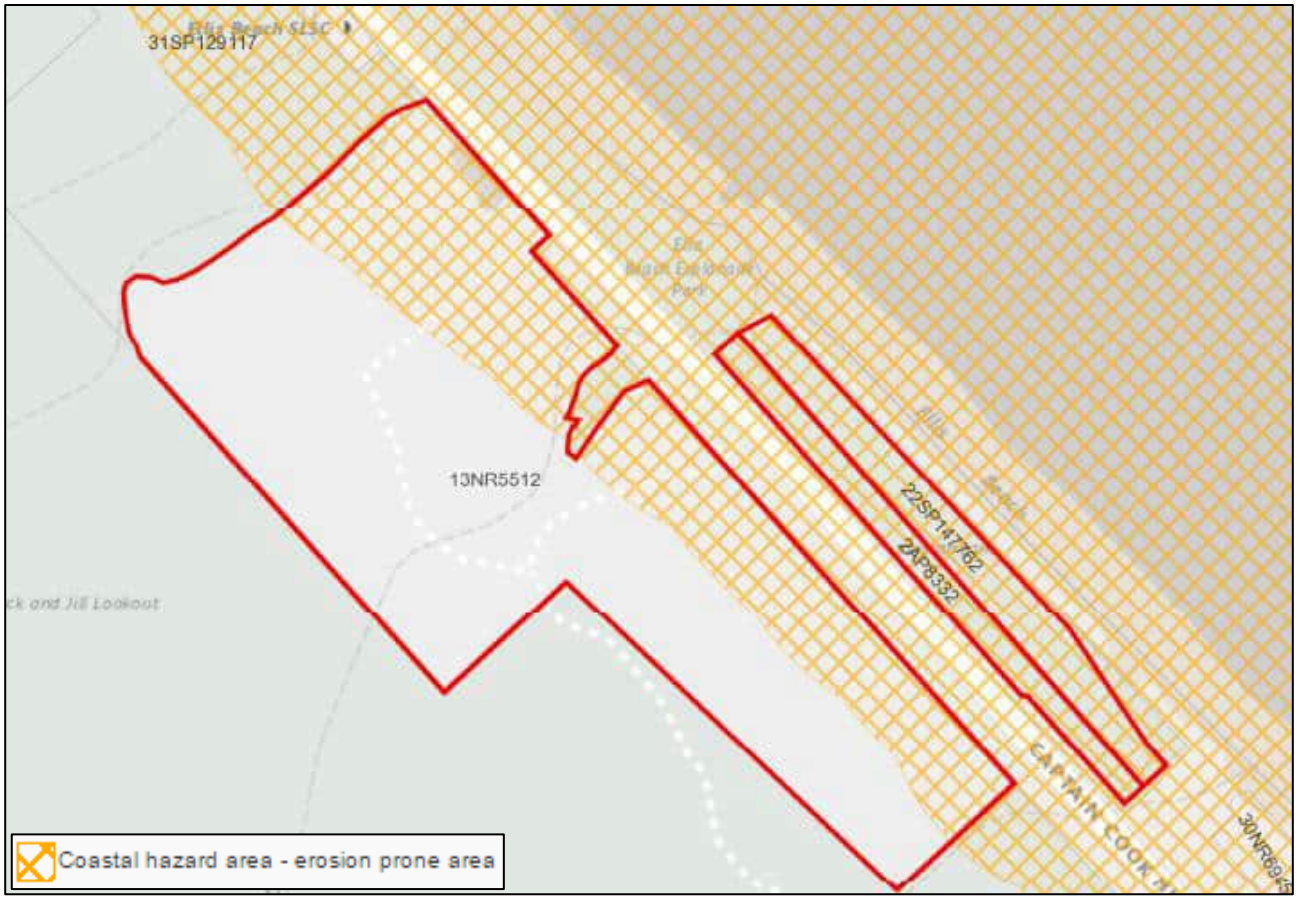


Figure 2.2 Coastal Hazard Area – Erosion Prone Land (Courtesy: DAMS)

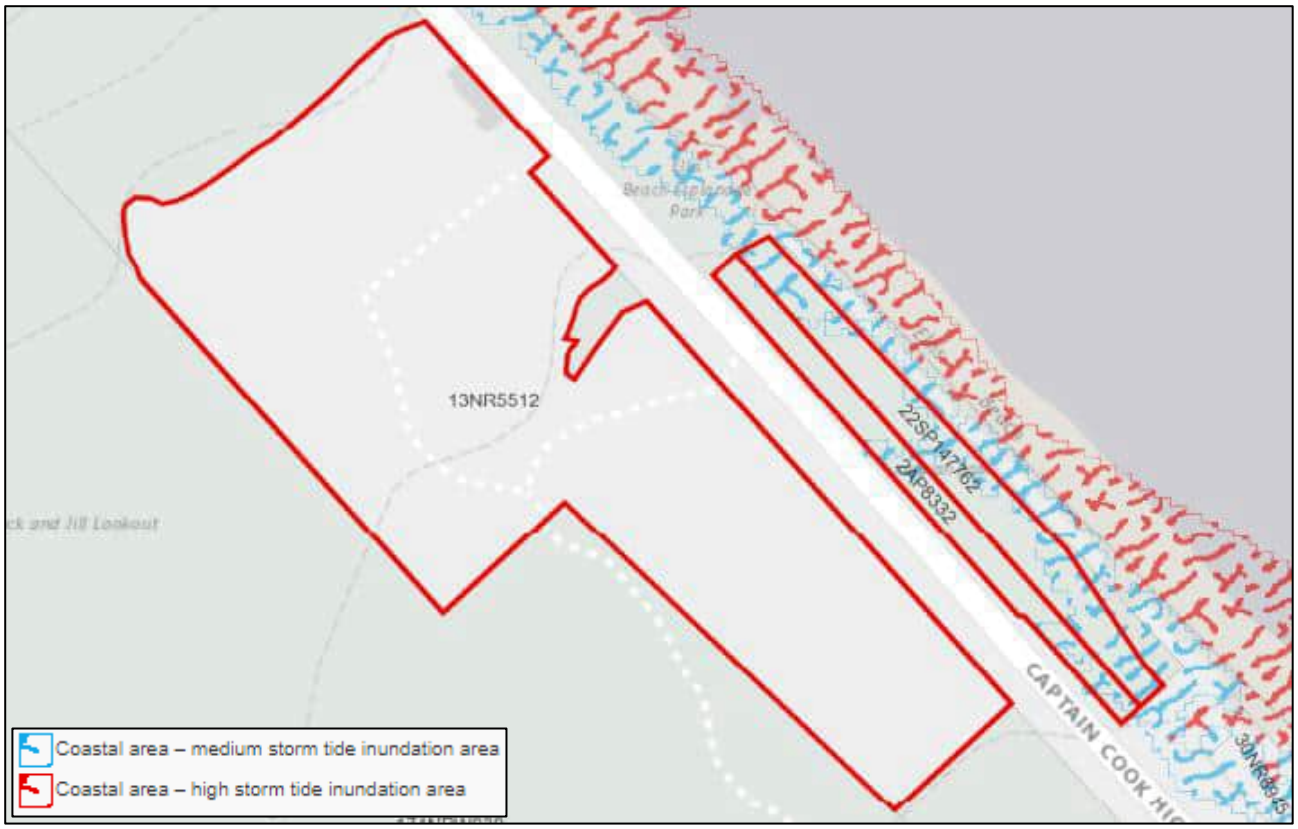


Figure 2.3 Medium Storm Tide Inundation Area (Courtesy: DAMS)

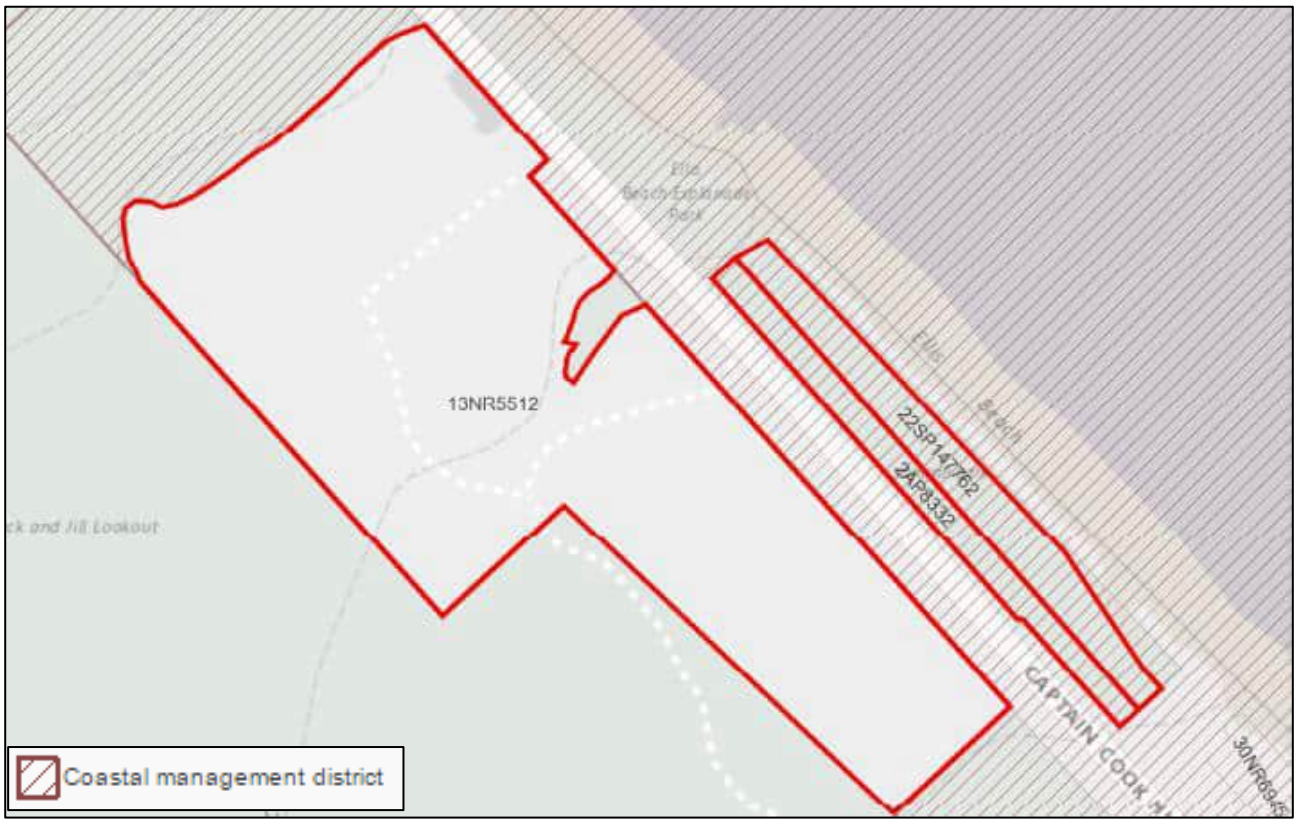


Figure 2.4 Coastal Management Districts (Courtesy: DAMS)

3. Site Conditions

3.1 Environmental Conditions

The proposed Surf Club is located adjacent to the Ellis Beach foreshore. The Ellis Beach environment is a dynamic environment which is shaped by coastal processes including fluctuations in the tide and wave action. There is a history of erosion and accretion along this section of the ocean beach as a result of extreme weather events and wave action. The following sections of this report discuss the environmental conditions experienced at the investigation area, focusing upon the following:

- Astronomical Tides;
- Storm Tides; and
- Wave Action.

3.2 Astronomical Tides

Property adjoining the Coral Sea is subject to semi-diurnal tides which have a tidal range of 3.57m. Tidal planes for Ellis Beach have been based levels prescribed within the 2023 Semidiurnal Tidal Planes chart produced by Maritime Safety Queensland for Cairns and have been reproduced below in Table 7.1.

Table 3.1 Semi Diurnal Tides Range for Cairns

Tidal Planes	Level (m LAT)	Level (m AHD)
Highest Astronomical	3.57	1.83
Mean High Water Spring	2.67	1.03
Mean Hight Water Neap	1.98	0.34
Mean Low Water Spring	0.82	-0.82
Mean Low Water Neap	1.50	-0.14
Mean Sea Level	1.74	0.00
Australian Height Datum	1.74	0.00
Lowest Astronomical Tide	0.00	-1.74
Minimum Site Level	4.12	2.38
Maximum Site Level	6.56	4.82

3.3 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 North-East Queensland are caused by severe weather events such as Tropical Lows (Cyclones).

A storm tide is the combined or total water level which comprises of the following components:

- Astronomical Tide; and

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

3.4 Wave Action

As identified above, the subject site is situated on adjacent to the Ellis Beach foreshore and shall be subjected to wave action generated by weather systems. Wind roses downloaded from BoM for the Cairns airport identify that the predominant wind directions are from the South and South-East. The coastline in this area is afforded protection from the Great Barrier Reef, which dissipates wave energy prior to waves reaching the coastline. As a result, the site is subjected to reduced impacts from wind generated wave action, with only waves generated during extreme weather events (cyclones) causing large scour events.

3.4.1 Sediment Transport & Erosion

High energy wave events combined with elevated water levels (storm tide) generated by severe weather systems (Tropical Cyclones) 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. In these areas, all existing infrastructure may potentially be lost or damaged and can be considered sacrificial in nature.

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.

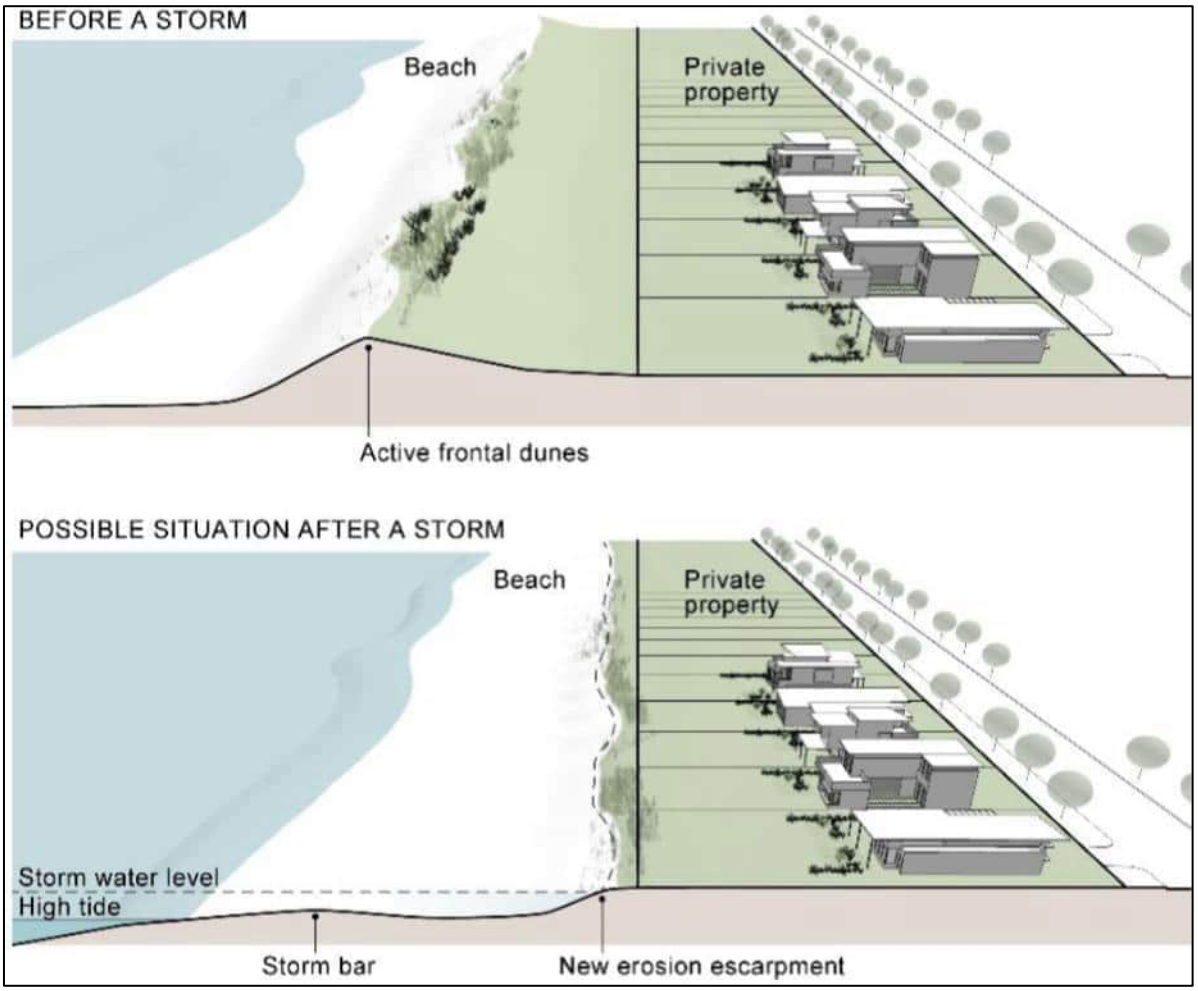


Figure 3.1 Diagram Depicting Pre and Post Short-Term Erosion Event (Courtesy: CoGC)

4. Design Considerations

4.1 Impacts of Erosion

The subject site has an interface with the Ellis Beach foreshore which is a dynamic environment subject to the affects of wave impact, tidal fluctuation and storm tide inundation. Infrastructure installed at the interface between the terrestrial and marine environments will be required to be designed to withstand the forces that are to be exerted upon them by environmental processes.

During the design process measures should be incorporated to provide infrastructure which is resistant to scour and can withstand wave impact, and hydrostatic forces experienced during a storm tide event.

4.2 Storm Tide Inundation

As identified by DAMS coastal hazard mapping, the development site is subject to Medium Storm Tide Inundation. Areas mapped as being situated within a Medium Storm Tide Inundation area will be inundated up to 1m of water during the design storm tide event.

A review of the *NDRP Storm Tide Hazard Interpolation Study Report* prepared by GHD for the Department of Science, Information Technology, Innovation and the Arts was undertaken to determine ocean water levels for coastal local government areas. The report identified that during the Probable Maximum Storm Tide event, a water level of 3.8m AHD would be reached, inundating the entirety of the site.

5. Design Criteria

5.1 Carpark

Should off street car parking be provided, it is to be designed in accordance with *Australian Standard AS2890.1-2004 Parking Facilities Off-street Car Parking.* The design of any future car park should also take into account the proximity of the structure to the ocean and the facilities susceptibility to:

- Periodic inundation from storm tide events; and
- Scour from wave impact.

It is likely that any proposed parking structure associated with the future development will be subject to periodic inundation from storm surge and wave impact / scour from wave action. For further details, please refer to design drawings prepared by Robert Bass Surveyors contained within Appendix A of this report.

5.2 Building Design

The area nominated for the potential establishment of the future Ellis Beach Surf Life Saving Club is mapped as being subject to periodic inundation from storm tide events. The area immediately adjacent the Ellis Beach foreshore may also be subject to scour from tidal fluctuations and wave energy generated by the extreme weather events.

Given the above, it is recommended that the proposed facility be constructed to resist hydrostatic uplift and loads expected to be exerted during the design storm tide event. It is also recommended that footings are designed, constructed and certified for scour to at least -1.74m AHD (LAT). It is noted in CRC's storm tide mapping that the site is situated in close proximity to mapped bedrock. Should rock be present in the area then it is recommended that foundations (piles) be sunk a minimum of 300mm into the bedrock layer. Please note that these design recommendations should be adopted for the design of the proposed boardwalk structure.

In order to determine the subsurface condition present onsite, it is recommended that a geotechnical assessment be undertaken to establish the design criteria for the foundations of the proposed building. Additionally, it is recommended that the finished floor level (FFL) of the future development be designed to provide 300mm of freeboard to the Probable Maximum Storm Tide level of 3.8m AHD. A typical cross section depicting the depths to which piles are to be sunk to and finished flood level of the future building is provided below in Figure 5.1.

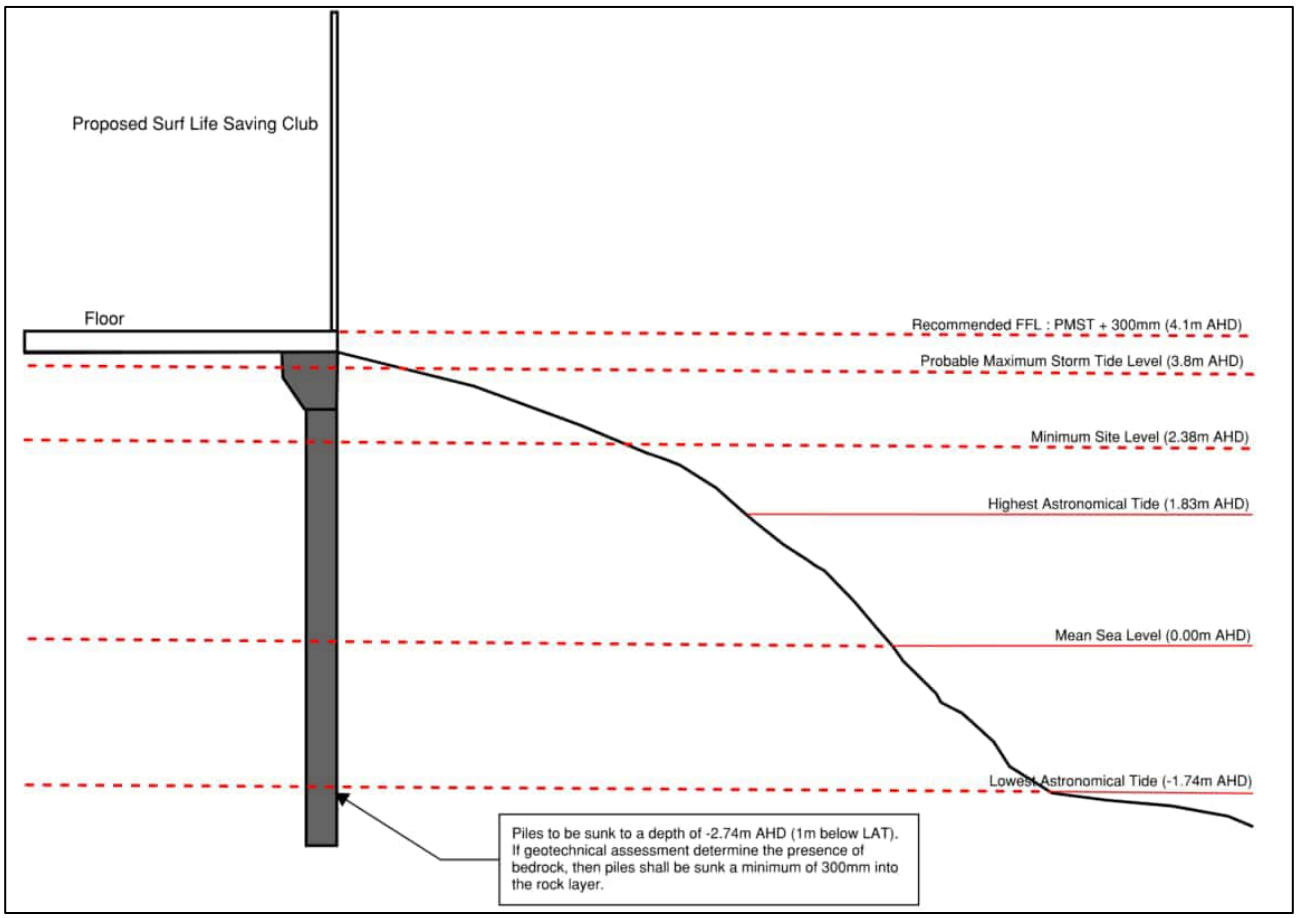


Figure 5.1 Typical Cross Section Depicting Recommended Finished Levels.

Please note that future buildings should be designed in accordance with provisions prescribed within Australian Standard AS4997 Guidelines for the design of Maritime Structures and AS1170 Guidelines for Wind Actions Part 2. Please note that rock armouring of a minimum rock size no smaller than 650mm will be placed beneath the building undercroft to ensure that localised scour is prevented below the building.

6. Statutory Compliance

The proposed development will be subject to assessment against the provisions of applicable state planning instruments (State Development Assessment Provisions (SDAP)) and applicable sections of the Local Government Planning Scheme (Cairns Plan (Version 3.1)) which incorporates the provisions prescribed by the State Planning Policy for the State Interest – Natural Hazards.

6.1 Cairns Plan 2016 (Version 3.1)

As detailed in section 2.1 of this report, the site is located within an area mapped as being subject to coastal erosion. An assessment of the proposed development against the provisions of the Coastal Processes Overlay Code has been completed as part of this report.

For further details, please refer to the code response to the Cairns Plan Coastal Processes Overlay Code contained in Appendix C.

6.2 State Development Assessment Provisions: State Code 8

As detailed in section 2.2 of this report, the site is located within the Coastal Management District and will be subject to assessment against the provisions of the State Development Assessment Provisions. In particular, the development is required to be assessed against the provisions of SDAP State Code 8: Coastal Development and Tidal Works.

An assessment of the proposed development against the provisions of State Code 8 has been completed as part of this report.

For further details, please refer to the response to the State Development Assessment Provisions: State Code 8 contained in Appendix D.

7. Conclusions

This report has assessed the impacts of coastal hazards impacts upon a future Surf Life Saving Club which is proposed within the Ellis Beach Esplanade Park at Ellis Beach in the Cairns Regional Council local government area, documenting the negative impacts that severe storm tide events and erosion may have upon future development.

The report has determined that the proposed Surf Life Saving Club site is situated within the coastal environment within an area which is mapped by the Development Assessment Provisions as being in a Coastal Management District and in an Erosion Prone area which may be subject to the impacts of medium storm tide inundation. The proposed building and associated infrastructure are to be treated as a piece of sacrificial infrastructure which is able to be closed and abandoned during a severe weather event.

The assessment has determined that the proposed development and associated infrastructure will need to consider:

- Exposure to erosive processes driven by the fluctuation of the tidal prism;
- Scour from wave action generated by extreme weather events;
- Hydrostatic forces exerted during storm tide events and wave impact;

It is recommended that the proposed development be designed in accordance with the following criteria:

- Forces exerted by a maximum wave height of 2m generated by extreme weather events;
- Forces exerted by a probable maximum storm tide depth of 3.8m AHD;
- The design of car parking facilities be developed in accordance with *Australian Standard AS2890.1-2004 Parking Facilities Off-Street Car Parking*;
- The building be setback as far as practicable from the top of the dune in order to reduce exposure to the impacts of wave impact / scour;
- The building be established no further seaward than adjoining coastal development (Ellis Beach Bungallows)
- A detailed geotechnical investigate be completed prior to the commencement of detailed design to determine subsurface conditions.
- The finished floor level of the future development be established 300mm above the prescribed Probable Maximum Storm Tide level for the site.
- Pile structures of the proposed buildings are to be sunk at a minimum of the least Lowest Astronomical Tide or where bedrock is present, piles are to be sunk 300mm into the rock;
- Future buildings should be designed in accordance with AS4997 Guidelines for the design of Maritime Structures and AS1170 Guidelines for Wind Actions Part 2.
- Rock armouring of a minimum size of 650mm is to be placed below the building undercroft to prevent scour underneath the building during extreme weather events.
- The design of the proposed surf lifesaving club be undertaken to reduce (where practicable) the extent of vegetation disturbed by development works (particularly on banks / dunes subject to erosive processes) to ensure bank / dune stability is maintained;

- Vegetated areas impacted by construction works are reinstated to pre-construction levels (where practical).

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

- Negatively impacting upon coastal processes;
- Impacting upon the protective function of landforms and retains vegetation;
- Significantly impacting 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 the future Surf Life Saving Club, it is unlikely that the proposed development will have negative impacts upon the local marine environment or coastal processes within the Ellis Beach locality. Nevertheless, careful consideration should be given during the design phase of the development to ensure that the impacts of coastal erosion are properly accounted for.

8. Definitions

Astronomical Tide: the periodic rising and falling of the oceans, resulting from the gravitational attraction of the moon, sun and other astronomical bodies acting upon the rotating earth.

Average height datum (AHD): Australian height datum is the datum (adopted by the National Mapping Council of Australia) to which all vertical control for topographic mapping is to be referred.

Average recurrence interval (ARI): the average, or expected, value of the periods between the exceedance of a given storm tide level. It is implicit in this definition that the periods between each exceedance are generally random.

Beach Nourishment: the replenishment of a beach system using imported sediment to balance erosion losses or to re-establish a wider dine buffer zone.

Coastal erosion: the erosion of land or the removal of beach or dune sediments by wave or wind action, tidal currents, wave currents or drainage.

Coastal processes: natural processes of the coast including sediment transport; fluctuations in the location and form of the foreshore, dune systems and associated ecosystems; tides; changes in sea level and coastal hazards (for example, storm tide surge); ecological processes (such as migration of plant and animal species) and the natural water cycle (for example, coastal wetlands' role in nutrient filtration and flood mitigation).

Erosion Prone Area: an area subject to coastal erosion or tidal inundation and declared to be erosion prone under section 70(1) of the *Coastal Protection and Management Act 1995.*

Highest Astronomical Tide (HAT): the highest water level that can be predicted to occur under average meteorological conditions and any combination of astronomical conditions.

Storm surge: a localised increase (or decrease) in ocean water levels caused by high winds and reduced atmospheric pressures associated with a storm event.

Storm tide: the effect on coastal water of a storm surge combined with the normally occurring astronomical tide.

Storm tide inundation: the area of land determined to be at risk from inundation associated with a storm tide.

9. References

Coastal Protection and Management Act 1995 (Qld) (Australia)

Department of Environment and Heritage Protection 2013, Coastal Hazard Technical Guide: Determining Coastal Hazard Areas, Queensland State Government, view 24 September 2015.

Cairns Regional Council, 2016. Cairns Plan (Version 3.1), August, 2022.

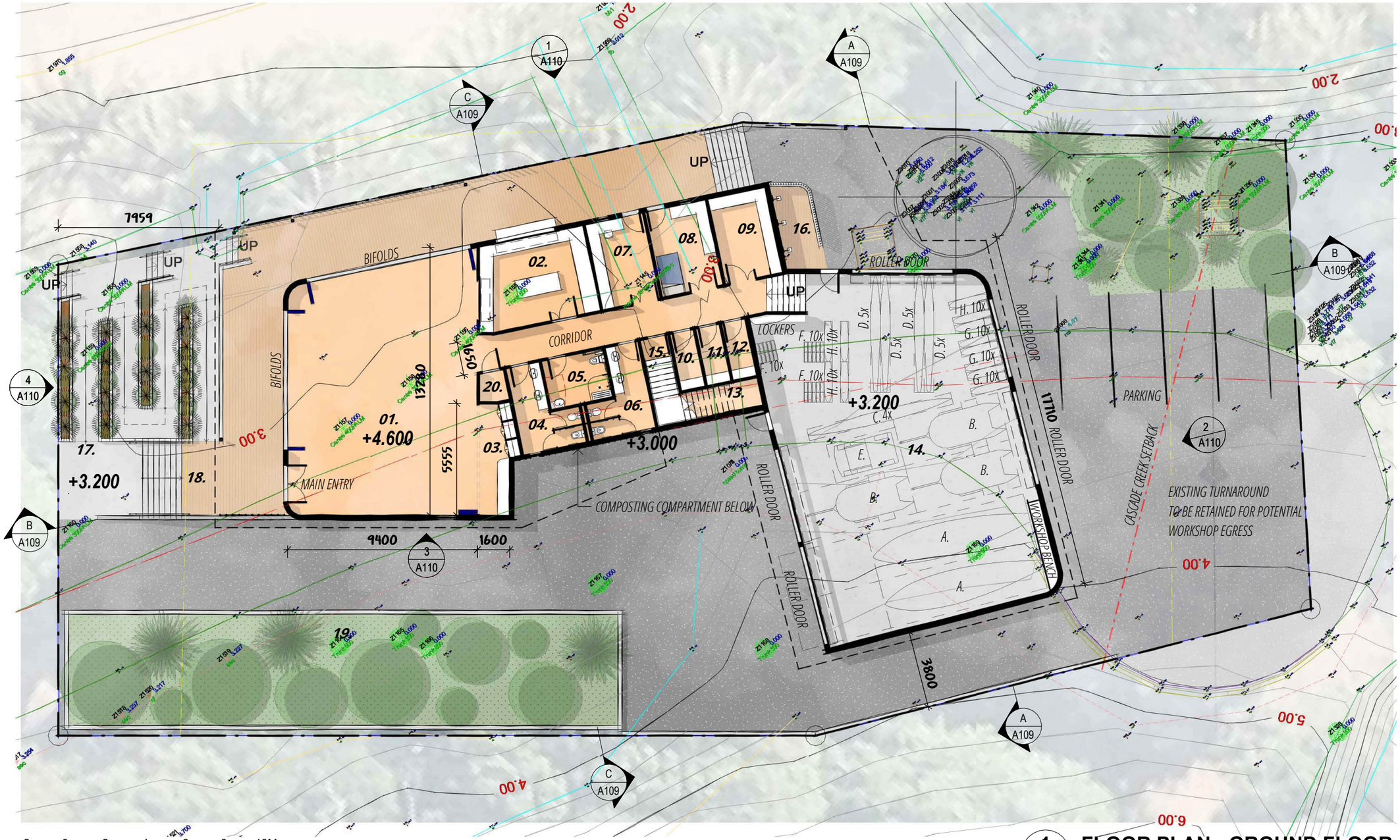
State Planning Policy (July 2017)

Planning Act 2016 (Qld) (Australia)

Appendix A – Design Drawings

EQUIPMENT

A. SURFBOAT (2 NO.)
B. IRB (3 NO.)
C. DOUBLE SKI (4 NO.)
D. SINGLE SKI (20 NO.)
E. ATV (1 NO.)
F. RACING PADDLE BOARD (MAL) (30 NO.)
G. NIPPER BOARDS (30 NO.)
H. FOAM BOARDS (30 NO.)



2 0 2 4 6 8 10M
SCALE 1:200 AT A3

ROOMS

01. FUNCTION SPACE
02. CANTEEN
03. TRAINING STORE
04. MALE BATHROOM
05. PWD
06. FEMALE BATHROOM
07. PATROL
08. FIRST AID
09. STORE
10. CHANGE ROOM 1
11. CHANGE ROOM 2
12. CHANGE ROOM 3
13. STAIRS
14. EQUIPMENT AND VEHICLE STORE
15. HOT WATER/MSB
16. SHOWERS
17. RAMP
18. ENTRY STAIRS
19. TRANSPIRATION
20. CLEANER'S

GROUND FLOOR AREA SCHEDULE

CANTEEN	24 m²
PWD	8 m²
MALE BATHROOM	10 m²
FEMALE BATHROOM	10 m²
TRAINING STORE	9 m²
FUNCTION SPACE	115 m²
PATROL	13 m²
FIRST AID	13 m²
STORE	12 m²
EQUIPMENT STORE	208 m²
CHANGE ROOM 1	3 m²
CHANGE ROOM 2	3 m²
CHANGE ROOM 3	3 m²
SHOWERS	Not Enclosed
CLEANER'S	2 m²
STAIRS	* 12 m²
TOTAL APPROX.	447 m²

* NOT INCLUDING WALLS OR CORRIDOR

1 A109 **FLOOR PLAN - GROUND FLOOR**
SCALE - 1 : 200

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	06-04-2023
P2	PRELIMINARY ISSUE	12-04-2023
P3	PRELIMINARY ISSUE	17-04-2023
P4	PRELIMINARY ISSUE	19-04-2023
P5	CLIENT ISSUE	04-05-2023

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DRAWN	BM	SCALE As indicated	SIZE A3
APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **FLOOR PLAN - GROUND**
DWG No. **1531-SD A106** | STAMP PRELIMINARY | ISSUE **P5**



2 0 2 4 6 8 10M

SCALE 1:200 AT A3

ROOMS

01. DINING
02. KITCHEN
03. LAUNDRY
04. LIVING
05. CORRIDOR
06. BEDROOM 1
07. BATHROOM
08. BEDROOM 2
09. STORE
10. DECK

FIRST FLOOR AREA SCHEDULE	
BED 1	14 m²
DINING	6 m²
LAUNDRY	8 m²
BATHROOM	6 m²
CORRIDOR	19 m²
BED 2	12 m²
KITCHEN	11 m²
LIVING	6 m²
STORE	3 m²
DECK	20 m²
TOTAL APPROX.	* 105 m²

* NOT INCLUDING WALLS OR STAIRS

3 / A109 **FLOOR PLAN - FIRST FLOOR**

SCALE - 1 : 200

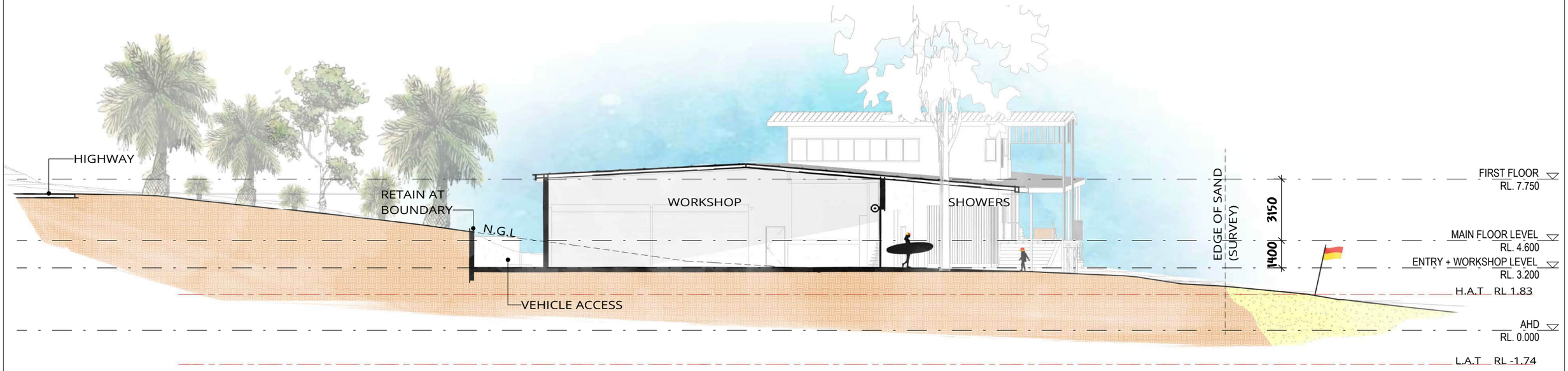
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	12-04-2023
P2	PRELIMINARY ISSUE	17-04-2023
P3	PRELIMINARY ISSUE	19-04-2023
P4	CLIENT ISSUE	04-05-2023

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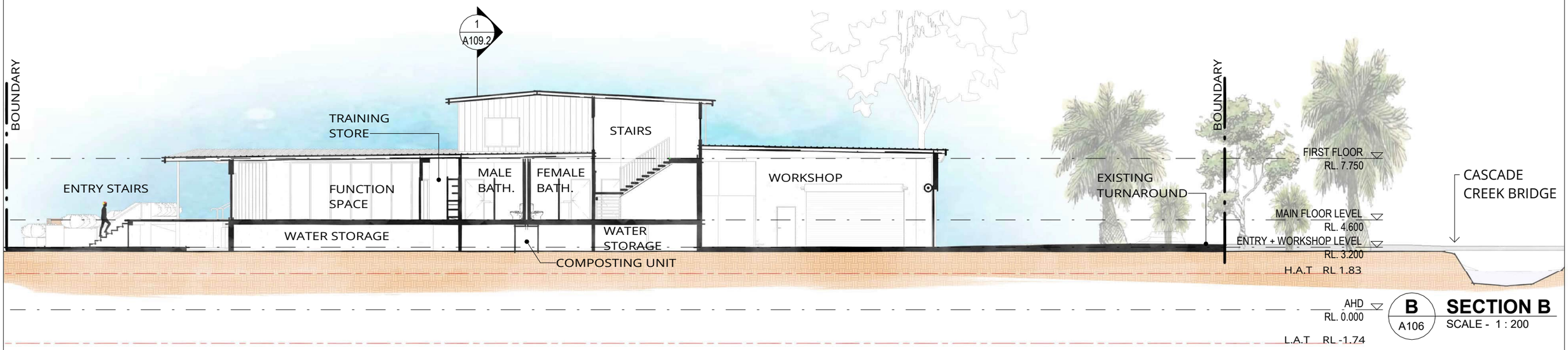
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APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **FLOOR PLAN - FIRST FLOOR**
DWG No. **1531-SD A107** | STAMP PRELIMINARY | ISSUE **P4**



A / A106 **SECTION A**
SCALE - 1 : 200



B / A106 **SECTION B**
SCALE - 1 : 200

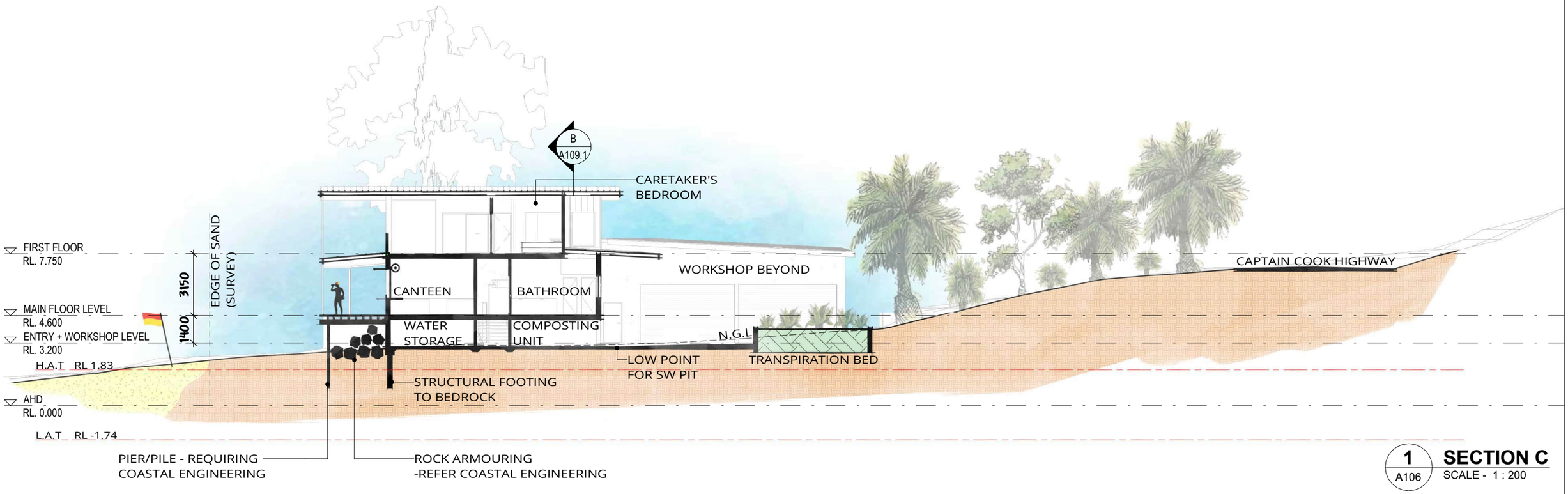
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	19-04-2023
P2	CLIENT ISSUE	04-05-2023
P3	TIDE LEVELS ADDED	21-09-2023

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APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE SECTIONS**
DWG No. **1531-SD A109.1** | STAMP PRELIMINARY | ISSUE **P3**



1 A106 **SECTION C**
SCALE - 1 : 200

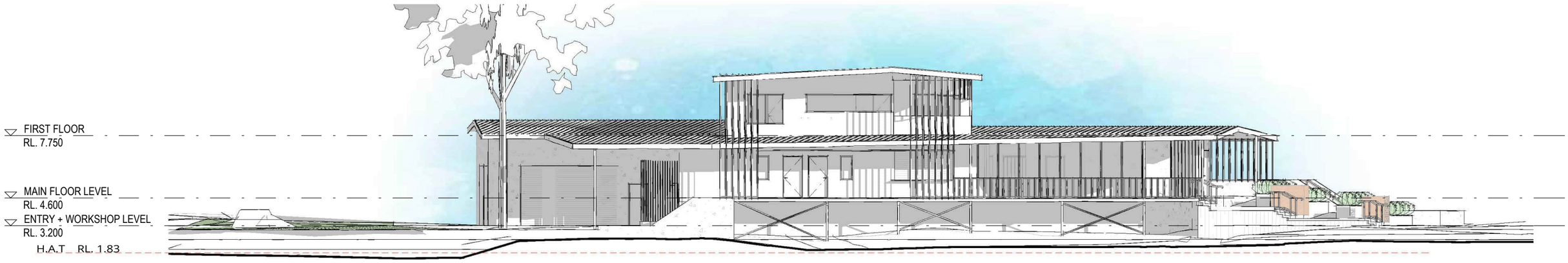
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	19-04-2023
P2	CLIENT ISSUE	04-05-2023
P3	TIDE LEVELS ADDED	21-09-2023

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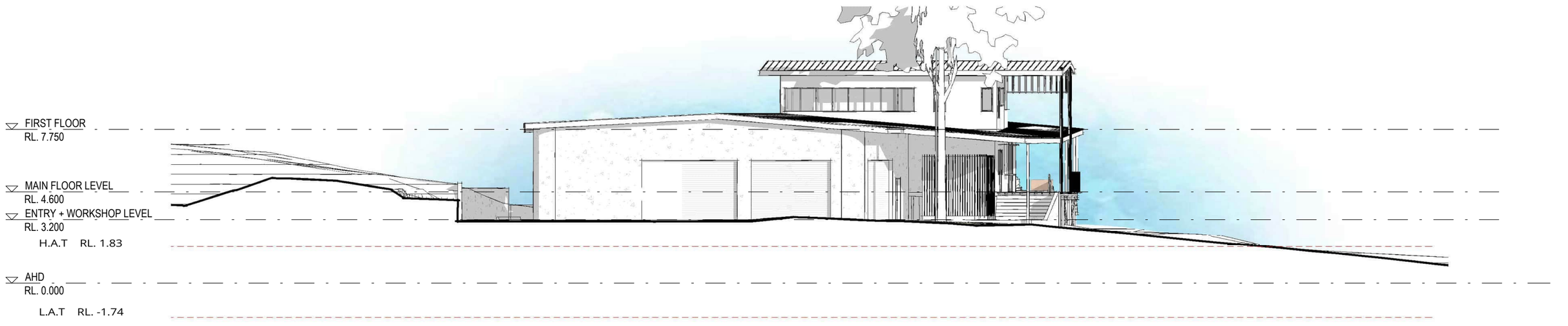
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PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE SECTIONS**
DWG No. **1531-SD A109.2** | STAMP PRELIMINARY | ISSUE **P3**



1 / A106 **ELEVATION A**
SCALE - 1 : 200



2 / A106 **ELEVATION B**
SCALE - 1 : 200

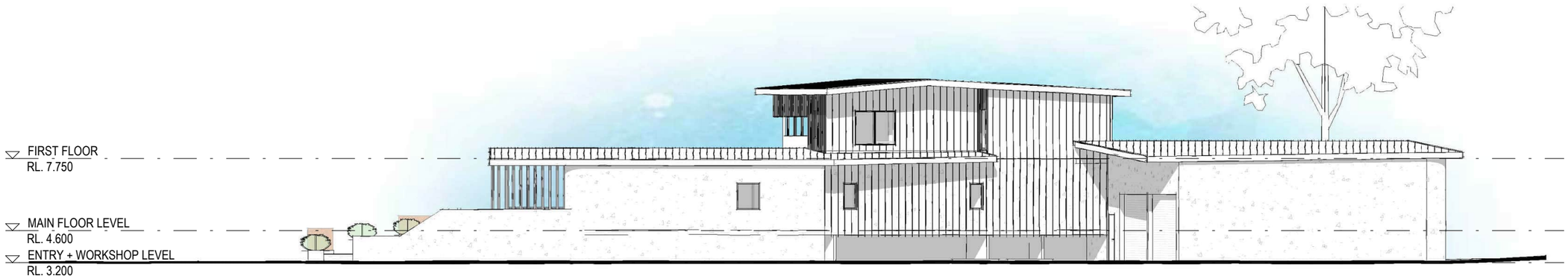
AMENDMENTS		DATE
P1	CLIENT ISSUE	04-05-2023
P2	TIDE LEVELS ADDED	21-09-2023

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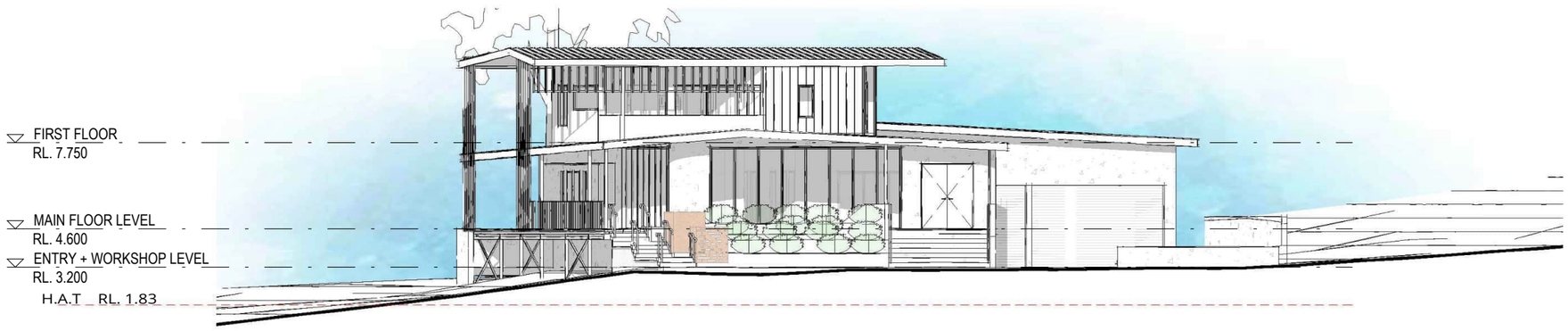
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APPROVED	DI	DATE	MAY 2023

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **ELEVATIONS**
DWG No. **1531-SD A110.1** | STAMP PRELIMINARY | ISSUE **P2**



1 / A106 **ELEVATION C**
SCALE - 1 : 200



2 / A106 **ELEVATION D**
SCALE - 1 : 200

AMENDMENTS	DATE
P1 TIDE LEVELS ADDED	21-09-2023

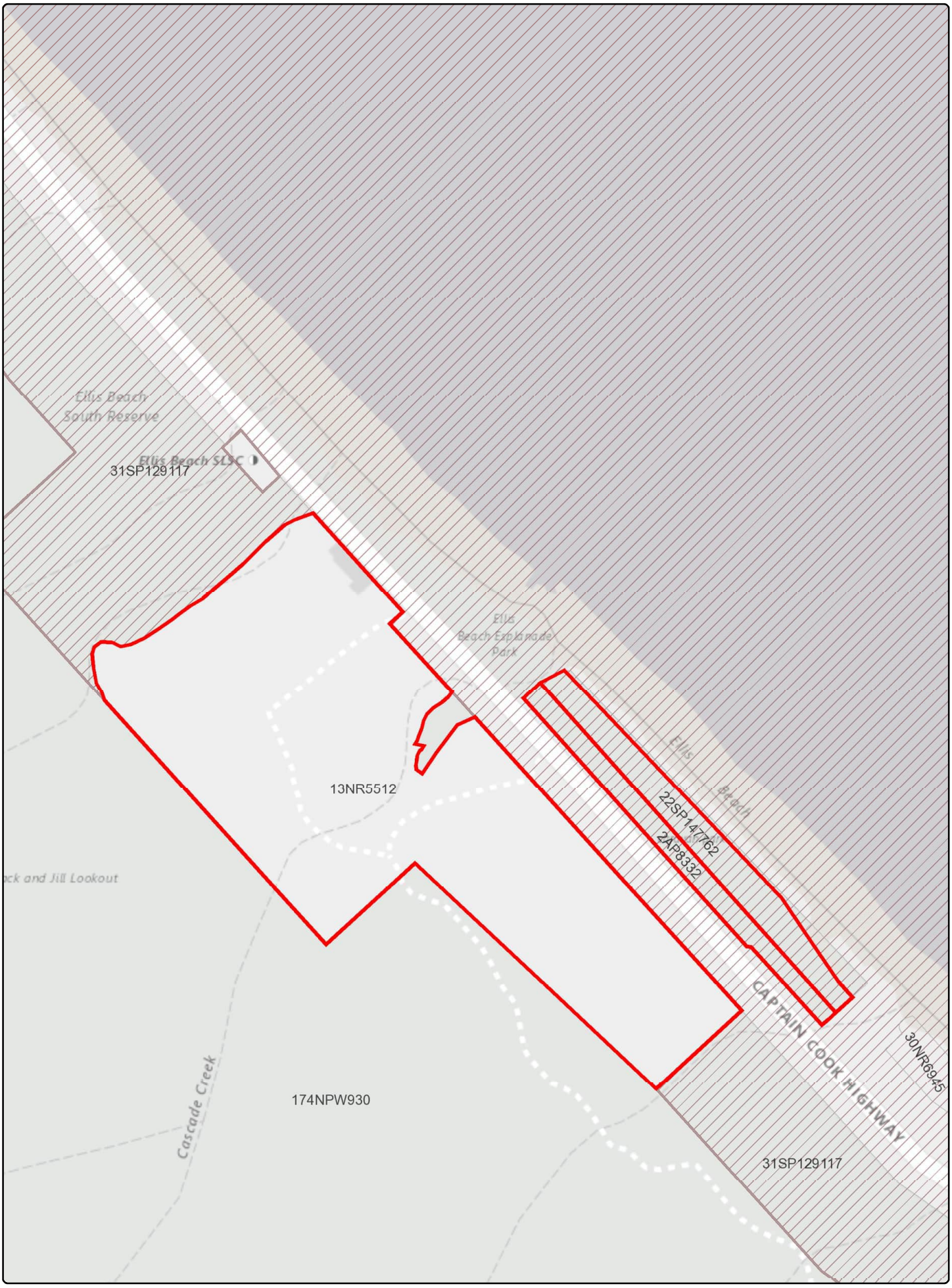
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APPROVED DI	DATE MAY 2023		

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **ELEVATIONS**
DWG No. **1531-SD A110.2** | STAMP PRELIMINARY | ISSUE **P1**

Appendix B – State Mapping



DA Mapping System – Print Screen

Date: 04/01/2023

0 70 140 210 280

Metres

Queensland Government

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Legend

Drawn Polygon Layer

Override 1

Cadastre (5k)

Cadastre (5k)

Coastal management district

Coastal management district

DA Mapping System – Print Screen

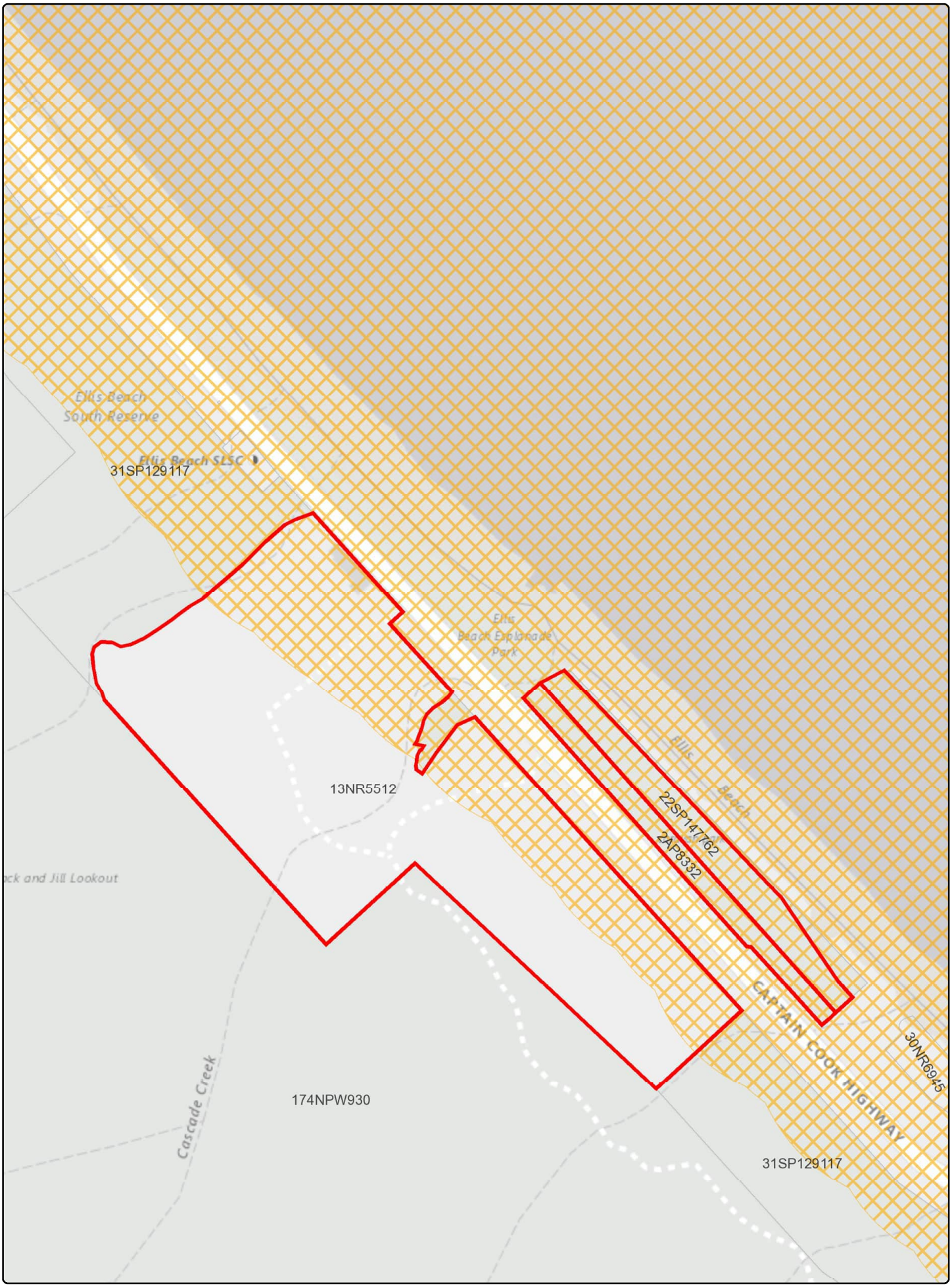
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Legend

Drawn Polygon Layer

Override 1

Cadastre (5k)

Cadastre (5k)

Coastal area - erosion prone area

Coastal area - erosion prone area

DA Mapping System – Print Screen

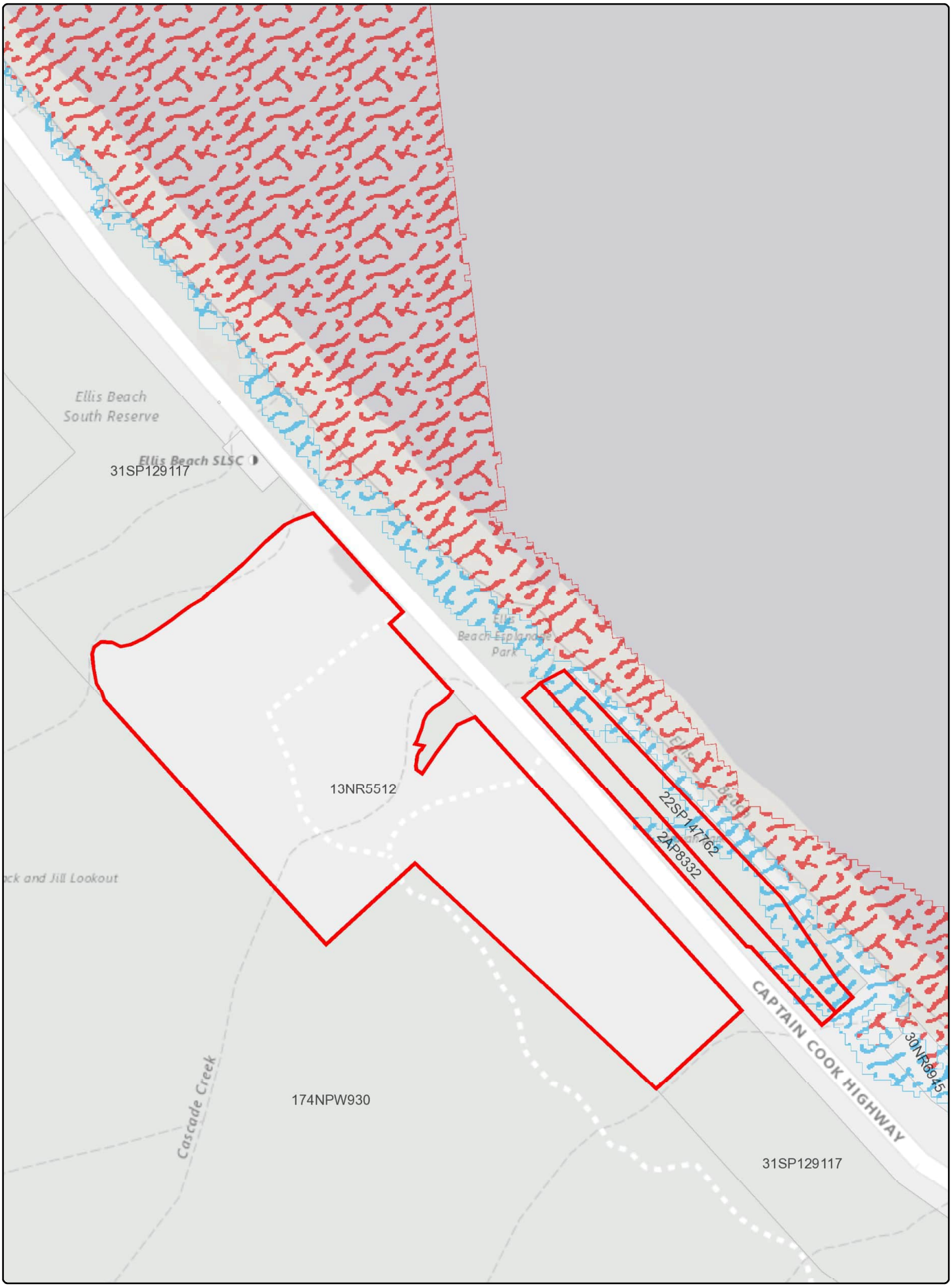
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Legend

Drawn Polygon Layer

Override 1

Cadastre (5k)

Cadastre (5k)

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

DA Mapping System – Print Screen

Date: 04/01/2023

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Appendix C – CRC Planning Scheme Code Response

8.2.5 Coastal processes overlay code

8.2.5.1 Application

This code applies to assessing development within the Coastal processes overlay as shown on the Coastal processes overlay maps contained in Schedule 2.

When using this code, reference should be made to Part 5.

Editor's note – As referenced in Part 1, this planning scheme does not appropriately integrate the Coastal hazards – Erosion prone areas aspect of the State Planning Policy. Therefore, the State Planning Policy prevails over all mapping and assessment criteria relating to Coastal hazards - Erosion prone areas within this planning scheme. Refer to the State Planning Policy mapping and Part E Interim Development Assessment Provisions for Coastal hazards - Erosion prone areas.

8.2.5.2 Purpose

(1) The purpose of the Coastal processes overlay code is to:
- (a) reduce risk to people and property from coastal processes;
- (b) allow coastal processes to occur naturally;
- (c) ensure that development takes into account the predicted changes in sea level rise as a consequence of climate change.

(2) The purpose of the code will be achieved through the following overall outcomes:
- (a) development minimises exposure of people and property to unacceptable coastal hazards, and maximises their ongoing safety;
- (b) development allows for natural coastal processes, including as a result of sea level rise, to occur without interference;
- (c) coastal protection works are only undertaken as a mitigation action where erosion within an erosion prone area poses an imminent threat to public safety and property outside the erosion prone area;
- (d) development within the Erosion prone area minimises the intensification of existing uses or structures other than for existing community infrastructure;
- (e) development preserves the integrity of the coastal building line as the defined seaward boundary for building work and other development;
- (f) community access to the foreshore or public use of coastal waters is maintained and where appropriate, increased.

8.2.5.3 Assessment benchmarks and requirements

Table 8.2.5.3.a – Coastal processes overlay code – assessment benchmarks for assessable development and requirements for accepted development

Performance outcomes	Acceptable outcomes	Applicant response
For accepted development subject to requirements and assessable development		
Coastal building lines		
PO1 Development adjacent to the coast or a reserve for a coastal resource with a defined coastal building line does not extend seaward of the coastal building line.	**AO1.1** Development (where for buildings and other permanent structures such as swimming pools and retaining walls) does not extend seaward of a coastal building line except for uncovered and unenclosed cantilevered balconies where: (a) not extending greater than 3 metres seaward of the coastal building line; (b) set back not less than 6 metres from the seaward boundary of the lot. Editor's 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.	**Not Applicable**
PO2 Where a coastal building line does not exist on a lot fronting the coast or a reserve adjoining the coast development is set back to maintain the amenity and use of the coastal resource.	**AO2.1** Where a coastal building line does not exist on a lot fronting the coast or a reserve adjoining the coast, development (including all buildings and other permanent structures such as swimming pools and retaining walls are set back not less than 6 metres from the seaward boundary of the lot.	**Not Applicable**
For assessable development		
Coastal access		
PO3 Development ensures public access to the coast and coastal waters is provided to a safe and serviceable standard and is not impeded by private use of the coastal resource.	**AO3.1** Development incorporates public access to the coast and coastal waters where: (a) adjacent to a reserve; or (b) has direct frontage to the coastline.	**Complies with AO3.1** The proposed development is for the establishment of a new Ellis Beach Surf Life Saving Club. The facility will provide community facilities which facilitate the use of the coast and coastal waters.

Performance outcomes	Acceptable outcomes	Applicant response
	AO3.2 Where adjacent to the coast, development improves the standard and number of public access points to the coast.	**Complies with AO3.2** The proposed development is for the establishment of a new Ellis Beach Surf Life Saving Club. As part of the development proposal, the standard of existing public access points to the coast (in the vicinity of the proposed development) should be improved.
Coastal processes		
PO4 Development allows for natural fluctuations of the coast to occur, including appropriate allowance for climate change and sea level rise.	**AO4.1** No acceptable outcomes are provided.	**Complies with AO4.1** The proposed development is for the establishment of a new Surf Life Saving Club within the Ellis Beach esplanade park. The development should be established behind the existing dune and as far landward as possible so as not to impact upon coastal processes within the immediate vicinity.
Erosion prone areas		
PO5 Development is located, designed and managed to: (a) allow natural coastal processes to occur; (b) protect people and property from coastal erosion risks; (c) avoid the use of coastal protection works, as far as practical. Note – For the purposes of PO5 Coastal protection work means any permanent or periodic work undertaken primarily to manage the impacts of coastal hazards, including altering physical coastal processes such as sediment transport.	**AO5.1** Development is not located in the Erosion prone area within the Coastal management district shown on the Coastal processes overlay maps contained in Schedule 2, unless: (a) the development cannot be feasibly located elsewhere; (b) it is coastal-dependent development, or is temporary, readily relocatable or able to be abandoned development. Note – Coastal –dependant development is defined in Schedule 1.2. Note – For the purposes of AO5.1, Temporary, readily relocatable or able to be abandoned development means a land use or structure that, if threatened by adverse coastal hazard impacts, will be relocated, or discontinued and removed rather than protected from the impacts because: (1) it is not anticipated to remain in place for more than 10 years and/or is capable of being disassembled or easily removed (2) there will be negligible adverse economic or social consequences associated with its relocation, or from it being discontinued or removed.	**Complies with AO5.1** The proposed development is for the establishment of a Surf Life Saving Club which is a coastal-dependent development and provides facilities which can be used by the general public. The proposed development is to be designed so that it is able to abandoned in the event of a storm tide. The development also cannot be feasibly located elsewhere due to the nature of the development being intrinsically linked to the coastal environment. **AO5.2 Not Applicable** The proposal is not for a redevelopment. **Complies with AO5.3** The proposed development should be established as far landward as practicable (further landward than the adjoining Ellis Beach Bungalows development line as a minimum). The positioning of the proposed development should make provisions to accommodate the future construction of any erosion control structures should they be deemed necessary.

		AO5.4 Not Applicable No coastal protection works proposed as part of the development application.

Performance outcomes	Acceptable outcomes	Applicant response
	AO5.2 Development that is for the redevelopment of existing permanent buildings or structures is located on a part of the site that is not within the Erosion prone area shown on the Coastal processes overlay maps contained in Schedule 2; or **AO5.3** Where it is not feasible to locate the redevelopment outside an Erosion prone area, the redevelopment: (a) is located: (i) as far landward from the seaward property boundary as possible, or (ii) landward of the seaward alignment of the neighbouring buildings; (b) provides space seaward of the development within the premises to allow for the future construction of erosion control structures. Note – For the purposes of AO5.2 and AO5.3 Redevelopment means development that affects permanent built structures on an already developed site. Redevelopment includes the expansion of a building footprint or addition of a structure, reconstruction or remodelling an exterior, demolition and replacement of existing structures, or the establishment of an alternative type of use and associated land disturbing activities	

Performance outcomes	Acceptable outcomes	Applicant response
	AO5.4 Development that involves coastal protection work (excluding beach nourishment) only occurs as a last resort where coastal erosion presents an imminent threat to public safety or existing buildings and structures, and all of the following apply: (a) the property and use cannot reasonably be relocated or abandoned, and (b) any coastal protection works to protect private property is located as far landward as practicable and on the lot containing the property to the maximum extent reasonable, and (c) the coastal protection work mitigates any increase in coastal hazard risk for adjacent areas. Note – For the purposes of AO5.4 Coastal protection work means any permanent or periodic work undertaken primarily to manage the impacts of coastal hazards, including altering physical coastal processes such as sediment transport.	

Appendix D – SDAP State Code 8 Code Response

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	
PO1 Development is only permitted in the **erosion prone area** where it: 1. is one of the following types of development: 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: a. a **fit for purpose revetment**; or b. a proposed revetment that is consistent with: i. an **agreement with a local government**; or ii. the alignment of adjacent lawful revetments; or 4. is on a lot less than 2000m^2 where a **coastal building line** is present.	Complies with PO1 **1.** The proposed development is for the establishment of a Surf Life Saving Club which is a coastal-dependent development and provides facilities which can be used by the general public. The proposed development is able to abandoned in the event of a storm tide and cannot be feasibly located elsewhere due to the nature of the development being intrinsically linked to the coastal environment.
PO2 Development (other than **coastal protection work**) in the **erosion prone area**: 1. does not adversely impact **coastal processes**; and 2. ensures that the protective function of landforms and vegetation is maintained. 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 *Coastal Protection and Management Act 1995*. Where the planning chief executive receives a copy of a land surrender requirement or proposed land surrender notice under the *Coastal Protection and Management Act 1995*, this must be considered in assessing the application.	**Complies with PO2** Current industry best practice is to be adopted during the design of the development to ensure that development works do not impact upon the severity of coastal hazards. This will include the installation of facilities in accordance with current Australian Standards, the reinstatement of natural features (banks and vegetation) where possible and the establishment of the proposed development behind the existing dune (as far landward as possible).
PO3 Development is sited, designed and constructed to limit the risk of impacts of **coastal erosion** to an acceptable level by: 1. locating development outside the **erosion prone area**; or 2. mitigating or otherwise accommodating the risks posed by **coastal erosion.**	**Complies with PO3** The proposed SLSC is to be set back from the active beach frontage as far landward as possible and as a minimum should be established behind the line of existing shorefront development within the vicinity of the development site (Ellis Beach Bungallows). The proposed development is to be designed to withstand forces exerted by wave impact and storm

Performance outcomes	Response
	tide (hydrostatic uplift / debris loading) and it is recommended that the building be established on piles founded at a minimum depth of LAT (-1.74m AHD) or be sunk 300mm into bedrock should it be present. It is also recommended that vegetation in dunal areas in the vicinity of the proposed development be re-established to stabilise any areas affected during the construction process.
PO4 Development in the **erosion prone area** does not significantly increase the risk or impacts to people and property from **coastal erosion**.	**Complies with PO4** Current industry best practice is to be adopted during the design of the development to ensure that development works do not impact upon the severity of coastal hazards. This includes the installation of facilities in accordance with current Australian Standards and the reinstatement of natural features (banks and vegetation) where possible. The proposed surf club is to be constructed to withstand the loads exerted during storm surge events, including hydrostatic uplift and scour generated by wave impact. The facility will also be required to be able to be abandoned during extreme weather events.
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.	**Complies with PO5** The proposed development will not directly or indirectly increase the severity of coastal erosion either on or off the site. The proposed development is to be constructed in an area which has been heavily disturbed by past activities with the majority of native vegetation removed. The future development should also be established as far landward as possible (behind existing shorefront development within the vicinity of the development site as a minimum)
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.	**Not Applicable**
Artificial waterways	
PO7 Development of **artificial waterways**, canals and **dry-land marinas** conserves **coastal resources** by: 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.	**Not Applicable**

Performance outcomes	Response
Coastal protection work	
PO8 Works for **beach nourishment** minimises adverse impacts on **coastal processes**.	**Not Applicable** No beach nourishment works proposed
PO9 Works for **beach nourishment** do not increase the severity of erosion on adjacent land.	**Not Applicable** No beach nourishment works proposed
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: 1. **beach nourishment**; or 2. relocation or abandonment of structures.	**Not Applicable** No erosion control structures proposed as part of the development. While rock armouring is proposed, this is below the proposed building structure.
PO11 Erosion control structures (revetments only) are only constructed where: 1. there is an **imminent threat** to **significant buildings or infrastructure**, and there is no feasible option for either: a. **beach nourishment**; or b. relocation or abandonment of structures; or 2. the development: 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.	**Not Applicable** No revetment structures proposed as part of the development. While rock armouring is proposed, this is below the proposed building structure.
PO12 Erosion control structures minimise interference with **coastal processes** and reduce the severity of erosion on adjacent land.	**Complies** Rock armouring proposed as part of the development is to be installed below the building structure itself and will have little impact upon coastal processes in the surrounding area.
Water quality	
PO13 Development: 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**.	**Complies with PO13** Please refer to the Conceptual Stormwater Management Plan prepared by Burchills Engineering Solutions which details the stormwater treatment train to be employed onsite to achieve water quality objectives for Queensland waters.
Public use of and access to State coastal land	
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).	**Complies with PO14** The proposed development will maintain the publics ability to access state coastal land.
PO15 Private marine development does not reduce public use of and access to **State coastal land** and ensures that works: 1. are used for **marine access purposes** only;	**Not Applicable**

Performance outcomes	Response
2. minimise the use of **State coastal land**; 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.	
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: 1. except where impeded by **significant buildings or infrastructure** that cannot be removed or relocated; or 2. for revetments the development is: 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.	**Complies with PO16** The proposed development will maintain the publics ability to access state coastal land. The development will also provide a community facility which will benefit the public.
Matters of state environmental significance	
PO17 Development is designed and sited to: 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**. 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.	**Complies with PO17** A review of the Development Assessment Mapping System has identified that within and adjacent the subject four (4) Matters of State Environmental Significance are present. These MSES are: • MSES – High Ecological Value Waters (wetland) • MSES – Regulated Vegetation (Category R) • MSES – Regulated Vegetation (intersecting a watercourse) • MSES – Wildlife Habitat (endangered or vulnerable) During the detailed design phase of the project, it is recommended that these matters be considered, with the ultimate design of the overall project be developed to be sympathetic to MSES, having as little impact upon these constraints as possible. For further details, please refer to the Ecological Site Assessment prepared by Burchills Engineering Solutions for the subject site submitted as part of the application package.

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**;	Complies with PO# Use this column to indicate whether compliance is achieved with the relevant PO, and explain why

Performance outcomes	Response
2. shoreline or riverbank hardening; 3. **dredging** for **marine access purposes**.	
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**.	
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.	
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.	
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**.	
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**.	

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

Performance outcomes	Acceptable outcomes	Response
PO24 Tidal works are sited and designed to operate safely during and following a **defined storm tide event**.	**AO24.1** Tidal work is designed and located in accordance with the Guideline: Building and	Complies with PO# / AO#

Performance outcomes	Acceptable outcomes	Response
	engineering standards for tidal works, Department of Environment and Heritage Protection, 2017.	Use this column to indicate whether compliance is achieved with the relevant PO or AO (or if they do not apply), and explain why

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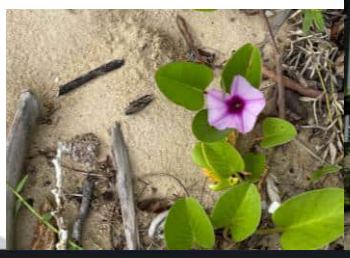
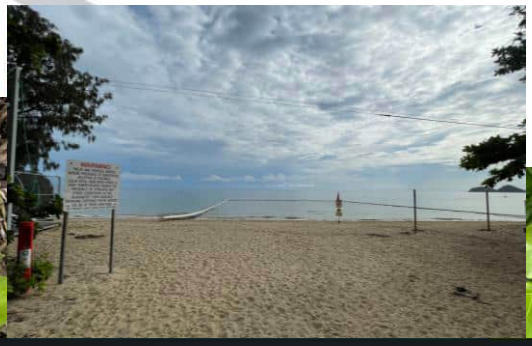
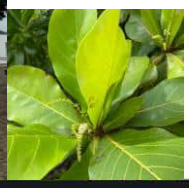
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Appendix 5

Ecological Assessment prepared by Burchills

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Ellis Beach Surf Life Saving Club
Ecological Assessment Report

Client: Surf Life Saving Queensland
Project No: BE220596
Document No: BE220596-RP-EAR-01

September 2023

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Executive Summary

Burchills were engaged by Ellis Beach Surf Life Saving Club (SLSC) to prepare an Ecological Assessment Report for a proposed surf lifesaving club at Ellis Beach, Captain Cook Highway within the Cairns Regional Council (CRC) local government area.

The objectives of the Ecological Assessment Report were to characterise the existing ecology including habitat features, matters of environmental significance and significant weed infestations, and identify any potential impacts on the existing environment that may result from the proposed works. Recommendations are provided to minimise and mitigate any impacts resulting from the proposed works.

Site flora and fauna surveys were undertaken in January 2023. A total of 47 flora species were recorded in the project area including 30 native and 17 non-native species. One (1) species recorded is identified as a Restricted Invasive Plant under the Qld Biosecurity Act – *Sphagneticola trilobata* (Singapore daisy). A moderate infestation of this species was recorded in the southern part of the site in the foredune area.

Two (2) vegetation associations were mapped and classified as follows:

- Vegetation Association A - Disturbed Coastal Littoral Open Forest; and
- Vegetation Association B - Foredune Shrubland.

No threatened flora species of conservation significance (EVNT) were detected during the surveys. No plants were detected that meet the criteria for marine plants as defined under the Qld Fisheries Act. Two (2) Special Least Concern (SL) flora species were recorded – both epiphytic species growing on mature mango and beach almond trees:

- *Platycerium hillii* (elkhorn fern); and
- *Dockrillia calamiformis* (northern pencil orchid).

Seventeen (17) species of fauna were observed within the subject site during surveys including 15 bird species and two (2) reptiles. No significant fauna species were detected however surveys were undertaken over a snapshot time period so fauna species are underrepresented in survey results.

The footprint for the proposed development has been designed to avoid impacting environmentally sensitive areas and falls within a mostly cleared and existing developed area (carpark and road) at the southern end of the site. The design also avoids clearing of native vegetation within a 10m buffer to Cascade Ck.

Though no habitat features of significance or breeding places were detected during surveys, a licenced spotter catcher should be engaged to inspect the site prior to any clearing works to ensure no fauna or breeding places (eg hollows, nests etc) are impacted by the proposed works.

The proposed development will be undertaken in accordance with an approved Environmental Management Plan that includes an erosion and sediment control plan to ensure potential environmental harm is avoided, minimised, mitigated and managed appropriately.

In summary, 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.

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Appendix B – Site Flora Species List
Appendix C – 'Likelihood of Occurrence' Assessment – Conservation Significant Fauna Species

1. Introduction

Burchills were engaged by Ellis Beach Surf Life Saving Club (SLSC) to prepare an Ecological Assessment Report (EAR) for a proposed surf lifesaving club at Ellis Beach, Captain Cook Highway within the Cairns Regional Council (CRC) local government area.

The Ellis Beach SLSC is currently housed on the western side of Captain Cook highway to the north of the proposed new location. A new location, on north-eastern side of Captain Cook Highway, is required for the club due to issues with pedestrian (and equipment) movement to and from Ellis Beach across the highway and conflicts with highway traffic.

1.1 Scope

This EAR provides the results of an assessment of environmental values of the proposed new location (the subject site) and potential impacts that may result from the proposed works. The scope of this report includes:

- Desktop assessment of existing environment including mapped vegetation, significant species, habitat and other matters of environmental significance at a local, state and national level.
- Site assessment to verify existing conditions, significant habitat/ breeding places**,** marine plants and identify vegetation impacted by proposed options.
- Assessment of relative impacts of options on environmentally significant matters determined from the desktop and site assessments including plan showing impacts on vegetation resulting from the proposed works.
- Table of permit and approval requirements based on proposed works.
- Recommendations for minimising and mitigating impacts on environmentally significant matters (eg. offsets, compensatory tree replacement) and environmental management actions for the construction stage.

1.2 Subject Site

Ellis Beach is located approximately 30km north of Cairns. The Ellis Beach SLSC is proposed to be relocated to the beach side of Captain Cook Highway in order to minimise conflicts between pedestrians travelling to and from Ellis Beach (i.e. Nippers and SLSC members) and vehicular movements on the highway.

The proposed new site for the SLSC is within the road reserve and currently provides recreational opportunities for the general public including BBQs and informal parking. The subject site is close to an existing restaurant and bar (to the west) and a holiday park (to the southeast) (Figure 1.1).

1.3 Proposed Development

The proposed development includes relocation of the Ellis Beach SLSC, and includes the following land uses:

- Commercial kitchen, bar, dining area and function rooms
- Administration and storage areas
- Self-contained caretaker's accommodation; and
- Hardstand car parking including a pickup and drop off area.

The footprint for the proposed development has been designed to avoid impacting environmentally sensitive areas and falls within a mostly cleared and existing developed area (carpark and road) at the southern end of the site. The entrance and access works will be undertaken in existing disturbed areas. The design also avoids clearing of native vegetation within a 10m buffer to Cascade Ck (Figure 1.3 and Figure 1.4).



Figure 1.1 Subject site locality (Qld Globe 2023)



Figure 1.2 Aerial view of proposed new Ellis Beach SLSC location (Qld Globe 2023)

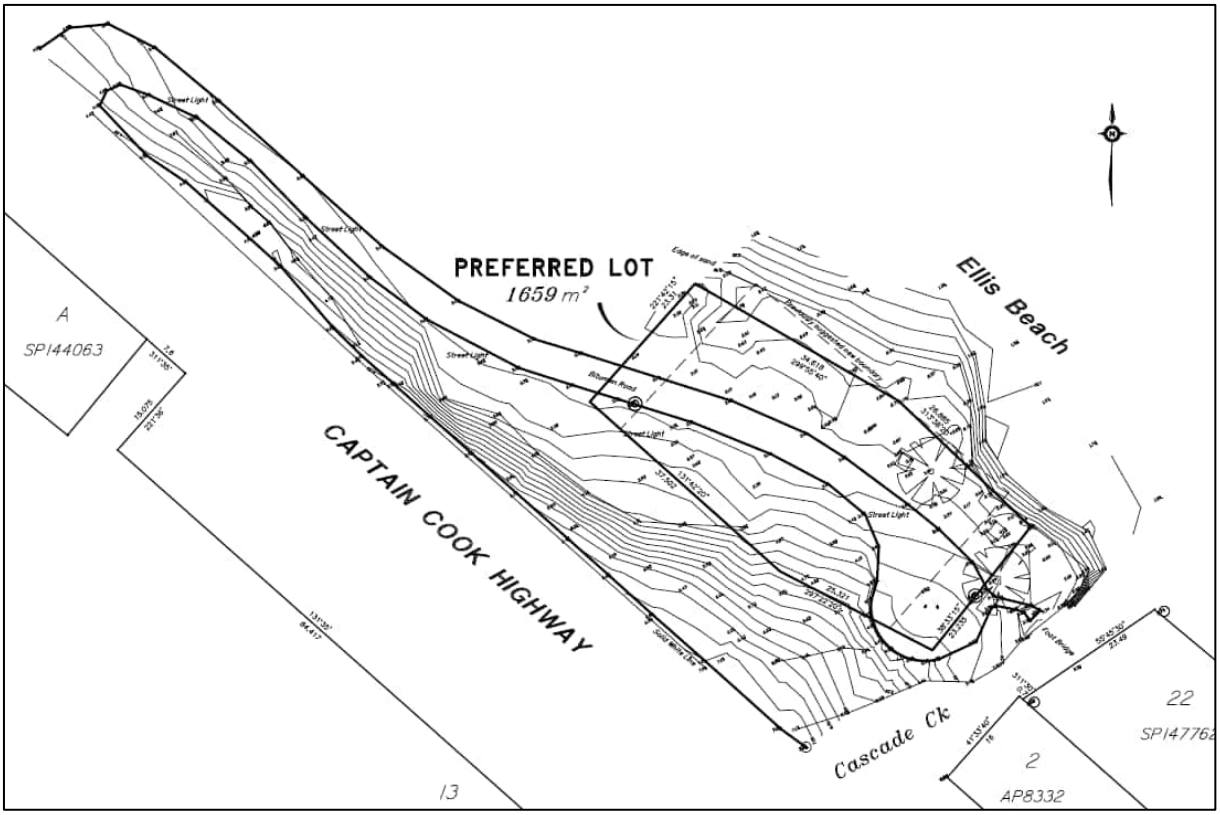


Figure 1.3 Site survey and proposed new Ellis Beach SLSC location (Robert Bass Surveying, 2019)

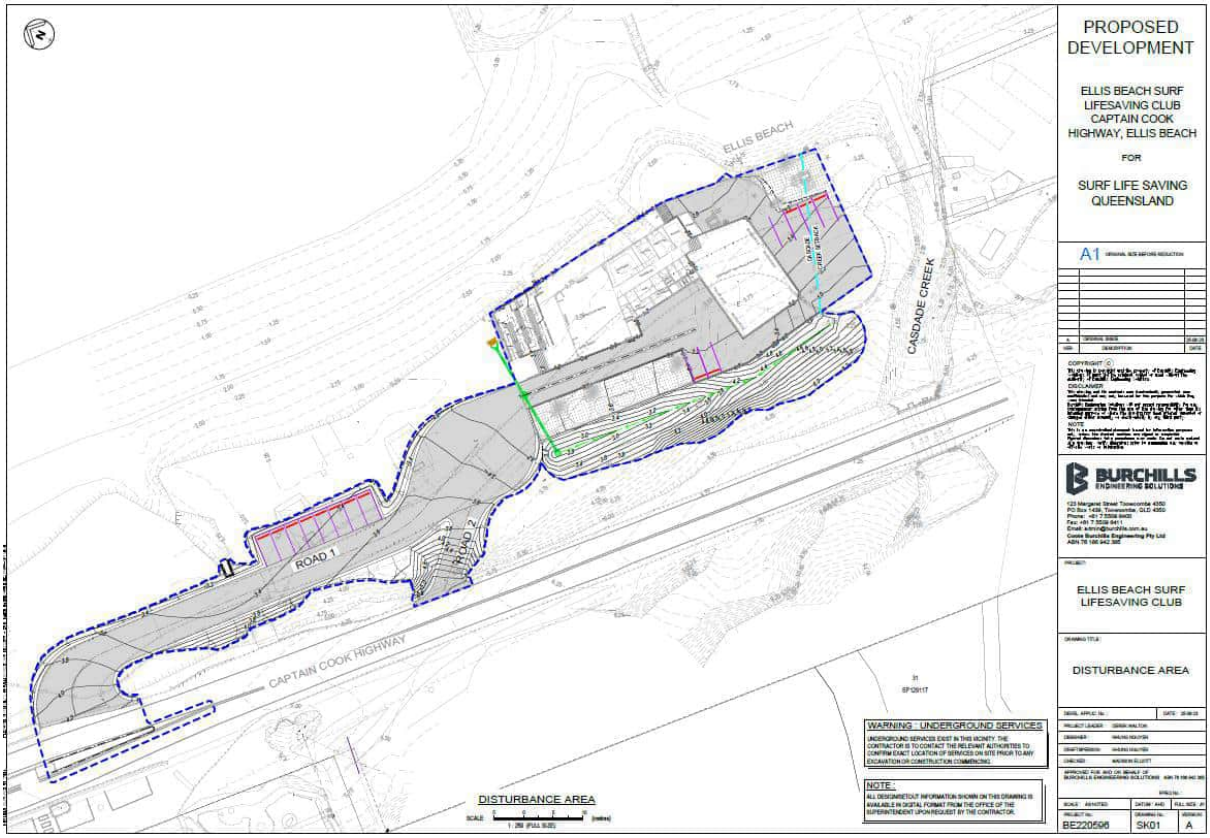


Figure 1.4 Proposed Earthworks (Burchills, 2023)

2. Desktop Review

2.1 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:

- The site is proximate to two (2) World Heritage Properties/ Natural National Heritage Places areas: Great Barries reef, Wet tropics of Queensland and one (1) Indigenous National Heritage Place: Tropics World Heritage Area (Indigenous Values);
- Two (2) listed threatened ecological communities may occur within the area:
    1. Broad leaf tea-tree (Melaleuca viridiflora) woodlands in high rainfall coastal north Queensland; and
    2. Coastal Lowland tropical rainforest of the Wet Tropics.
- 46 threatened species may occur within the area, comprising 9 threatened flora species and 37 threatened fauna species;
- 46 Migratory species may occur within the area including six (6) migratory marine birds, 22 migratory marine species, eight (8) migratory terrestrial species and 10 migratory wetland species; and
- 96 listed Marine species (under the Commonwealth area provisions).

Results of this search are presented in Appendix B. An assessment of the likelihood of MNES presence on and or near the subject site based on results of the surveys, possible impacts and referral requirements, is discussed in Section 5.1 and Appendix C.

2.2 Matters of State Environmental Significance

Matters of state environmental significance (MSES) are a component of the biodiversity state interest that is defined under the State Planning Policy 2017 (SPP) and defined under the *Environmental Offsets Regulation 2014* (Offset Regulation).

The SPP and Offset Regulation 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*;
- A designated precinct, in a strategic environmental area under the *Regional Planning Interests Regulation 2014*, schedule 2, part 5, s15(3);
- 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 as defined under the Environmental Offsets Act 2014;
- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the *Nature Conservation (Animals) Regulation 2020*;
- 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*.
- Marine plants under the *Fisheries Act 1994* (excluding marine plants in an urban area);
- Waterways that provide for fish passage under the *Fisheries Act 1994* (excluding waterways providing for fish passage in an urban area);
- High risk area on the flora survey trigger as described by the Environmental offsets Regulation 2014, schedule 2, part 6 (1);
- Regulated vegetation under the *Vegetation Management Act 1999* that is:
    i. Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
    ii. Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
    iii. Category R areas on the regulated vegetation management map;
    iv. 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 *Nature Conservation Act 1992*;
    v. Category A,B,C,R areas that intersect with watercourses identified on the vegetation management watercourse and drainage feature map; and
    vi. Category A,B,C,R areas that are within 100m of wetlands identified on the vegetation management wetlands map.

A summary of MSES that may occur within or close to the subject site based on State MSES mapping is provided in Table 2.1. 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 Sections 3 and 4 and Appendix C. Matters that are mapped as potentially occurring within or near the subject site are further detailed in the following sections and shown in Figure 2.1 (full MSES report provided in Appendix A).

Table 2.1 MSES and potential presence on subject site based on desktop review

Matter	**Mapped on/near site or NA***
Protected areas under the *Nature Conservation Act 1992* and *Marine Parks Act 2004*	No
Fish Habitat Areas declared under the *Fisheries Regulation 2008*	No
A designated precinct, in a strategic environmental area under the *Regional Planning Interests Regulation* 2014, schedule 2, part 5, s15(3)	No
Wetlands mapped under the *Environmental Protection Regulation 2019*	No
Wetlands and watercourses in high ecological value waters identified in the *Environmental Protection (Water) Policy 2009*, schedule 1	**Yes**
Legally secured offsets as defined under the *Environmental Offsets Act 2014*	No
Threatened wildlife (Endangered or Vulnerable) under the *Nature Conservation Act 1992* and Special Least Concern fauna under the *Nature Conservation (Animals) Regulation 2020*	**Yes**

Matter	Mapped on/near site or NA*
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
Marine plants under the *Fisheries Act 1994* (excluding marine plants in an urban area)	No (no mapping available)
Regulated Vegetation under the *Vegetation Management Act 1999* that is: 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 e. 'endangered wildlife' or 'vulnerable wildlife' under the *Nature Conservation Act 1992* **f. 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** g. 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.	**Yes (c and f)**

*NA = Not applicable.



Figure 2.1 MSES values mapped on site (Category R vegetation) and adjoining the site (HEV wetland and Wildlife Habitat. Source: DSDMIP DA Mapping System, 2023)

2.2.1 High Ecological Value Wetland

Wetlands and watercourses in high ecological value (HEV) waters identified in Schedule 1 of the Qld *Environmental Protection (Water) Policy 2009* are identified as MSES. The Qld Department of State Development, Infrastructure, Local Government and Planning (DSDMIP) Development Assessment Mapping System (DAMS) indicates the HEV wetland is the adjoining ocean as shown in Figure 2.1. The mapping extends along the entire regional coastline as shown in Figure 2.2.

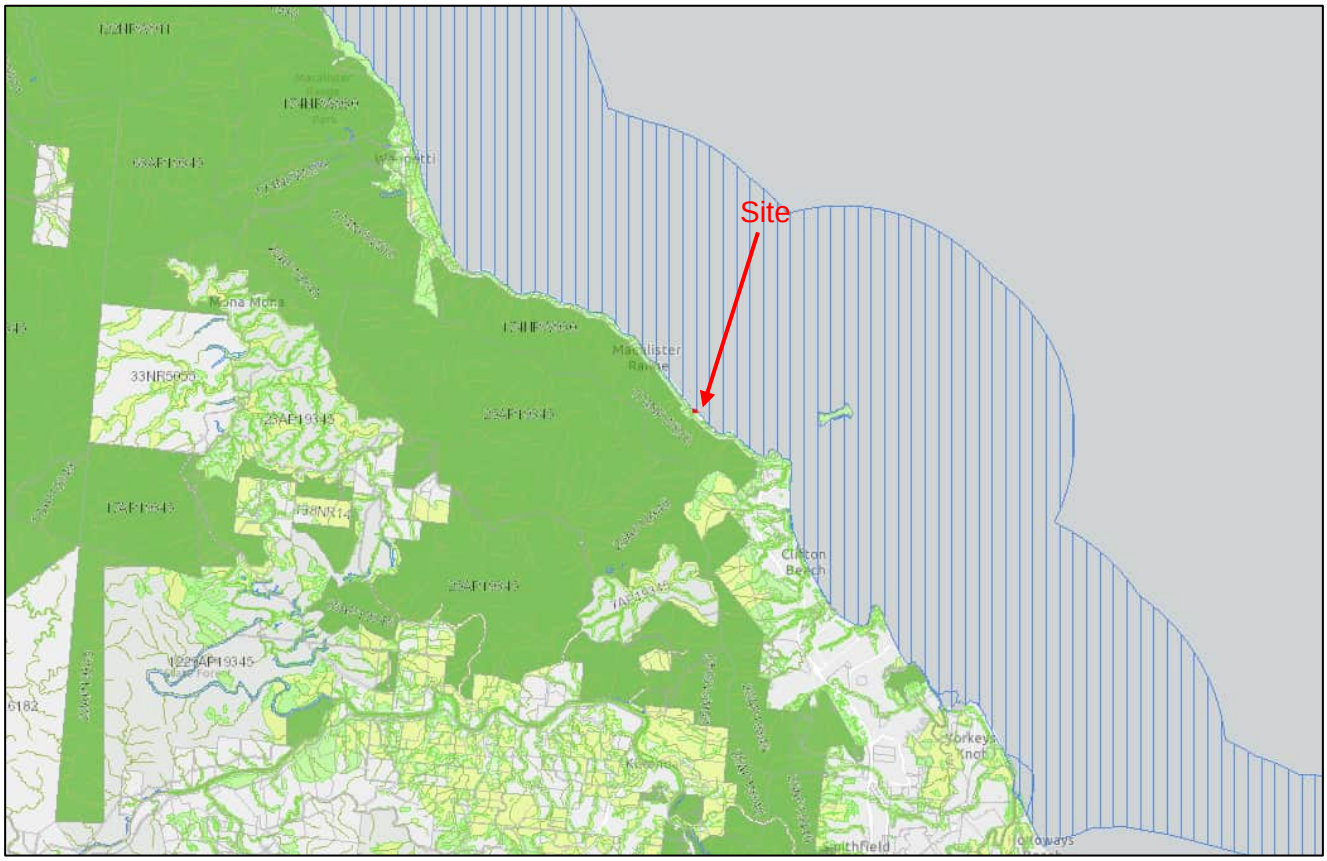


Figure 2.2 HEV Wetland Map (Source: DSDMIP DA Mapping System, 2023)

2.2.2 Wildlife Habitat for Threatened Species

MSES 'Wildlife Habitat for Endangered and/or Vulnerable Species' is mapped near the subject site (on the western side of Captain Cook Highway – refer Figure 2.1). To determine which species the mapping applies to, the Queensland Government Wildlife Online database was queried using a radius of 2km from the centre of the site (-16.7242, 145.6447).

The Wildlife Online database search results indicate four (4) Vulnerable species have been recorded within a 2km radius of the site as listed in Table 2.2 (complete report provided in Appendix B). An assessment of the likelihood of presence of these species within the site based on results of the site surveys is summarised in Section 5 and detailed in Appendix C.

Table 2.2 Threatened wildlife potentially occurring within or near the subject site

Scientific Name	Common Name	NCA Status*	Habitat requirements**
Crocodylus porosus	estuarine crocodile	V	Coastal rivers, swamps and lagoons – will readily enter the ocean.
Cyclopsitta diophthalma macleayana	Macleay's fig-parrot	V	Its preferred habitat is lowland dry and subtropical rainforest, especially in alluvial

Scientific Name	Common Name	NCA Status*	Habitat requirements**
			areas. Recent records are from dry or cool subtropical rainforest from sea level to approximately 900m. Birds also use thin strips of gallery rainforest, littoral rainforest and coastal eucalypt/melaleuca forest where fig densities are high.
Esacus magnirostris	beach stone-curlew	V	Shorebird – intertidal mudflats, sandflats and sandy beaches of sheltered coasts.
Orcaella heinsohni	Australian snubfin dolphin	V	The species occur mainly in shallow (<20m deep), coastal habitats, with the highest frequency of sightings adjacent to river and tidal creek mouths and in sheltered, mangrove line bays. They have been reported utilizing channel habitats, including dredged channels in some locations.

*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.
**From DES WildNet database and/or Qld Museum website and/or Encyclopedia of marine mammals and/or Atlas of living Australia and/or www.environment.gov.au

Though not recovered in the database searches, during the SDMIP prelodgement meeting (August 2019), Cairns Regional Council identified two (2) conservation significant species of goby previously recorded in the local area including the Blue-spot Goby (*Pseudogobius* sp. 9 syn. *Pseudogobius olorum*) and the Opal cling goby (*Stiphodon semoni*). Blue-spot Goby is currently undescribed and does not yet have a conservation classification. The Opal cling goby is Critically endangered under the EPBC. An assessment of the likelihood of presence of these species within the site based on results of the site surveys is summarised in Section 5.

2.2.3 Regulated Vegetation

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, regulate the clearing of vegetation across Queensland. The Vegetation Management Regional Ecosystem mapping for the subject site indicates that part of the site is mapped as Category R reef-regrowth watercourse vegetation, with the balance mapped as Category X Non-Remnant Vegetation.

Qld Globe (Department of Resources, 2023) indicates the Category R vegetation mapped over the site represents Regional Ecosystem 7.3.44. It should be noted however that due to the broad-scale nature of the regional ecosystem mapping, it does not delineate the site's correct land zone which is Land Zone 2 (tidal flats and beaches). This is supported by the On-site Wastewater Management Report (Phase 3 Consulting, January 2023) which identifies the site's soils as predominantly sand.

Table 2.3 Vegetation Management Regional Ecosystem category on subject site

Regional Ecosystem	VMA Status	Category	Short Description	Structure
7.3.44	Endangered	R	*Eucalyptus leptophleba*, *Corymbia clarksoniana* open forest to woodland on alluvium in near-coastal areas with moderate rainfall	Mid-dense
Non-rem	None	X	None	None

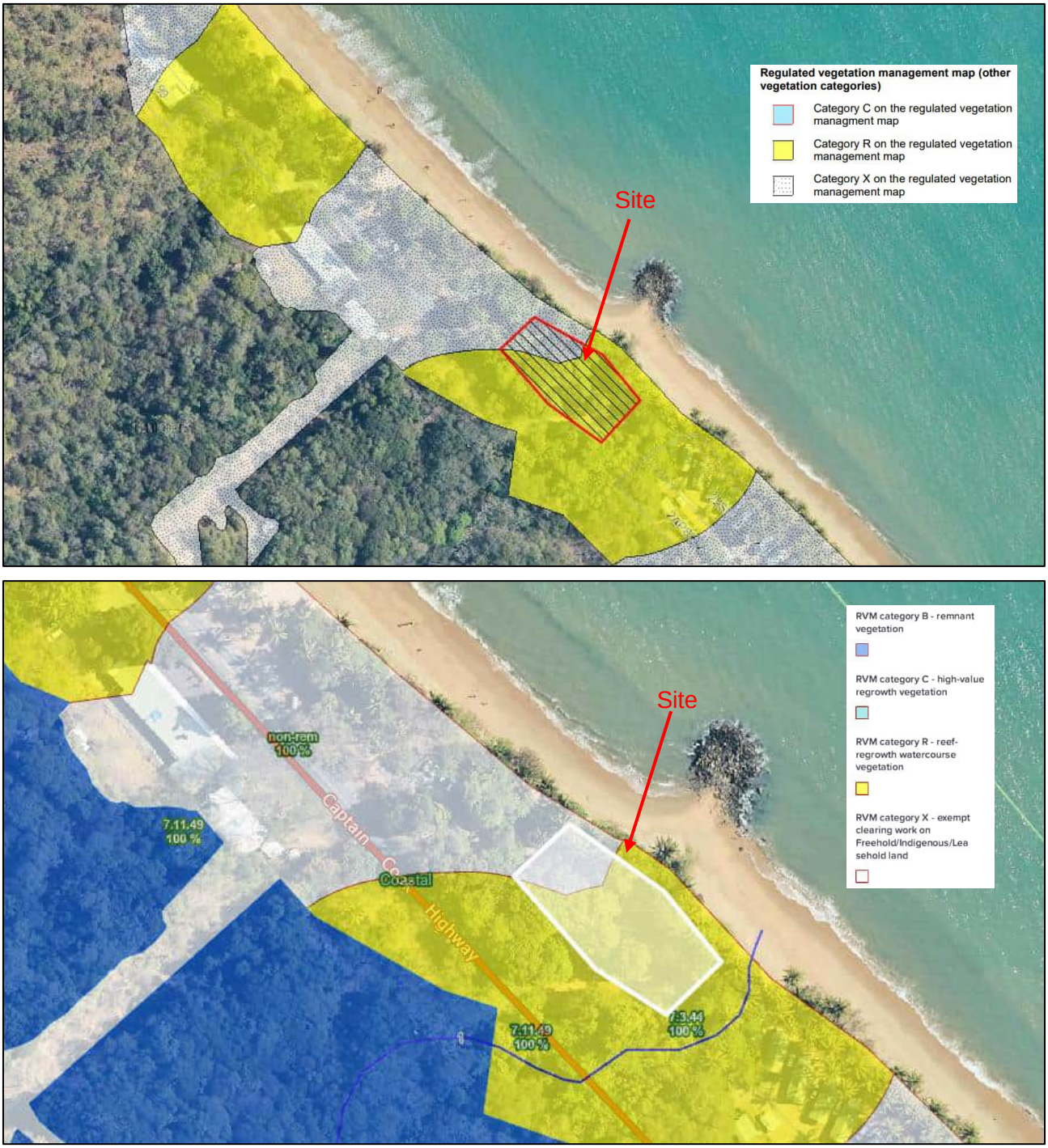


Figure 2.3 Regulated Vegetation (Source: DSDMIP DA Mapping System, 2023)

2.3 Matters of Local Environmental Significance

The CairnsPlan version 3.1 (2016) identifies Matters of Local Environmental Significance (MLES) under the Natural Areas Overlay and development is required to comply with the Natural Areas Overlay Code. The purpose of the Natural areas overlay is to protect the natural areas of the region through:

a) avoiding development within areas of environmental significance, wetlands and declared fish habitat areas;
b) minimising direct and indirect adverse impacts of development on areas of environmental significance;

c) minimising adverse impacts on sensitive receiving environments; and
d) encouraging expansion of habitat and ecological connectivity and restoration of terrestrial and aquatic ecosystems.

A search of the CairnsPlan interactive mapping indicates the site is mapped as having MSES (Category R vegetation – refer section 2.2.3) and MLES - Waterway trigger areas. Cascade Ck to the south of the site is also mapped as an MSES Regulated Vegetation Watercourse.

2.3.1 MLES - Waterway Trigger Area

Waterway trigger areas are identified in the CairnsPlan as: Urban waterway A trigger area, Urban waterway B trigger area and Non-urban waterway trigger area.

The CairnsPlan Natural Areas Overlay Map indicates a Non-urban waterway trigger area is mapped within the southern portion of the site, requiring a buffer width of 25 metres on each side of the waterway, measured perpendicular from the top of the high bank.



Figure 2.4 Natural Areas Overlay – MLES within subject site (CairnsPlan version 3.1)

3. Site Surveys

3.1 Methods

Field surveys were undertaken in January 2023 by ecologists experienced in survey and assessment of Queensland coastal-terrestrial ecosystems. The survey area included the subject site as shown in Figure 1.1.

The flora survey methodology was generally consistent with the Queensland Herbarium's *Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland* (Neldner *et al*., 2022) and consisted of an initial visual audit followed by quaternary level quantitative assessments. Post processing of vegetation associations was undertaken in QGIS using survey data and recent high resolution aerial imagery.

The following quantitative data was recorded during the vegetation surveys:

- All species recorded from random meander through site area;
- Growth form – determined in accordance with pp 88-93 of Hnatiuk *et al*. (2009);
- Stratum intervals – determined by recording the median height of the top of each stratum. Strata were defined in accordance with Table 3.1, which is summarised from Hnatiuk *et al*. (2009);
- Height (m) – determined from estimation in the field;
- Crown cover – determined using a field estimation of the crown separation ratio in accordance with Table 3.2, which is reproduced from Hnatiuk *et al*. (2009);
- Human activity / disturbance and potential threats (e.g. pests and weeds etc);
- GPS waypoint record for any for any habitat features (e.g. nests, habitat-hollow trees); and
- GPS waypoint record for any conservation significant species (EVNT).

Table 3.1 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 3.2 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

Criteria Assessed in Field	Description	Crown Separation Ratio	Crown Cover (%)	Foliage Cover (%)
Isolated plants (trees approx.. 100 m apart; shrubs approx.. 20 m apart)	Isolated Plants	>20	<0.25	<0.20
Isolated clumps of 2 to many plants approx.. 200 m 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).

3.1.1 Marine Plants

The surveys included investigation of the presence of marine plants within the subject site. A 'Marine plant' is defined in section 8 of the *Fisheries Act 1994* as:

1. a plant (a tidal plant) that usually grows on, or adjacent to, tidal land, whether it is living, dead, standing or fallen;
2. material of a tidal plant, or other plant material on tidal land; and / or
3. a plant, or material of a plant, prescribed under a regulation or management plan to be a marine plant.

Dune species are generally excluded from the definition of marine plants unless they occur within a storm tide area.

3.1.2 Fauna and Habitat Survey Method

Fauna surveys were conducted during the flora survey in January 2023. The fauna survey method was generally compliant with the *Terrestrial Vertebrate Fauna Survey Guidelines for Queensland* (Eyre *et al*, 2022) and was undertaken in accordance with the conditions of Burchills' Scientific Use Registration permit number SUR000518, issued under Section 52 of the Qld *Animal Care and Protection Act 2001*, and valid until 12 April 2023.

The fauna survey method included diurnal avifauna transects, habitat assessments and opportunistic observations recorded throughout the duration of vegetation surveys. Habitat features and functions include significant features such as hollow-bearing trees, waterways / wetlands and riparian areas and functions such as corridors and buffers. The opportunistic observations included surveying for inferential evidence such as scats, tracks, shed skins and diggings as well as inspecting potential habitat features such as hollows, arboreal termite mounds, nests and dreys.

The diurnal avifauna transects incorporated 60-minute dawn, mid-morning and dusk survey periods (3 hours in total) along the site foreshore and around the foredune communities. Bird species were identified through direct observations (i.e. visual sightings) and / or vocalisations.

3.1.3 Nomenclature

Application of flora scientific names in this report follows the Queensland Flora Census 2022 published by the Qld Herbarium. Use of an asterisk (*) indicates the species is not native to Queensland or the local area. Fauna scientific names are in accordance with the nomenclature adopted by the Qld Department of Environment and Science.

3.1.4 Survey Limitations

It should be noted that the survey was focused on quantifying the extent and composition of terrestrial plant communities and fauna within a limited timeframe. The survey scope excluded seasonal fauna surveys (eg shorebirds). Despite the limitations acknowledged above, the survey has been undertaken at adequate resolution to determine the ecological values of the project area.

3.2 Results

3.2.1 Flora Surveys

A total of 47 flora species were recorded in the project area including 30 native and 17 non-native species. One (1) species recorded is identified as a Restricted Invasive Plant under the Qld Biosecurity Act – *Sphagneticola trilobata* (Singapore daisy). A moderate infestation of this species was recorded in the southern part of the site in the dunal area.

Two (2) vegetation associations were classified as summarised in Table 3.3 and further described in the following sections and shown in Figure 3.1.

Table 3.3 Vegetation communities within the subject site

Vegetation Map Unit	Description
Vegetation Association A	Disturbed Coastal Littoral Open Forest: This vegetation association represents a modified coastal littoral open forest community on sandy soils and is present over the majority of the site (Figure 3.1). The structure generally comprises a cleared and maintained groundcover and shrub layer with mature canopy trees including non-native (mango) and preclearing regional ecosystem tree species.
Vegetation Association B	Foredune Shrubland: This vegetation was recorded in a narrow band along the eastern fringe of Vegetation Association A in the dunal area. The structure generally comprises a low sparse canopy with areas of dense shrubland and moderate cover of grass and forbland.

No threatened flora species of conservation significance (EVNT) were detected during the surveys. Two (2) Special Least Concern (SL) flora species were recorded – both epiphytic species growing on the mango and beach almond trees:

- *Platycerium hillii* (elkhorn fern); and
- *Dockrillia calamiformis* (northern pencil orchid).

No plants were detected that meet the criteria for marine plants as defined under the Fisheries Act.

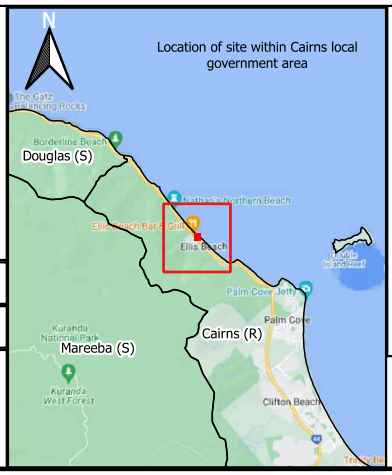


Ellis Beach SLSQ

Figure 3.1 Vegetation Associations in Study Area

Project: BE220596	Date: 31-01-2023
Scale: 1:850 at A4	Projection: GDA94 MGA55

Data Sources: Queensland Department of Resources (2023), Nearmap (2022)



Legend

- Subject Site
- Cascade Ck
- 1m Contours
- 2.5m Contours

Site Vegetation

- Veg Assn A
- Veg Assn B

Client: Surf Life Saving Qld

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3.2.1.1 *Vegetation Association A – Disturbed Coastal Littoral Open Forest*

This vegetation association represents a modified coastal littoral open forest community on sandy soils and is present over the majority of the site (Figure 3.1). The structure generally comprises a cleared and maintained groundcover and shrub layer with mature canopy trees representing the preclearing regional ecosystem non-native species (eg mango trees).

The results of the quantitative assessment are provided in Table 3.4 and Table 3.5. A complete species list is provided in Appendix A.

Table 3.4 Association A Quantitative Assessment - Structure

Stratum†	Growth Form	Cover (%)	Stratum Height (m)
Canopy	Tree	40-60	15-20
Sub-canopy	Tree	40	4-12
Mid	Shrub	5	1-3
Ground	Grass/forbs	30	0.4-1.5

†Strata that were not present have been omitted.

Table 3.5 Association A Quantitative Assessment - Floristics

Stratum	Species†
Canopy	*Terminalia catappa* (beach almond), *Mangifera indica** (mango), *Cocos nucifera* (coconut palm), *Melaleuca leucadendra* (weeping paperbark), *Corymbia tesselaris* (Moreton Bay ash), *Cassia fistula** (Indian laburnum)
Sub-canopy	*Terminalia catappa* (beach almond), *Casuarina equisetifolia* (coastal she-oak), *Acacia polystachya* (polystachya wattle), *Amyema conspicua subsp. conspicua* (mistletoe), *Dillenia alata* (red beech), *Canarium australianum* (scrub turpentine), *Dillenia alata* (red beech), *Dockrillia calamiformis* (northern pencil orchid), *Platycerium hillii* (elkhorn fern)
Mid	*Scaevola taccada* (sea lettuce tree), *Colubrina asiatica* (colubrina), *Morinda citrifolia* (canary wood), *Premna serratifolia* (bastard guelder)
Ground	*Axonopus compressus** (carpet grass), *Megathyrsus maximus** (Guinea grass), *Sphagneticola trilobata** (Singapore daisy), *Eleusine indica** (crowsfoot grass), *Oplismenus mollis* (oplismenus), *Chloris inflata** (purpletop chloris), *Commelina ensifolia* (scurvy grass), *Crotalaria pallida** (streaked rattlepod), *Macroptilium atropurpureum** (siratro), *Phyllanthus tenellus** (hen and chicken), *Sansevieria trifasciata** (mother-in-law's tongue).

†In order of dominance, occasional species not included. Complete floristics provided in Appendix A.

*Non-native

The upper stratum is the ecologically dominant layer (EDL) in this vegetation association. The EDL structure and floristics of this association are highly modified and do not represent remnant vegetation due to the predominance of non-native canopy species (e.g., mango and coconut palm). The vegetation floristics of the canopy and sub-canopy however resemble the pre-clearing Regional Ecosystem 7.2.7a.

A number of weed species were detected including an infestation of Singapore daisy - a Restricted Invasive Plant under the Qld Biosecurity Act (refer Section 3.3).

No threatened flora species of conservation significance (EVNT) were recorded. Two (2) Special Least Concern (SL) flora species were recorded – both epiphytic species growing on the mango and beach almond trees:

- *Platycerium hillii* (elkhorn fern); and
- *Dockrillia calamiformis* (northern pencil orchid).

No marine plants as defined under the Fisheries Act were detected in this unit.



Figure 3.2 Vegetation Unit A – looking south from entrance



Figure 3.3 Vegetation Unit A – picnic area



Figure 3.4 Vegetation Unit A – southern end of site

3.2.1.2 Vegetation Association B – Foredune Shrubland

This vegetation association fringes the eastern side of Vegetation Association A in the foredune area of the subject site (Figure 3.1). The structure is predominantly closed to open hummock grassland with forbs and areas of shrubland with an emergent tree stratum dominated by *Terminalia catappa* (beach almond), *Cocos nucifera* (coconut palm) and *Casuarina equisetifolia* (coastal she-oak).

The results of the quantitative assessment are provided in Table 3.6 and Table 3.7. A complete species list is provided in Appendix A.

Table 3.6 Association B Quantitative Assessment - Structure

Stratum†	Growth Form	Cover (%)	Stratum Height (m)
Upper	Tree	5-10	8-15
Mid	Shrub	20-30	1-3
Ground	Grass/forbs	20-50	0.4-1.1

†Strata that were not present have been omitted.

Table 3.7 Association B Quantitative Assessment - Floristics

Stratum	Species†
Upper	*Terminalia catappa* (beach almond), *Cocos nucifera* (coconut palm), *Casuarina equisetifolia* (coastal she-oak*), Acacia polystachya* (polystachya wattle), *Amyema conspicua subsp. conspicua* (mistletoe)
Mid	*Scaevola taccada* (sea lettuce tree), *Colubrina asiatica* (colubrina), *Premna serratifolia* (bastard guelder)
Ground	*Megathyrsus maximus** (Guinea grass), *Spinifex sericeus* (beach spinifex), *Sporobolus virginicus* (sand couch), *Ipomoea pes-caprae* (beach morning glory), *Vigna marina* (yellow beach bean), *Sphagneticola trilobata** (Singapore daisy), *Thuarea involuta* (tropical beachgrass), *Macroptilium atropurpureum** (siratro),

†In order of dominance, occasional species not included. Complete floristics provided in Appendix A.

*Non-native

The upper stratum is the ecologically dominant layer (EDL) in this vegetation association. The vegetation floristics of this association resembles the pre-clearing Regional Ecosystem 7.2.7a.

A number of weed species were detected including an infestation of Singapore daisy - a Restricted Invasive Plant under the Qld Biosecurity Act (refer Section 3.3).

No threatened flora species of conservation significance (EVNT) were recorded.

No marine plants as defined under the Fisheries Act were detected in this unit.



Figure 3.5 Vegetation Association B



Figure 3.6 Vegetation Association B – Left: *Scaevola taccada* (sea lettuce tree); Right: Invasive weed *Sphagneticola trilobata* (Singapore daisy).

3.3 Weeds

For the purposes of this report, a weed is defined as a species that is not native to North Qld and is recognised as an invasive plant under the Queensland *Biosecurity Act 2014*, or recognised as an environmental weed in the Qld DES WildNet database.

The Queensland *Biosecurity Act 2014* requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control.

A total of 17 invasive weeds were recorded during the flora surveys including one (1) Restricted Invasive Plant. Weed species recorded are listed in Table 3.8.

Table 3.8 Weed Species Recorded on Site

Family	Scientific Name	Common Name	Qld Status*
Poaceae	*Axonopus compressus*	carpet grass	
Leguminosae	*Cassia fistula*	Indian laburnum	
Poaceae	*Cenchrus echinatus*	Mossman River grass	
Poaceae	*Chloris inflata*	purpletop chloris	
Poaceae	*Chrysopogon aciculatus*	Mackie's pest	
Fabaceae	*Crotalaria pallida*	streaked rattlepod	
Poaceae	*Eleusine indica*	crowsfoot grass	
Fabaceae	*Macroptilium atropurpureum*	siratro	
Anacardiaceae	*Mangifera indica*	mango	
Poaceae	*Megathyrsus maximus*	Guinea grass	
Rubiaceae	*Oldenlandia corymbosa var. corymbosa*	oldenlandia	
Phyllanthaceae	*Phyllanthus tenellus*	hen and chicken	
Portulacaceae	*Portulaca pilosa*	hairy pigweed	
Dracaenaceae	*Sansevieria trifasciata*	mother-in-law's tongue	
Malvaceae	*Sida acuta*	southern sida	
Asteraceae	***Sphagneticola trilobata***	**Singapore daisy**	**RIP**
Sparrmanniaceae	*Triumfetta rhomboidea*	chinese burr	

*Qld Status under the *Biosecurity Act 2014,* where:
RIP = Restricted invasive plants must not be given away, sold or released into the environment without a permit. The Biosecurity Act requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control. At a local level, each local government must have a biosecurity plan that covers invasive plants and animals in its area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws.

3.4 Fauna Survey Results

Seventeen (17) species of fauna were observed within the subject site during surveys including 15 bird species and two (2) reptiles (Table 3.9). Only one (1) introduced species was detected – the common myna. Surveys were undertaken over a snapshot time period, so all fauna species are underrepresented in the results.

All species detected during surveys are edge species - typically found in disturbed and human modified environments. There is good small reptile habitat on site due to high levels of leaf litter and within the grass and shrubland along the dunal area.

No breeding places (e.g., nests) were observed in the study area during the survey and no species of conservation significance (EVNT) were detected.

Table 3.9 Fauna Species Identified On-Site

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Birds						
Sturnidae	*Acridotheres tristis*	common myna	I	V	W	DBS
Apodidae	*Aerodramus terraereginae*	Australian swiftlet	LC	V	W	OO
Artamidae	*Artamus leucorynchus*	white-breasted wood swallow	LC	V	W	OO
Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo	LC	V	W	OO
Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra	LC	V	W	OO
Dicaeidae	*Dicaeum hirundinaceum*	mistletoe bird	LC	V	W	DBS
Columbidae	*Ducula bicolor*	pied imperial-pigeon	LC	V	W	OO
Columbidae	*Geopelia humeralis*	bar-shouldered dove	LC	V	W	OO
Columbidae	*Geopelia placida*	peaceful dove	LC	V	E	OO
Haematopodidae	*Haematopus longirostris*	Australian pied oystercatcher	LC	V	E	OO
Meliphagidae	*Meliphaga notata*	yellow-spotted honeyeater	LC	V	E	OO
Meliphagidae	*Philemon buceroides*	helmeted friarbird	LC	V	W	DBS
Rhipiduridae	*Rhipidura leucophrys*	willie wagtail	LC	V	W	OO
Oriolidae	*Sphecotheres vieilloti*	Australasian figbird	LC	V	E	OO
Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet	LC	V	W	OO
Reptiles						
Scincidae	*Carlia longipes*	rainbow skink	LC	V	W	OO
Scincidae	*Ctenotus spaldingi*	straight-browed ctenotus	LC	V	W	OO

*Status: I = Introduced non-native species.

As listed under the Queensland *Nature Conservation Act 1992*: CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, SL = Special Least Concern, LC = 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; OO = opportunistic observation; NST = Nocturnal Spotlighting Transect.

††Location: W = species observed within subject property; E = species observed external but close (within 100m) to subject site.

4. Permits and Approvals

Table 4.1 provides a summary of the permits and approvals that may be required for the proposed works based on the results of the desktop review and site assessment. Applicable permits will depend on the final works footprint and the nature of the development application (i.e., MID or Planning Act DA).

Table 4.1 Permits and Approvals Required for Proposed Works

Item	Statutory trigger	Assessment and Permits/Approvals
1	**Coastal development** Development within the coastal zone is regulated under the *Planning Act* & *Coastal Protection & Management Act* Triggers include: • Operational works in the: - tidal zone - coastal management district (CMD) • Material change of use (MCU).	Works area is within a coastal management district – application may require referral for assessment against State Code 8. Refer to accompanying Coastal Hazard Assessment report (Burchills, 2023).
2	**Marine Plants and Fish Habitat Areas (FHA)** *Fisheries Act 1994* Impact to a (A) marine plant, (B) FHA, or (C) Fish passages may be subject to an approval or notification process.	Proposed footprint is located outside tidal areas and no marine plants were identified within the proposed footprint area. Marine plants as defined under the Qld *Fisheries Act 1994* and generally exclude foredune species unless they fall within a storm tide area.
3	**Building waterway barriers** *Fisheries Act 1994* This includes fresh and tidal water, permanent and temporary dams, weirs or other structures that form a barrier or interference to the flow of water (and therefore fish passage).	No structures that form a barrier or interference to the flow of water are proposed.
4	**Riverine protection** *Water Act 2000* Activities within natural watercourses (non-tidal), wetlands, lakes and over-land flow paths. Typically only applies to fresh water systems.	No activities within natural watercourses (non-tidal), wetlands, lakes and over-land flow paths are proposed.

Item	Statutory trigger	Assessment and Permits/Approvals
5	**Matters of national environmental significance** (MNES) includes: • world/national heritage parks/wetlands • nationally threatened species, ecological communities and migratory species. *Environment Protection and Biodiversity Conservation Act 1999*	Protected Matters search completed – refer Appendix A. A number of MNES (46 x threatened species / 2 x communities / 46 x migratory species) are modelled as potentially occurring within/near the project area. No MNES were detected during surveys and based on the expected low level impacts from the proposed works – it is not expected that the project will significantly impact on MNES. Consequently, the project will not require referral under the EPBC Act to determine controlled action status.
6	**Impacts to plant communities under the vegetation management framework** *Vegetation Management Act 1999*	Vegetation within north of the site is non-regulated Category X under the Qld *Vegetation Management Act 1999*. The balance of the site is identified as Category R (reef regrowth watercourse vegetation). A prelodgement meeting with SDMIP was undertaken in August 2019 and the following advice was provided by DNRME (now Department of Resources) regarding clearing of native vegetation: • *The development will not trigger referral for vegetation clearing for the MCU application as any clearing within the lease area would be consistent with the lease and therefore can be carried out as exempt clearing.* • *Clearing outside the lease area for car parking could also be undertaken as exempt clearing for government support transport infrastructure.* • *Any other clearing should be reviewed to see if referral is required.* • *Buildings should be located 10m from the defining bank of adjacent creeks.*
7	**Impacts to Protected Plants** *Nature Conservation Act 1994*	The project area does not fall within the Protected Plants Flora Survey trigger (PPFST) area.
8	**Weeds and Pests** *Biosecurity Act 2014*	One (1) Restricted Invasive Plant listed under the Qld *Biosecurity Act 2014* was identified in the project area - *Sphagneticola trilobata* (Singapore daisy). This species should be controlled by the land owner (lease holder) in accordance with the provisions of the *Biosecurity Act 2014*. All clearing works should by managed in accordance with an Environmental Management Plan to ensure existing weeds and controlled and not spread by the works and to ensure no new weeds are introduced as part of the works.
10	**Impacts on Native Fauna** *Nature Conservation Act 1994*	No habitat features were detected within the works area, however mature trees and other structures (eg stormwater pipes, picnic shelters) may providing breeding / nesting opportunities for native fauna and should be inspected by a spotter catcher prior to works commencing.

5. Impacts and Recommendations

5.1 Matters of National Environmental Significance

The results of the desktop surveys and field investigations indicate that the proposed development is unlikely to result in a significant impact on values identified as matters of national environmental significance (MNES). Given that impacts have been avoided and minimised to the greatest extent possible, with the current footprint for the proposed development falling within a mostly cleared area at the southern end of the site, these impacts will not constitute a Significant Impact, as per the Matters of National Environmental Significance: Significant Impact Guidelines 1.1 (Commonwealth of Australia 2013). An assessment of the likelihood of presence on and / or near the subject site for most species (excluding pelagic and marine species unlikely to occur within the subject site) based on results of the surveys is presented in Appendix C.

5.2 Matters of State Environmental Significance

5.2.1 High Ecological Value Wetland

High Ecological Value (HEV) wetland mapping is indicated along the entire far north Qld coastline as shown in Figure 2.1 and Figure 2.2. To avoid and minimise impacts on the adjoining HEV wetland values, the works footprint is limited to land above the high-water mark and avoids clearing native vegetation in a 10m setback to Cascade Ck. Additionally all works will be undertaken in accordance with the recommendations of an Onsite Effluent Disposal assessment and an Environmental Management Plan (EMP) including an Erosion and Sediment Control Plan (ESCP).

5.2.2 Marine Plants

No marine plants (as defined under the Qld Fisheries Act) were detected within the study area and the works are not expected to impact on marine plants or fish habitat provided the works footprint is limited to land above the high-water mark.

5.2.3 Threatened Wildlife

No conservation significant threatened flora or fauna species were detected within the study area and the works are not expected to impact on conservation significant threatened flora or fauna species.

The site is mapped as having potential wildlife habitat for Endangered or Vulnerable wildlife. Based on a search of WildNet data (DES, 2022), four (4) EVNT species have previously been recorded within 2km of the investigation area (Appendix A): The estuarine crocodile, Macleay's fig-parrot, beach stone-curlew and Australian snubfin dolphin. These species and habitat for these species was not detected within the proposed development footprint and provided all potential impacts area managed in accordance with this report and an approved EMP, it is not expected that the proposed development would impact on these species.

Additionally, during the SDMIP prelodgement meeting (August 2019), Cairns Regional Council identified two (2) conservation significant species of goby have previously been recorded in the local area including the Blue-spot goby (*Pseudogobius* sp. 9) and the Opal cling goby (*Stiphodon semoni*).

The Blue-spot goby (*Pseudogobius* sp. 9) is currently undescribed (previously known as *Pseudogobius olorum*) and does not yet have a conservation classification. This species typically inhabits seagrass beds of estuaries of eastern Australia – a habitat type not present within or near the subject site.

The Opal cling goby (*Stiphodon semoni*) is Critically endangered under the EPBC and not listed under the NCA. This species is limited to a small number of rainforest streams in the Wet Tropics region with an estimated total population size of 10–30 mature individuals. The main threats to this species are collection for the

aquarium trade and habitat loss/modification. This species inhabits undisturbed, freshwater rainforest streams with direct (unmodified) access to marine habitat. Due to physical barriers and modification upstream, Cascade Ck does not meet the habitat requirements for this species.

An assessment of the likelihood of presence of EVNT species based on results of the site surveys determined that species that may utilise habitat on the subject site are limited to highly mobile avian species that are not solely dependent on habitat values provided by the site so are unlikely to be impacted by the proposed works (refer Appendix C for detailed assessment).

Though no habitat features of significance or breeding places were detected during surveys, a licenced spotter catcher should be engaged to inspect the site prior to clearing to ensure no fauna or breeding places (e.g., hollows, nests etc) are impacted by the proposed works.

5.2.4 Regulated Vegetation

As shown in Figure 2.3, the study area is mapped as having Category R vegetation in the southern part of the study area. Site surveys found the vegetation in this area to be highly modified and inclusive of hardstand areas (road and cul-de-sac head) with existing vegetation dominated by Mango trees and not representative of the mapped preclearing regional ecosystem (RE 7.3.44). Additionally, soils in this area are sandy so the land zone is more likely to be Land Zone 2 and not Land Zone 3.

The current footprint for the proposed development falls within a mostly cleared area at the southern end of the site within Vegetation Association A. Trees present in this area include *Terminalia catappa* (beach almond), *Cocos nucifera* (coconut palm) and *Melaleuca leucadendra* (weeping paperbark). In accordance with the prelodgement advice from DNRME (now Department of Resources) the design has been located to avoid clearing of native vegetation in a 10m setback to Cascade Ck.

Additionally, clearing of trees required for the proposed works will be mitigated through a replacement planting program using a compensatory planting ratio of at least 1:3 (three trees planted for each tree removed). Species will be selected from the preclearing regional ecosystems.

All works should be undertaken in accordance with an Environmental Management Plan (EMP) and this EAR to ensure no damage to protected vegetation outside of the works area occurs and weeds are managed to ensure no incursion into protected vegetation results from the project works.

5.3 Matters of Local Environmental Significance

5.3.1 Waterway Trigger Area

The Waterway trigger area identified in the CairnsPlan as a Non-urban waterway trigger area (Cascade Ck and buffers) is also mapped as a (Stream Order 1) Vegetation Management watercourse and a watercourse under the Qld *Water Act 2000*. The relevant defined setback distance for a Stream Order 1 Vegetation Management watercourse is 10m either side of the high bank. The proposed development has been designed to avoid clearing of native vegetation in a 10m setback to Cascade Ck.

The CairnsPlan Natural Areas Overlay code identifies a buffer width of 25 metres on each side of the waterway, measured from the high bank. Given the predominance of non-native vegetation (eg mangos) and large areas of hardstand (cul-de-sac head) in this 25m setback, it is not expected that further development in this area will compromise the existing riparian values of Cascade Ck. Furthermore, site clearing works should be undertaken in accordance with an Environmental Management Plan (EMP) including an Erosion and Sediment Control Plan (ESCP) as well as the project Stormwater Management Plan to ensure no worsening of stormwater runoff from the subject site.



Figure 5.1 Cascade Ck – left looking into site towards cul-de-sac from creek bridge, right – looking towards adjacent site with tourist cabins from bridge/

5.4 General Recommendations

To ensure the ongoing viability of vegetation and habitat and wetland/waterway values adjoining the works area, the following procedures are to be implemented:

- Clearing of trees required for the proposed works should be mitigated through a replacement planting program using a compensatory planting ratio of at least 1:3 (three trees planted for each tree removed). Species should be selected from the preclearing regional ecosystems.
- Prior to works, a vegetation protection zone is to be demarcated with temporary fencing in accordance with *AS4970-2009 Protection of trees on development sites*, or a similar alternative, to protect the marine plants that are proposed to be retained outside of the works area;
- Fencing should be above the tidal zone and be appropriately signed;
- All fencing is to be inspected daily and maintained throughout the course of the works and following each incidence of heavy rainfall. If the fence shows signs of failure, the fence is to be fixed or replaced;
- Fencing and signage is to remain in place for the duration of works;
- No non-essential works, placement of fill, storage of equipment or access is to be permitted within the tree protection zone;

- Should works be required within the vegetation protection zone be unavoidable, an ecologist or qualified (AQF5) Arborist (for trees) should be contracted to provide advice regarding protection of the vegetation and monitoring if required;
- Promptly remove any material or debris which has been deposited within the coastal management district or tidal waters by way of construction. This does not include removal any marine plants (whether live or dead) aside from those specifically outlined in this document;
- Erosion and sediment control measures are to be installed and maintained to prevent the release of contaminants and / or sediment to tidal waters;
- Any disturbed or oxidised acid sulfate soil must be treated and managed in accordance with the current Queensland *Acid Sulfate Soil Technical Manual: Soil Management Guidelines 4.0*, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014;
- During construction activities only use materials which are clean and free of silt and free from pests, chemicals and other contaminants as defined under section 11 of the *Environmental Protection Act 1994*;
- Tidal land profiles that are temporarily disturbed by the development works (other than those within the permanent development footprint) must be promptly restored to pre-work profiles;
- Other than spoil deliberately used for re-profiling the substrate, spoil from excavation must be removed from tidal land and other wetlands, including waterways;
- Spoil and disturbed substrate are managed to prevent acid sulfate soil oxidation and movement of sediment, runoff and leachate to fish habitats;
- A licensed spotter catcher should inspect the site prior to clearing to ensure no fauna or breeding places are impacted by the works; and
- Where native trees are removed / cleared / impacted by the works, compensatory replacement should be undertaken utilising species from the preclearing ecosystem at an offset ratio of 3:1 (i.e., three trees replaced for each tree removed).

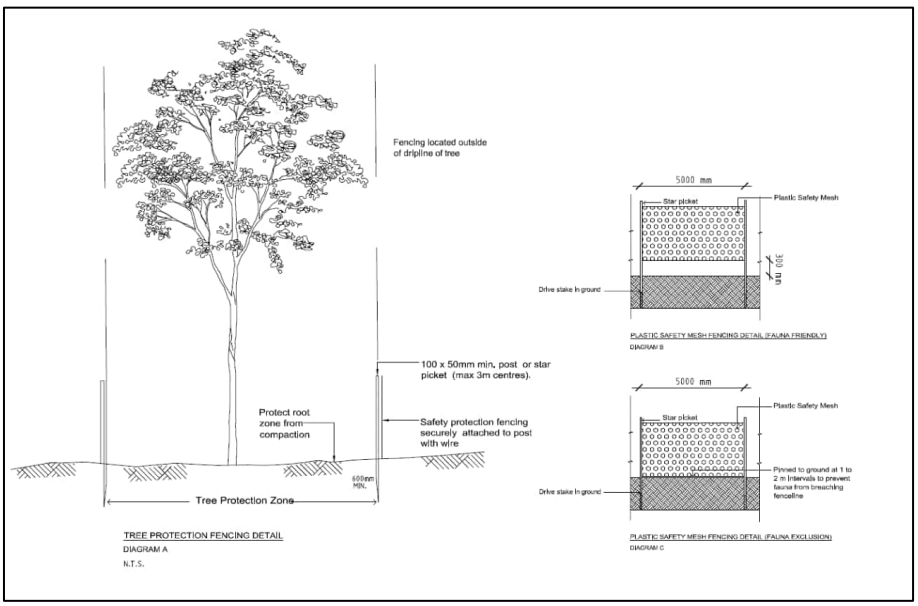


Figure 5.2 Example of tree protection fencing

6. Conclusions

Site flora and fauna surveys were undertaken in January 2023. A total of 47 flora species were recorded in the project area including 30 native and 17 non-native species. One (1) species recorded is identified as a Restricted Invasive Plant under the Qld Biosecurity Act – *Sphagneticola trilobata* (Singapore daisy). A moderate infestation of this species was recorded in the southern part of the site in the foredune area.

Two (2) vegetation associations were mapped and classified as follows:

- Vegetation Association A - Modified Coastal Littoral Open Forest; and
- Vegetation Association B - Foredune Shrubland.

No threatened flora species of conservation significance (EVNT) were detected during the surveys. Two (2) Special Least Concern (SL) flora species were recorded – both epiphytic species growing on mature mango and beach almond trees:

- *Platycerium hillii* (elkhorn fern); and
- *Dockrillia calamiformis* (northern pencil orchid).

No plants were detected that meet the criteria for marine plants as defined under the Qld Fisheries Act.

Seventeen (17) species of fauna were observed within the subject site during surveys including 15 bird species and two (2) reptiles. Only one (1) introduced species was detected – the common myna. Surveys were undertaken over a snapshot time period, so all fauna species are underrepresented in the results.

All species detected during surveys are edge species - typically found in disturbed and human modified environments. There is good small reptile habitat on site due to high levels of leaf letter and within the grass and shrubland in the foredune area. No breeding places (e.g., nests) were observed in the study area during the survey and no species of conservation significance (EVNT) were detected.

The footprint for the proposed development falls within a mostly cleared and developed area at the southern end of the site and the design has been located to avoid clearing of native vegetation in a 10m setback to Cascade Ck.

Though no habitat features of significance or breeding places were detected during surveys, a licenced spotter catcher should be engaged to inspect the site prior to any clearing works to ensure no fauna or breeding places (eg hollows, nests etc) are impacted by the proposed works.

The proposed works should be undertaken in accordance with an approved Environmental Management Plan that includes an erosion and sediment control plan to ensure potential environmental harm is avoided, minimised, mitigated and managed appropriately.

7. Acronyms

CRC	Cairns Regional Council
DAF	Queensland Department of Agriculture and Fisheries
DES	Queensland Department of Environment and Science (formerly EHP/DERM/EPA)
EPBC Act	Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*
EVNT	Species listed as Critically Endangered, Endangered or Vulnerable or Near Threatened under the NCA / EPBC
HAT	Highest Astronomical Tide
LAT	Lowest Astronomical Tide
MSES	Matter(s) of State Environmental Significance
NCA	Queensland *Nature Conservation Act 1992*
PPFST Map	Protected Plants Flora Survey Trigger Map
SDAP	State Development Assessment Provisions
VMA	Queensland *Vegetation Management Act 1999*

8. References

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Appendix A – Desktop Review Search Results

Australian Government

Department of Climate Change, Energy, the Environment and Water

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: 16-Dec-2022

Summary

Details

- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat

Acknowledgements

Summary

Matters of National Environment 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:	2
National Heritage Places:	3
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	1
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	46
Listed Migratory Species:	46

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:	96
Whales and Other Cetaceans:	12
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

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:	2
Key Ecological Features (Marine):	None
Biologically Important Areas:	4
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status
Great Barrier Reef	QLD	Declared property
Wet Tropics of Queensland	QLD	Declared property

National Heritage Places [Resource Information]

Name	State	Legal Status
Indigenous		
Wet Tropics World Heritage Area (Indigenous Values)	QLD	Within listed place
Natural		
Great Barrier Reef	QLD	Listed place
Wet Tropics of Queensland	QLD	Listed place

Great Barrier Reef Marine Park [Resource Information]

Zone Type	Zone ID	IUCN
Habitat Protection	HP-16-5130	VI

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
Broad leaf tea-tree (Melaleuca viridiflora) woodlands in high rainfall coastal north Queensland	Endangered	Community may occur within area
Lowland tropical rainforest of the Wet Tropics	Endangered	Community may occur within 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
BIRD		
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Casuarius casuarius johnsonii Southern Cassowary, Australian Cassowary, Double-wattled Cassowary [25986]	Endangered	Species or species habitat known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix olivii Buff-breasted Button-quail [59293]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Tyto novaehollandiae kimberli](#) Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
FISH		
[Stiphodon semoni](#) Opal Cling Goby [83909]	Critically Endangered	Species or species habitat likely to occur within area
FROG		
[Litoria dayi](#) Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707]	Vulnerable	Species or species habitat likely to occur within area
[Litoria nyakalensis](#) Mountain Mistfrog, Nyakala Frog [1820]	Critically Endangered	Species or species habitat likely to occur within area
MAMMAL		
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat may occur within area
[Dasyurus hallucatus](#) Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
[Hipposideros semoni](#) Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area
[Macroderma gigas](#) Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
[Mesembriomys gouldii rattoides](#) Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat may occur within area
[Petauroides minor](#) Greater Glider (northern), Greater Glider (north-eastern Queensland) [92008]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
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 likely to occur within area
Pteropus conspicillatus		
Spectacled Flying-fox [185]	Endangered	Species or species habitat likely to occur within area
Rhinolophus robertsi		
Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Canarium acutifolium		
[23956]	Vulnerable	Species or species habitat likely to occur within area
Dendrobium mirbelianum		
Dark-stemmed Antler Orchid, Mangrove Orchid [14310]	Endangered	Species or species habitat may occur within area
Diplazium cordifolium		
[15585]	Vulnerable	Species or species habitat may occur within area
Myrmecodia beccarii		
Ant Plant [11852]	Vulnerable	Species or species habitat may occur within area
Phaius pictus		
[22564]	Vulnerable	Species or species habitat likely to occur within area
Phalaenopsis rosenstromii listed as Phalaenopsis amabilis subsp. rosenstromii		
Native Moth Orchid [15984]	Endangered	Species or species habitat likely to occur within area
Phlegmariurus squarrosus		
Rock Tassel-fern, Water Tassel-fern [86556]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Polyscias bellendenkerensis [7237]	Vulnerable	Species or species habitat may occur within area
Vappodes lithocola Dwarf Butterfly Orchid, Cooktown Orchid [78893]	Endangered	Species or species habitat likely to occur within area
REPTILE		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Sphyrna lewini](#) Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
[Anous stolidus](#) Common Noddy [825]		Species or species habitat known to occur within area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Fregata ariel](#) Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
[Fregata minor](#) Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat known to occur within area
[Phaethon lepturus](#) White-tailed Tropicbird [1014]		Species or species habitat may occur within area
[Sternula albifrons](#) Little Tern [82849]		Species or species habitat may occur within area
Migratory Marine Species		
[Anoxypristis cuspidata](#) Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
[Balaenoptera edeni](#) Bryde's Whale [35]		Species or species habitat may occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Foraging, feeding or related behaviour known to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Anous stolidus		
Common Noddy [825]		Species or species habitat known to occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis		
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine 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

Scientific Name	Threatened Category	Presence Text
[Sternula albifrons as Sterna albifrons](#) Little Tern [82849]		Species or species habitat may occur within area
[Symposiachrus trivirgatus as Monarcha trivirgatus](#) Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area
Fish		
[Acentronura tentaculata](#) Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
[Bulbonaricus davaoensis](#) Davao Pughead Pipefish [66190]		Species or species habitat may occur within area
[Choeroichthys brachysoma](#) Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
[Choeroichthys sculptus](#) Sculptured Pipefish [66197]		Species or species habitat may occur within area
[Choeroichthys suillus](#) Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
[Corythoichthys amplexus](#) Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
[Corythoichthys flavofasciatus](#) Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
[Corythoichthys intestinalis](#) Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Corythoichthys ocellatus](#) Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area
[Corythoichthys paxtoni](#) Paxton's Pipefish [66204]		Species or species habitat may occur within area
[Corythoichthys schultzi](#) Schultz's Pipefish [66205]		Species or species habitat may occur within area
[Cosmocampus maxweberi](#) Maxweber's Pipefish [66209]		Species or species habitat may occur within area
[Doryrhamphus dactyliophorus](#) Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
[Doryrhamphus excisus](#) Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
[Doryrhamphus janssi](#) Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
[Festucalex cinctus](#) Girdled Pipefish [66214]		Species or species habitat may occur within area
[Festucalex gibbsi](#) Gibbs' Pipefish [66215]		Species or species habitat may occur within area
[Halicampus dunckeri](#) Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
[Halicampus grayi](#) Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Halicampus macrorhynchus Whiskered Pipefish, Ornate Pipefish [66222]		Species or species habitat may occur within area
Halicampus mataafae Samoan Pipefish [66223]		Species or species habitat may occur within area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippichthys spicifer Belly-barred Pipefish, Banded Freshwater Pipefish [66232]		Species or species habitat may occur within area
Hippocampus bargibanti Pygmy Seahorse [66721]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus zebra Zebra Seahorse [66241]		Species or species habitat may occur within area
Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area
Microphis brachyurus Short-tail Pipefish, Short-tailed River Pipefish [66257]		Species or species habitat may occur within area
Nannocampus pictus Painted Pipefish, Reef Pipefish [66263]		Species or species habitat may occur within area
Phoxocampus diacanthus Pale-blotched Pipefish, Spined Pipefish [66266]		Species or species habitat may occur within area
Siokunichthys breviceps Softcoral Pipefish, Soft-coral Pipefish [66270]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Syngnathoides biaculeatus](#) Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
[Trachyrhamphus bicoarctatus](#) Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
[Trachyrhamphus longirostris](#) Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
[Dugong dugon](#) Dugong [28]		Species or species habitat known to occur within area
Reptile		
[Acalyptophis peronii](#) Horned Seasnake [1114]		Species or species habitat may occur within area
[Aipysurus duboisii](#) Dubois' Seasnake [1116]		Species or species habitat may occur within area
[Aipysurus eydouxii](#) Spine-tailed Seasnake [1117]		Species or species habitat may occur within area
[Aipysurus laevis](#) Olive Seasnake [1120]		Species or species habitat may occur within area
[Astrotia stokesii](#) Stokes' Seasnake [1122]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
Chitulia ornata as Hydrophis ornatus Spotted Seasnake, Ornate Reef Seasnake [87377]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Disteira kingii Spectacled Seasnake [1123]		Species or species habitat may occur within area
Disteira major Olive-headed Seasnake [1124]		Species or species habitat may occur within area
Enhydrina schistosa Beaked Seasnake [1126]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Hydrophis elegans Elegant Seasnake [1104]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli Small-headed Seasnake [75601]		Species or species habitat may occur within area
Lapemis curtus as Lapemis hardwickii Spine-bellied Seasnake [83554]		Species or species habitat may occur within area
Laticauda colubrina a sea krait [1092]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Laticauda laticaudata a sea krait [1093]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area
Orcaella heinsohni as Orcaella brevirostris Australian Snubfin Dolphin [81322]		Species or species habitat known to occur within area

Current Scientific Name	Status	Type of Presence
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Foraging, feeding or related behaviour known to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Great Barrier Reef Coast	Marine Park	QLD
Macalister Range	National Park	QLD

Nationally Important Wetlands	[Resource Information]
Wetland Name	State
Great Barrier Reef Marine Park	QLD

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Ellis Beach holiday accommodation and ancillary development, Qld	2013/6854	Controlled Action	Post-Approval
Wangetti Trail South Section Wangetti to Palm Cove	2020/8722	Controlled Action	Proposed Decision

Biologically Important Areas		
Scientific Name	Behaviour	Presence

Scientific Name	Behaviour	Presence
Dolphins		
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Foraging	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Likely to occur
Seabirds		
Sterna sumatrana Black-naped Tern [800]	Breeding	Known to occur
Whales		
Megaptera novaeangliae Humpback Whale [38]	Breeding and calving	Known to occur

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 BIOCLIM 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.

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Ellis Beach SLSQ

MSES Values Mapped on or near the site

16°43'24"S 145°38'37"E

16°43'24"S 145°38'45"E



16°43'33"S 145°38'37"E

16°43'33"S 145°38'45"E

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0 25 metres

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MSES Values Mapped on or near the site

Legend

MSES protected area [estates]



MSES protected area [nature refuges]



MSES marine park [highly protected]



MSES declared fish habitat area [A and B areas]



MSES legally secured offset area [offset register]



MSES legally secured offset area [vegetation offsets]



MSES regulated vegetation [defined watercourse]

MSES declared high ecological value waters [watercourse]

MSES declared high ecological value waters [wetland]



MSES strategic environmental area [designated precinct]



MSES regulated vegetation [category B - endangered or of concern]



MSES regulated vegetation [category C- endangered or of concern]

MSES regulated vegetation [category R- GBR riverine]



MSES regulated vegetation [essential habitat]

MSES regulated vegetation [100m from wetland]

MSES wildlife habitat [endangered or vulnerable]



MSES wildlife habitat [special least concern animal]



MSES wildlife habitat [SEQ koala habitat - core]



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MSES high ecological significance wetlands

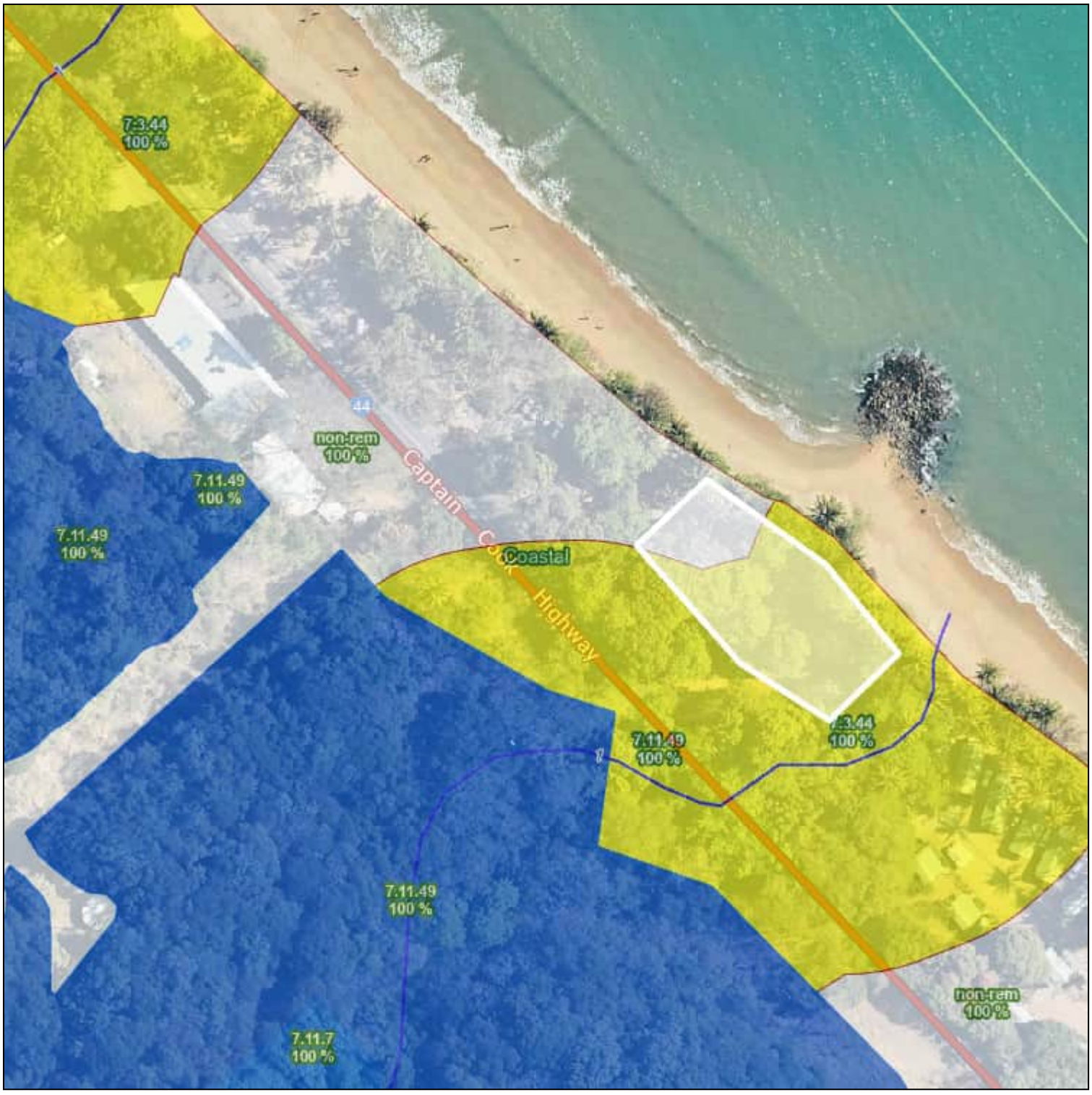


MSES wildlife habitat [SEQ koala habitat - locally refined]



16°43'24"S 145°38'37"E

16°43'24"S 145°38'46"E



16°43'33"S 145°38'37"E

16°43'33"S 145°38'46"E

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Legend

site.kml - poly

Vegetation management wetlands map

Wetlands map

Essential habitat map

Essential habitat map

VM watercourse/drainage feature - 1:100 000 and 1:250 000

VM watercourse/drainage - 1:25 000

Pre-clear regional ecosystems

Pre-clear area containing endangered RE

Pre-clear area containing of-concern RE

Pre-clear area containing least-concern RE

Water

Other

Vegetation management coastal and non-coastal bioregions and sub-regions map

RVM category A - vegetation offsets; compliance notices; VDecs

RVM category B - remnant vegetation

RVM category C - high-value regrowth vegetation

RVM category R - reef-regrowth watercourse vegetation

RVM category X - exempt clearing work on Freehold/Indigenous/Leasehold land

RVM water

RVM area not categorised

RVM - all

Category A

Category B

Category C

Category R

Category X

Water

Not Categorised

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WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Queensland status: All
Records: All
Date: All
Latitude: -16.7242
Longitude: 145.6447
Distance: 2
Email: caroline.kelly@burchills.com.au
Date submitted: Friday 16 Dec 2022 15:42:29
Date extracted: Friday 16 Dec 2022 15:50:04

The number of records retrieved = 176

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Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Acanthizidae	*Gerygone levigaster*	mangrove gerygone		C		1
animals	birds	Accipitridae	*Accipiter novaehollandiae*	grey goshawk		C		2
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		10
animals	birds	Accipitridae	*Haliastur indus*	brahminy kite		C		14
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		7
animals	birds	Alcedinidae	*Todiramphus macleayii*	forest kingfisher		C		4
animals	birds	Alcedinidae	*Todiramphus sanctus*	sacred kingfisher		C		3
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		2
animals	birds	Apodidae	*Aerodramus terraereginae*	Australian swiftlet		C		14
animals	birds	Apodidae	*Apus pacificus*	fork-tailed swift		SL		2
animals	birds	Ardeidae	*Butorides striata*	striated heron		C		1
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		2
animals	birds	Ardeidae	*Egretta sacra*	eastern reef egret		C		3
animals	birds	Ardeidae	*Nycticorax caledonicus*	nankeen night-heron		C		1
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		23
animals	birds	Artamidae	*Melloria quoyi*	black butcherbird		C		7
animals	birds	Burhinidae	*Burhinus grallarius*	bush stone-curlew		C		1
animals	birds	Burhinidae	*Esacus magnirostris*	beach stone-curlew		V		1
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		28
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		3
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		36
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		28
animals	birds	Charadriidae	*Vanellus miles miles*	masked lapwing (northern subspecies)		C		2
animals	birds	Columbidae	*Chalcophaps longirostris*	Pacific emerald dove		C		3
animals	birds	Columbidae	*Ducula bicolor*	pied imperial-pigeon		C		19
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		29
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		27
animals	birds	Columbidae	*Spilopelia chinensis*	spotted dove	Y			7
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		1
animals	birds	Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo		C		1
animals	birds	Cuculidae	*Cacomantis variolosus*	brush cuckoo		C		5
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		3
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		2
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		12
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		21
animals	birds	Haematopodidae	*Haematopus longirostris*	Australian pied oystercatcher		C		2
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		8
animals	birds	Laridae	*Chroicocephalus novaehollandiae*	silver gull		C		1
animals	birds	Laridae	*Gelochelidon nilotica*	gull-billed tern		SL		2
animals	birds	Laridae	*Hydroprogne caspia*	Caspian tern		SL		1
animals	birds	Laridae	*Thalasseus bergii*	crested tern		SL		3
animals	birds	Megapodiidae	*Megapodius reinwardt*	orange-footed scrubfowl		C		7
animals	birds	Meliphagidae	*Meliphaga notata*	yellow-spotted honeyeater		C		44
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		41
animals	birds	Meliphagidae	*Microptilotis gracilis*	graceful honeyeater		C		9
animals	birds	Meliphagidae	*Myzomela obscura*	dusky honeyeater		C		7

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meliphagidae	*Philemon buceroides*	helmeted friarbird		C		17
animals	birds	Meliphagidae	*Ramsayornis modestus*	brown-backed honeyeater		C		3
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		12
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		7
animals	birds	Monarchidae	*Monarcha melanopsis*	black-faced monarch		SL		1
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		19
animals	birds	Monarchidae	*Symposiachrus trivirgatus*	spectacled monarch		SL		2
animals	birds	Nectariniidae	*Cinnyris jugularis*	olive-backed sunbird		C		33
animals	birds	Oriolidae	*Sphecotheres vieilloti*	Australasian figbird		C		24
animals	birds	Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush		C		2
animals	birds	Pandionidae	*Pandion haliaetus cristatus*	eastern osprey		SL		3
animals	birds	Psittaculidae	*Cyclopsitta diophthalma macleayana*	Macleay's fig-parrot		V		3
animals	birds	Psittaculidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		1
animals	birds	Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet		C		25
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		6
animals	birds	Sturnidae	*Acridotheres tristis*	common myna	Y			9
animals	birds	Sturnidae	*Aplonis metallica*	metallic starling		C		8
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		1
animals	mammals	Delphinidae	*Orcaella heinsohni*	Australian snubfin dolphin		V		1/1
animals	mammals	Suidae	*Sus scrofa*	pig	Y			1
animals	reptiles	Crocodylidae	*Crocodylus porosus*	estuarine crocodile		V		3
animals	reptiles	Elapidae	*Acanthophis praelongus*	northern death adder		C		1
animals	reptiles	Gekkonidae	*Nactus cheverti*	Chevert gecko		C		2/2
animals	reptiles	Scincidae	*Concinnia brachysoma*	northern bar-sided skink		C		1
animals	reptiles	Scincidae	*Ctenotus spaldingi*	straight-browed ctenotus		C		1/1
fungi	Agaricomycetes	Polyporaceae	*Polyporus grammocephalus*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Trametes hirsuta*			C		1/1
fungi	lecanoromycetes	Physciaceae	*Rinodina oxydata*			C		1/1
plants	land plants	Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		1/1
plants	land plants	Annonaceae	*Desmos goezeanus*			C		1/1
plants	land plants	Annonaceae	*Huberantha nitidissima*			C		1/1
plants	land plants	Annonaceae	*Uvaria concava*			C		2/2
plants	land plants	Apocynaceae	*Cynanchum viminale subsp. brunonianum*			C		1/1
plants	land plants	Apocynaceae	*Gymnema longipedicellatum*			C		1/1
plants	land plants	Apocynaceae	*Hoya australis subsp. australis*			C		1/1
plants	land plants	Apocynaceae	*Leichhardtia velutina*			C		1/1
plants	land plants	Apocynaceae	*Parsonsia longipetiolata*			C		1/1
plants	land plants	Apocynaceae	*Vincetoxicum coloratum*			C		1/1
plants	land plants	Araceae	*Typhonium wilbertii*			C		1/1
plants	land plants	Araliaceae	*Polyscias purpurea*			C		1/1
plants	land plants	Asteraceae	*Eleutheranthera ruderalis*		Y			1/1
plants	land plants	Capparaceae	*Capparis lucida*			C		1/1
plants	land plants	Capparaceae	*Capparis sepiaria*			C		1/1
plants	land plants	Celastraceae	*Denhamia disperma*			C		1/1
plants	land plants	Celastraceae	*Denhamia fasciculiflora*			C		1/1
plants	land plants	Celastraceae	*Hedraianthera porphyropetala*	hedrianthera		C		3/3

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Cochlospermaceae	*Cochlospermum gillivraei*			C		1/1
plants	land plants	Combretaceae	*Lumnitzera littorea*			C		1/1
plants	land plants	Commelinaceae	*Aneilema acuminatum*			C		1/1
plants	land plants	Commelinaceae	*Commelina ensifolia*	scurvy grass		C		1/1
plants	land plants	Convolvulaceae	*Ipomoea eriocarpa*			C		1/1
plants	land plants	Convolvulaceae	*Xenostegia tridentata*			C		1/1
plants	land plants	Cyperaceae	*Cyperus pedunculatus*			C		1/1
plants	land plants	Ebenaceae	*Diospyros hebecarpa*			C		1/1
plants	land plants	Euphorbiaceae	*Alchornea rugosa*			C		1/1
plants	land plants	Euphorbiaceae	*Macaranga tanarius*	macaranga		C		1/1
plants	land plants	Lamiaceae	*Vitex rotundifolia*			C		1/1
plants	land plants	Lauraceae	*Beilschmiedia bancroftii*			C		1/1
plants	land plants	Lauraceae	*Beilschmiedia recurva*			C		1/1
plants	land plants	Lauraceae	*Cryptocarya grandis*			C		1/1
plants	land plants	Lauraceae	*Cryptocarya lividula*			C		1/1
plants	land plants	Lauraceae	*Endiandra bessaphila*			C		1/1
plants	land plants	Lauraceae	*Endiandra monothyra subsp. monothyra*			C		1/1
plants	land plants	Lauraceae	*Litsea glutinosa*			C		1/1
plants	land plants	Leguminosae	*Acacia oraria*			C		1/1
plants	land plants	Leguminosae	*Cassia fistula*	Indian laburnum	Y			1
plants	land plants	Leguminosae	*Crotalaria trichotoma*		Y			1/1
plants	land plants	Leguminosae	*Indigofera pratensis*			C		1/1
plants	land plants	Leguminosae	*Leucaena leucocephala*		Y			2
plants	land plants	Leguminosae	*Millettia pinnata*			C		1/1
plants	land plants	Malvaceae	*Hibiscus meraukensis*	Merauke hibiscus		C		1/1
plants	land plants	Meliaceae	*Aglaia elaeagnoidea*			C		1/1
plants	land plants	Meliaceae	*Dysoxylum arborescens*			C		1/1
plants	land plants	Meliaceae	*Dysoxylum parasiticum*	yellow mahogany		C		1/1
plants	land plants	Meliaceae	*Vavaea amicorum*			C		1/1
plants	land plants	Menispermaceae	*Hypserpa decumbens*			C		1/1
plants	land plants	Menispermaceae	*Hypserpa laurina*			C		1/1
plants	land plants	Menispermaceae	*Stephania tuberosa*			C		1/1
plants	land plants	Monimiaceae	*Austromatthaea elegans*			C		1/1
plants	land plants	Monimiaceae	*Levieria acuminata*			C		1/1
plants	land plants	Moraceae	*Ficus microcarpa*			C		1/1
plants	land plants	Myristicaceae	*Myristica globosa subsp. muelleri*	native nugmeg		C		2/2
plants	land plants	Myrtaceae	*Acmena hemilampra subsp. hemilampra*			C		1/1
plants	land plants	Myrtaceae	*Pilidiostigma tetramerum*			C		1/1
plants	land plants	Myrtaceae	*Rhodamnia spongiosa*			C		1/1
plants	land plants	Myrtaceae	*Rhodomyrtus pervagata*			E		1/1
plants	land plants	Oleaceae	*Chionanthus ramiflorus*	northern olive		C		1/1
plants	land plants	Orchidaceae	*Rhomboda polygonoides*			V	V	1/1
plants	land plants	Passifloraceae	*Passiflora kuranda*			C		1/1
plants	land plants	Poaceae	*Axonopus fissifolius*		Y			1/1
plants	land plants	Poaceae	*Cenchrus echinatus*	Mossman River grass	Y			2/2
plants	land plants	Poaceae	*Chloris inflata*	purpletop chloris	Y			1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Poaceae	*Chrysopogon aciculatus*	Mackie's pest	Y			1/1
plants	land plants	Poaceae	*Cyrtococcum oxyphyllum*			C		1/1
plants	land plants	Poaceae	*Dactyloctenium aegyptium*	coast button grass	Y			1/1
plants	land plants	Poaceae	*Digitaria leucostachya*			C		1/1
plants	land plants	Poaceae	*Eleusine indica*	crowsfoot grass	Y			1/1
plants	land plants	Poaceae	*Eragrostis interrupta*			C		1/1
plants	land plants	Poaceae	*Eriachne triodioides*			C		2/2
plants	land plants	Poaceae	*Oplismenus mollis*			C		1/1
plants	land plants	Poaceae	*Sporobolus jacquemontii*		Y			1/1
plants	land plants	Poaceae	*Thuarea involuta*	tropical beachgrass		C		1/1
plants	land plants	Poaceae	*Whiteochloa airoides*			C		1/1
plants	land plants	Polypodiaceae	*Dendroconche ampla*			SL		1/1
plants	land plants	Portulacaceae	*Portulaca pilosa*		Y			1/1
plants	land plants	Proteaceae	*Bleasdalea bleasdalei*			C		1/1
plants	land plants	Proteaceae	*Musgravea heterophylla*			C		1/1
plants	land plants	Proteaceae	*Neorites kevedianus*			C		1/1
plants	land plants	Putranjivaceae	*Drypetes iodoformis*			C		1/1
plants	land plants	Rhamnaceae	*Rhamnella vitiensis*			C		1/1
plants	land plants	Rubiaceae	*Gynochthodes sessilis*			C		1/1
plants	land plants	Rubiaceae	*Ixora oreogena*			C		1/1
plants	land plants	Rubiaceae	*Ixora timorensis*			C		1/1
plants	land plants	Rubiaceae	*Mitracarpus hirtus*		Y			1/1
plants	land plants	Rubiaceae	*Oldenlandia corymbosa var. corymbosa*		Y			1/1
plants	land plants	Rutaceae	*Melicope rubra*			C		1/1
plants	land plants	Salicaceae	*Casearia dallachii*			C		1/1
plants	land plants	Salicaceae	*Casearia grewiifolia var. gelonioides*			C		1/1
plants	land plants	Sapindaceae	*Alectryon connatus*	grey birds-eye		C		1/1
plants	land plants	Sapindaceae	*Ganophyllum falcatum*			C		1/1
plants	land plants	Sapindaceae	*Mischocarpus stipitatus*			C		1/1
plants	land plants	Sapindaceae	*Sarcopteryx reticulata*			C		1/1
plants	land plants	Sapindaceae	*Toechima daemelianum*			C		1/1
plants	land plants	Sapotaceae	*Planchonella obovata*			C		1/1
plants	land plants	Schizaeaceae	*Schizaea dichotoma*	branched comb fern		SL		1/1
plants	land plants	Simaroubaceae	*Brucea javanica*			C		1/1
plants	land plants	Sparrmanniaceae	*Triumfetta rhomboidea*	chinese burr	Y			1/1
plants	land plants	Thymelaeaceae	*Lethedon setosa*			C		1/1
plants	land plants	Verbenaceae	*Lantana camara*	lantana	Y			1
plants	land plants	Verbenaceae	*Stachytarpheta cayennensis*		Y			1/1

CODES

I - 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).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999.*
The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).
This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

Appendix B – Site Flora Species List

Family	Scientific Name	Common Name	I	Q	Weed	Qld Invasive Status
Leguminosae	*Acacia polystachya*	polystachya wattle		C		
Rhamnaceae	*Alphitonia excelsa*	red ash		C		
Loranthaceae	*Amyema conspicua subsp. conspicua*	mistletoe		C		
Poaceae	*Axonopus compressus*	carpet grass	Y		Y	
Burseraceae	*Canarium australianum*	scrub turpentine		C		
Leguminosae	*Cassia fistula*	Indian laburnum	Y		Y	
Casuarinaceae	*Casuarina equisetifolia*	coast she oak		C		
Poaceae	*Cenchrus echinatus*	Mossman River grass	Y		Y	
Poaceae	*Chloris inflata*	purpletop chloris	Y		Y	
Poaceae	*Chrysopogon aciculatus*	Mackie's pest	Y		Y	
Arecaceae	*Cocos nucifera*	coconut palm		C		
Rhamnaceae	*Colubrina asiatica*	wild coffee		C		
Commelinaceae	*Commelina ensifolia*	scurvy grass		C		
Myrtaceae	*Corymbia tessellaris*	carbeen		C		
Fabaceae	*Crotalaria pallida*	streaked rattlepod	Y		Y	
Cyperaceae	*Cyperus pedunculatus*	pineapple sedge		C		
Dilleniaceae	*Dillenia alata*	red beech		C		
Orchidaceae	*Dockrillia calamiformis*	northern pencil orchid		SL		
Poaceae	*Eleusine indica*	crowsfoot grass	Y		Y	
Poaceae	*Eriachne triodioides*			C		
Moraceae	*Ficus microcarpa*			C		
Convolvulaceae	*Ipomoea pes-caprae*	goat's foot convolvulus		C		
Euphorbiaceae	*Macaranga tanarius*	macaranga		C		

Family	Scientific Name	Common Name	I	Q	Weed	Qld Invasive Status
Fabaceae	*Macroptilium atropurpureum*	siratro	Y		Y	
Anacardiaceae	*Mangifera indica*	mango	Y		Y	
Poaceae	*Megathyrsus maximus*	Guinea grass	Y		Y	
Sapotaceae	*Mimusops elengi*	red coondoo		C		
Rubiaceae	*Morinda citrifolia*	canary wood		C		
Rubiaceae	*Oldenlandia corymbosa var. corymbosa*	oldenlandia	Y		Y	
Poaceae	*Oplismenus mollis*	oplismenus		C		
Bignoniaceae	*Pandorea pandorana*	wonga wonga vine		C		
Phyllanthaceae	*Phyllanthus tenellus*	hen and chicken	Y		Y	
Polypodiaceae	*Platycerium hillii*	elkhorn fern		SL		
Portulacaceae	*Portulaca pilosa*	hairy pigweed	Y			
Lamiaceae	*Premna serratifolia*	bastard guelder		C		
Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		
Rhamnaceae	*Rhamnella vitiensis*			C		
Dracaenaceae	*Sansevieria trifasciata*	mother-in-law's tongue	Y		Y	
Goodeniaceae	*Scaevola taccada*	Cardwell cabbage		C		
Malvaceae	*Sida acuta*	southern sida	Y		Y	
Asteraceae	*Sphagneticola trilobata*	Singapore daisy	Y		Y	RIP
Poaceae	*Sporobolus virginicus*	sand couch		C		
Combretaceae	*Terminalia arenicola*	brown damson		C		
Combretaceae	*Terminalia catappa*	beach almond		C		
Poaceae	*Thuarea involuta*	tropical beachgrass		C		
Sparrmanniaceae	*Triumfetta rhomboidea*	Chinese burr	Y		Y	
Fabaceae	*Vigna marina*	beach bean		C		

Notes: I - Y indicates that the taxon is introduced to Queensland and has naturalised; Q - conservation status under the NCA: Special Least Concern (SL) and Least Concern (C). Weed – Identified as an Environmental Weed in the Qld DES WildNet database. Qld Invasive Status under the Biosecurity Act 2014, where: RIP = Restricted invasive plants must not be given away,

sold or released into the environment without a permit. The Biosecurity Act requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control. At a local level, each local government must have a biosecurity plan that covers invasive plants and animals in its area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws.

Appendix C – 'Likelihood of Occurrence' Assessment – Conservation Significant Fauna Species

Information provided in this table regarding species' distribution, biology, ecology and threats is from the Australian Government Department of Agriculture, Water and Environment (DAWE) Species Profile and Threats Database (SPRAT 2021) unless otherwise referenced. For species only listed under the NCA, information is from the DES Species Profile online database and Atlas of Living Australia unless otherwise referenced. The 'Likelihood of Occurrence' assessment is also based on the results of the site surveys.

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
Anseranas semipalmata	Magpie goose	M	**UNLIKELY** Mainly found in shallow wetlands (less than 1 m deep) with dense growth of rushes or sedges. Equally at home in aquatic or terrestrial habitats; often seen walking and grazing on land; feeds on grasses, bulbs and rhizomes. Activities are centred on wetlands, mainly those on floodplains of rivers and large shallow wetlands formed by run-off; breeding can occur in both summer and winter dominated rainfall areas and is strongly influenced by water level; most breeding now occurs in monsoonal areas; nests are formed in trees over deep water. Often seen in trios or flocks on shallow wetlands, dry ephemeral swamps, wet grasslands and floodplains; roosts in tall vegetation. The Magpie Goose is widespread throughout coastal northern and eastern Australia. It can be seen from Fitzroy River, Western Australia, through northern Australia to Rockhampton, Queensland, and has been extending its range into coastal New South Wales to the Clarence River and further south. The magpie goose is found in a variety of open wetland areas such as floodplains and swamps, where they wade and swim. They eat mostly vegetation such as dry grass blades, grass seeds, spike rush bulbs and wild rice. Most magpie geese are found in wet grasslands, swamps, and other marshlands along the coast and rarely stray inland. *Anseranas semipalmata* was not seen during surveys, and the site does not provide habitat for this species.
Apus pacificus	fork-tailed swift	SL, M	**LIKELY** *Apus pacificus* 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. 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. *Apus pacificus* 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. Given the broad habitat requirements of this species it is possible it utilises the subject site.

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
Bubulcus ibis	Cattle egret	M	**POSSIBLE** Cattle egret It is a gregarious species and is most commonly seen foraging with grazing stock and in wetland areas. Their feeding habitats include seasonally inundated grasslands, pastures, farmlands, wetlands, and rice paddies. They often accompany cattle or other large mammals, catching insect and small vertebrate prey disturbed by these animals. Some populations are migratory and others show postbreeding dispersal. Although the cattle egret sometimes feeds in shallow water, unlike most herons, it is typically found in fields and dry grassy habitats, reflecting its greater dietary reliance on terrestrial insects rather than aquatic prey. *Bubulcus ibis* was not seen during surveys, but the site may provide habitat for this species.
Calidris acuminata	sharp-tailed sandpiper	SL, M	**UNLIKELY** *Calidris acuminata* 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. Though suitable habitat is present on site this species is generally a marine and estuarine shorebird and is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Calidris canutus	red knot	E, E#, M	**UNLIKELY** *Calidris canutus* 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. Though suitable habitat is present on site this species is generally a marine and estuarine shorebird and is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Calidris ferruginea	curlew sandpiper	CR, CE#, M	**UNLIKELY** *Calidris ferruginea* 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. Though suitable habitat is present on site this species is generally a marine and estuarine shorebird and is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Calidris melanotos	pectoral sandpiper	SL, M	**UNLIKELY** *Calidris melanotos* 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.

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			Though suitable habitat is present on site this species is generally a marine and estuarine shorebird and is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Charadrius leschenaultii	greater sand plover	V, V#, M	**UNLIKELY** *Charadrius leschenaultii* is a non-breeding spring/summer northern-hemisphere migratory shorebird that is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons. Suitable habitat is not present on site for this species.
Charadrius mongolus	lesser sand plover	E, E#, M	**UNLIKELY** *Charadrius mongolus* is a non-breeding spring/summer northern-hemisphere migratory shorebird that primarily inhabits coastal littoral and estuarine habitats. The species also inhabits saltworks and near-coastal saltpans, brackish swamps and sandy or silt islands in riverbeds and rarely inland lakes, soaks and swamps associated with artesian bores. Suitable habitat is not present on site for this species.
Crocodylus porosus	estuarine crocodile	V	**UNLIKELY** The species habits coastal rivers, swamps and lagoons and will readily enter the ocean. It is unlikely the species utilizes the subject site, or the mapped riparian area located south of the site.
Cuculus optatus	oriental cuckoo, Horsfield's cuckoo	SL, MT	**UNLIKELY** *Cuculus optatus* 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.
Cyclopsitta diophthalma macleayana	Macleay's fig-parrot	V	**UNLIKELY** Its preferred habitat is lowland dry and subtropical rainforest, especially in alluvial areas. Recent records are from dry or cool subtropical rainforest from sea level to approximately 900m. Birds also use thin strips of gallery rainforest, littoral rainforest and coastal eucalypt/melaleuca forest where fig densities are high. Suitable habitat for this species is not present on the subject site.

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
Dasyurus hallucatus	northern quoll	E, E#	**UNLIKELY** *Dasyurus hallucatus* 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. *Dasyurus hallucatus* shelters in den sites made inside hollow trees, hollow logs, caves or rock crevices and is dependent on an area 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.
Erythrotriorchis radiatus	red goshawk	E, V#	**UNLIKELY** 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. It is unlikely that this species utilises the subject site.
Esacus magnirostris	beach stone-curlew	V, M	**UNLIKELY** Tidal mudflats, saltwater creeks and mangroves are the preferred habitat types for this large resident shorebird species. This species tends to establish nests on sandbanks, amongst mangroves or in sand surrounded by short grass and Coastal She-oaks. This species is very shy and not tolerant of human disturbance. It is unlikely that this species utilises the subject site.
Gallinago hardwickii	Latham's snipe	SL, M	**UNLIKELY** *Gallinago hardwickii* 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. It is unlikely the species utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Gelochelidon nilotica	gull-billed tern	SL, M	**UNLIKELY** *Gelochelidon nilotica* typically inhabits estuaries, saltpans, lagoons and saltmarshes, or inland sites such as large rivers, lakes, rice-fields, sewage ponds, reservoirs, saltpans and irrigation canals. The Gull-billed Tern's diet consists of adult and larval terrestrial and aquatic insects (such as Ephemeroptera, Odonata, Lepidoptera

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			and Coleoptera) as well as spiders, earthworms, small reptiles, frogs, small fish (6-9 cm long), aquatic invertebrates and rarely voles and small birds. It is unlikely the species utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Haliaeetus leucogaster	White-bellied sea-eagle	M	**POSSIBLE** White-bellied sea eagles live primarily in terrestrial habitats near the ocean, especially coasts, islands, and estuaries, but also live in forested areas with access to smaller bodies of water, such as lakes, ponds, and rivers. most white-bellied sea eagles live at elevations around 900 m, with the highest elevation recorded at 1,700 m. ("Breeding ecology of white-bellied sea eagle (*Haliaeetus leucogaster*) in Hong Kong - a review and update", 2010; Ferguson-Lees and Christie, 2001; "Wildlife fact sheet: white bellied sea-eagle *Haliaeetus leucogaster*", 2011). White-bellied Sea-Eagles are a common sight in coastal and near coastal areas of Australia, the species is normally seen perched high in a tree or soaring over waterways and adjacent land. *Haliaeetus leucogaster* was not seen during surveys, but the site may provide habitat for this species.
Hirundapus caudacutus	white-throated needletail	V, V#, M	**POSSIBLE** *Hirundapus caudacutus* 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. *Hirundapus caudacutus* was not seen during surveys, but the site may provide habitat for this species.
Hydroprogne caspia	Caspian tern	SL, M	**UNLIKELY** *Hydroprogne caspia* typically inhabits coastal harbours, lagoons, inlets, bays, estuaries and river deltas with sandy or muddy margins. They also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes, rivers and creeks. The Caspian Tern usually forages in open wetlands, including lakes and rivers. They often prefer sheltered shallow water near the margins but can also be found in open coastal waters. In coastal inlets they may prefer to forage in tidal channels, or over submerged mudbanks. It is unlikely the species utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Limosa lapponica baueri	Western Alaskan bar-tailed godwit	V, V#, M	**UNLIKELY** *Limosa lapponica baueri* is a migratory wader which undertakes the largest non-stop flight of any bird. The trans-Pacific route from its breeding grounds in the Arctic to its non-breeding grounds in the southern

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			hemisphere covers over 11,000 km. Birds arrive in Australia between August and October and then leave between February and April, with a small number of individuals overwintering. The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. It has been sighted in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. Though suitable habitat is present on site this species is generally a marine and estuarine shorebird and is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Merops ornatus	Rainbow bee-eater	M	**POSSIBLE** Rainbow bee-eaters inhabit a variety of habitats depending on what regional environments are available to them. These include sandy pastures, lightly wooded savannas, forests near freshwater creeks and lakes, and arable land in Australia. (Del Hoyo, et al., 2001) The Rainbow Bee-eater is most often found in open forests, woodlands and shrublands, and cleared areas, usually near water. It will be found on farmland with remnant vegetation and in orchards and vineyards. It will use disturbed sites such as quarries, cuttings and mines to build its nesting tunnels. *Merops ornatus* was not seen during surveys, but the site may provide habitat for this species.
Monarcha melanopsis	black-faced monarch	SL, MT	**UNLIKELY** *Monarcha melanopsis* (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. Suitable habitat for this species is not present on the subject site.
Myiagra cyanoleuca	satin flycatcher	SL, MT	**UNLIKELY** *Myiagra cyanoleuca* 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. Suitable habitat for this species is not present on the subject site.
Numenius madagascariensis	eastern curlew	E, CE, M	**UNLIKELY** *Numenius madagascariensis* 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,

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			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. *Numenius madagascariensis* predominantly forages on sheltered intertidal sandflats or mudflats and roosts on sandy spits and dry beaches, as well as within coastal vegetation. Though suitable habitat is present on site this species is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Orcaella heinsohni	Australian snubfin dolphin	V	**UNLIKELY** The species occur mainly in shallow (<20m deep), coastal habitats, with the highest frequency of sightings adjacent to river and tidal creek mouths and in sheltered, mangrove line bays. They have been reported utilizing channel habitats, including dredged channels in some locations. The impacts will be limited to land and there is no infrastructure proposed in the water where the species is likely to occur.
Pandion haliaetus	Osprey	SL, M	**POSSIBLE** *Pandion haliaetus* 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.
Phascolarctos cinereus	koala	E, E#	**UNLIKELY** *Phascolarctos cinereus* inhabits dry open sclerophyll forests and woodlands occurring on fertile soils. Communities containing denser vegetation and larger trees are generally preferred; however, *Phascolarctos cinereus* 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 *Eucalyptus* species but will also feed leaves of *Corymbia*, *Angophora*, *Lophostemon* and *Melaleuca* species. This species is unlikely to utilise the subject site due to lack of suitable habitat on site.
Rhipidura rufifrons	rufous fantail	SL, MT	**UNLIKELY** *Rhipidura rufifrons* is a north south migrant (and possibly altitudinal), inhabiting the dense undergrowth of rainforests, wet sclerophyll forests, swamp woodlands and mangroves. This species is unlikely to utilise the subject site due to lack of suitable habitat on site.
Rostratula australis	Australian painted snipe	V, E#	**UNLIKELY** *Rostratula australis* 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.

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			This species is unlikely to utilise the subject site due to proximity to areas of more suitable habitats in the proximate river estuaries.
Sternula albifrons	little tern	SL, M	**UNLIKELY** *Sternula albifrons* is an almost exclusively coastal species that prefers sheltered environments. *Sternula albifrons* 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. *Sternula albifrons* 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. This seabird species is unlikely to utilise the subject site.
Symposiachrus trivirgatus	spectacled monarch	SL, MT	**UNLIKELY** *Symposiachrus trivirgatus* 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.
Thalasseus bergii	crested tern	SL, M	**UNLIKELY** *Thalasseus bergii* is common and widespread in Australian coastal areas and generally inhabits near coastal waters, both on ocean beaches, bays, harbours and estuaries with muddy, sandy or rocky shores. The crested tern breeds in colonies on small offshore islands. This seabird species is unlikely to utilise the subject site.

**Status: As listed within 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 in the Commonwealth Environment Protection and Biodiversity Conservation Act 1999: CE# = Critically Endangered, E# = Endangered, V# = Vulnerable, CD# = Conservation Dependent, I# = Introduced Species, MTS = Migratory Terrestrial Species, MWS = Migratory Wetland Species, M = Marine*

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Appendix 6

Traffic Impact Statement prepared by Burchills

adams+sparkes
TOWN PLANNING

Our Ref: BE220596 Traffic Impact Statement Rev C
Enquiries: Adele Packer

TECHNICAL MEMORANDUM

Date	9 October 2023	
To	Tyson Quig	
From	Adele Packer	Reviewed by Lucas Faulkner
Project	Ellis Beach Surf Life Saving Club	
Subject	Pedestrian and Vehicle Access Desktop Safety Review	

1. BACKGROUND

Burchills Engineering Services have been engaged by Ellis Beach Surf Life Saving Club (SLSC) to provide traffic engineering advice in relation to a proposed Surf Life Saving Club. The subject site is adjacent to the Captain Cook Highway which is a state-controlled road within the Cairns Regional Council (CRC) local government area.

The new Ellis Beach SLSC is proposed to be located to the north-eastern side of Captain Cook Highway in order to minimise conflicts between pedestrians travelling from the existing clubhouse on the western side of the highway to Ellis Beach (i.e. Nippers and SLSC members) and vehicular movements on the road. The proposed site for the new SLSC is within the Captain Cook Highway road reserve and is shown in Figure 1.1 below.

It is understood that the club will acquire the land for the new clubhouse from the state government once the development footprint is determined, including the proposed access arrangements..

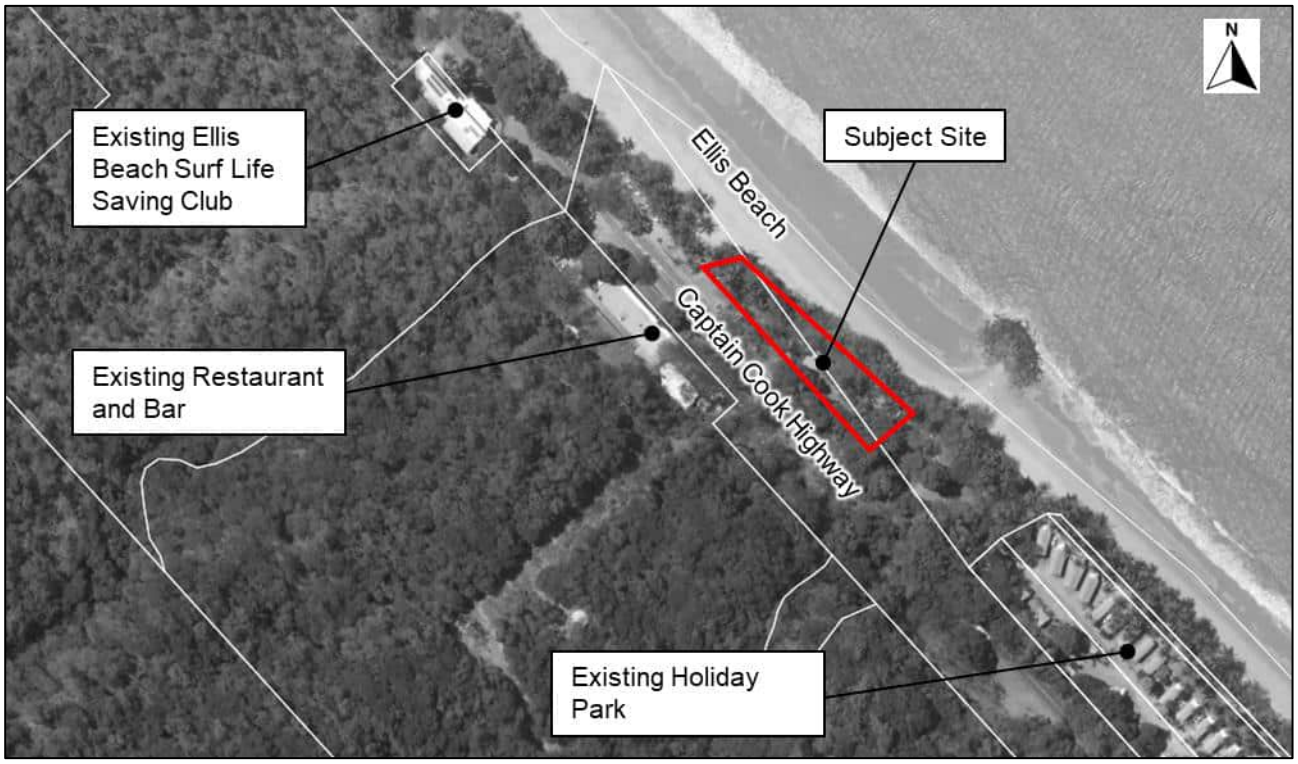


Figure 1.1 Subject Site and Surrounds

2. EXISTING CONDITIONS

2.1 Existing Site

The existing subject site is currently part of the Captain Cook Highway road reserve and provides recreational area for the general public, including public BBQs and informal parking areas.

The subject site is adjacent to an existing restaurant, being the Ellis Beach Bar & Grill, on the opposite side of the highway to the west of the site and the Ellis Beach Bungalow holiday park to the south-east of the site.

2.2 Existing Site Access

The subject site is currently accessed via a left-in, left out access onto Captain Cook Highway, as shown in Figure 2.1 below.

There are no formal intersection treatments at this location other than a stop sign and hold line on the access road. The existing median on the highway is a painted chevron on the approach to a pedestrian crossing to the north and double barrier lines to the south.

Presently, left-in, left-out movements would be facilitated by informal u-turns on the roadside or using either the Ellis Beach Bar and Grill driveway or amenities area to the north or the Ellis Beach Bungalows driveway or amenities area to the south.

There is not any physical infrastructure to prevent vehicles making right turn movements into and out of the site.



Figure 2.1 Subject Site Access – Southbound Street View

2.3 Road Network

The subject site is adjacent to Captain Cook Highway which provides connection to Cairns and Palm Cove to the south and Port Douglas / Mossman to the north. The speed limit adjacent to the subject site is 60km/h and the carriageway is two-lane, two-way with an approximate width of 8m including the shoulders.

2.4 Public Transport

There are two bus stops in proximity to the subject site, as shown in Figure 2.2 below.

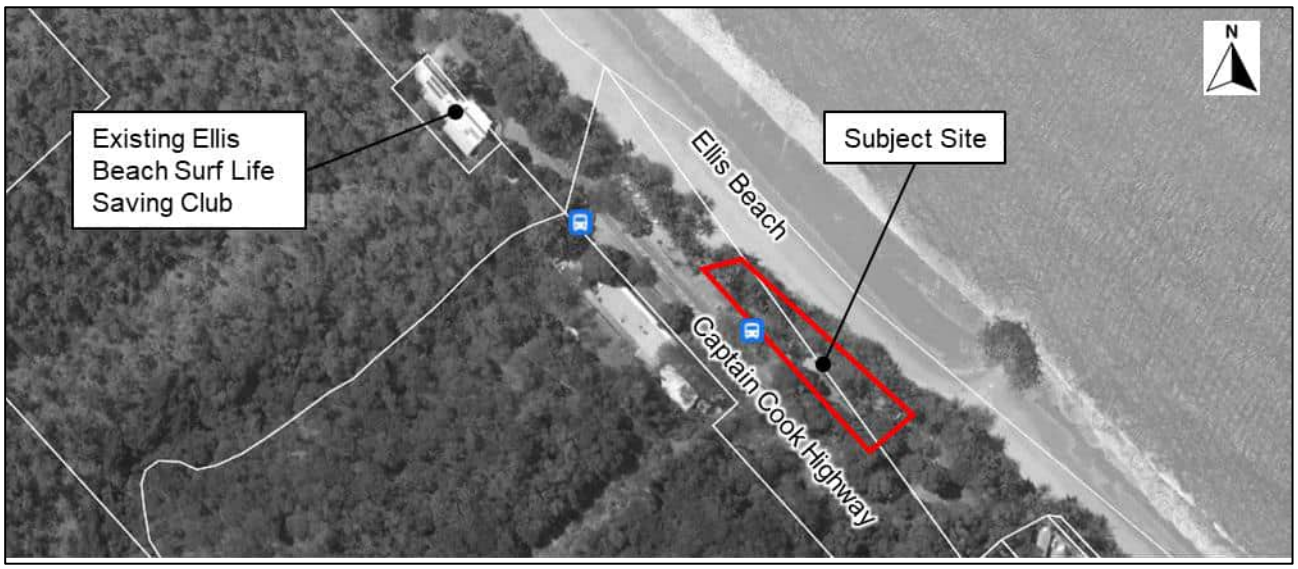


Figure 2.2 Bus Stops in Proximity to the Subject Site

The southbound bus stop is located immediately to the south of the existing access road. Neither bus stop appears to be compliant with current Transport and Main Roads Public Transport Infrastructure Manual, however the public bus network no longer services this area.

2.5 Active Transport

There is an existing pedestrian median crossing on Captain Cook Highway adjacent to site access as shown in Figure 2.3 below. There are no formalised footpaths on either side of Captain Cook Highway or connecting to the bus stops.



Figure 2.3 Median Crossing – Northbound Street View

3. DEVELOPMENT DETAILS

The proposed development includes the following land uses:

- Function rooms
- Administration and storage areas
- Self-contained caretaker's accommodation
- Hardstand car parking including a pickup and drop off area.

It is anticipated the site will provide non-worsening of traffic vehicle movements as the SLSC has a membership cap and will be a relocation of existing service offerings (or less), and an improvement in traffic conditions to and from the site due to the formalisation of intersection arrangements.

3.1 Carparking

The proposed development with provide a formalised car parking arrangement, guiding traffic movements on the site, compared with the existing land use. GFA is defined as Gross floor area, for a building, means the total floor area of all storeys of the building, measured from the outside of the external walls and the centre of any common walls of the building, other than areas used for— (a) building services, plant or equipment; or (b) access between levels; or (c) a ground floor public lobby; or (d) a mall; or (e) parking, loading or manoeuvring vehicles; or (f) unenclosed private balconies, whether roofed or not.

The proposed floor areas for the various cub uses equate to 176.2m2 with a car parking demand of seven (7) spaces as depicted on the GFA and Town Planning plan (DWG 1531-SD A112) prepared by Clark and Prince Architects. The balance of the internal floor areas are consistent with the exempt 'other' areas.

4. ACCESS AND SAFETY REVIEW

4.1 Proposed Vehicular Access

Trip generation to the proposed SLSC will be originating from / departing to Cairns or Port Douglas, and as such there will be a high demand for right turn movements into and out of the site.

The more frequent used of SLSC traffic at the intersection will introduce additional a risk of vehicles crossing the painted median to make right turn movements into and out of the site. It is recommended to provide a formalised intersection arrangement to facilitate all traffic movements into and out of the site.

Further high level investigations have been undertaken to inform the development access options which may include the following:

- Formalise existing left-in, left-out vehicle arrangements
- Channelised intersection to provide all vehicle movements priority intersection
- Roundabout to provide all vehicle movements priority intersection
- Signalised intersection to provide all vehicle movements priority intersection

It should be noted that Transport and Main Road were contacted in relation to the future Captain Cook Highway upgrades however there were no details or information available for any road widening or boundary setback adjacent to the site.

4.2 Pedestrian Access

While there is an existing protected pedestrian median crossing on Captain Cook Highway adjacent to site access, there are no other formalised pedestrian facilities in the vicinity. Pedestrian movements will increase with additional development, including children; therefore, it is recommended to provide formal pedestrian facilities as part of the access to the proposed SLSC. The upgrade of the pedestrian facilities to meet current guidelines will minimise the number of conflict points with vehicular traffic and therefore reduce the risk of accidents.

The key expected pedestrian desire lines are highlighted in Figure 4.1 below.

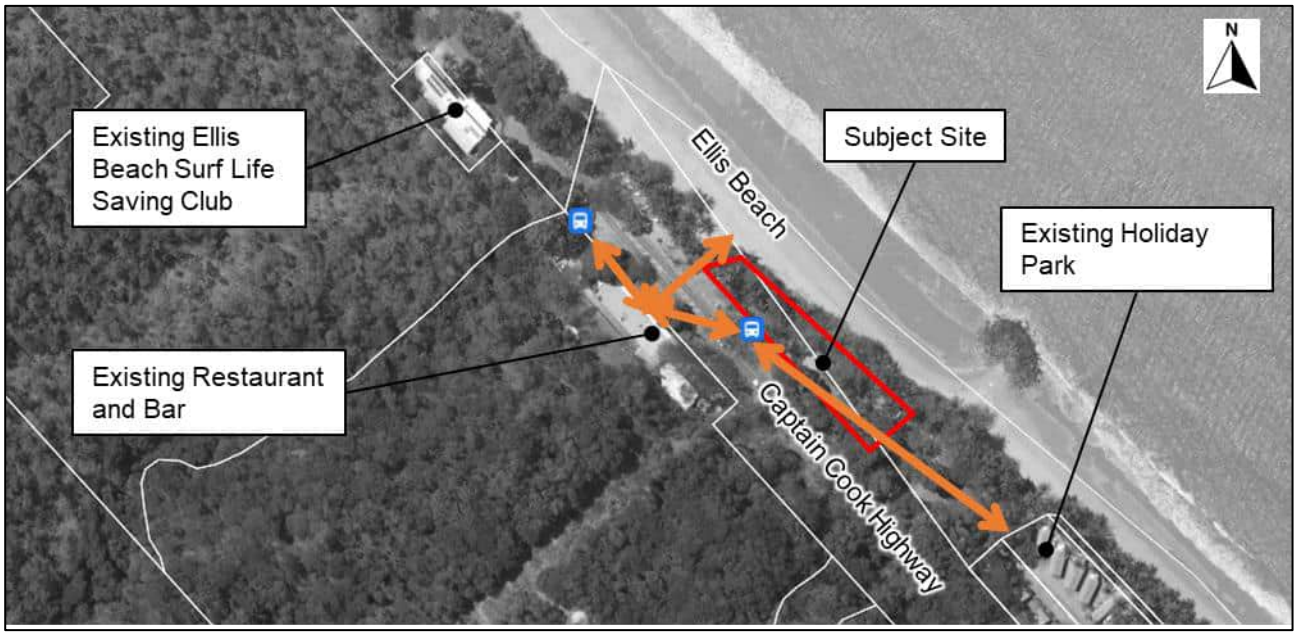


Figure 4.1 Key Pedestrian Desire Lines

It is recommended that updated pedestrian facilities are a key consideration as part of the proposed development access options.

5. PROPOSED ACCESS UPGRADE OPTIONS

High level investigation of four access options have been investigated as outlined below. It is recommended that additional footpath infrastructure is provided for each option to direct pedestrians to the crossing location.

5.1 Option 1 – Left-in, Left-out

Option 1 to formalise the existing left-in, left-out simple intersection vehicle arrangements by extending the existing concrete median to physically restrict right turns into and out of the site and improve linemarking and signage. This arrangement would need to resolve the u-turn facilities either side of the access road to enable vehicles travelling to the site from Cairns or from the site to Port Douglas to change direction. If the u-turn facilities are not appropriately signed, there is a risk that some vehicles may mount the centre median to travel in their desired direction or make unsafe manoeuvres when undertaking u-turns either side of the site.

There would be limited improvement to pedestrians movements which would utilise the existing crossing infrastructure and still need to make a decision when is safe to cross each lane.

This option would represent the least permit / approval risk, Capex construction cost and environmental impacts as it involves modification of the existing access arrangement only.

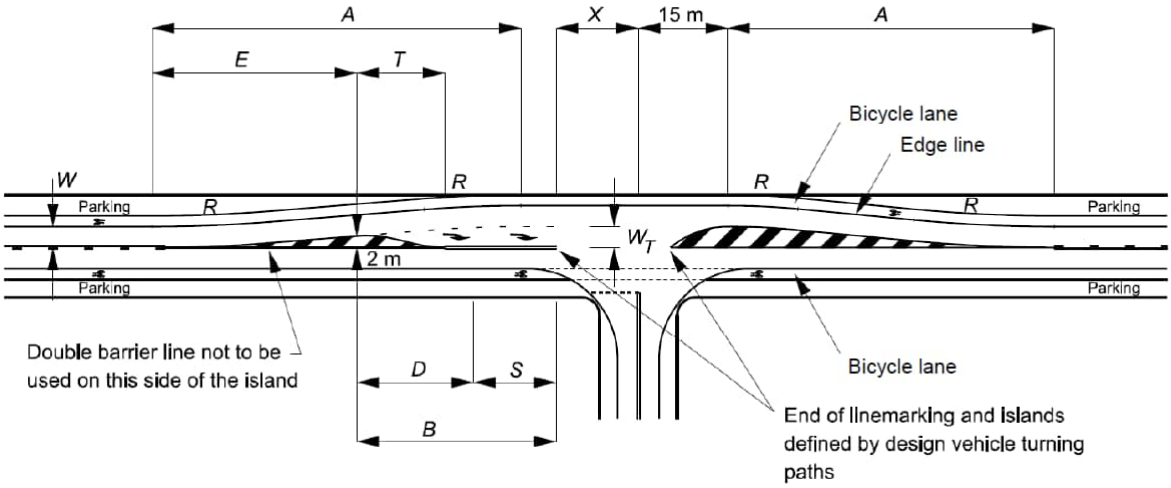
5.2 Option 2 – Channelised Priority Intersection

Option 2 involves the construction of channelised T-junction intersection to enable all vehicle movements into and out of the site generally in accordance with Austroads Guide to Road Design Part 4A as shown below. The construction footprint required for this option may require additional

land to be utilised from both sides of the road reserve to create the additional lane for right turn movements, which will impact the beach front land and Ellis Beach Bar and Grill driveway.

A modified version of the existing pedestrians crossing would be provided in the chevron area on the northern side of the access similar to the existing crossing. Pedestrians would still need to make a decision when is safe to cross each lane and may conflict with right turn vehicle movements from the access road.

Figure 7.7: Urban CHR(S) treatment on a two-lane road



This option would represent a median permit / approval risk, DTMR Capex construction cost and environmental impacts. The channelised priority intersections are regularly utilised in the regional for highway access however the local road reserve area is constrained.

It should be noted that the Austroads figure includes on-street car parking, however it is not recommended in this location due to the constrained local road reserve, sightline obstructions to the pedestrian crossings and conflicts with the bicycle and through traffic lanes

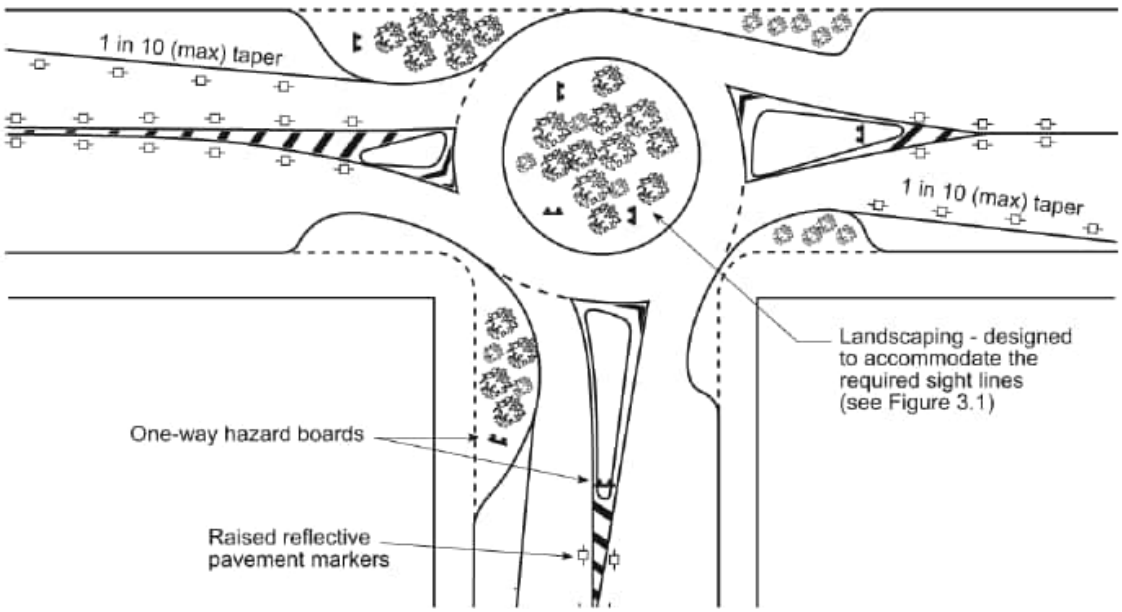
5.3 Option 3 – Roundabout

Option 3 involves the construction of round-about t-intersection to enable all movements into and out of the site generally in accordance with Austroads Guide to Road Design Part 4B as shown below. The construction footprint required for this option may require additional land to be utilised from both sides of the road reserve to facilitate the round-a-bout footprint, which will impact the beach front land and Ellis Beach Bar and Grill driveway. All through traffic on the Captain Cook Highway would need to slow and manoeuvre for a round-a-bout treatment, including heavy articulated vehicles that utilised this route.

Pedestrian crossings could be provided on one or more legs, however it is widely published that round-a-bouts are not preferred treatments for pedestrian movements due to the conflicts with vehicles at the intersection. Therefore it would still be recommended to provide a dedicated pedestrian crossing at a suitable locations. Pedestrians would still need to make a decision when is safe to cross each lane. Bicycle movements are not desirable through round-a-bouts due to conflicts with vehicles, however the constrained local road reserve would limit the opportunity for on/off bicycle ramps and off-road bicycle paths to be provided on the north-south legs.

This option would represent a median DTMR Capex construction cost and environmental impacts risk, however may present a high permit / approval risk. permit / approval risk. The Captain Cook Highway road reserve is constrained in the local area which may not be appropriate to accommodate a round-a-bout and it may not be desirable for TMR to approve a round-a-bout in this isolated location

Figure 4.16: Roundabout at T-intersections in an urban area



5.4 Option 4 – Signalised Priority Intersection

Option 4 involves the construction of signalised T-junction intersection to enable all movements into and out of the site generally in accordance with Austroads Guide to Road Design Part 4A. The construction footprint required for this option may require additional land to be utilised from both sides of the road reserve to create the additional lane for right turn movements, which will impact the beach front land and Ellis Beach Bar and Grill driveway.

A signalised pedestrian crossings would be provided on one or more legs. Pedestrians would cross the Captain Cook highway on the signal phasing which presents the safest outcome in comparison to the other options.

This option would represent a median permit / approval risk, DTMR Capex construction cost and environmental impacts. The signalised priority intersections are regularly utilised in the regional for highway access however it may not be desirable for TMR to approve a signalised intersection in this isolated location .

6. OPTIONS ANALYSIS

6.1 Multi Criteria Analysis

To assess and rank the various access options, a high level options assessment and analysis has been completed with the view to select a preferred option to be taken into the concept design phase of the project. The outcome of this was a structured Multi-Criteria Analysis (MCA) of each option against agreed key project criteria. The framework of the MCA includes:

- A variety of social, environmental and economic criteria that each option was assessed against;
- A set of criteria weightings that represent the relative importance of each of the assessment criteria on this particular project; and
- A score from 1 (low score) to 3 (high score) for each criterion.

The MCA process is not intended to be definitive but is a useful tool to differentiate between the options.

6.2 Evaluation Categories

Weighting against each agreed category of social, environmental and economic impacts was determined based on their importance. It was decided to allocate 60% weighting against the social category, 35% to economic and the remaining for environmental. Following this, a "long list" of evaluation criteria was developed in each category before shortlisting to the preferred criteria below.

6.3 Criteria Considerations

The "long list" of criteria considered in the MCA covered a variety of potential criteria to be considered in determining the preferred route segment options. The long list of criteria is presented in Table 6.1.

Table 6.1 Criteria Considerations – Long List

Long List of Criteria Considered	
Impact on existing recreation	Impact on coastal processes
Visibility of the pathway	Impact on significant vegetation species / communities / features
Connectivity to areas of interest	Permit / approvals risk
Visual amenity of the access	Bushfire hazard
Vehicle, pedestrian / cyclist movement	CAPEX Construction costs
Vehicle, pedestrian / cyclist safety / traffic permeability – construction and operational	OPEX Operational and maintenance costs
Closure / diversions (construction) - impact on local residents and business	TMR co-ordination delays / costs
Pedestrian safety and experience	Impact on local business
Impact on Cultural Heritage	Impact on local residents
Conflict with Native Title	Durability

6.4 Selected Key Criteria

The selected key criteria, categories, descriptions, and weightings are presented in Table 6.2.

Table 6.2 Selected MCA Criteria

Criteria	Category	Description	Weighting
1 – Vehicle / pedestrian / cyclist movement	Social	Different type of users behaviors, intent and how they interact to each other when using the access	30%
2 – Pedestrian safety and experience	Social	The pedestrian experience that the average user would expect to have to use the crossing safety.	30%
3 – Permit / approval risk	Economic	This has been included to weight any time or delays involved in obtaining approvals from TMR and Council for the proposed access	15%
4 – CAPEX Construction Costs	Economic	This has been included to weight the proposed access construction cost.	20%
5 - Impact on significant vegetation species / communities / features	Environmental	How the proposed works footprint size impacting to the environment and recreation areas.	5%

The selected criteria are distributed between all three categories. The social category has the greatest weighting (60%) when working through the bridge options.

6.5 Criteria Weightings and Scores

Each segment option was then given a score against each criterion from 1 (low or poor score) to 3 (high or positive score) and given a final ranking based on the weighted score as shown in Table 6.3.

Table 6.3 MCA Scores and Rankings

Access Options	Criteria / Score					Weighted Score	Rank
	1	2	3	4	5		
Option 1 - Left-in / left-out	1	2	3	3	3	2.10	2
Option 2 - Channelised intersection	2	1	2	2	2	1.70	4
Option 3 - Round-a-bout	2	2	1	2	2	1.85	3
Option 4 - Signalised intersection	3	3	2	1	2	2.40	1

7. DISCUSSION

In summary, the vehicular and pedestrian access to the proposed SLSC were reviewed for safety, and the following outcomes were identified:

- Access to the site is recommended to be a signalised priority intersection to accommodate all traffic movements.
- A signalised pedestrian crossings would allow pedestrians would cross the Captain Cook highway on the signal phasing which presents the safest outcome.
- Ultimately, the Captain Cook Highway will be upgraded on the site frontage and there is a desire from TMR to avoid major intersection upgrades so the department can plan, design and construct any future upgrades.
- The left-in / left-out option was the second ranked option and replicates the existing intersection conditions. This option scored the lowest in terms of vehicle / pedestrian / cyclist movements. The use of this arrangement would need to address the traffic accident history at the site.

8. CONCLUSION AND RECOMMENDATIONS

Based on the above assessment, it has been determined to adopt an intermediate solution until TMR undertake upgrade of Captain Cook Highway adjacent to the site and can provide a signalised intersection arrangement. A left-in/ / left-out intersection arrangement has been developed which addresses the u-turn / right hand turn movements, and avoids residual impacts to adjoining property accesses at the Ellis Beach Bar & Grill.

The following points are indicated on the detailed design plan:

- North-bound traffic to utilise the car park area to the north of the entry as a turn around facility
- Surf club access to adopt a left-in / left out arrangement to minimise conflicts with the existing pedestrian crossing location
- The pedestrian crossing island is to be extended to the south to prevent right turn movements from the Surf club access
- Right turn out only lane to be provided from the site for north-bound traffic, clear of the left-in / left out arrangement

Swept path diagrams have been prepare for the proposed intersection arrangement to address design vehicle access and egress for the site in accordance with the proposed intermediate intersection and site manoeuvring and are depicted on Vehicle Turning Path Sheet 1 and 2 (Dwg BE220596-800 and 801) prepared by Burchills Engineering Solutions.

Yours sincerely,



LUCAS FAULKNER
Principal Civil Engineer
RPEQ 8093

Appendix 7

Bushfire Hazard Assessment prepared by Eldon Bottcher Architect

adams+sparkes
TOWN PLANNING



BUSHFIRE MITIGATION REPORT
FM 6225
for
ELLIS BEACH SURF LIFE SAVING CLUB INC.
at
CAPTAIN COOK HIGHWAY
ELLIS BEACH

PREPARED BY
ELDON BOTTCHER ARCHITECT PTY LTD
145 VARSITY PARADE
VARSITY LAKES
PH 07 55920082
EMAIL bushfires@eb-a.com.au
18/07/2023





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DISCLAIMER

Experienced fire fighters with extensive knowledge of building have prepared this Report. Their practical knowledge of fire fighting has been backed up by academic study.

However, fire is an element of nature. Small natural occurrences can disastrously affect the outcome of the best planning. Human actions similarly can have disastrous results.

Whilst every care has been taken in the formulation of this management report, there can be no guarantee that even the strictest adherence to its recommendations can guarantee safety of life and property.

The authors of this report accept no responsibility for any damage to life or property caused by fire or any other cause to persons using land or structures, which could in any way be construed to be the subject of this report.

The report has been commissioned as the land falls within an area deemed a fire risk by the local authority.

As such, it must be recognized that structures upon this land and those using the structures could be deemed at risk.

Logo by LogoInstant

Very Important Note:
This report is valid for the following periods;

a) A maximum time of 5 years from date of preparation.
b) The currency of the legislation referred to in Section 1 Report Brief
c) Changes to any legislation generally that may impact on the report outcomes.
d) Changes to vegetation, both on and off site, which may impact on the results of this report.
e) Any other changes that may impact on the report in any manner.

THE COPYRIGHT ACT AND MORAL RIGHTS ACT PROTECT THIS REPORT.

IRRESPECTIVE OF THIS REPORT APPEARING ON A COUNCIL PD OR OTHER ONLINE SITE, THERE IS NO PERMISSION IMPLIED OR GIVEN TO ANY PARTY TO DOWNLOAD OR TO USE THIS REPORT IN WHOLE OR IN PART IN ANY MANNER OTHER THAN THAT FOR WHICH IT WAS ORIGINALLY PREPARED.
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THIS REPORT RELIES ON THE AS 3959 FOR THE CALCULATION OF CONSTRUCTION LEVELS.
ANY POSSIBLE ERRORS IN THE STANDARD ARE NOT THE RESPONSIBILITY OF THE AUTHOR.

THIS REPORT IS ONLY TO BE USED AND DISTRIBUTED AS A COMPLETE REPORT CONTAINING AS A MINIMUM SECTIONS 1,2,3,4 AND 5 (SECTIONS 5.1 & 5.2)

THIS REPORT IS NOT TO BE AMENDED IN ANY WAY BY ANY PERSONS OTHER THAN THE ORIGINAL AUTHOR.

THIS REPORT IS ONLY TO BE USED FOR PROJECTS IDENTIFIED IN THE REPORT AND REPRESENTED ON THE SITE PLAN ACCOMPANYING THE REPORT.

INTRODUCTION

This Fire Management Report has been written for the benefit of future occupants of this proposed site and developed in accordance with the requirements of;

- The Cairns Regional Council Town Plan,
- SPP 07/2017.
- Queensland Planning Act 2016
- "Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest" Natural Hazards, Risk and Resilience-Bushfire" published by QFES and Queensland Government.
- Natural hazards, risk and resilience-Bushfire State Planning Policy-state interest guidance material published by Queensland Government
- Bushfire Resilient Building Guidance for Queensland Homes published by CSIRO and Queensland Government
- The National Construction Code
- Queensland Bushfire Plan published by Queensland Government prepared by QFES.
- Australian Standard AS3959,
- International Fire Safety Engineering Guidelines

The report has been prepared as supporting documentation for a Material Change of Use (Building) Application.

1.1. **Address:**
Captain Cook Highway
Ellis Beach

1.2. **Local Authority**
Cairns Regional Council

1.3. **R.P.D.**
Lease description not yet available

1.4. **Site area**
Not available.

1.5. **Responsible Fire Authority**
Rural Fire Service Queensland via the rural fire brigade for rural fires and QFES for Structural fires.

1.6. **Potential Bushfire Hazard Rating.**
The draft risk rating maps prepared for the State Government show the ratings on this property as being in a bushfire hazard buffer area.

It must be noted that State Government is currently revising the mapping and there may be changes to mapped areas.

1.7. **Land tenure**
Leasehold

1.8. **Adjoining owners are:**
Freehold

1.9. **Current Land Use:**
Vacant

1.10. **Fire danger Index**
FDI 40 (nominated by AS 3959)

1.11. **Topography**
Plain at the v=base of Mountains and Gorges

1.12. **Predominant Wind Direction**
The predominate wind direction is from the South East. In times of severe fire weather, the wind direction will be from the North West. The Topography will create microclimates, which will cause swirling, which will modify the apparent wind direction according to primary direction and velocity.

1.13. **Slope**
Upslope

1.14. Aspect
East

1.15. Fuel Type
Predominate vegetation.

REGIONAL ECOSYSTEM	VHC DESCRIPTION	COMMENTS
7.3 44	Corymbia clarksonia open forest to woodland on alluvium in near coastal areas with moderate rainfall	Located on subject site
7.11.49	Eucalyptus leptophleba, Corymbia clarksonia and E. platuphylla open forest to woodland. Moist metamorphic foothills.	Located west of Captain Cook Highway

1.16. Threat Vegetation Location
West of captain Cook Highway

1.17. Fire History
There is no evidence of a recent fire event. Similar situations have been subjected to Low Threat hazard reduction burns,

1.18. Location of Access Tracks
The site is served by a sealed road system.

1.19. Location of Fire Breaks
There are formal firebreaks consisting of managed and low threat vegetation combined with the sealed road system with minimum width of 20m.

1.20. Location of existing firefighting Infrastructure
There site is to be connected to a reticulated water supply.

1.21. Historical and Cultural Sites
There is no evidence of Historical and Cultural sites on the property.

1.22. Koala Habitat
The site is not located in a Koala Habitat Area

2. SITE AND HAZARD ASSESSMENT

2.1. Discussion with Responsible Fire Authority

The fires management report has not been discussed with the First Officer of the Rural Fire Brigade, due to a Commissioners Directive in relation to advice provided by Rural Fire Brigade members.

2.2. Vegetation Types

The vegetation type predominate to this site are as scheduled in section 1.15.

2.3. Potential Bushfire Hazard Rating.

Desktop study, site inspection and assessment against the State Planning Policy Mapping Methodology generally confirms the intent of both Local Government and State Mapping in that the area is in a Potential Bushfire Hazard Area, and the relevant aspects required for Town Planning and Building are to be addressed.

2.4. Building Construction

All buildings situated within the site are in a Designated Risk Area. There is a requirement that certain Buildings within this area be constructed in accordance with the National Construction Code/Building Code of Australia, which refers to either the Australian Standard for Construction in Bushfire Prone Areas (AS 3959) or NASH Standard-Steel Framed Construction in Bushfire Areas as Deemed to Satisfy Solutions.
The levels determined effect the types and usage of materials in relation to the type of Bushfire Attack, which may occur as assessed under the Standard. The Level of Bushfire Attack is assessed taking the vegetation types, slope, and distance from vegetation into account. The most common elements affected are Windows and flyscreening, with some restrictions on cladding and timber types. A comprehensive breakdown is available in either the National Construction Code, the Australian Standard for Construction in Bushfire Prone Areas or NASH Standard-Steel Framed Construction in Bushfire Areas.
Extracts of these documents are not provided due to copyright reasons. Full details can be obtained from your building designer or certifier.

Note that the Building Code of Australia only requires Classes 1,2 and 3 buildings, certain Class 9 buildings, and Class 10a building associated with those buildings to comply with the bushfire provisions of the NCC /BCA.

The proposed building is of Class 4 and either 5 or 6 and is therefore not required to comply with the bushfire provisions of the NCC /BCA.

2.5. Ecological Requirements

There are no specific ecological requirements in relation to bushfire management.

Note;
The Category of Bushfire Attack referred to in the Australian Standard is different to the Hazard/Risk area referred to above.

Extensive modification of the existing vegetation types including that on adjoining sites could result in a change of Category of Bushfire Attack and therefore variation in the Level of construction required.

It is the responsibility of the owner of each individual site to ensure that plantings after their occupation of the site do not reduce the safety of their buildings in a manner, which could require a higher level of Construction than that originally utilised.

3. RISK MANAGEMENT PLAN

3.1. Agencies / Persons Responsible

The responsible Fire Authority is the Rural Fire Service Queensland through the Rural Fire Brigade being responsible for Bush Fires and the Queensland Fire and Emergency Service being responsible for Structural Fires

It is the responsibility of the Owners of the properties to ensure that the relevant measures required by this Management Report are in place prior to inspection by the Council and the Building Certifier and to ensure that those measures are in place prior to the occupation of any buildings, which are the subject of this report.

It is the responsibility of Council and Building Certifiers to ensure that relevant measures within their responsibility are in place prior to the issuance of any certification.

3.2. Bushfire Safety Objective

The objective of this report is to minimise potential risk to life and property by protecting the buildings from the effects of bushfire.

3.3. Aims

The aims to achieve this objective are to mitigate the effect of the bushfire attack mechanisms of: -

- 3.3.1. Radiant Heat
- 3.3.2. Direct Flame Contact
- 3.3.3. Wind
- 3.3.4. Ember Attack
- 3.3.5. Smoke

3.4. Functional Requirements

The functional requirements to achieve this objective are: -

- 3.4.1. The provision of safe conditions for fire fighters
- 3.4.2. The provision of safe conditions for residents
- 3.4.3. Ensure adequate and safe access to and from the property.
- 3.4.4. Ensure adequate and safe water supply to the property and the establishment of firefighting water reserves.
- 3.4.5. Provide a system of fire breaks and trails to protect the building component.
- 3.4.6. Remove vegetation that is considered dangerous and a hazard in Fire Conditions
- 3.4.7. To ascertain the required standard of construction of the buildings in accordance with the requirements of the National Construction Code and the Australian Standard for Construction in Bushfire Prone Areas or the provision of a satisfactory alternative solution
- 3.4.8. Facilitate the return to "normalcy "

3.5. Proposed Fire Fighting Infrastructure

- 3.5.1. The proposed buildings are to be served by a reliable reticulated water supply. This is to always have sufficient flow and pressure characteristics for fire-fighting purposes with a minimum pressure of 200kpa and a minimum flow rate of 10l per second in accordance with "Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots" published by QFES and Qld Government.
- 3.5.2. If flow and pressure requirements cannot be met, a tank reserve is to be utilised. Tanks are to be topped up with a trickle feed system from the reticulated water to maintain a minimum supply available for firefighting of 10,000l.

3.6. Construct a Fire Trail/Emergency Access track.

- 3.6.1. A new pedestrian fire trail is to be established around the building envelope. This trail is to comply fully with the standards as set out in this Report.
- 3.6.2. The location shown is indicative only and can be modified to suit terrain and vegetation.
- **3.6.3. NO WORKS CAN BE CARRIED OUT ON ADJOINING PROPERTIES UNLESS FORMAL APPROVAL IN PERPETUITY IS PROVIDED AND ATTACHED TO THE LAND TITLE**

3.7. Minimum Pedestrian Fire Trail Standards

The Fire/Maintenance trail has: -

- 3.7.1. A minimum width of 4m cleared of midstorey vegetation.
- 3.7.2. A minimum trafficable width of 1.5m
- 3.7.3. A maximum gradient of 25% (or stairs complying with BCA exits stair requirements) with adequate drainage to prevent soil erosion and minimise ongoing trail maintenance.

3.8. Building Construction

Construction is not required to be in accordance with National Construction Code/Building Code of Australia, which refers to either the Australian Standard for Construction in Bushfire Prone Areas or NASH Standard-Steel Framed Construction in Bushfire Areas as Deemed to Satisfy Solutions due to building class.

3.9. Street Numbering

Numbering is to be installed in accordance with the current Street Numbering System at time of completion of building.

3.10. Less Flammable Landscaping

Any new landscaping within the site is to be Less Flammable, in accordance with the list enclosed as an Appendix at the rear of this Report, rainforest species, or cultivated gardens, and comply with the requirements of " *Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest" Natural Hazards , Risk and Resilience-Bushfire"* published by QFES and Queensland Government, and "Natural hazards, risk and resilience-Bushfire-Assessment Benchmark 5" which cite a maximum Fuel Load of 8t/ha for revegetation or rehabilitation within bushfire prone areas.
"Bushfire Resilient Building Guidance for Queensland Homes" published by Qld State Government provides a schedule of species in Appendix E.
https://www.qra.qld.gov.au/bushfireguideline

3.11. Insurance

Failure to comply with this management report may have a detrimental effect upon the Insurance of the subject Buildings.

3.12. Emergency Response Procedures

In the event of Fire Emergency, assistance is to be obtained by dialling 000.

3.12.1. The owner should read thoroughly the brochures contained and those recommended at the rear of this report. They contain valuable information that could assist in the saving of lives and property in a fire event!

3.13. Community Awareness Strategies

3.13.1. Each subsequent owner is to be provided with a copy of this Fire Management report with an alert placed on either Title or Council Rate searches that the Report is in existence and is to be made available to ensuing owners.

3.14. Administering Staff

It is the responsibility of the owners to ensure compliance with this Report and the Town Plan, and to ensure that each of the new owners is provided with a copy of this report.

It is the responsibility of the Council and the Building Certifier to ensure that the relevant measures required by this management report are in place prior to the final completion stage inspection of any buildings on any sites which are the subject of this report as noted in Clause 3.1 of this report.

It is the responsibility of the ensuing owners of the properties to maintain the properties in the conditions outlined in this report.

4. FIRE MANAGEMENT ACTION SUMMARY AND SCHEDULE

DEVELOPMENT REQUIREMENTS	BUILDING REQUIREMENTS	MAINTENANCE
Provision of fire access trails	Building is not required to comply with the National Construction Code/Building Code of Australia bushfire requirements due to building class. No occupation until compliance with the Mitigation Report Pedestrian access around Building Site	Drive to be kept clear and accessible to satisfaction of the Fire Brigade. Building materials are to be maintained in "as new "condition to preserve the integrity of the relevant materials.

5. APPENDICES

5.1. Form 15
5.2. Site Plans
5.3. Supporting Information:

Note. These items below are referenced for information purposes only and are not to be construed as being part of the management report.
This information is generic and not provided for approval purposes.
It is only provided for end user knowledge.

5.3.1. Planning Regulation Fact Sheet December 2019
5.3.2. Prepare. Act. Survive
5.3.3. Rural property Fire Management Guide 2010
5.3.4. Notes for Landholders
5.3.5. Bushfire Action Guide
5.3.6. Bushfire Safety in Urban Fringe Areas
5.3.7. Water + Power -Vital for Fire fighting
5.3.8. Less Flammable Vegetation
5.3.9. Fire Retardant Native Plants
5.3.10. Tree selection for Fire-Prone Areas
5.3.11. Bushfire Resilient Building Guidance for Queensland Homes Appendix E
5.3.12. First Draft (specifying timber in bush fire zones)
5.3.13. External water spray system
5.3.14. Fire Retardant Coating Solutions
5.3.15. Archicentre Bushfire Design Guide
5.3.16. Section 3.8 Sign Types - Fire Trail Signage of the GCCC Natural Areas Management Unit Signage Guidelines (Page 16)
5.3.17. Trail Number and Key Point signage
5.3.18. Bushfire Hydrant detail
5.3.19. Tank detail
5.3.20. Recycled Water for Firefighting
5.3.21. Sample Easement Document
5.3.22. Bushfire Windows and Shutters
5.3.23. A guide to retrofit your home for better protection from a bushfire.
5.3.24. FireFly BAL-FZ System
5.3.25. Bushfire Planning and Design Certification Scheme Update
5.3.26. Eaves Water System
5.3.27. Aussi Ember Guard
5.3.28. The Australian "False Alarm: the great rainforest fire that wasn't".
5.3.29. Hijacking Australian 2019 Bushfire Tragedies to Fearmonger Climate Change
5.3.30. Bushfires have been in Australia for over 60 million years.

We also recommend that the landholder obtains and reads the following;

5.3.31. Bushfire Hazard Planning in Queensland
5.3.32. Protecting your home against Bushfire
Both available from the Dept. of Local Government and Planning, and

5.3.33. Fire in Bushland Conservation
Available from Queensland Heritage Trust.

5.3.34. Bushfire Resilient Building Guidance for Queensland Homes
https://www.qra.qld.gov.au/bushfireguideline

Signed

.....

Eldon Bottcher
Grad. Dip. DBPA (UWS) Dip. Arch. (QIT), Cert. R.F.M. (USQ), F.R.A.I.A., M.A.I.E.S. AIFireE
Architect
BPAD-L3 Practitioner

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

APPENDIX 5.1
FORM 15

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is to be used by an appointed competent person for the purposes of section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021(Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out a stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

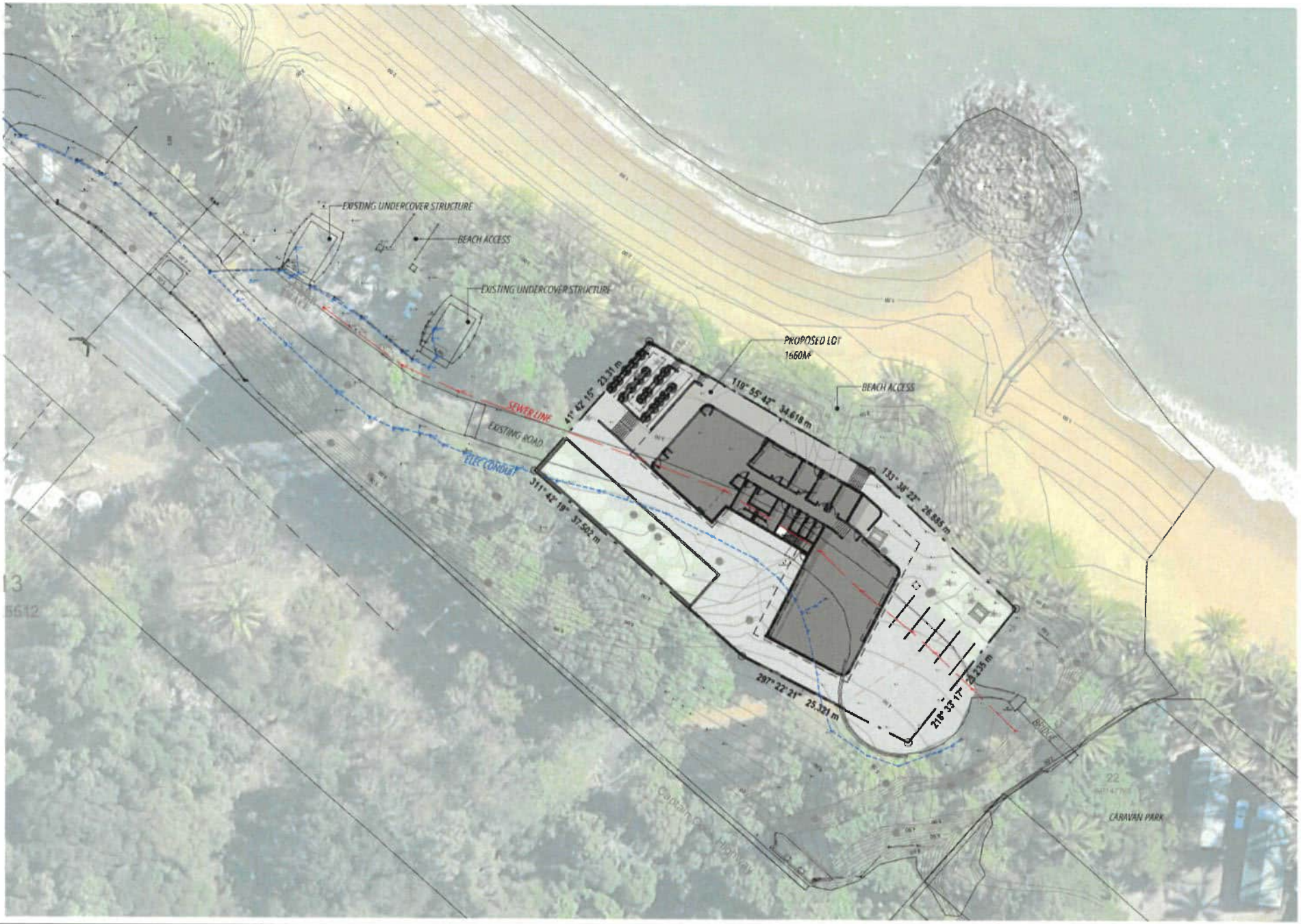
1. Property description This section need only be completed if details of street address and property description are applicable. E.g., in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable. The description must identify all land the subject of the application. The lot and plan details (e.g., SP/RP) are shown on title documents or rates notice. If the plan is not registered by title, provide previous lot and plan details.	Street address *(include no., street, suburb/locality, and postcode)* Captain Cook Highway Ellis Beach State **QLD** Postcode Lot and plan details *(attach list if necessary)* Lease description not yet available Local government area the land is situated in. Cairns Regional Council
2. Description of aspect/s certified Clearly describe the extent of work covered by this certificate, e.g., all structural aspects of the steel roof beam.	Work as required for bushfire mitigation purposes as set out in the Bushfire Management Report FM 6225 prepared by Eldon Bottcher Architect Pty Ltd Building is not required to comply with the National Construction Code/Building Code of Australia bushfire requirements due to building class.
3. Basis of certification Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.	Compliance with the Bushfire Management Report FM 6225 prepared by Eldon Bottcher Architect Pty Ltd **No certification of components covered by The Building Act 1975, The building Code of Australia or AS 3959.** Cairns Regional Council Town Plan Bushfire Management Constraint code.
4. Reference documentation Clearly identify any relevant documentation, e.g., numbered structural engineering plans.	Bushfire Mitigation Report FM 6225

5. Building certifier reference number and building development application number	Building certifier reference number Building development application number *(if available)* Not Available
6. Appointed Competent person details. Under Part 6 of the Building Regulation a person must be assessed as a competent for the type of work (design -specification) by the relevant building certifier.	Name *(in full)* Eldon John Bottcher Company name *(if applicable)* **Eldon Bottcher Architect Pty Ltd** Contact person **Eldon Bottcher** Business phone number 07 55920082 Mobile number 0412434134 Email address **bushfires@eb-a.com.au** Postal address P.O. Box 3606 Robina Town Centre **Postcode 4230** Licence Class or registration type *(if applicable)* ..... Licence or registration number *(if applicable)* Reg Architect Qld 1325 FPA Australia BPAD Level 3 practitioner 16935
7. Signature of appointed competent person This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.	**Signature** ..... **Date** 18 July 23

LOCAL GOVERNMENT USE ONLY

Date received		**Reference Number/s**	

APPENDIX 5.2
SITE PLANS



N E S W

1 A109 **SITE PLAN**
SCALE - 1 : 500

AMENDMENTS	DATE
P1 PRELIMINARY ISSUE	06-04-2023
P2 CLIENT ISSUE	04-05-2023

DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF CLARKE AND PRINCE PTY LTD. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

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w. www.clarkeandprince.com.au

DRAWN	BM	SCALE 1 : 500	SIZE A3
APPROVED	DI	DATE MARCH 2023	

PROJECT ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR ELLIS BEACH SURF LIFESAVING CLUB
DWG SITE PLAN
DWG No. 1531-SD A101 STAMP PRELIMINARY ISSUE P2

EQUIPMENT

A. SURFBOAT (2 NO.)
B. IRB (3 NO.)
C. DOUBLE SKI (4 NO.)
D. SINGLE SKI (20 NO.)
E. ATV (1 NO.)
F. RACING PADDLE BOARD (MAL) (30 NO.)
G. NIPPER BOARDS (30 NO.)
H. FOAM BOARDS (30 NO.)



2 0 2 4 6 8 10M
SCALE 1:200 AT A3

1 A109 FLOOR PLAN - GROUND FLOOR

SCALE - 1 : 200

ROOMS

01. FUNCTION SPACE
02. CANTEEN
03. TRAINING STORE
04. MALE BATHROOM
05. PWD
06. FEMALE BATHROOM
07. PATROL
08. FIRST AID
09. STORE
10. CHANGE ROOM 1
11. CHANGE ROOM 2
12. CHANGE ROOM 3
13. STAIRS
14. EQUIPMENT AND VEHICLE STORE
15. HOT WATER/MSB
16. SHOWERS
17. RAMP
18. ENTRY STAIRS
19. TRANSPIRATION
20. CLEANER'S

GROUND FLOOR AREA SCHEDULE

CANTEEN	24 m²
PWD	8 m²
MALE BATHROOM	10 m²
FEMALE BATHROOM	10 m²
TRAINING STORE	9 m²
FUNCTION SPACE	115 m²
PATROL	13 m²
FIRST AID	13 m²
STORE	12 m²
EQUIPMENT STORE	208 m²
CHANGE ROOM 1	3 m²
CHANGE ROOM 2	3 m²
CHANGE ROOM 3	3 m²
SHOWERS	14 m²
CLEANER'S	2 m²
STAIRS	12 m²
TOTAL APPROX.	* 461 m²

* NOT INCLUDING WALLS OR CORRIDOR

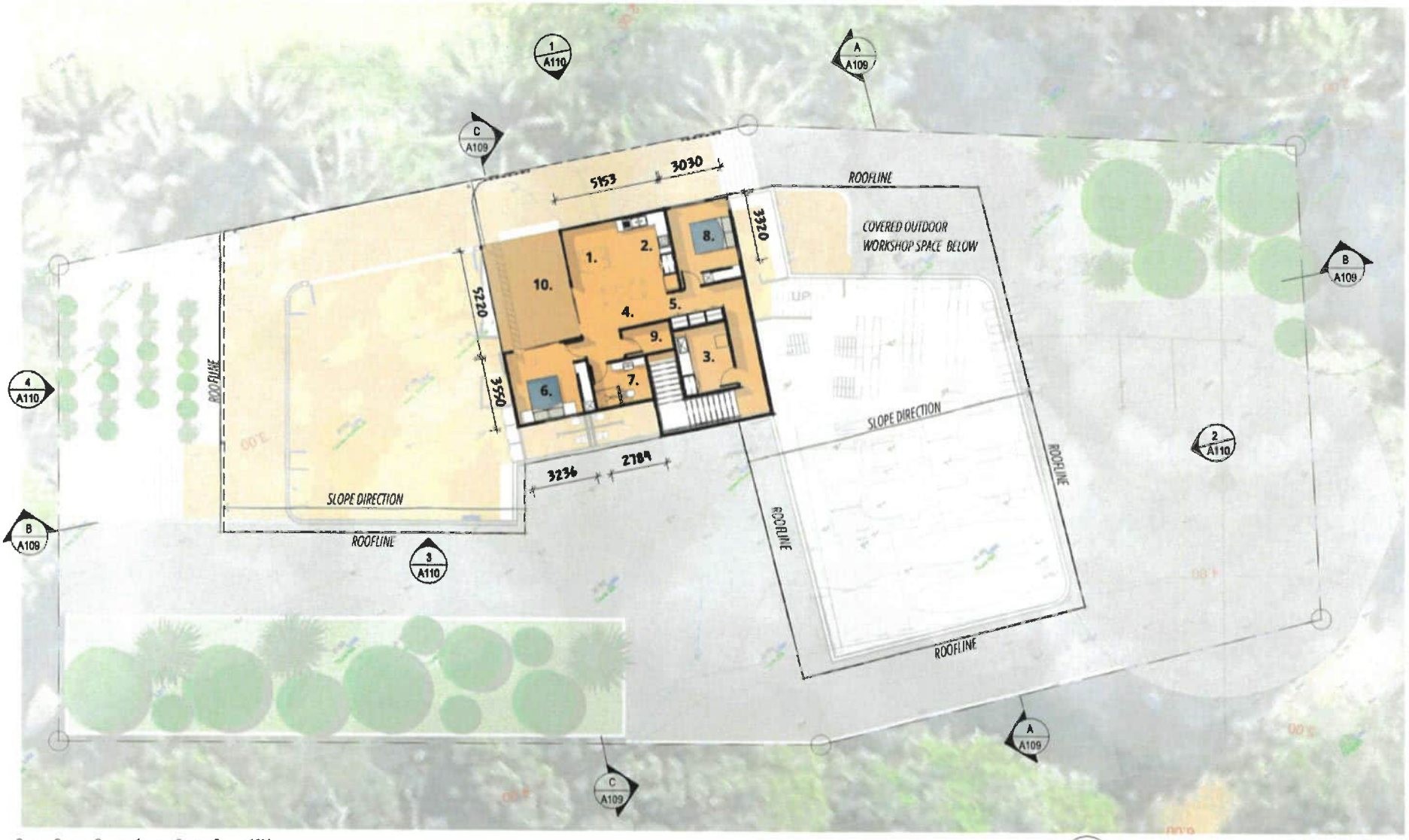
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	06-04-2023
P2	PRELIMINARY ISSUE	12-04-2023
P3	PRELIMINARY ISSUE	17-04-2023
P4	PRELIMINARY ISSUE	19-04-2023
P5	CLIENT ISSUE	04-05-2023

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DRAWN	BM	SCALE As indicated	SIZE A3
APPROVED	DI	DATE APRIL 2023	

PROJECT ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR ELLIS BEACH SURF LIFESAVING CLUB
DWG FLOOR PLAN - GROUND
DWG No. 1531-SD A106
STAMP PRELIMINARY
ISSUE P5



2 0 2 4 6 8 10M

SCALE 1:200 AT A3

ROOMS

01. DINING
02. KITCHEN
03. LAUNDRY
04. LIVING
05. CORRIDOR
06. BEDROOM 1
07. BATHROOM
08. BEDROOM 2
09. STORE
10. DECK

FIRST FLOOR AREA SCHEDULE	
BED 1	14 m²
DINING	6 m²
LAUNDRY	8 m²
BATHROOM	6 m²
CORRIDOR	19 m²
BED 2	12 m²
KITCHEN	10 m²
LIVING	6 m²
STORE	3 m²
DECK	20 m²
TOTAL APPROX.	* 104 m²

* NOT INCLUDING WALLS OR STAIRS

3 A109 **FLOOR PLAN - FIRST FLOOR**

SCALE - 1 : 200

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	12-04-2023
P2	PRELIMINARY ISSUE	17-04-2023
P3	PRELIMINARY ISSUE	19-04-2023
P4	CLIENT ISSUE	04-05-2023

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DRAWN	BM	SCALE As Indicated	SIZE A3
APPROVED	DI	DATE APRIL 2023	

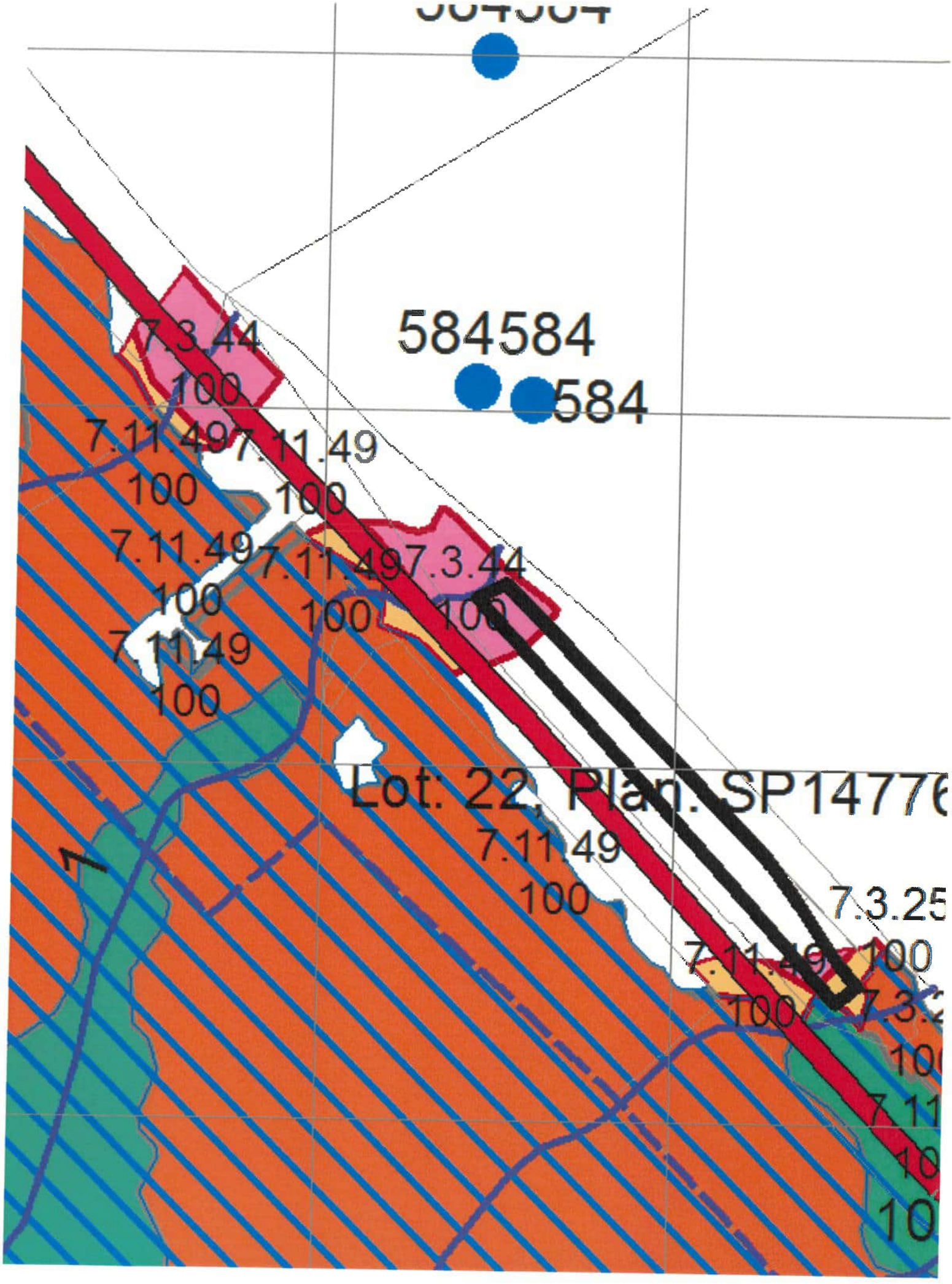
PROJECT ELLIS BEACH SURF LIFESAVING CLUB
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR ELLIS BEACH SURF LIFESAVING CLUB

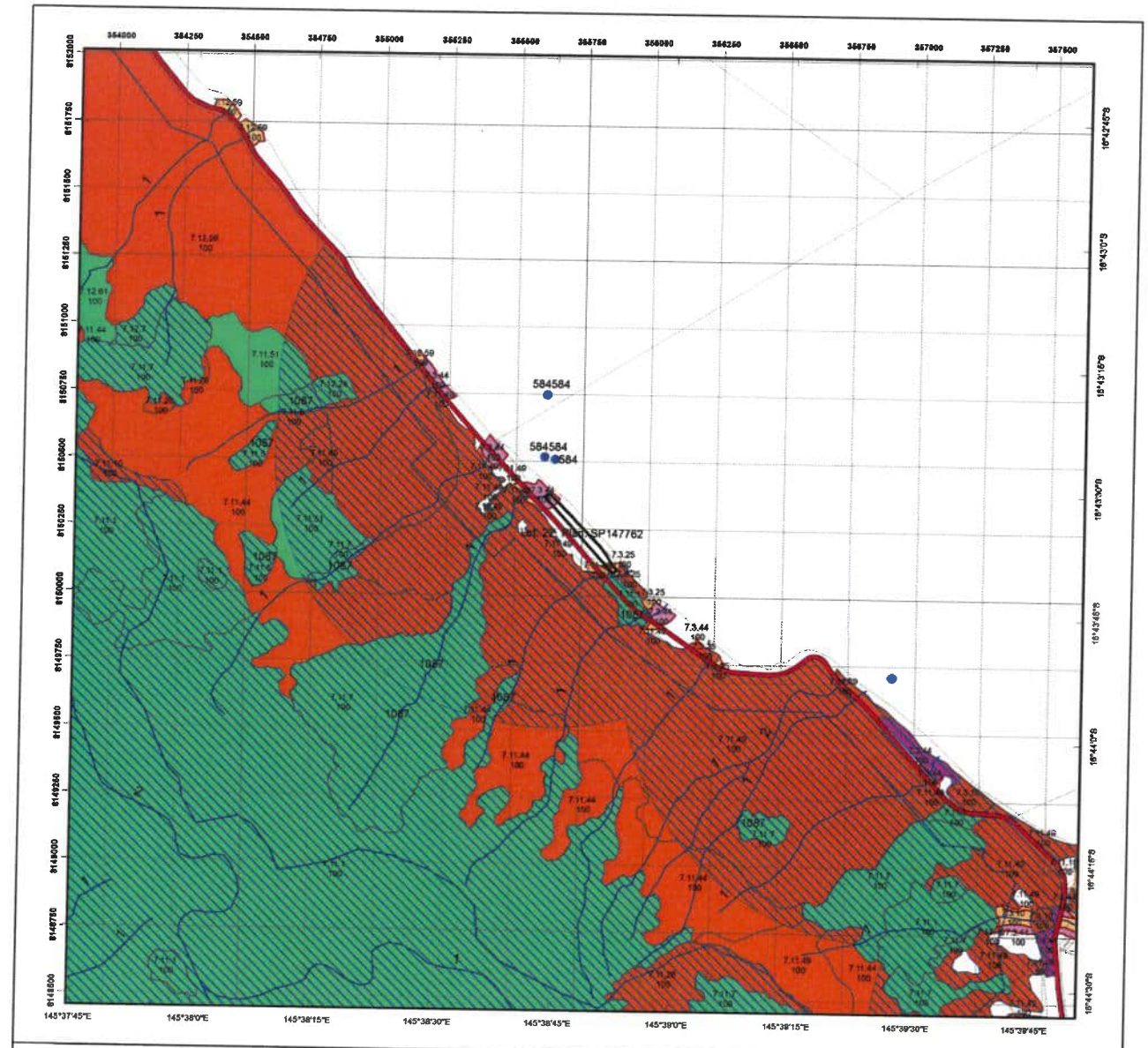
DWG FLOOR PLAN - FIRST FLOOR

DWG No. 1531-SD A107 | STAMP PRELIMINARY | ISSUE P4

APPENDIX 5.3
SUPPORTING INFORMATION

(NOTE: SOME OF THIS INFORMATION IS GENERIC AND NOT PROVIDED FOR APPROVAL PURPOSES. IT IS ONLY PROVIDED FOR END USER KNOWLEDGE)


584584
584
7.3.44
100
7.11.49
100
7.11.49
100
7.11.49
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7.3.44
100
Lot: 22, Plan: SP14776
7.11.49
100
7.3.25
100



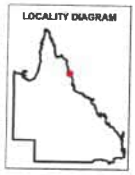
Vegetation Management Supporting Map

Legend

- Selected Lot and Plan
- 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
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area containing that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries

Queensland Government

LOCALITY DIAGRAM



N

0 140 280 420 560 700 m

This product is projected into:
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

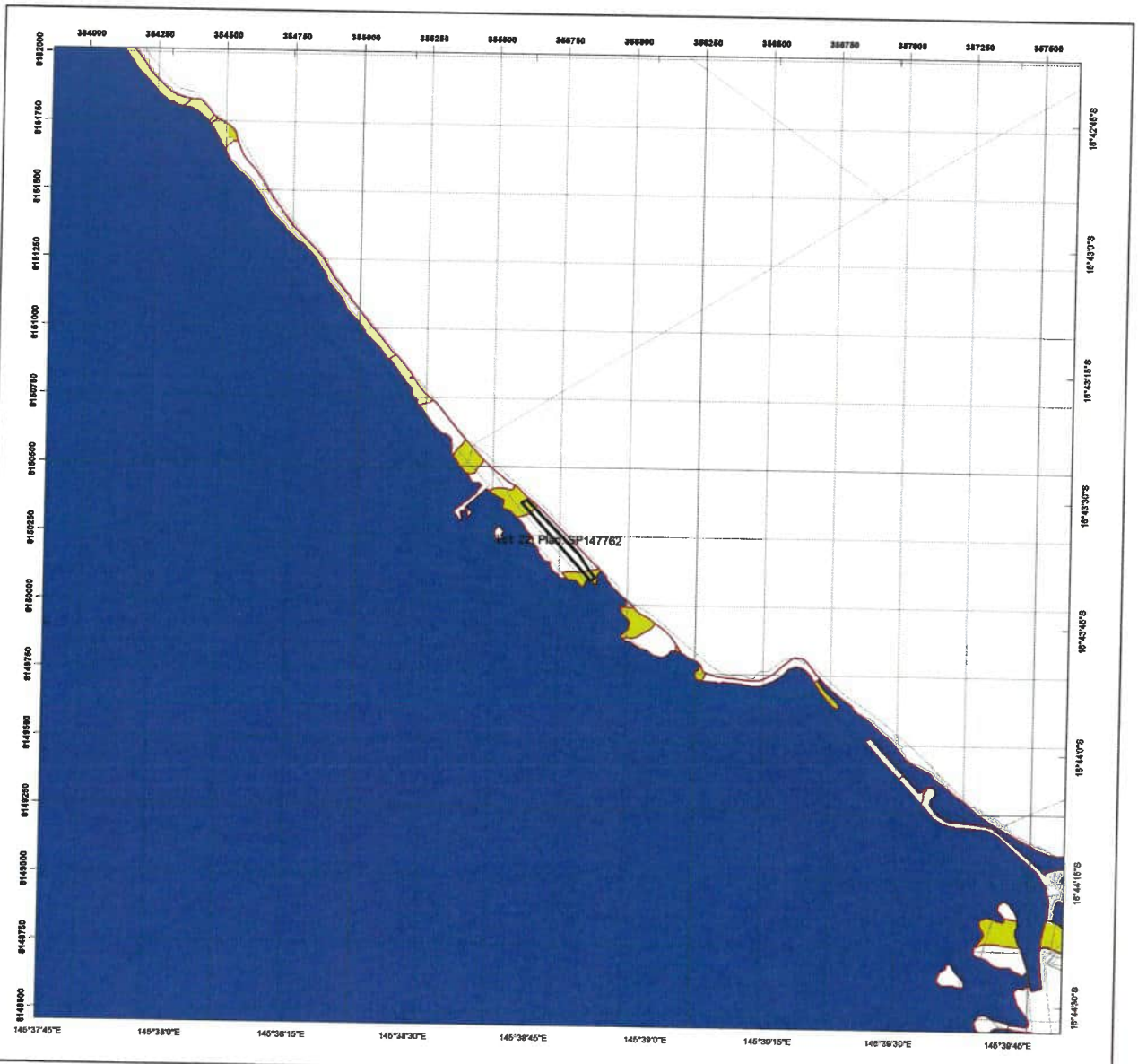
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While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at http://www.information.qld.gov.au/

Land parcel boundaries are provided as locational aid only.

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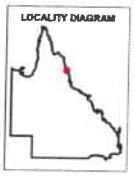


Regulated Vegetation Management Map

Legend

- Selected Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries

LOCALITY DIAGRAM



N

0 200 400 600 800 1,000 m

This product is projected into:
GDA 1994 MGA Zone 55

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Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at http://www.information.qld.gov.au/

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.

Queensland Government

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Regional ecosystem details for 7.11.49

Regional ecosystem	7.11.49
Vegetation Management Act class	Of concern
Wetlands	Not a Wetland
Biodiversity status	Of concern
Subregion	8, 9, (3), (3.2)
Estimated extent[1]	Pre-clearing 4000 ha; Remnant 2021 4000 ha
Short description	Eucalyptus leptophleba, Corymbia clarksoniana and E. platyphylla open forest to woodland on metamorphic foothills
Structure code	Open Forest
VMA structure category	Mid-dense
Description	Eucalyptus leptophleba (Molloy red box), Corymbia clarksoniana (Clarkson's bloodwood) and E. platyphylla open forest to woodland. Moist metamorphic foothills. Not a Wetland. (BVG1M: 9b).
Supplementary description	Stanton and Stanton (2005), M34; Tracey and Webb (1975), 16h
Protected areas	Macalister Range NP, Mowbray NP, Ngalba-bulal NP (CYPAL), Kuranda NP, Annan River (Yuku Baja-Muliku) NP, Smithfield CP, Annan River (Yuku Baja-Muliku) RR, Daintree NP (CYPAL), Earl Hill CP, Mount Whitfield CP, Macalister Range FR, Kuranda FR, Ngalba Bulal
Fire management guidelines	SEASON: Cool, dry season (April-Sep). INTENSITY: Low to moderate. INTERVAL: 2-5 years. INTERVAL_MIN: 2. INTERVAL_MAX: 5. STRATEGY: Mosaic burn < 30%. Begin burning early in the fire season, with progressive patch fires burnt through the year. Stop burning when the network of fires and other breaks is sufficient to impede fire spread later in the year. Storm-burning may be used to add further diversity to the fire mosaic. ISSUES: An occasional moderate severity fire may be used to manage overabundant recruitment of trees. Maintaining a fire mosaic will ensure protection of animal habitats and mitigate against wildfires.
Comments	7.11.49: Distinguished from 7.11.21 by its occurrence in moister, near-coastal areas and by the absence of species such as Erythrophleum chlorostachys, Melaleuca monantha, and Allocasuarina luehmannii. Earths or podzols. Near-coastal areas north of Cairns. Subject to invasion by molasses grass (Melinis minutiflora).

[1] Estimated extent is from version 13 pre-clearing and 2021 remnant regional ecosystem mapping. Figures are rounded for simplicity. For more precise estimates, including breakdowns by tenure and other themes see remnant vegetation in Queensland (https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/remnant-vegetation/).

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Last updated 14 June 2023

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Regional ecosystem details for 7.3.44

Regional ecosystem	7.3.44
Vegetation Management Act class	Endangered
Wetlands	Not a Wetland
Biodiversity status	Endangered
Subregion	2, 8, 9, (3), (6), (3.2)
Estimated extent[1]	Pre-clearing 2000 ha; Remnant 2021 600 ha
Short description	Eucalyptus leptophleba, Corymbia clarksoniana open forest to woodland on alluvium in near-coastal areas with moderate rainfall
Structure code	Open Forest
VMA structure category	Mid-dense
Description	Eucalyptus leptophleba and/or Corymbia clarksoniana usually dominate the mid-dense canopy (mean height of 18 m). Eucalyptus platyphylla is frequently a co-dominant tree, and E. portuensis and Lophostemon suaveolens are sometimes present in the canopy. Melaleuca viridiflora and Acacia leptocarpa dominate the sparse sub-canopy (8.3 m tall,) with Planchonia careya and A. flavescens also frequently present. A sparse shrub/low tree layer (up to 2.5m tall) is usually present, and contains immature canopy and sub-canopy tree species, and frequently other Acacia species and Alphitonia excelsa. The dense ground layer is usually dominated by the grasses Imperata cylindrica and/or Themeda triandra. The graminoids Paspalidium distans, Chrysopogon fallax, Fimbristylis depauperata and F. dichotoma, forbs Brunoniella acaulis, Flemingia parviflora and Pycnospora lutescens, and grass tree Xanthorrhoea johnsonii are frequently present in the ground layer. Alluvium, in near-coastal areas with moderate rainfall. Not a Wetland. (BVG1M: 9b).
Supplementary description	Stanton and Stanton (2005), A34; Tracey and Webb (1975), 16h
Protected areas	Girringun NP, Macalister Range NP, Ngalba-bulal NP (CYPAL), Daintree NP (CYPAL), Annan River (Yuku Baja-Muliku) RR, Kuranda NP, Macalister Range FR
Fire management guidelines	SEASON: Cool, dry season (April-Sep). INTENSITY: Low to moderate. INTERVAL: 2-5 years. INTERVAL_MIN: 2. INTERVAL_MAX: 5. STRATEGY: Mosaic burn < 30%. Begin burning early in the fire season, with progressive patch fires burnt through the year. Stop burning when the network of fires and other breaks is sufficient to impede fire spread later in the year. Storm-burning may be used to add further diversity to the fire mosaic. ISSUES: Ignition is most likely during hot, dry season (Oct - Jan). These fires are typically high intensity fires that can be difficult to control. Maintaining a fire mosaic will ensure protection of animal habitats and mitigate against wildfires.
Comments	7.3.44: Mainly north of Cairns on the coastal plains. One small outlier in the far south near Cardwell.

[1] Estimated extent is from version 13 pre-clearing and 2021 remnant regional ecosystem mapping. Figures are rounded for simplicity. For more precise estimates, including breakdowns by tenure and other themes see remnant vegetation in Queensland (https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/remnant-vegetation/).

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ELDON BOTTCHER

EDUCATION AND QUALIFICATIONS

Graduate Diploma in Design in Bushfire Prone Areas
University of Western Sydney
Diploma in Architecture
Queensland Institute of Technology
Certificate of Rural Fire Management
University of Southern Queensland
Registered Architect
Queensland
A+ Architect
Australian Institute of Architects
FPA Australia Certified Practitioner (BPAD-Level 3-16935)
Bushfire Planning and Design (BPAD-LEVEL 3), Alternate Solutions & DTS

PROFESSIONAL MEMBERSHIPS

Fellow
Australian Institute of Architects
Member
Australian Institute of Emergency Services
Member
Australian Institute of Engineers Society of Fire Safety
Member
Queensland Environmental Law Association.
Member Board of Experts
Bushfire Building Council of Australia
Associate Member
Institution of Fire Engineers
Corporate Member
Fire Protection Association of Australia

PROFESSIONAL EXPERIENCE

Director
Eldon Bottcher Architect Pty Ltd since 1978

Bushfire Assessment and Planning Consultant since 1998 with Involvement in more than 6,000 Bushfire Mitigation Projects ranging from single dwellings to major subdivisions, burn plans and general mitigation advice.

Group Officer
Albert Rural Fire Brigades Group
Queensland Fire and Rescue Service
Group Officer
Gold Coast Rural Fire Brigades Group
Queensland Fire and Rescue Service
Group Officer
South East Regional Support Group
Queensland Fire and Rescue Service
Planning Officer
Gold Coast Rural Fire Brigades Group
Queensland Fire and Rescue Service

Life Member
Guanaba Rural Fire Brigade
Member
Clagiraba Rural Fire Brigade

Member Practice Committee AIA Qld Chapter

AIA delegate to Building Industry and Research Consultation Panel on Bushfire Hazard advising Queensland State Bushfire Committee

BBCA representation to Australian Standards Committee FP20 (AS 3959 & AS 5414)

Research Consultant to Queensland University of Technology Scenic Rim Black Saturday Recovery Project

OTHER BUSHFIRE RELATED COURSES AND TRAINING

I.C.S./AIIMS (40 hr. course) in Incident Command Systems
Certificate 4 (Workplace Training and Assessment)
RFSQ Level 1
RFSQ Level 2 (Officer)
RFSQ Fire Management 1
RFSQ Crew Leader
Certificate II in Public Safety (Firefighting Operations)
Fire Weather 1
QELA Expert Witness Workshop 2020

BUSHFIRE RELATED AWARDS

National Planning Award
State Planning Award
Planning Institute of Australia
Gold Coast Bushfire Management Strategy
(Co-Initiator and Member of Preparation Committee)

Australian Government
National Medal
Long and Distinguished Service to Fire fighting
Queensland Fire and Rescue Service
Diligent and Ethical Service Medal + Clasp
Service to Fire fighting

Queensland Government
Australia Day Medallion
Services to Rural Fire Fighting
Queensland Government
Year of the Volunteer Medallion
Services to Fire fighting
UDIA
Best Consultancy Team Award in 2007.

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Bushfire Safety Engineering

Bushfire Planning and Design

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Alternative Solutions

Expert Witnessing
(See Planning and Environment Court of Queensland Determination
File No. BD 624 of 2005 sections 28 to 35)

Continuing Professional Development Lectures

Tertiary Education Lectures and Tutorials

Town Planning Bushfire Codes for Local Authorities

Bushfire Burn Planning

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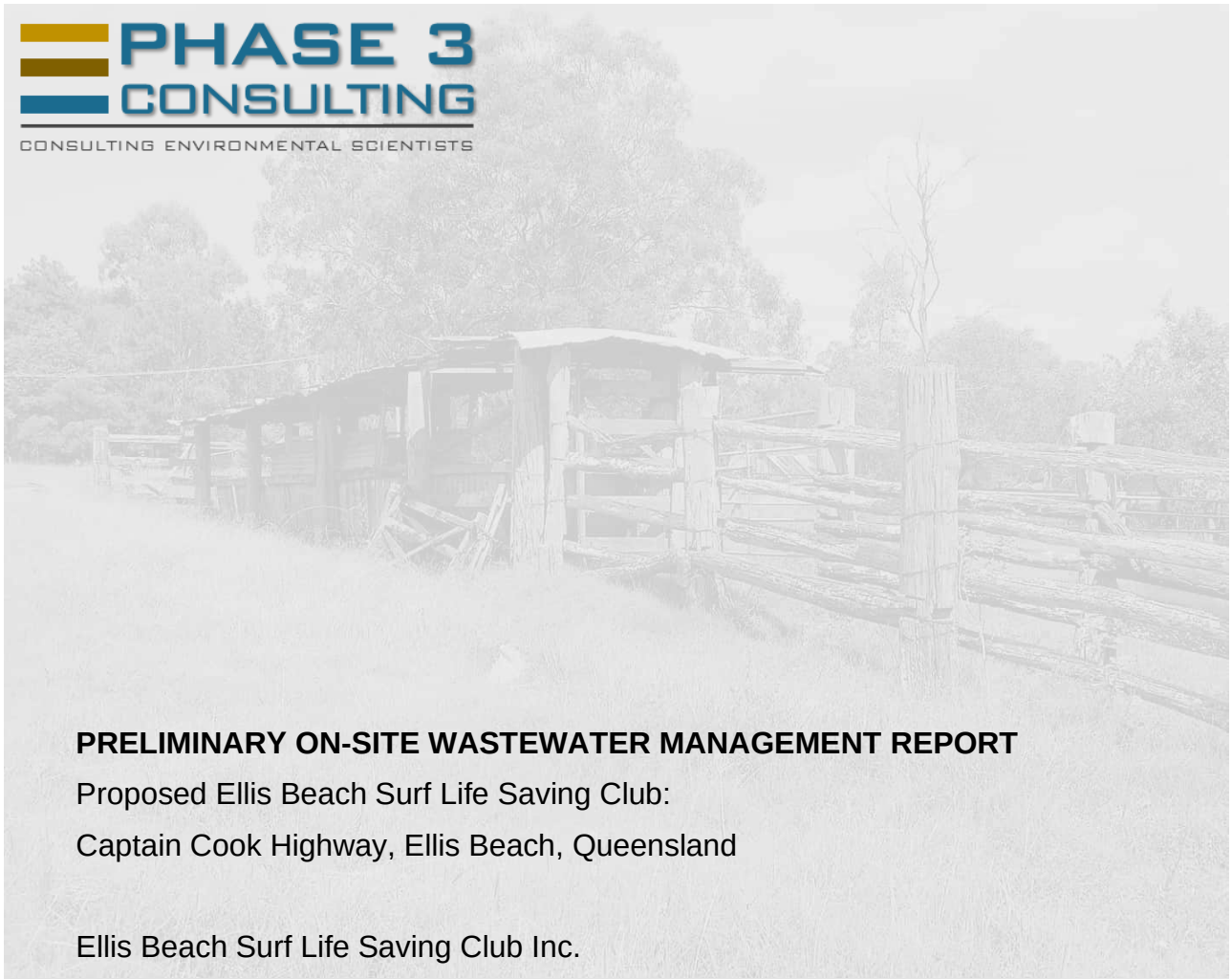
Appendix 8

On-Site Wastewater Management Report prepared by Phase 3 Consulting

adams+sparkes
TOWN PLANNING

PHASE 3 CONSULTING

CONSULTING ENVIRONMENTAL SCIENTISTS



PRELIMINARY ON-SITE WASTEWATER MANAGEMENT REPORT

Proposed Ellis Beach Surf Life Saving Club:

Captain Cook Highway, Ellis Beach, Queensland

Ellis Beach Surf Life Saving Club Inc.

Project P3C22.087

26 July 2023



Document control

Report details

Report Title:	Preliminary On-site Wastewater Management Report – Proposed Ellis Beach Surf Life Saving Club: Captain Cook Highway, Ellis Beach, Queensland
Project Manager:	David Bayel | Principal Environmental Scientist
Client:	Ellis Beach Surf Life Saving Club Inc.
Client Contact/s:	Tyson Quig and Hamish Jenkins

Quality information

Project Reference:	P3C22.087
Date:	12 January 2023
Prepared by:	David Bayel

Revision history

Revision	Distribution Date	Distribution	Authorised	
			Name/Position	Signature
A	12.01.23	Draft for client review	David Bayel Principal Environmental Scientist	
B	26.07.23	Preliminary Report	David Bayel Principal Environmental Scientist	

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1 Introduction

PHASE 3 Consulting (PHASE 3) was appointed by Ellis Beach Surf Life Saving Club Inc. (EBSLSC) to prepare a Preliminary On-site Wastewater Management Report for the proposed Ellis Beach SLSC to be situated at Captain Cook Highway, Ellis Beach, Queensland.

The proposed scope of work was described in PHASE 3's fee proposal dated 6 December 2022, and EBSLSC's acceptance of the engagement was confirmed on 9 December 2022.

1.1 Background

The existing Ellis Beach SLSC is situated to the west of Captain Cook Highway within property described as Lot 20 on NR7199 with an area of 1,042m^2. It is proposed to establish a new SLSC to the east of the highway within a 1,659m^2 site as shown in Figure 1 Appendix A. The development will comprise a member only surf club for a maximum of 200 members per day with a small café and a one-bedroom caretakers' residence. It is understood that the café will be staffed by club members and offer takeaway coffee and light snacks such as takeaway sandwiches, wraps and pies etc. that have been prepared and packaged off-site. The café will utilise a water saving dishwasher and single sink for kitchen cleaning and staff hand washing. The site will be supplied water via on-site roof water collection that may be supplemented during the dry season by water drawn from an existing local supply in Spring Creek.

An On-site Wastewater Management Options Report was prepared for the development by PHASE 3 on 8 November 2022. The report identified options for on-site wastewater management, comprising a combination of water and wastewater saving measures and possible storage and regular off-site disposal of liquid waste. This preliminary on-site wastewater management report is based on Option 3; utilising a combination of waterless composting toilets and beach showers to substantially reduce wastewater flows, with irrigation of the resulting greywater effluent within the bounds of the site. The report has been prepared to assist development planning and design purposes and will require updating once building designs have been finalised.

1.2 Project objectives

The objectives of the assessment were to:

- Summarise background information;
- Determine anticipated wastewater volumes based on expected usage;
- Characterise site and soil conditions;
- Identify the most suitable areas for greywater effluent application; and
- Provide recommendations for wastewater treatment and the sustainable land application of effluent within the site.

1.3 Relevant guidance

The project was undertaken with reference to the following documents:

- AS/NZS 1547:2000. *On-site domestic wastewater management*. Standards Australia International Ltd and Standards New Zealand. 2000.
- AS/NZS 1547:2012. *On-site domestic wastewater management*. Standards Australia International Ltd and Standards New Zealand. 2012.
- *Code of Practice for Wastewater Management*. 2020. Northern Territory Government, Department of Health.
- *Development Manual, Design Manual D7 Sewerage System Version No. – 03/17*. Far North Queensland Regional Organisation of Councils (FNQROC). 2017.
- *Planning Guidelines for Water Supply and Sewerage*. Queensland Government, Department of Energy and Water Supply. 2010.

- *Queensland Plumbing and Wastewater Code*. Queensland Government, Department of Housing and Public Works. 2019.

1.4 Scope of work

The following scope of work was completed to achieve the project objectives:

- A desktop study and preliminaries including:
    1. Review of plans, relevant reports and associated information provided by Surf Life Saving Queensland (SLSQ);
    2. Review of current aerial photographs of the site and surrounding environment;
    3. Review of published geology and soil maps for the area; and
    4. Search of groundwater bores licensed by the Department of Natural Resources Mines and Energy (DNRME) within a 1km radius of the site.

- An inspection of the site and surrounding environment to identify suitable land application areas and any constraints to on-site wastewater management.

- The advancement of six boreholes to a maximum 1.0m depth throughout the site and the recovery of discrete soil samples throughout the soil profile at each location.

- Classification and dispersivity testing of selected soil samples via the modified Emerson Aggregate Test method.

- Calculation of the expected wastewater volumes and equivalent population (EP) based on the maximum number of members.

- Calculation of the area/s required for effluent application based on the site and soil characteristics and expected wastewater volumes.

- Preparation of this Preliminary On-site Wastewater Management Report to assist with development planning and design.

2 Site characteristics

2.1 Property description

The location of the proposed site is shown in Image 1 below. The site is situated between Captain Cook Highway and the Coral Sea with Ellis Beach Oceanfront Bungalows and Caravan Park located directly to the south-east. Surrounding land comprises a frontal coastal dune system in the east and moderate to steep slopes and mountainous terrain of the Macalister Range to the west. The proposed site is shown in Figure 1 Appendix A.

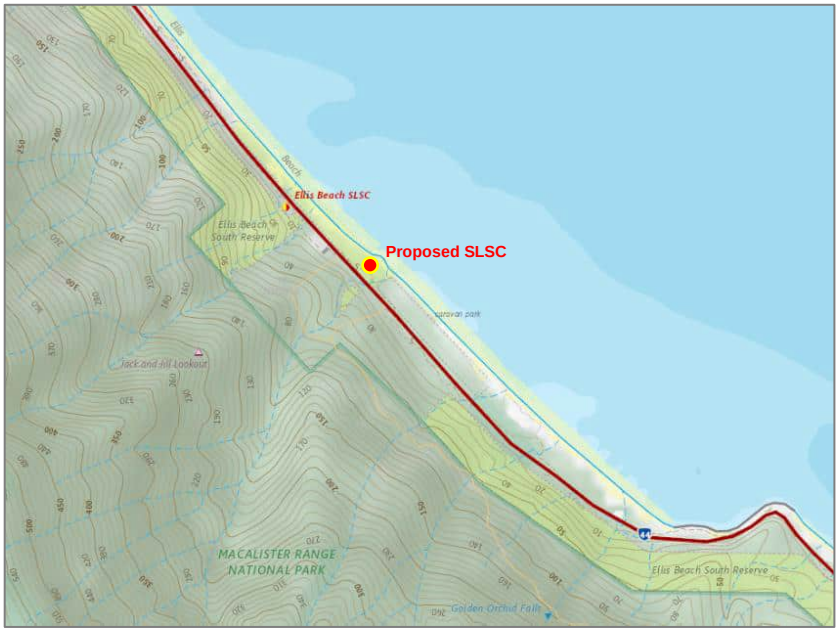


Image 1. Proposed Ellis Beach SLSC location

2.2 Geology & soils

The geology of the area is characterised by Mount Formartine Granite (Pgf) comprising biotite granite (foliated and sheared) to the north and Barron River Metamorphics (SDb) comprising argillite, greywacke, quartzite, greenstone, phyllite, schist and pseudo-phyllite to the south (Cairns District 1:100,000 series Geological Survey).

Soil mapping of the local area indicates that soil types include aeric podsols adjacent the Coral Sea with mountainous parts dominated by red dermosols, brown dermosols and red ferrosols (Soils of Babinda – Cairns Area, North Queensland 1:50,000, CSIRO and DPI 1996).

Soil conditions identified during the site assessment are described in Section 3.2 below.

2.3 Hydrology

Land to the west of the Captain Cook Highway is incised by several watercourses flowing from the Macalister Range to the frontal dune system; The nearest waterway, Cascade Creek is located directly to the south of the site at a minimum distance of 4.5m and flows directly to the Coral Sea which bounds the site to the east.

2.4 Hydrogeology

A search of DNRME registered groundwater bores undertaken on 10 January 2023 identified three licensed bores within a 1km radius of the proposed SLSC site, details of which are provided in Table 2 below. A map showing the location of the groundwater bores and the relevant bore card are provided in Appendix B.

Table 2. Licensed bore details

Bore no.	Location	Status	Aquifers (m BSL)	SWL (m BSL)	Geology
RN148189	260m SE	Existing sub-artesian monitoring	nda	2.8	Clayey sand to 0.6m, over sand with many gravels to 6.8m, over heavy clay with gravels to 12.5m terminated on hard rock
RN45537	Unknown*	Existing sub-artesian water supply	6.0 – 12.0 Boulders and sand	3.7	Dry sand and boulders to 6m, over sand and boulders to 12m
RN45780	Unknown*	Existing sub-artesian water supply	3.0 – 5.5 Boulders and sand 5.5 – 18.0 Shale	3.0	Silty sand and boulders to 3m, over sand and boulders to 5.5m, over shale to 18m

Table notes: m BSL = metres below surface level, nda = no data available, * = bore locations incorrect

Registered bore RN148189 is situated to the south-east of the site within Ellis Beach Oceanfront Bungalows site. The locations of the remaining two bores appear to have been incorrectly recorded positioning the bores approximately 200m offshore.

The geological records appear to be generally consistent in the bores and are considered to represent subsurface conditions to the east of Captain Cook Highway. Standing groundwater levels range from 2.8 – 3.7m below the ground surface. Based on the local topography and geological setting, the inferred shallow groundwater flow at the site is to the north-east toward the Coral Sea.

3 Site assessment

The site and soil evaluation was completed by David Bayel on 6 January 2023. Site assessment findings are detailed in the following sections.

3.1 Site conditions

The conditions identified within the site and immediate surrounds are provided in Table 2 and representative photographs of the site are shown in Images 2 and 3 below.

Table 2. Site conditions

Site feature	Description
Slope	Generally level throughout (<5%) with a slight grade to the north-east. The site is intersected by a level bitumen roadway. Land to the west is more elevated with slopes of around 10% which partially extend into the site.
Configuration	Generally linear planar
Aspect	North-east
Exposure	The site is partially shaded by tall vegetation but is well exposed the prevailing winds
Erosion potential	Erosion potential is low
Run-on and/or flooding potential	Upslope diversion drains will be required to prevent surface water run-on to the land application area. No flooding potential identified
Site drainage	Well drained to north-east
Presence of rock outcrops	Cobbles and near surface floaters are present throughout the elevated slope and area adjacent Cascade Creek on the southern portion of the site. No rock outcrops, floaters and/or shallow bedrock identified within the proposed application area.
Presence of fill	Shallow filling to approximately 0.3m depth was identified on the south-eastern part of the site between the existing roadway and beachfront. The existing bitumen road partially encroaches on the proposed land application area and will require removal and backfilling with sandy loam prior to construction of the application area.
Vegetation	Groundcover comprises patchy grass and leaf litter with occasional medium to large sized trees.
Presence of waterways	Cascade Creek is located directly to the south of the site and approximately 40m to the south-east of the greywater application area. The Coral Sea is situated to the east of the site, approximately 22m from the greywater application area.
Buffer distances achievable	All waterway buffer distances are achievable on the site. Given the limited available area, boundary setbacks to the greywater irrigation area have been reduced to 0.5m as justified in Section 5 below.



Image 2. Site viewed to south-east



Image 3. Site viewed to north

3.2 Soil assessment

Six boreholes (BH1 to BH6) were advanced to a maximum depth of 1.0m below the ground surface using a Dormer 50mm soil auger at the locations shown in Figure 1 Appendix A. Representative soil samples were recovered from each material type and subjected to the modified Emerson Aggregate Test (AS 1289.3.8.1 – 2006). The Emerson Aggregate Test classifies the behaviour of soil aggregates when immersed, on their coherence in water, and is the primary method of identifying dispersive soils. The soil conditions encountered were generally consistent between the boreholes as shown in Table 3 below.

Table 3. Soil characteristics

Location	Depth (m)	Lithological description	Structure	Soil category
BH1	0.00 – 0.10	Loamy SAND: Dark grey-brown, fine to medium grained, few fine to coarse angular gravel and common fine roots throughout, moist	Weak	2
	0.10 – 0.20	Sandy LOAM: Brown-grey, with fine to medium grained sand, abundant fine to coarse angular gravel and common fine roots, moist	Massive	2
	Auger refusal on cobble or rock. Borehole terminated.			
BH2	0.00 – 0.25	Loamy SAND: Grey-brown, fine to medium grained, very few fine angular gravel and common fine roots throughout, moist	Massive	2
	0.25 – 0.60	SAND: Grey-brown, fine to medium grained, very few fine angular gravel and common fine roots throughout, moist	Massive	2
	0.60 – 0.70	Loamy SAND: Dark grey, fine to medium grained, moist	Massive	2
	Auger refusal on cobble or rock. Borehole terminated.			
BH3	0.00 – 0.20	Loamy SAND: Grey-brown, fine to medium grained, very few fine angular gravel and common fine roots throughout, moist	Massive	2
	0.20 – 0.50	SAND: Grey-brown, fine to medium grained, very few fine angular gravel and common fine roots throughout, moist	Massive	2
	0.50 – 0.60	SAND: Grey-brown, fine to medium grained, very few fine angular gravel, moist	Massive	2
	Auger refusal on cobble or rock. Borehole terminated.			
BH4	0.00 – 0.35	SAND: Brown, fine to medium grained, common fine roots throughout, moist	Massive	1
	0.35 – 1.00	SAND: Pale yellow-brown, fine to medium grained, moist	Massive	1
	Limit of investigation			
BH5	0.00 – 0.30	SAND: Brown, fine to medium grained, very few fine angular gravel and common fine roots throughout, moist (FILL)	Massive	1
	Auger refusal on coarse gravel FILL. Borehole terminated.			
BH6	0.00 – 0.30	SAND: Brown, fine to medium grained, few fine angular gravel and abundant fine roots throughout, moist (FILL)	Massive	1
	0.30 – 1.00	SAND: Pale yellow-brown, fine to medium grained, few fine tree roots throughout, moist	Massive	1
	Limit of investigation			

The identified natural soils are consistent with those expected to be found at the site based on the geology and soil mapping for the area. No standing groundwater or seepage was encountered in the boreholes. Emerson Class testing was completed on two representative samples (BH2 0.00 – 0.25 and BH3 0.00 – 0.20) to identify dispersive soils. A strongly dispersive soil is indicated by an Emerson Class of 1, whilst a soil with no, or slightly dispersive properties is indicated by an Emerson Class of 4/7. Each of the samples displayed 4/7 characteristics and are therefore considered to be non-dispersive.

Shallow fill materials were identified within BH5 and BH6 which are expected to have been placed during construction of the existing road and associated car parking areas. No wastewater application is proposed within this area.

Natural soils throughout the site have been classified in accordance with AS/NZS 1547:2012 as sands and loamy sands, which are defined as Soil Categories 1 and 2 respectively. These soils have an indicative permeability of 1.4 – >3.0m/day and are described as very well drained, with a recommended design irrigation rate (DIR) of 5mm/day for irrigation systems. The proposed land application area partially encroaches on the existing road and associated filling. All bitumen and underlying fill materials in this area must be removed and replaced with good quality sandy loam during construction.

3.3 Site constraints

The site is constrained by limited available area and the presence of the adjacent surface waters. These constraints can be overcome by:

- Minimising wastewater production and the volume of effluent required to be disposed on-site. This will be achieved by:
    - Developing a member only club with a maximum of 200 members;
    - Installing waterless composting toilets throughout the development;
    - The use of outdoor beach showers instead of internal showering facilities;
    - Directing wastewater generated by the café to a holding tank for regular pump-out by a licensed liquid waste contractor.
- Treating greywater to advanced secondary standard;
- Positioning the land application area to achieve approximately 40m and 22m separation from the banks of Cascade Creek and the Coral Sea respectively; and
- Applying effluent by sub-surface irrigation to promote evapo-transpiration and absorption in the surface soils and prevent direct contact with the public.

4 Design wastewater flow and sizing

4.1 Wastewater flow determination

Wastewater flows for the development have been based on *Typical Domestic-Wastewater Flow Design Allowances* (AS/NZS 1547:2012) and *Commercial flow allowances for standard fixtures* (NT DoH 2020) and are based on reticulated community water supply. The expected total wastewater flows and corresponding EPs for each aspect of the development based on 200 members per day are shown in Table 4 below.

Table 4. Total wastewater flow based on 200 members per day

Development aspect	Indicative wastewater flow (L/day)	Unit of measure	Number	Daily wastewater flow (L/day)	EP based on maximum flow
Caretakers' residence	150	Person	2	300	1.5
Members	40[B]	Person	200	8,000	40
Café/kiosk	10[C]	Person	200	2,000	20
Total daily wastewater flow (L/day) & EP				**10,300**	**51.5**

Table notes:

[A] = AS/NZS 1547:2012 Residential premises with on-site roof water tank supply
[B] = Northern Territory Department of Health (2020) for 'Clubs" members, guests, and staff
[C] = Northern Territory Department of Health (2020) for 'Kiosk/Tearooms

The above wastewater flows are considered conservative estimates and are based on peak flows which would be experienced on weekends, public and school holidays with only minimal usage expected throughout the remainder of the week. It should be noted that the wastewater flow generated by the café may vary substantially from that indicated above, depending on the number of members and visitors purchasing coffee and snacks on any given day.

4.2 Wastewater flow reduction

It is proposed to substantially reduce the above wastewater flows by installing waterless composting toilets throughout the development (33% reduction) and utilising external beach showers instead of providing internal showering and bathroom facilities for the club (additional 60% reduction). In addition, given the unknown number of potential café customers, all wastewater generated by the café will be directed to a holding tank for regular pump-out by a licensed liquid waste contractor.

Wastewater flows for each fixture type have been adopted from AS/NZS 1547:2012, Table H2 and are based on the proportion of the total flows shown in Table 4 above. The volume of wastewater requiring on-site treatment is reduced to 7% of the total estimated flow if both beach showers and waterless composting toilets are utilised as shown in Table 5 below.

These figures are based on handbasins with time-controlled push button taps being the only wastewater producing fixtures within the club, with the exception of the caretakers' residence which will utilise a composting toilet with standard plumbing fixtures providing a 33% reduction in wastewater generation.

Table 5. Reduced wastewater flows with waterless composting toilets and beach showers

Development aspect	Number	Maximum daily wastewater flow (L/day)	33% wastewater reduction (L/day) [A]	60% wastewater reduction (L/day) [B]	Reduced daily wastewater flow (L/day)
Caretakers' residence	2	300	100	-	200
Members	200	8,000	2,640	4,800	560
Reduced total daily wastewater flow (L/day)					**760**

Table notes:

[A] = AS/NZS 1547:2012: WC only represents 33% of daily flow
[B] = AS/NZS 1547:2012: Kitchen + shower + bath + laundry represents 60% of daily flow

Based on the reduced flow estimates, the development is expected to generate approximately 760 litres of greywater per day which will be treated and irrigated on-site. All wastewater produced by the café will be directed to a holding tank for regular pump-out by a licensed liquid waste contractor.

4.3 Land application area sizing

The hydraulic area required for land application of greywater effluent by irrigation has been determined in accordance with AS/NZS 1547:2012, based on the following calculation:

IA = Q / DIR

Where: IA = irrigation area (m^2)
Q = daily wastewater flow (L/day)
DIR = design irrigation rate (mm/day)
Therefore:

Area required for sub-surface irrigation = 760 / 5
= 152m^2

A minimum irrigation area of 152m^2 is required based on the anticipated hydraulic loading and identified soil conditions. The proposed land application area is shown in Figure 1 Appendix A.

4.4 Beach showers

Ideally the beach showers will be designed to provide natural dunal discharge, however discharge via a soakage/absorption trench may be adopted if required. The beach showers must be fitted with time-controlled push button taps to improve water efficiency and minimise soakage trench dimensions. Based on 500 showers/day for a duration of 30 seconds with an output of 6 litres/minute, a total volume of approximately 1,500 litres of water would be generated for infiltration into the dune system. Based on a saturated hydraulic conductivity of 180mm/hr for sandy soils (4,320mm/day) and an assumed 25% design loading rate (DLR), the area for absorption via a conventional absorption bed has been determined based on the following calculation:

L = Q / (DLR x W)

Where: L = length of bed (m)
Q = daily wastewater flow (L/day)
DLR = design loading rate (mm/day)
Therefore:

Length of bed = 1,500 / (1,080 x 1)
= 1.39m

The above calculation indicates that a basal area of 1.0m x 1.4m would suffice based on the anticipated hydraulic loading and identified soil conditions. The proposed shower location is shown in Figure 1 Appendix A.

5 Setback distances

The recommended setback distances for land application areas in Queensland are specified in the *Queensland Plumbing and Wastewater Code 2019*. The relevant setback distances for sub-surface irrigation are provided in Tables 6 and 7 below.

Table 6. Horizontal separation distances for sub-surface land application areas

Feature	Up slope	Down slope	Level
Property boundaries, pedestrian paths, walkways, recreation areas, retaining walls, and footings for buildings or other structures	2	4	2
Inground swimming pools	6	6	6
Inground potable water tank not exposed to primary effluent	6	6	6
Inground potable water tank exposed to primary effluent	15	15	15

Table notes: All distances are given in metres and are measured from the edge of the trench/bed excavation or subsurface irrigation distribution pipework to the nearest point of the feature

Table 7. Horizontal separation distances for the protection of surface water and groundwater

Feature	Advanced secondary	Secondary	Primary
Top of bank of a permanent water course	10	30	50
Top of bank of an intermittent water course			
Top of bank of a lake, bay or estuary			
Top water level of a surface water source used for agriculture, aquaculture or stock purposes			
Open stormwater drainage channel or drain			
Bore or a dam			
Unsaturated soil depth to a permanent water table (vertically)	0.3	0.6	1.2

Table notes: All distances are given in metres and are measured from the edge of the irrigated wetted area to any point of the feature

The above horizontal and vertical separation distances for the protection of surface water and groundwater are achievable on the site with advanced secondary treatment of wastewater.

Given the limited available area within the site, it is suggested that the recommended setback distances be relaxed to provide 0.5m separation between the greywater irrigation area and the adjacent property boundary. Justification for the proposed relaxation is provided below:

- The property is bound by road reserve with the nearest infrastructure being the Captain Cook Highway at a distance of 17.5m from the site boundary;
- The site surface grades gently away from the road reserve, hence sub-surface effluent cannot migrate upslope onto the neighbouring land;
- The application area will be fenced to prevent public and member access and will be densely vegetated with tropical, water tolerant plants.

6 On-site wastewater management

6.1 Waterless composting toilets

The development will utilise waterless composting toilets throughout. Composting toilet systems have specific installation requirements that must be considered during the building design phase. Based on the anticipated usage by members and caretakers' only, it is recommended that two Clivus Multrum CM40 tank systems be installed in the members amenities (i.e. one male and one female). Each CM40 can accommodate 4 pedestals and 2 urinals and is designed for an average of 110 daily visits. A separate CM8 tank would be required to service the caretakers' residence unless the building is designed to provide adjacent bathrooms that can share a single composting tank. Details of the Clivus Multrum systems are provided in Appendix C. It is recommended that the building designer contact Clivus Multrum Australia directly to confirm design requirements and system sizing.

In addition to composted solids, small volumes of liquid waste (leachate) are generated during the composting process. This waste is typically directed to a small absorption trench, however given the sensitive environment it is recommended that the leachate be directed to the wastewater holding tank for pump-out by a licensed liquid waste contractor. Clivus Multrum also supplies a zero-discharge system that could be used if insufficient fall can be achieved between the CM tanks and the wastewater holding tank. The zero-discharge is a closed loop system that recirculates leachate within the composting tank.

6.2 Greywater treatment

Greywater generated by the club hand basins and caretakers' residence will be treated to advanced secondary standard using an aerated wastewater treatment system (AWTS) or similar. The selected system must have Chief Executive Approval issued by the Queensland Department of Housing and Public Works (DHPW). The following link provides access to all currently approved advanced secondary systems in Queensland:

https://www.business.qld.gov.au/industries/building-property-development/building-construction/plumbing-drainage/on-site-sewerage#AdvancedSecondary

AWTS typically incorporate the following processes:

- Settling of solids and floatation of scum in an anaerobic primary chamber (septic tank);
- Oxidation and consumption of organic matter through aerobic biological processes, comprising either a suspended growth (activated sludge) or an attached growth (fixed film) process;
- Clarification - secondary settling of solids; and
- Disinfection using chlorination, or other approved means if surface land application of treated wastewater is to occur.

Table 8 shows the expected quality of advanced secondary treated effluent as specified by Queensland DHPW.

Table 8. Advanced secondary quality effluent

Parameter	Concentration
Biochemical oxygen demand (mg/L)	10
Total suspended solids (mg/L)	10
Thermotolerant coliforms (cfu/100mL)	10
Total chlorine (mg/L)	>0.5 and <2.0

6.3 Wastewater holding tank

All wastewater produced within the café and any leachate generated within the composting tanks will be directed to a wastewater holding tank for regular pump-out by a licensed liquid waste contractor. The holding tank must have a minimum operating volume of 20,000 litres which will provide at least ten days storage during peak times. The tank must be fitted with a visual high-water alarm to indicate when pump-out is required and avoid overtopping of the tank.

6.4 Land application area design

Based on the expected wastewater flows and site assessment findings, a minimum land application area of 152m^2 is required for greywater effluent irrigation. Advanced secondary treated effluent will be dispersed using sub-surface irrigation which is the most appropriate method of land application given the site constraints and conditions encountered. The location and design requirements of the irrigation system are provided in Figures 1 and 2 Appendix A.

The sub-surface irrigation system must be constructed using pressure compensating drip irrigation line to provide uniform distribution of effluent throughout the land application area and avoid clogging or root intrusion. Pressure compensating drip emitter lines and all pipework must be purple in colour to indicate the presence of wastewater effluent. The system will ensure that effluent is applied evenly at the design irrigation rate and will provide effective anaerobic and aerobic decomposition within the soil. The irrigation lines must be permanently buried at a depth of 100mm below the ground surface at maximum lateral spacings of 600mm.

The irrigation system must be constructed by a suitably qualified and licensed plumber and drainer following the requirements of AS/NZS 1547:2012 and must be installed to achieve the setback distances shown in Figure 1 Appendix A.

An in-line filter must be fitted to the pump discharge to prevent solids being carried into the irrigation system and to facilitate system servicing. The performance of the pump must be suited to the hydraulic characteristics of the irrigation system. All distribution pipe work must be purple in colour and buried to a minimum depth of 150mm below the ground surface. The pipes must be permanently buried and fixed and their presence indicated with underground marking tape.

The irrigation system must include vacuum and air release valves to prevent the ingress of soil into the irrigation lines under negative pipeline pressures, with flush valves at the end of each header pipe to allow maintenance as and when required. All surface boxes must have purple-coloured lids to indicate their use for wastewater.

The irrigation design and sizing are based on sandy loam soils being present throughout the application area. Existing fill materials and bitumen that partially encroach on the area must be removed and replaced with good quality sandy loam during construction. The area should be graded to provide a level surface throughout prior to the installation of the irrigation system.

The irrigation system will distribute effluent into the topsoil to deliver in-situ treatment of effluent constituents and provide nutrient assimilation and evapotranspiration by vegetation. The land application area will be densely planted with suitable tropical, water tolerant species to provide nutrient removal during active growth periods. The boundaries of the land application area must be fenced and animal and human access to the area must be restricted.

Stormwater runoff must be diverted away from the land application area by the installation of up-slope surface water diversion drains or bunds. No effluent seepage or runoff should occur beyond the boundaries of the designated area.

6.5 Beach shower design

Ideally the beach showers will be designed to provide natural dunal discharge, however discharge via a soakage/absorption trench may be adopted if required. The beach showers must be fitted with time-controlled push button taps to improve water efficiency and minimise soakage trench dimensions. The preferred natural dunal discharge design is shown in Image 4 below and typical design details are shown in Sunshine Coast Council's *Open Space Landscape Infrastructure Manual – Showers* (April 2021).

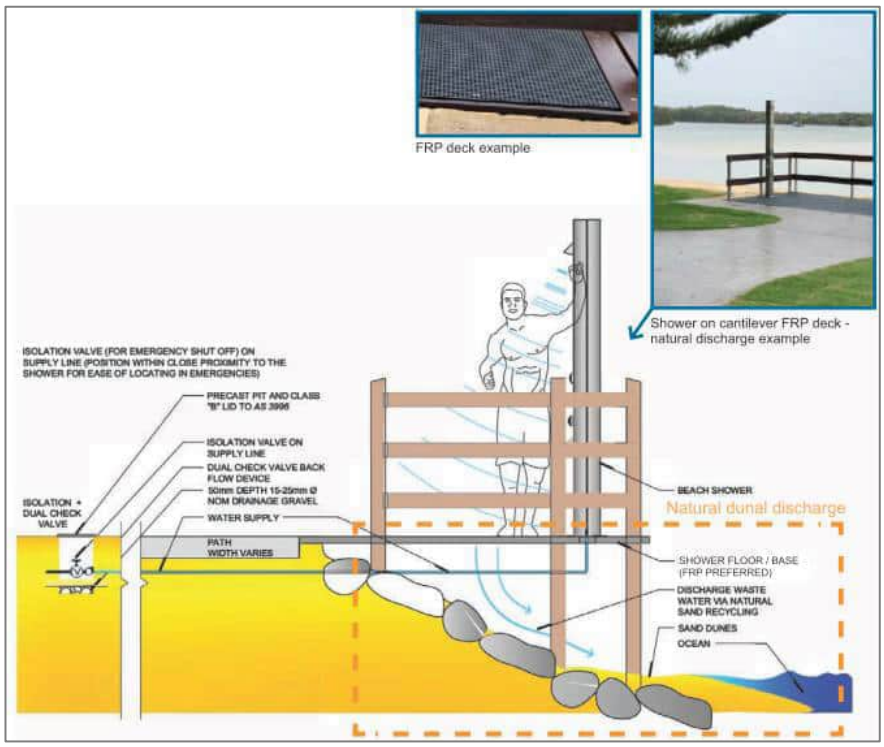


Image 4. Typical natural dunal discharge design

7 Operation and maintenance

7.1 Operation

All staff and members should be aware of the following general advice on the operation of the wastewater treatment systems.

Reduce the volume of sludge accumulating in the treatment tank:

- All solids, grease and fats should be scraped from dishes before washing;
- Food disposal units such as in-sink macerators must not be installed; and
- Foreign materials such as nappies, sanitary napkins, condoms and other hygiene products must not be allowed to enter the system.

Maximise beneficial bacteria in the treatment tank and land application area:

- Only use biodegradable soaps and detergents that are low in phosphorus and sodium. All detergents should be used at the recommended rates;
- Powerful bleaches, whiteners, nappy soakers, spot removers and disinfectants should be avoided; and
- Don't allow chemicals or paint to enter the system.

Water conservation measures will improve treatment system and land application area performance:

- Install water conserving plumbing fixtures on all outlets;
- Take showers instead of baths when possible; and
- The system will operate more efficiently when 'shock loads' are avoided. Heavy water use activities such as laundering, automatic dishwashing and showering should be evenly spread over the day and week.

Waterless composting toilet systems must be operated and maintained in accordance with the manufacturers' *Operation and Maintenance Manual* which is included in Appendix C.

7.2 Maintenance

The AWTS must be operated and maintained in accordance with the manufacturer's instructions and the owners must enter into an annual service contract with an approved service agent. Most AWTS require servicing at 3-monthly intervals and a maintenance report must be submitted to Council within 14 days of the service.

The following general maintenance should be undertaken at each service to optimise the performance of the system:

- The primary chamber and clarifier should be inspected to confirm accumulated sludge volumes;
- Inspection and cleaning of the outlet filter to prevent clogging. The filter should be replaced in accordance with the manufacturer's instructions;
- Inspection and testing of all pumps, air blowers or venturis, chlorinator and the alarm system;
- Replenishment of disinfectant;
- Inspection of the land application area including flushing to maintain the irrigation system; and
- Sampling and testing of treated effluent in accordance with the manufacturer's specifications and conditions of the Chief Executive Approval.

The owners must ensure that the land application area is protected as follows:

- Restrict access and/or vehicular traffic;
- Do not grow deep rooting trees or shrubs within the area;
- Regularly clean surface water diversion drains to prevent blockages and concentrated water flows into the area during rain events;
- Regularly trim plants to maintain evapotranspiration and nutrient assimilation within the area; and
- Assess the area for excessively wet, dry or damaged patches of vegetation and soils that may indicate system failure.

Operational issues can occur when systems are not maintained and/or land application areas fail. Warning signs include:

- Wastewater ponding on the surface of the land application area;
- Noticeable effluent smell in the vicinity of the treatment tank or application area;
- Drains are emptying slowly indicating blockages; and
- The grease trap is blocked or full.

All repairs and maintenance to the irrigation system must be completed by a suitably qualified and licensed drainer.

8 References

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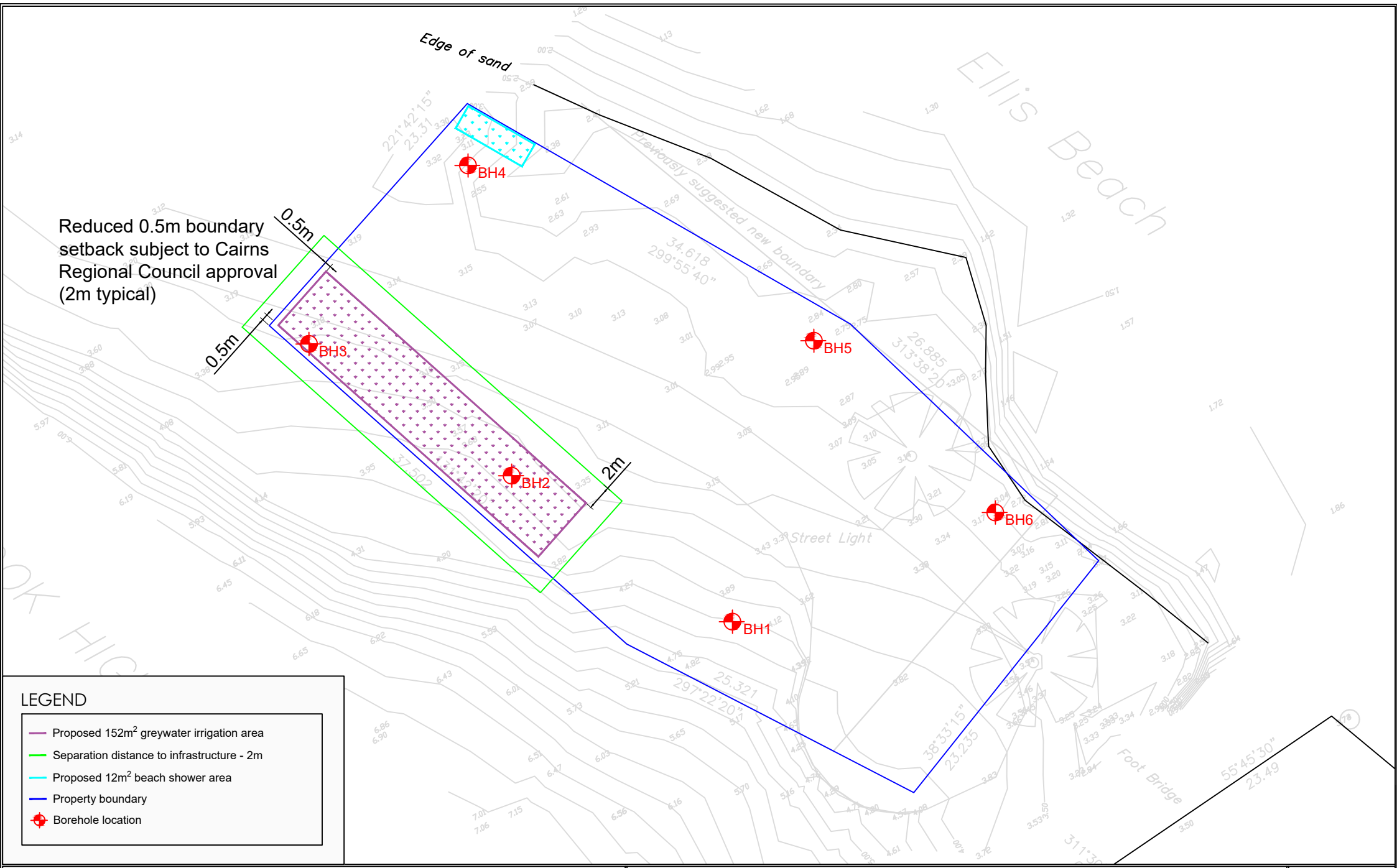
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Appendix A: Figures



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CLIENT: Ellis Beach Surf Life Saving Club Inc.

SITE: Proposed Ellis Beach Surf Life Saving Club - Captain Cook Highway, Ellis Beach, QLD

PROJECT REF: P3C22.087

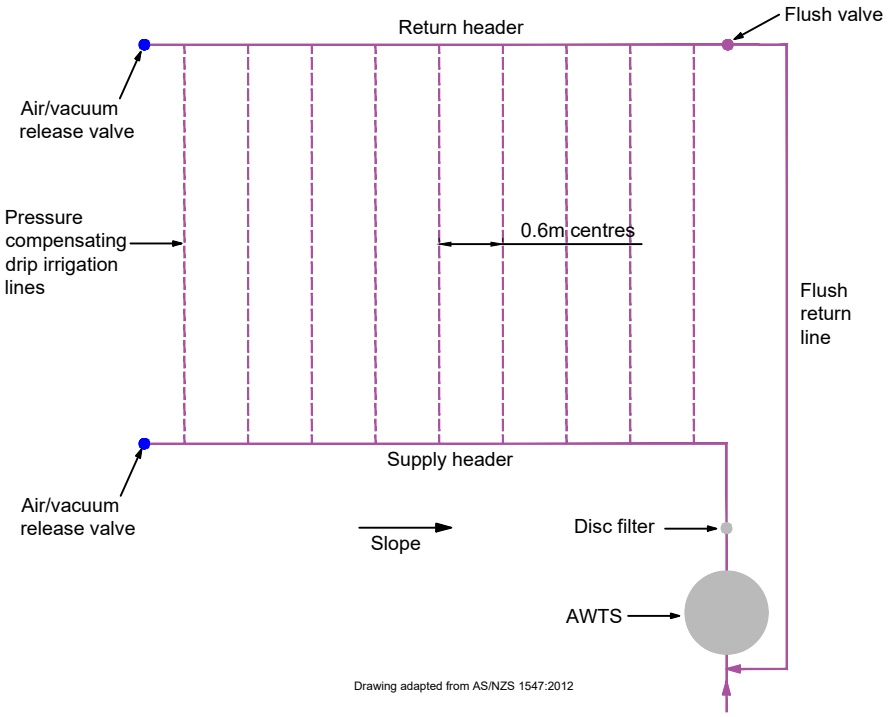
Drawn by: David Bayel Date: 12 January 2023 Survey Plan Source: Robert Bass Surveying

FIGURE 1: Draft on-site wastewater layout

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Appendix B: Licensed bore search results

TYPICAL LAYOUT OF SUB-SURFACE IRRIGATION SYSTEM



SUB-SURFACE IRRIGATION SYSTEM DESIGN NOTES

- The 152m^2 irrigation system must be constructed by a suitably qualified and licensed plumber and drainer following the requirements of AS/NZS 1547:2012 and must be installed to achieve the setback distances provided in Section 5 of the preceding report and/or where specified in Figure 1.
- A surface water diversion mound or drain must be constructed immediately up-gradient of the land application area to divert stormwater runoff away from the area.
- An in-line filter must be fitted to the pump discharge to prevent solids being carried into the irrigation system and to facilitate system servicing. The performance of the pump must be suited to the hydraulic characteristics of the irrigation system.
- The irrigation system must be constructed using pressure compensating drip irrigation line. Pressure compensating drip emitter lines and all pipework must be purple in colour to indicate the presence of wastewater effluent.
- The irrigation laterals must be permanently buried at a depth of 100mm below the finished ground surface at maximum spacings of 600mm.
- All distribution pipework must be purple in colour and installed at a minimum depth of 150mm below the ground surface. The pipes must be permanently buried and fixed and their presence indicated with underground marking tape.
- The irrigation system must include vacuum and air release valves to prevent the ingress of soil into the system under negative pipeline pressures. Flush valves must be installed at the end of each drip-line lateral to allow system maintenance as required. All surface boxes must have purple coloured lids to indicate their use for wastewater.
- The irrigation design and sizing are based on sandy loam soils being present throughout the application area. Existing fill materials and bitumen that partially encroach on the area must be removed and replaced with good quality sandy loam during construction. The area should be graded to provide a level surface throughout prior to the installation of the irrigation system.
- The boundaries of the application area must be fenced to prevent animal and human access to the area.
- The land application area must be densely planted with suitable tropical, water tolerant species to provide nutrient removal during active growth periods.

CLIENT: Ellis Beach Surf Life Saving Club Inc.

SITE: Proposed Ellis Beach SLSC - Captain Cook Hwy, Ellis Beach, Queensland

PROJECT REF: P3C22.087

Drawn by: David Bayel Date: 12 January 2023

FIGURE 2: Preliminary land application area design

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PO Box 4372 Robina Town Centre, QLD 4230

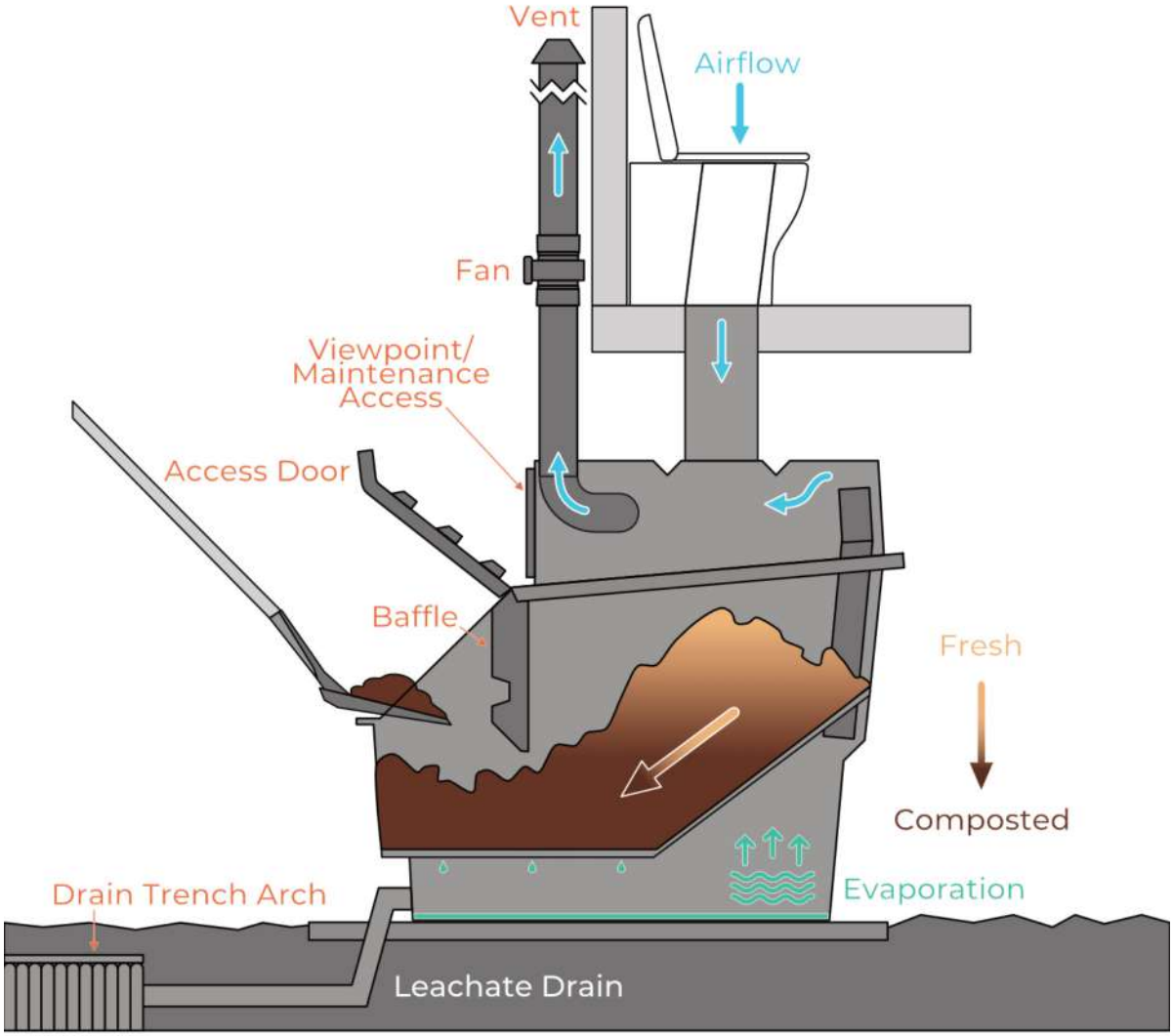
Appendix C: Clivus Multrum specifications

CLIVUS MULTRUM

For over 40 years Clivus Multrum™ has been designing and manufacturing waterless composting toilets for the Australian and New Zealand market. Originally developed in Sweden in the 1930's, Clivus Multrum™ composting toilets were the first composting toilet designs in the world to find commercial success.

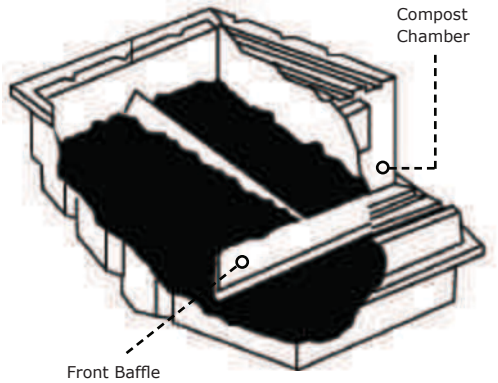
CONTINUOUS COMPOSTING SYSTEM

Clivus Multrum CM8 Next Gen, CM14 Next Gen, CM20 and CM40 Next Gen



HOW DOES IT WORK?

The Clivus Multrum CM tank system is based on a "Continuous" composting process in one large tank. As the organic material decomposes it will reduce in volume by up to 80%. The compost pile is therefore always 'shrinking in the middle' whilst new material is being added to the top and finished compost is removed from the bottom front section of the tank.



AUSTRALIAN MADE AND OWNED

FEATURES AND BENEFITS:

- Continuous composting system results in minimum maintenance
- Designed and manufactured in Australia
- New design with a leachate storage feature, resulting in a reduced likelihood of blockage within the drainage system.
- The sloped design makes the composting process more efficient.
- Excellent high capacity alternative to sewerage
- Proven track record of over 40 years
- Certified to AS/NZS 1546.2-2008 standards

PACKAGE INCLUDES:

- Fully assembled composting tank
- Standard waste chute with dektite
- Porcelain palisade pedestal with soft close seat*
- Ventilation and drain kit*
- Installation kit with all components
- Starter pack of consumables included
- Easy to follow installation, operation & maintenance manual

SOLAR OPTION:

40W solar package or commercial solar package available to purchase.

SPECIFICATIONS:

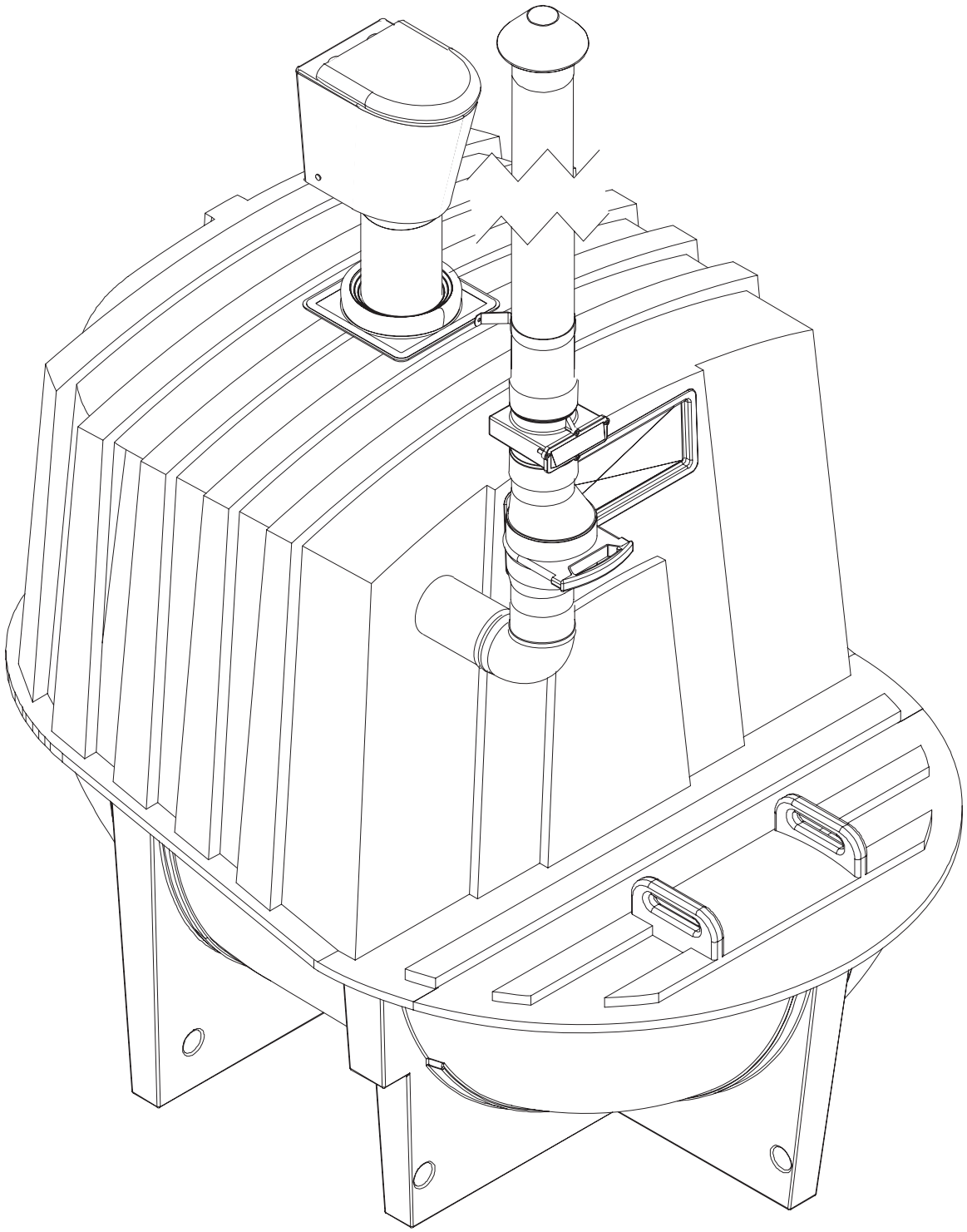
	CM8 Next Gen NEW	**CM14 Next Gen** NEW	**CM20**	**CM40**
				
Capacity Full time	5-7 people	9-19 people	13-28 people	27-28 people
Uses	Daily | 20 visits (average) Annual | 8000 visits (approx.)	Daily | 38 visits (average) Annual | 14000 visits (approx.)	Daily | 55 visits (average) Annual | 20000 visits (approx.)	Daily | 110 visits (average) Annual | 40000 visits (approx.)
Power Usage	12V 5W	12V 5W	240/24/12V	240/24/12V
Water consumption	Waterless	Waterless	Waterless	Waterless
Unit dimensions mm	1550 L 1200 W 1300 H	2135 L 1740 W 1200 H	2390 L 1200 W 1630 H	2129 L 1740 W 1897 H
Underfloor clearance mm	Min. clearance under floor = 1350	Min. clearance under floor = 1260	Min. clearance under floor = 1680	Min. clearance under floor = 1850
	Min. clearance below joists = 830 Max. buried depth = 550	Min. clearance below joists = 475 Max. buried depth = 720	Min. clearance under floor if buried = 1410 Max. buried in ground at front = 270	Min. clearance under floor if buried = 1400 Max. buried in ground at front = 720
Max. fixtures	1 pedestal	2 pedestals	2 pedestals +1 urinals	4 pedestals +2 urinals
Warranty ROTO MOULDING COMPONENT	10 years warranty	10 years warranty	10 years warranty	10 years warranty
Applications	Sustainable off-grid living residences Small homes Holiday houses Walking trails Tiny houses Remote work stations	Larger households with more than one toilet and small public facilities especially where two pedestals are required	Larger homes with more than one toilet and small to medium-sized public facilities, especially where 2 pedestals and a urinal are required	Medium to high usage public facilities e.g. roadside stops and national parks

* Note pedestal, vent and drain kit for CM20 and CM40 are sold separately.

CM40

INSTALLATION MANUAL

AUS | NZ



Certified Product™
Australian Standard
Lic No.SMKH25591
AS/NZS 1546.2
SAIGlobal

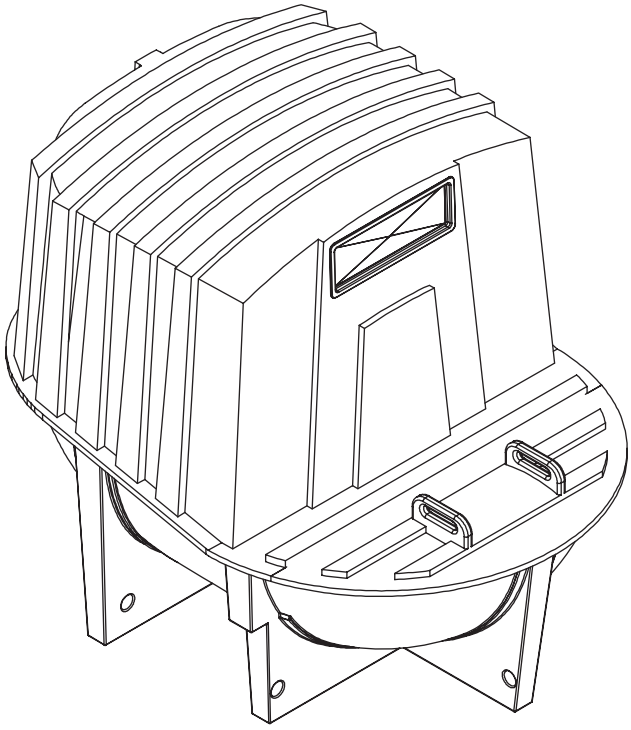
clivus multrum
WATERLESS COMPOSTING TOILETS

IMCM-40.090522

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CM40 TANK ITEMS



1x CM40 TANK



1x MAINTENANCE RAKE

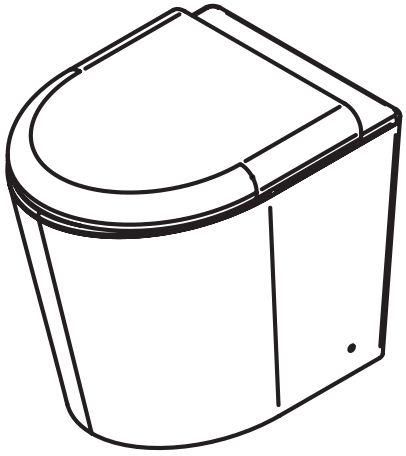


1x SILICONE SEALANT



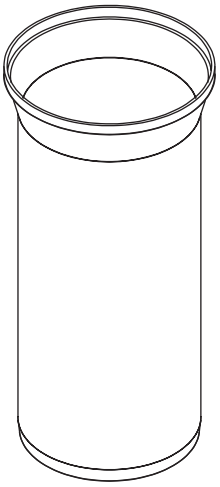
1x 'HOW TO USE' SIGN

PEDESTAL ITEMS



1x PEDESTAL & TOILET SEAT

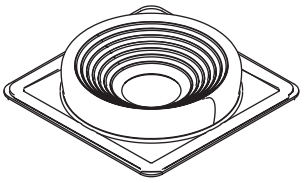
(Type and quantity dependent on customer requirements)



1x TOILET CHUTE



16x ROOFING SCREWS

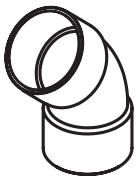


1x TOILET CHUTE COLLAR

DRAIN ITEMS

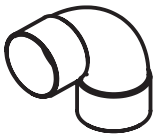


1x LIQUID DRAIN PIPE CONNECTOR 50mm

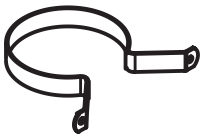


2x 45° BEND 50MM

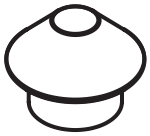
VENT ITEMS



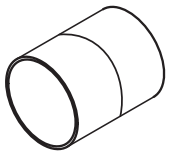
1x 90° BEND 150mm



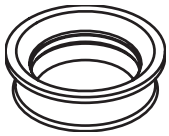
2x VENT SUPPORT BRACKETS & 4x SCREWS



1x VENT COWL 150mm



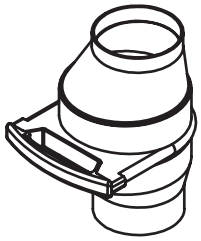
3x SLIP JOINERS 150mm



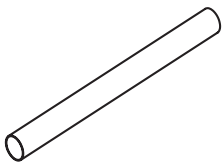
1x WALLACE SEAL 150mm



2x PIPE REDUCER 150-100mm

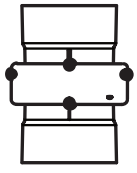


1x MOZZIE STOPPA (with Pipe Adapters)

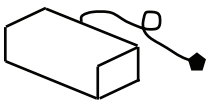


4x VENT PIPE SECTIONS 150mm OD 1000mm Long

ELECTRONIC VENT ITEMS:

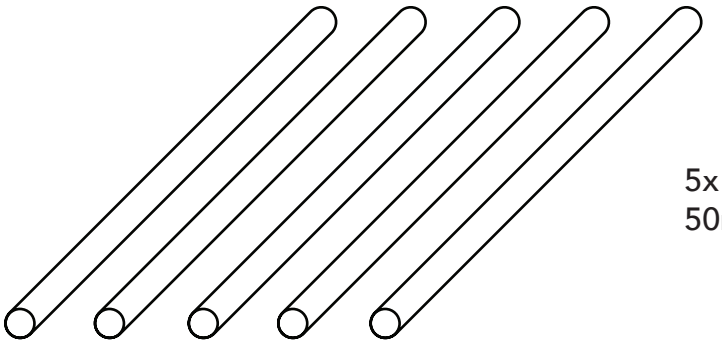


1x FAN IN HOUSING



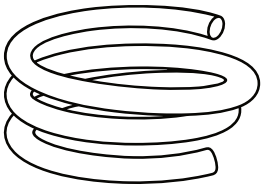
1x TRANSFORMER

OPTIONAL ITEMS FOR BURIED ANCHOR SYSTEM ONLY

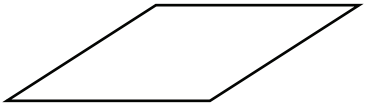


5x FRP PIPE
50mm OD 300mm Long

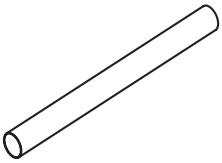
OPTIONAL ITEMS FOR LEACHATE DRAIN



1x SLOTTED DRAIN COIL
100mm OD 3000mm Long

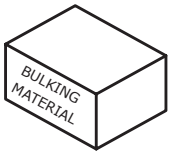


1x FILTER CLOTH



1x PVC DRAIN PIPE
50mm OD 1000mm Long

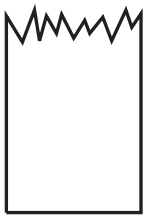
CONSUMABLES



3x STARTER
BULKING
MATERIAL



1x SPRAY BOTTLE



1x BAG OF
MICROBES



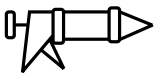
1x 125mL
ENZYMES

TOOLS REQUIRED


Screwdriver (Philips/plain)


Spade


Spirit Level

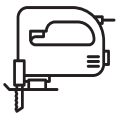

Caulking gun


Scissors/Knife

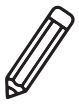

Drill


PPE


Ladder


Jigsaw


Tape Measure


Marker

MATERIALS REQUIRED

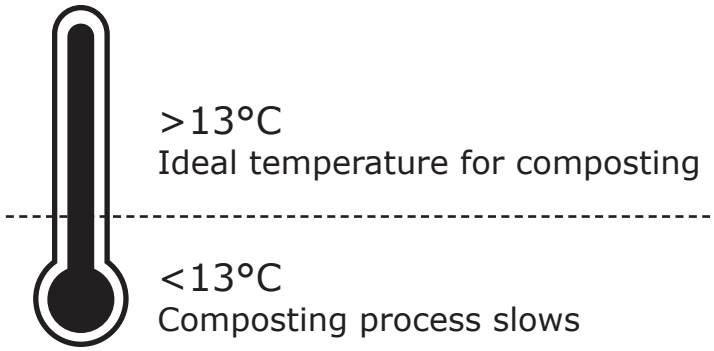
- Water to wet starter material.
- Additional 50mm PVC pipe (coupling and bends if absorption trench is to be located some distance away from tank). Additional pipe bends if needed for vent pipe.
- In poor soil conditions, extra length of trenching arch or agi drain may be required.
- Drainage gravel for leachate drain.

INSTALLATION SUMMARY

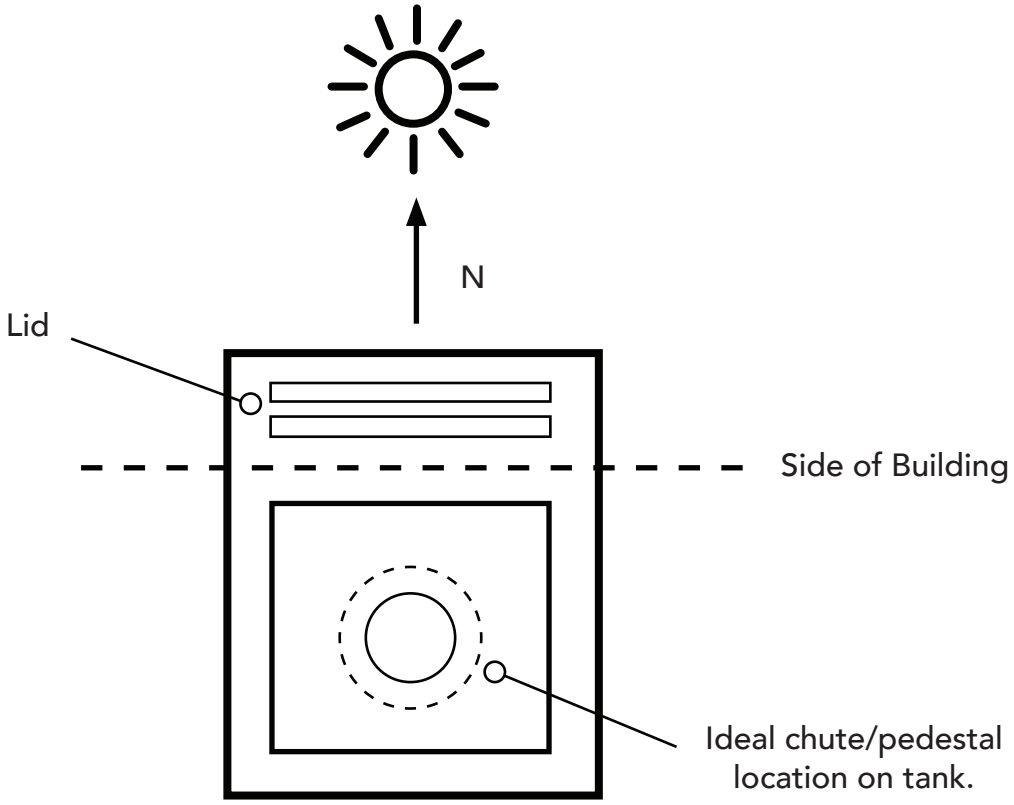
1. Ensure the tank is in a position so that the toilet chute will be perfectly straight over the tank below.
2. Ensure the tank foundation is solid with a sand or crusher dust bed.
3. Mark and cut holes in the floor for the toilet chute.
4. Mark and cut holes in the tank top.
5. Insert toilet chute and pedestal.
6. Install the vent system.
7. Install the liquid end-product drain pipe and absorption/transpiration trench.
8. Connect fan to power source.
9. Check everything is sealed.
10. Place a starter-bed of suitable bulking agent (e.g. wood shavings) in the unit.
11. Wet bulking agent before use of toilet.
12. Add starter bacteria after 14 days of use.

CONDITIONS

Any decomposition process works better where temperatures are warmer. Over the winter months the composting process slows or can even temporarily stop where temperatures in the pile drop below 4°C.



As the composting tank is black, it will absorb heat from the sun. **Simply by installing the compost bin on the north side of the house will make a dramatic difference to the composting process.** In addition, a translucent hatch and enclosure can be installed around the compost bin. In extreme alpine conditions it may be necessary to insulate the tank itself in addition to the above.



PLAN VIEW

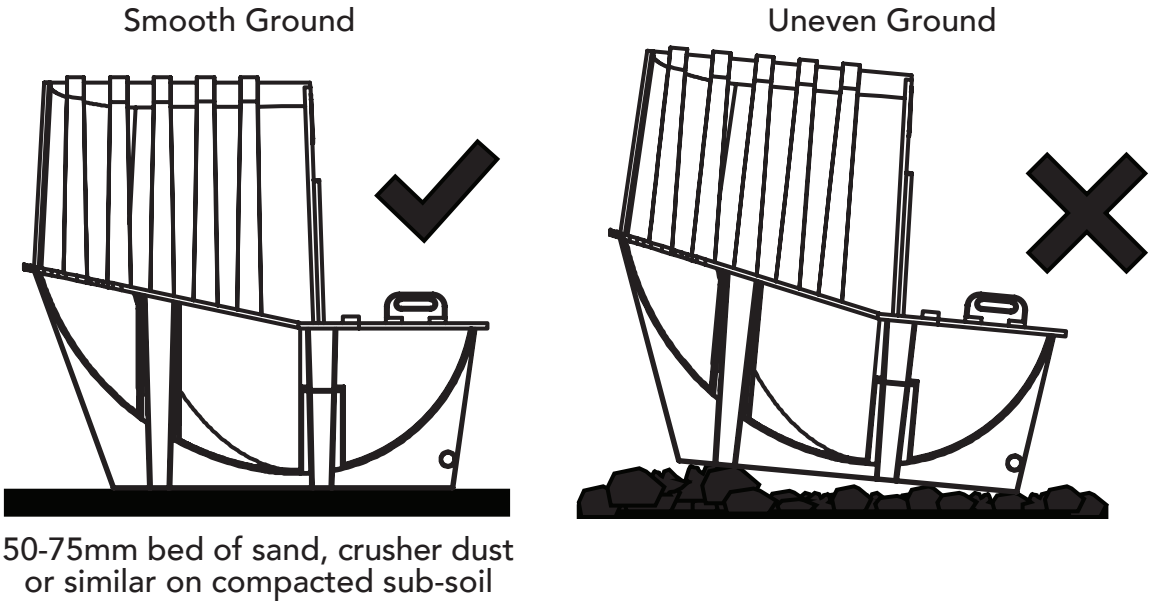
POSITIONING THE TANK

If there is very little room between the top of the tank and the floor of the building, the order of the installation can be changed as follows: Firstly, cut the hole for the pedestal in the floor of the building (refer to page 11, Toilet Chute & Pedestal). Position the tank under the hole and then mark the position of the hole onto the tank. After the tank has been marked, it can be removed from under the building. Cut the hole in the tank and fit the chute collar before placing the tank back into position.

- Check the position planned for the toilet chute. The toilet chute must be positioned over the top of the compost tank. For less maintenance of the compost pile, the optimum location for the chute/s to enter the tank is mid-width, in the rear half of the tank. A clearance of at least 150mm from edge of chute to edge of tank-top is desirable to avoid rapid build up of the pile against the sides.
- Check there are no major support beams, pipes or electrical wire that are in the way of the toilet chute.
- Where mains power is to be used, check that a power point has been installed near the location for the ventilation fan.
- Locate where the excess liquid drainpipe and tench is to go and take this into account when positioning the tank.

TANK SUPPORT

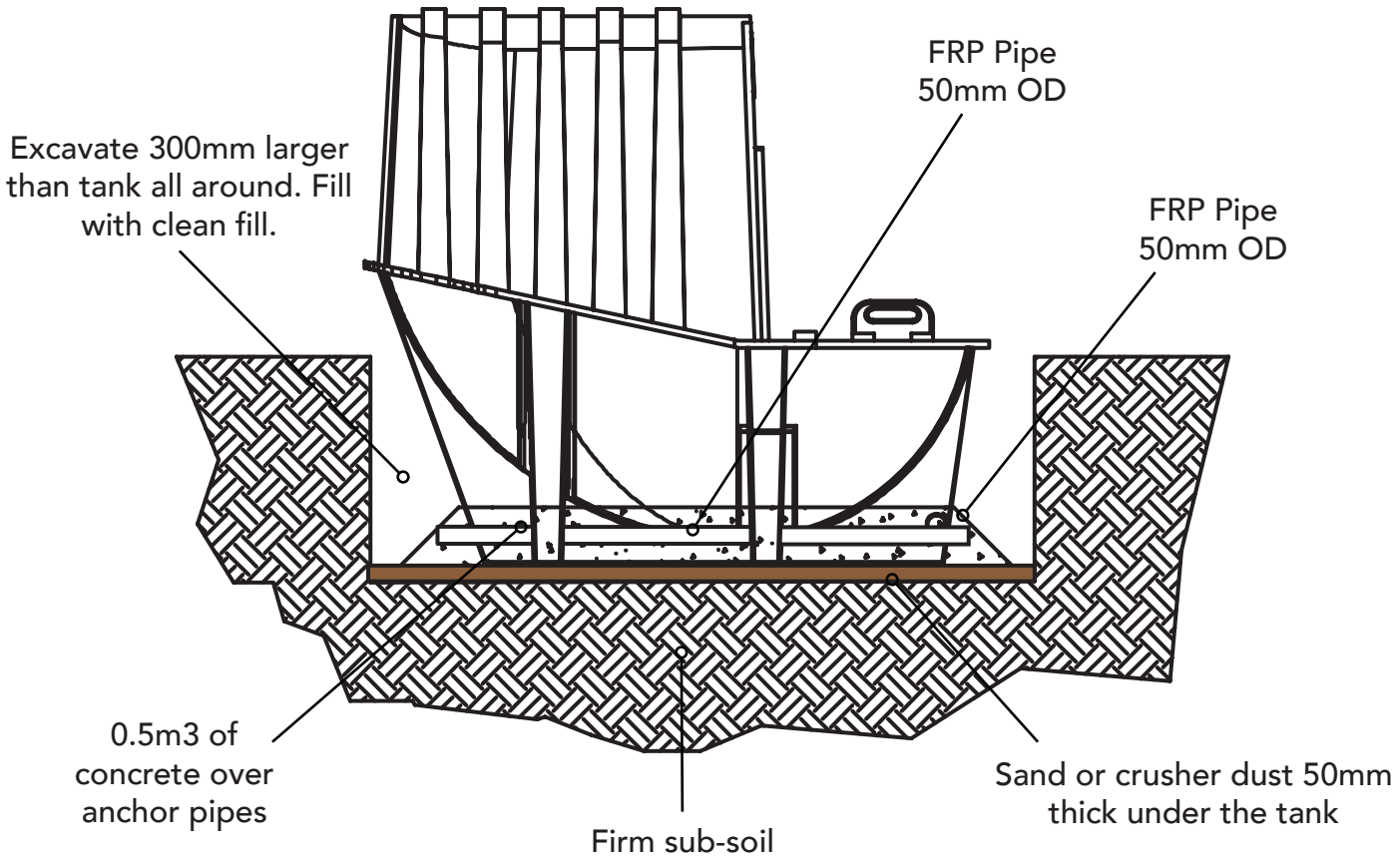
The composting tank must be supported by either compacted subsoil with the tank placed on a bed of sand, or a concrete slab. Insulation between the tank and the concrete slab will reduce heat loss and aid the composting process. **NOTE: The tank and enclosure should be protected from surface and floodwater.**



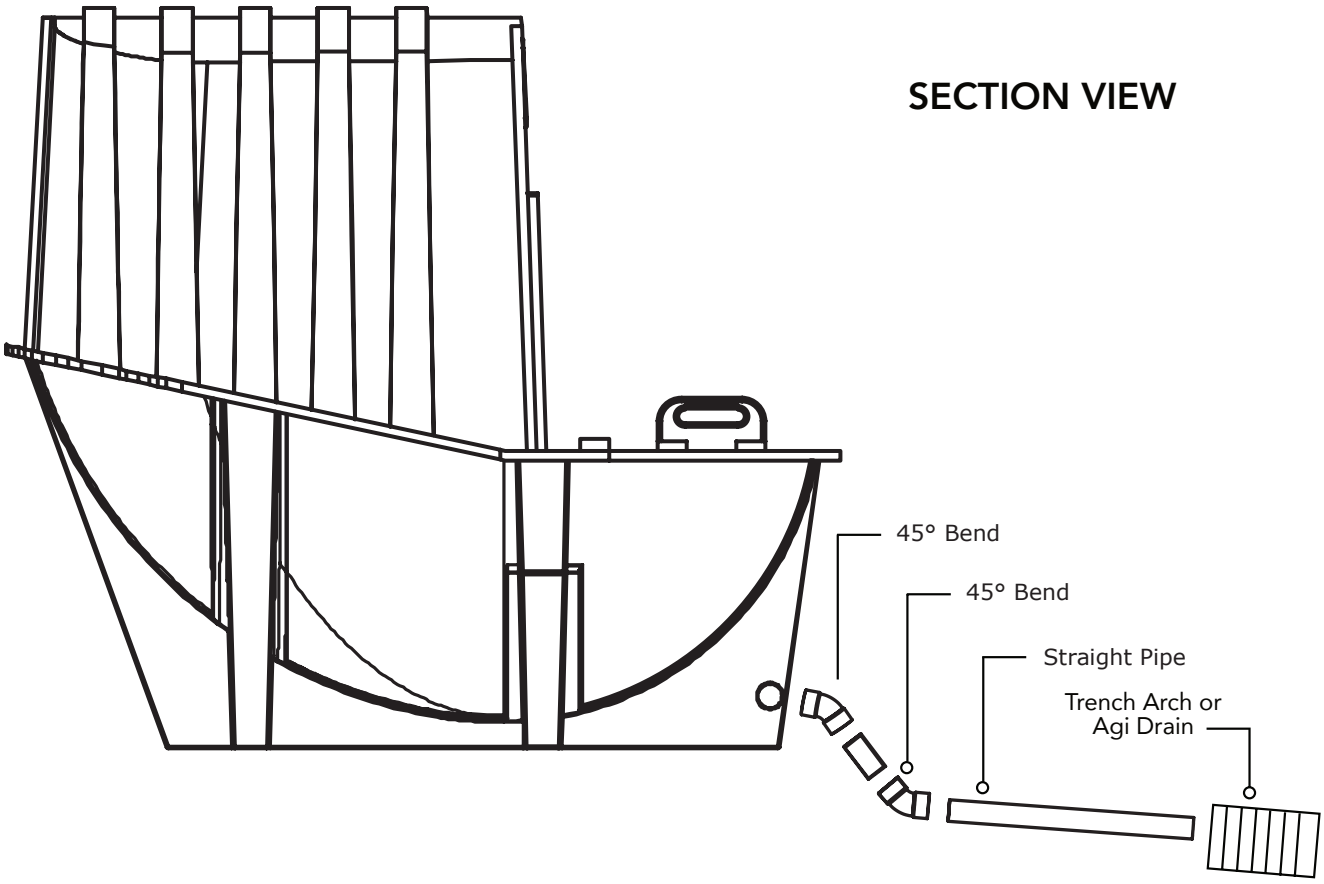
INSTALLATION FOR BURIED ANCHOR SYSTEM ONLY

For a buried system it is required to hold the tank down with galvanised rods. These are slid into the slots provided on both sides and the front of the CM40 tank.

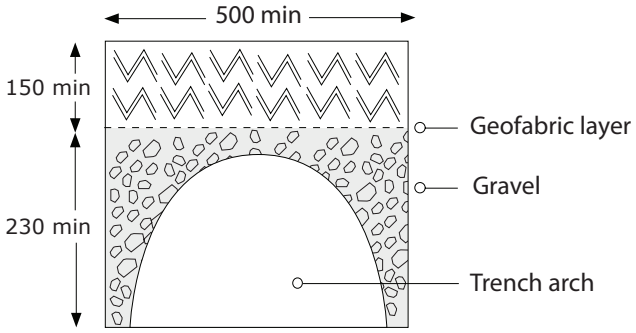
LEFT SIDE VIEW SECTIONAL IN GROUND



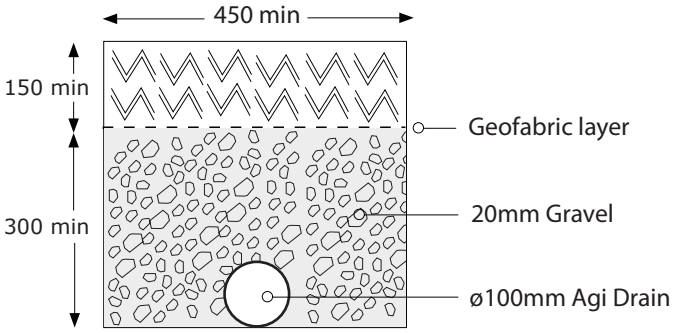
EXCESS LEACHATE DRAIN INSTALLATION (OPTIONAL)



Trench Arch Drain



Agi Drain

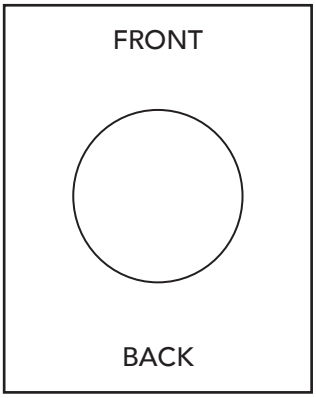


ALTERNATIVE EXCESS LEACHATE DRAINAGE

PLEASE CONTACT OUR SALES STAFF ABOUT ZERO DISCHARGE UNITS.

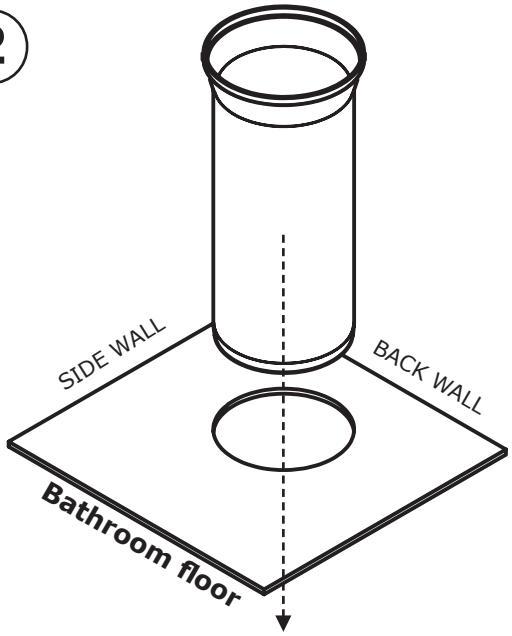
TOILET CHUTE & PEDESTAL

1 Please refer to the Pedestal installation manual for instructions on how to locate the pedestal in your bathroom.



A3 Template to cut chute hole at the correct size (included with pedestal).

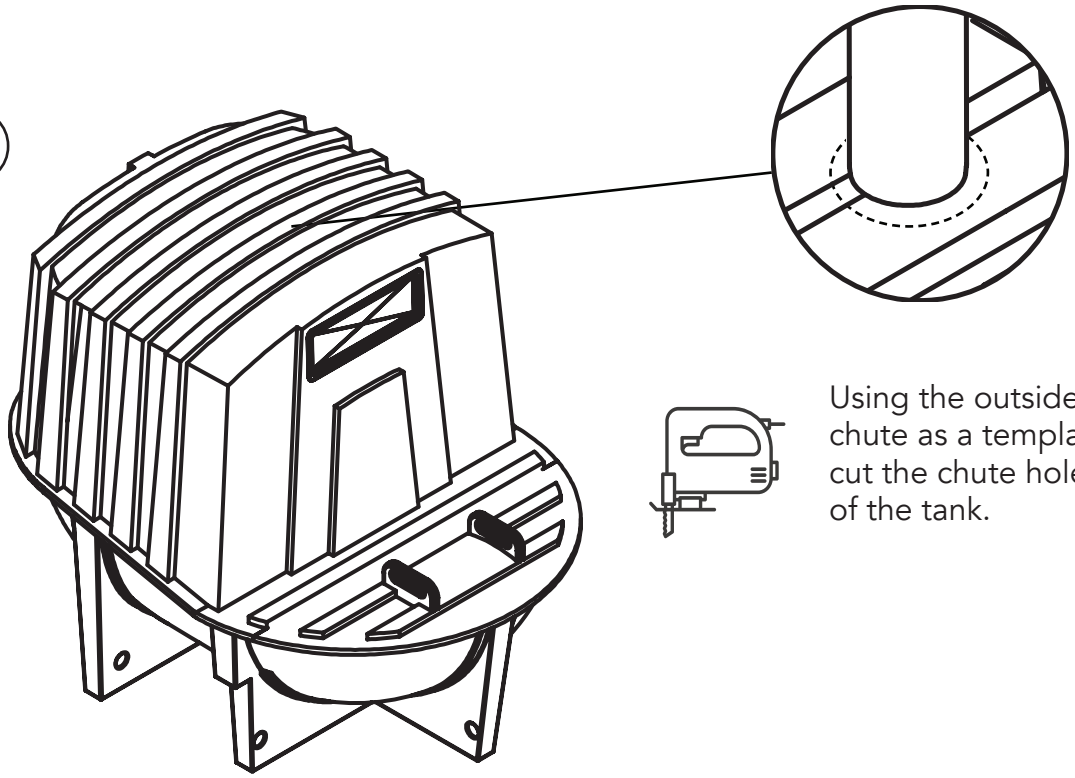
2



< **5mm of sideways play** around the hole.

Note: If the floor of the building is high above the top of the tank a chute extension piece/s may be needed. Extra lengths are available from your supplier. Joints should be screwed with short self-tapper screws, and sealed with silicon. If more than 2 chutes are joined then additional support straps or brackets are needed to support their weight from the building frame, instead of hanging only by the top chute.

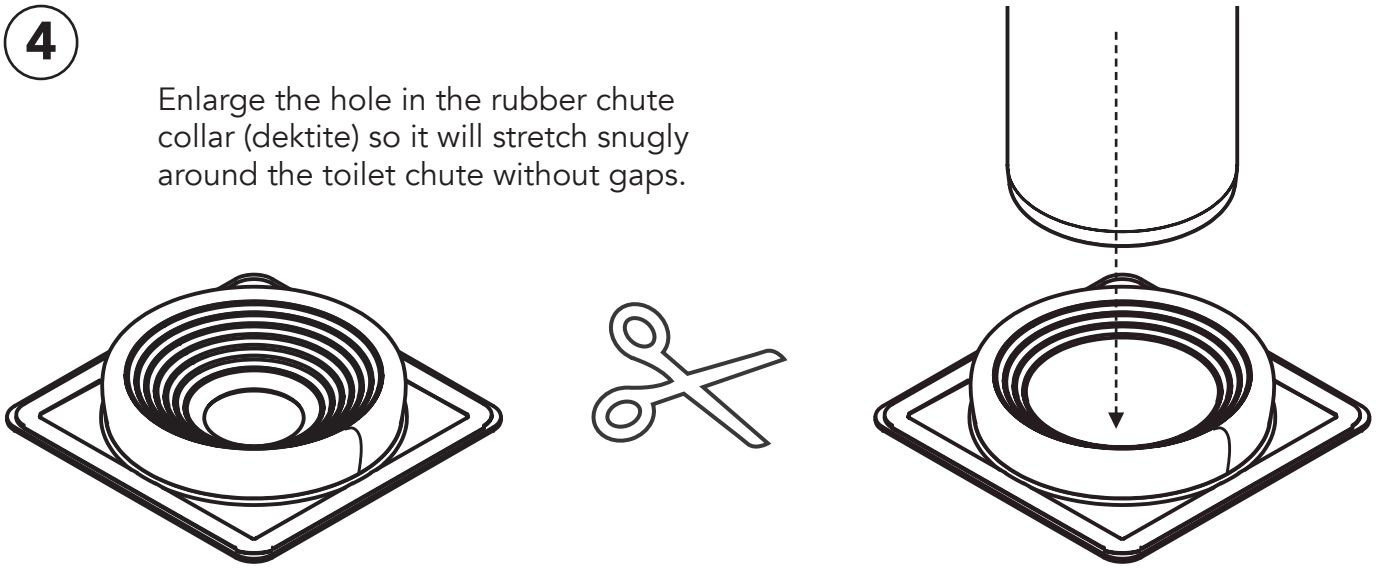
3



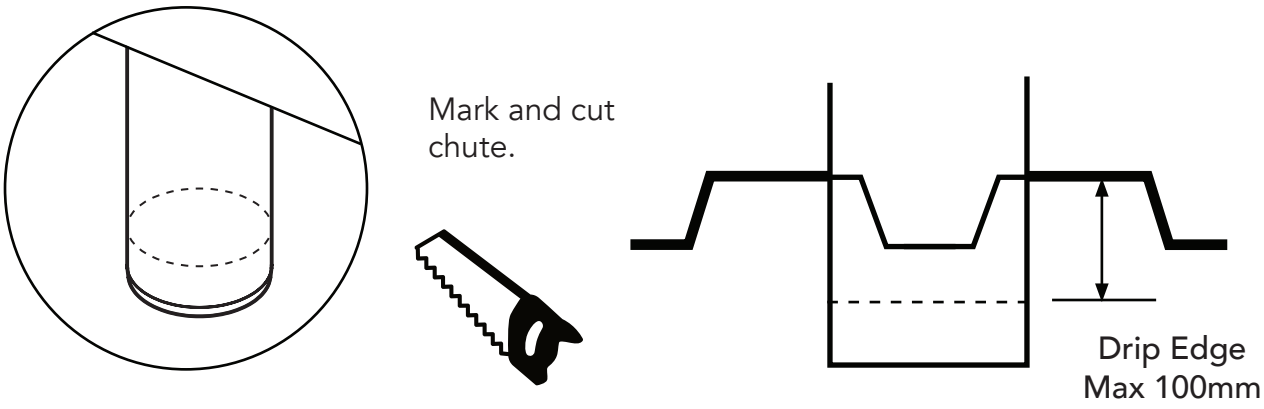
Using the outside of the toilet chute as a template, mark and cut the chute hole into the top of the tank.

4

Enlarge the hole in the rubber chute collar (dektite) so it will stretch snugly around the toilet chute without gaps.

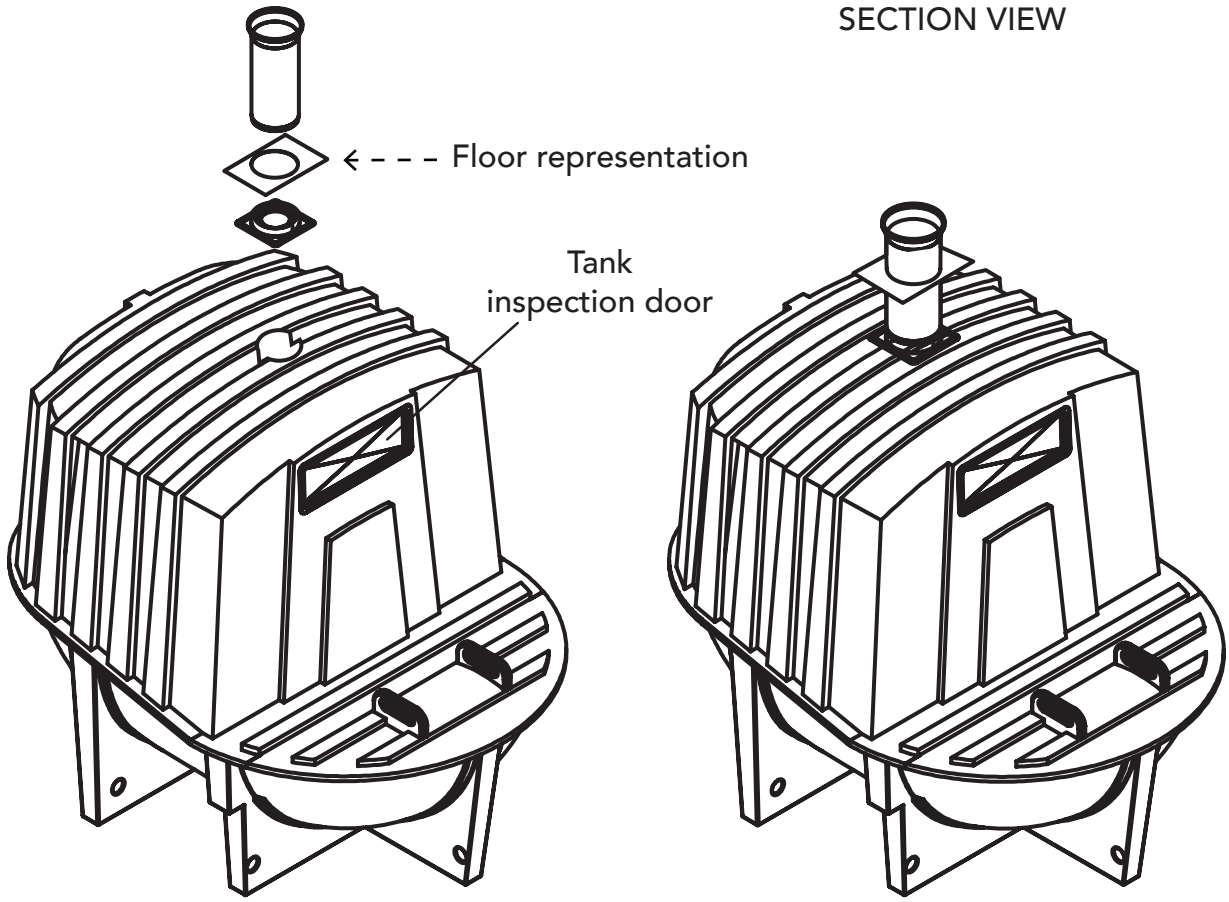


5



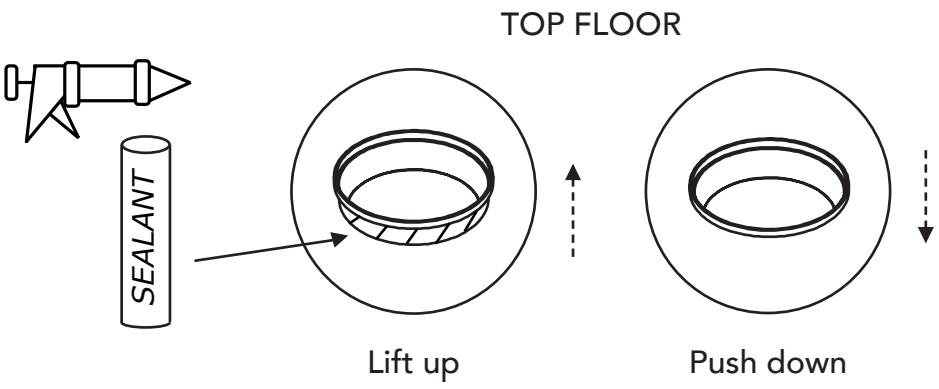
SECTION VIEW

6



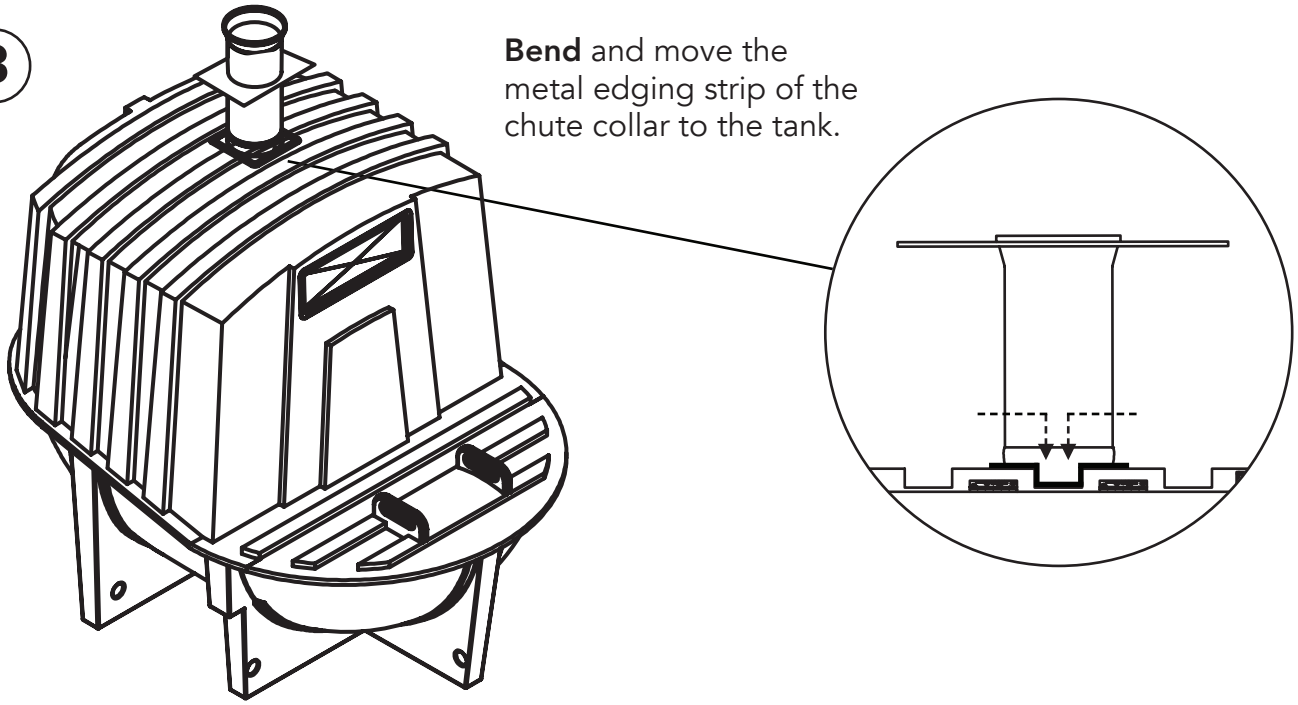
7

Lift the toilet chute slightly and put sealant between the toilet chute and the floor then **press chute down** again to seat firmly onto the floor.

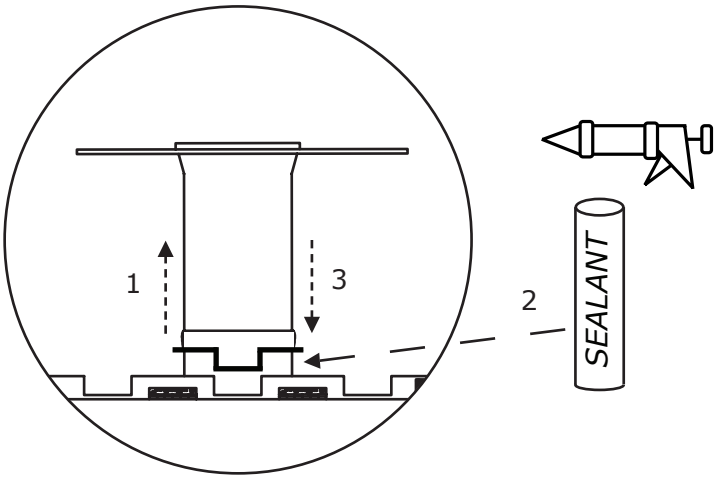


8

Bend and move the metal edging strip of the chute collar to the tank.

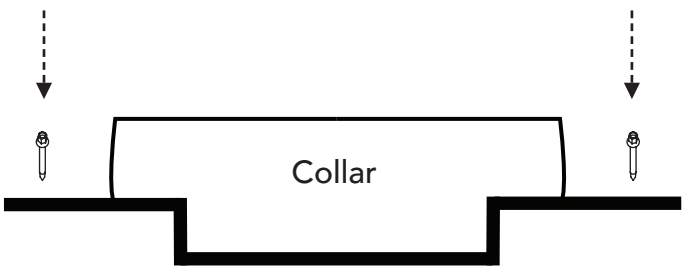


9



Run a bead of silicon sealant around the underside edge of the collar.

Using the 1/2 stainless screw provided, secured the collar of the tank top by screwing through the metal edging strip.



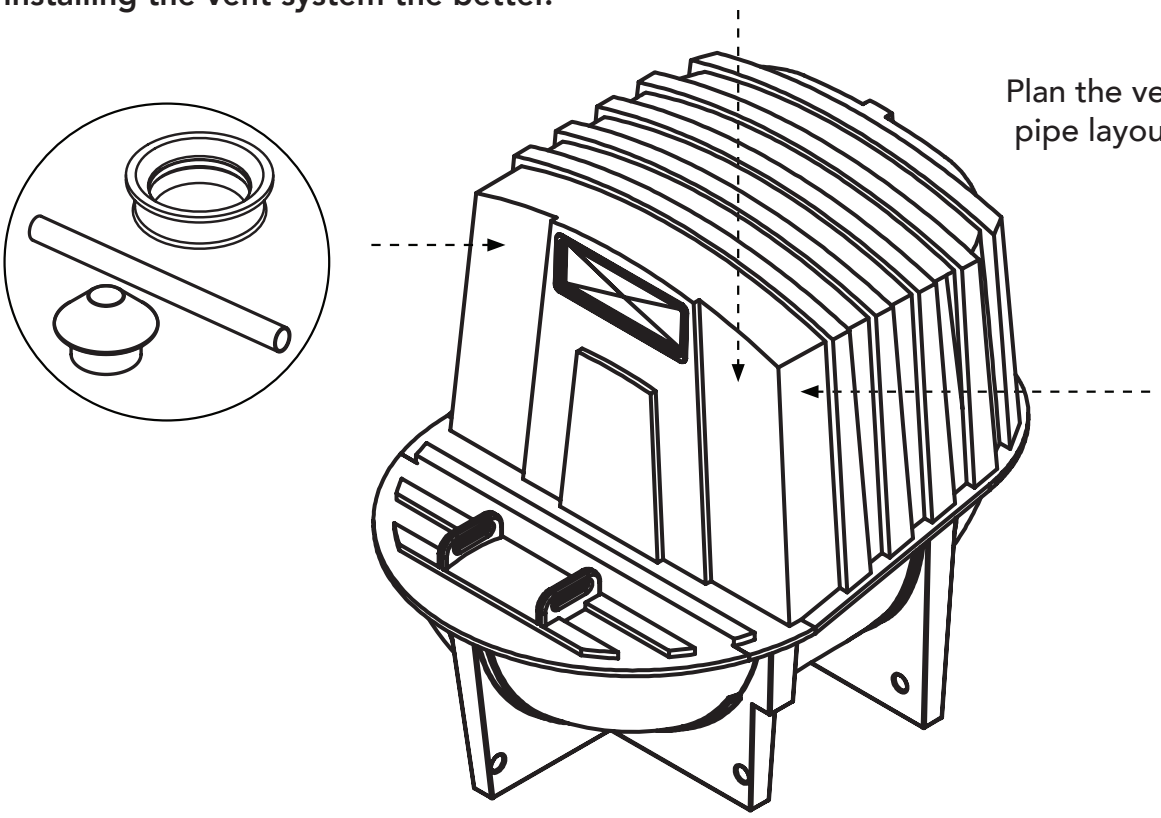
PEDESTAL INSTALLATION

See separate instruction manual for pedestal installation.

INSTALLATION OF VENTILATION SYSTEM

Note: As air flow is essential to the operation of the unit, **the fewer bends that are used when installing the vent system the better.**

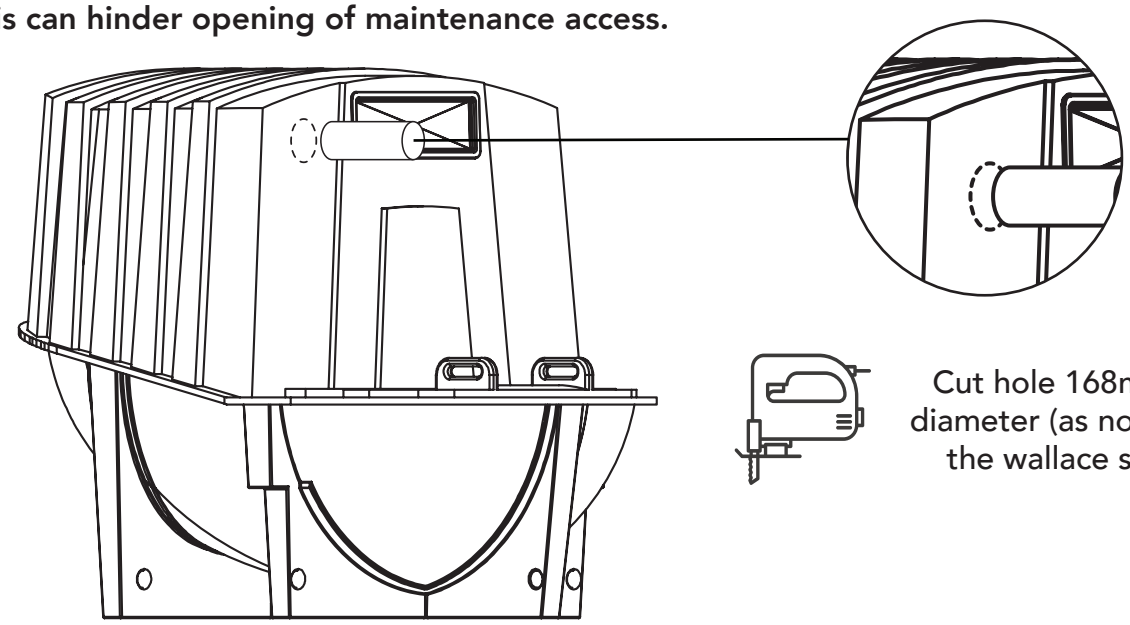
1



Plan the vent pipe layout.

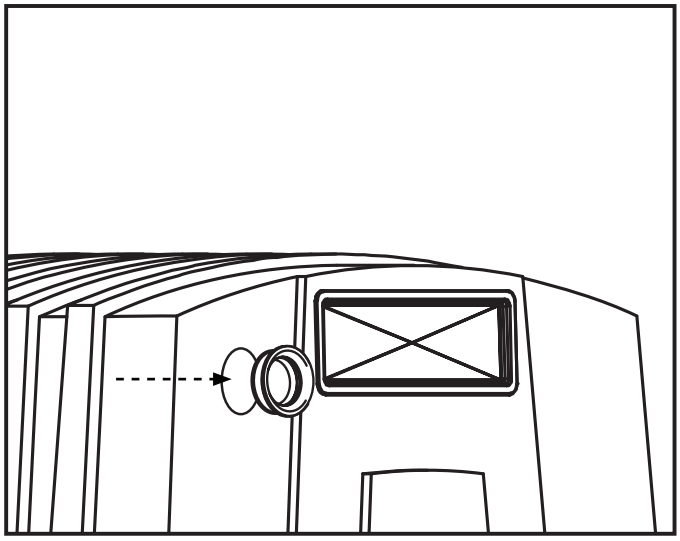
NOTE: The hole for the vent pipe is best at the side of the tank
or along the top edge, as far as practical from the nearest chute entry. Refrain from placing it along the front face as this can hinder opening of maintenance access.

2



Cut hole 168mm in diameter (as noted on the wallace seal).

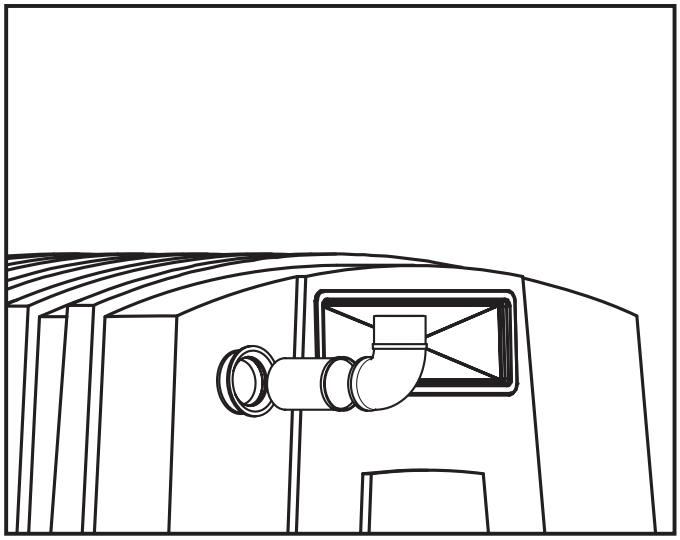
3



Secure Wallace seal into position.

Tip: Putting the wallace seal in hot water for 5 minutes can help when installing the PVC pipe.

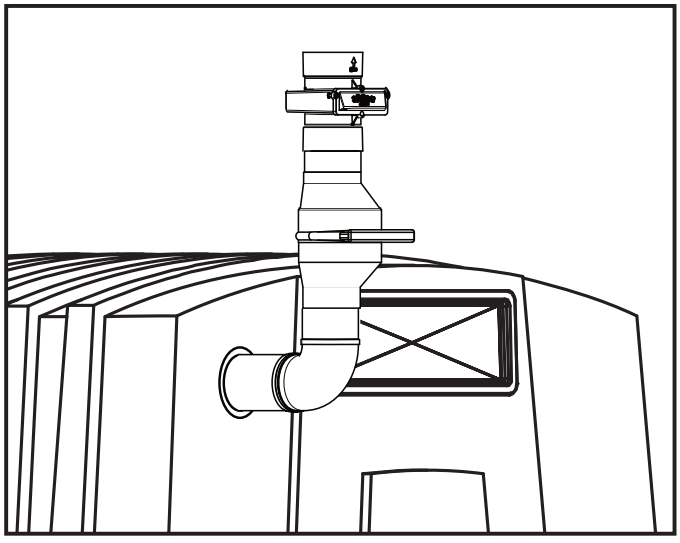
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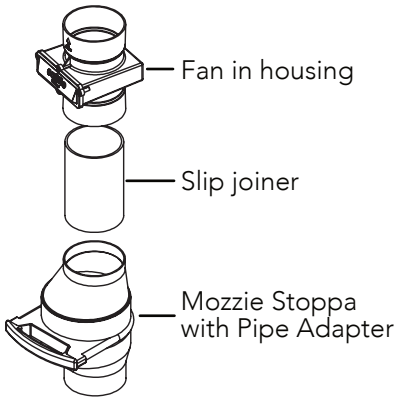


Secure pipe fittings according to building/roofing instructions. Complexity may vary.

Fan Housing

5



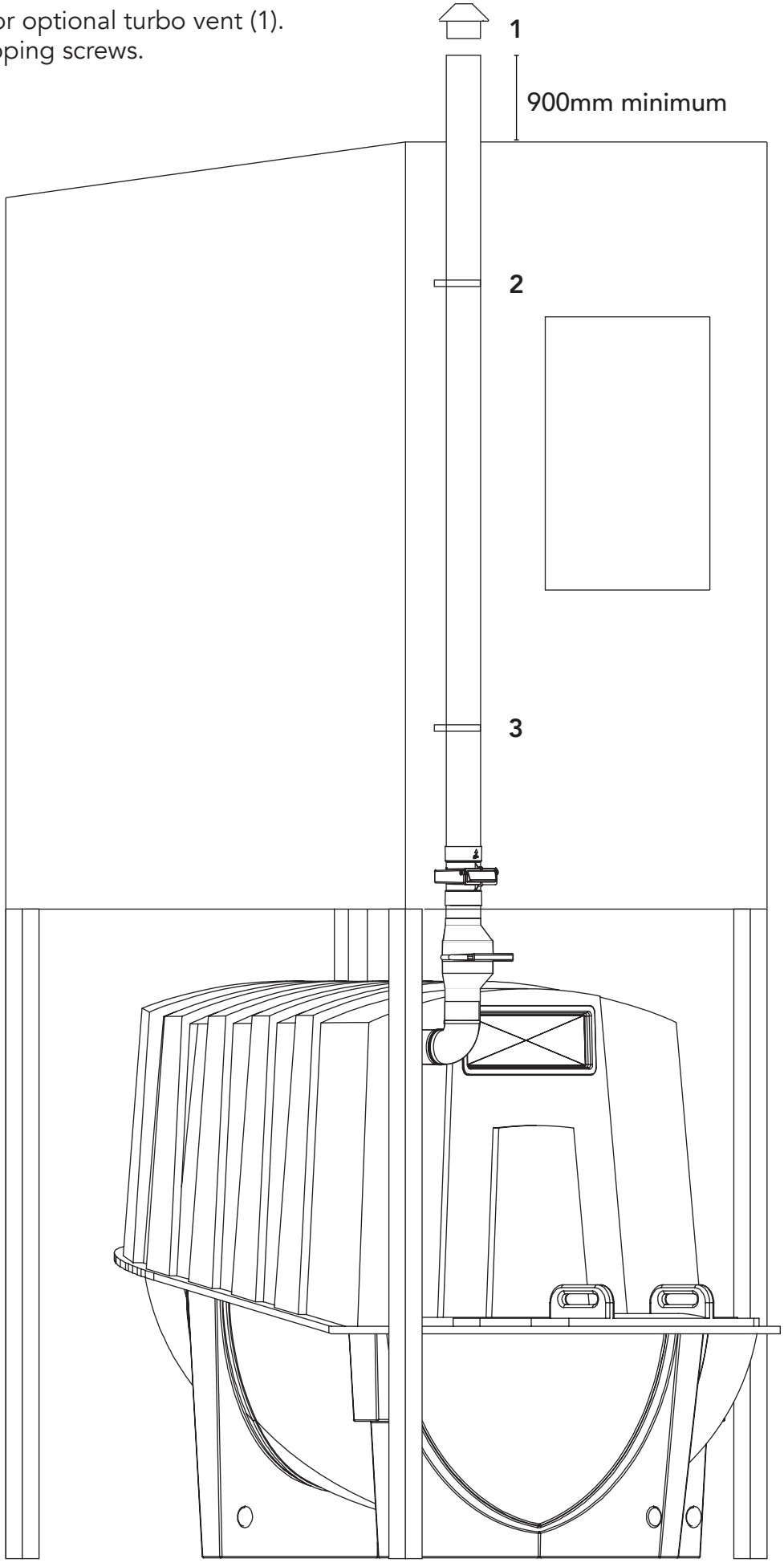


Mount the fan housing and Mozzie Stoppa onto the vent pipe. Position the fan housing so that it can be easily accessed and secure with silicon.

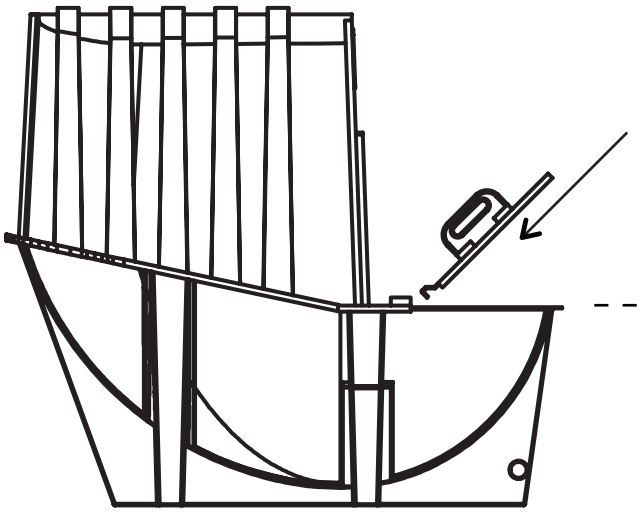
6 Install the vent cowl or optional turbo vent (1). Secure with 3 self-tapping screws.

7

Attach the upper section of the vent pipe. **The pipe should be supported against the wall of the building with the brackets provided (2, 3)**. This configuration will vary depending on location of CM40.

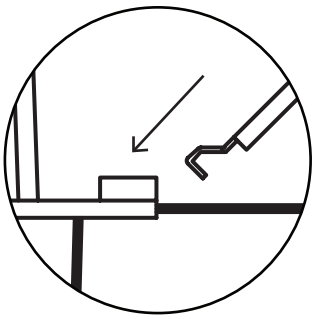


HOW TO USE THE MAIN LID



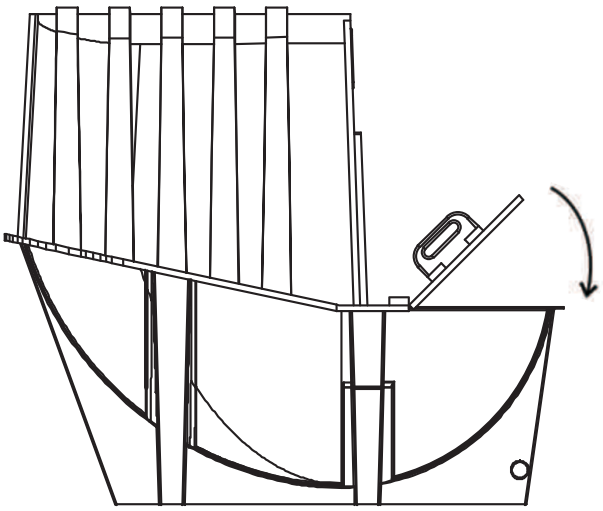
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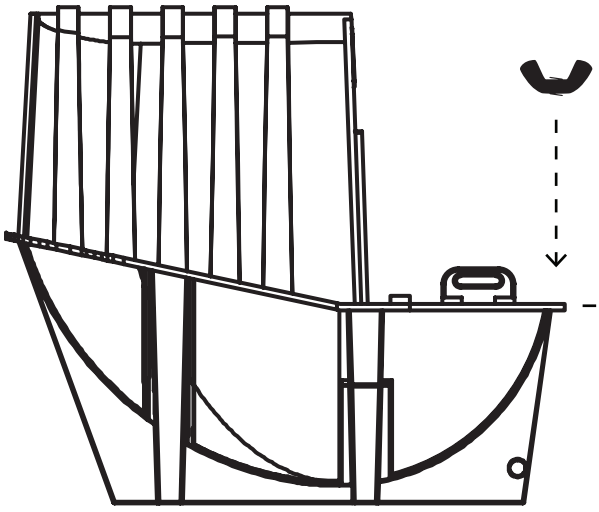
Aline the lip of the lid with the front rib of the Main Top Tank.



2

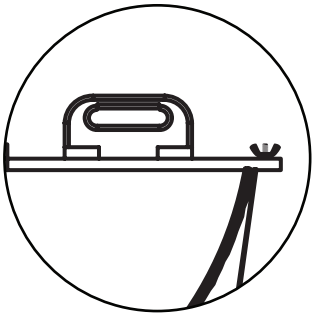
Push the lip under the rib and ensure there is a strong secure fit. Once the lip is secured push the lid down to its final position.





3

Once the lid is in its final position use the two wing nuts to secure the front of the lid.



STARTER-BED OF ORGANIC MATTER

SUITABLE BULKING MATERIAL



Wood shavings



Hemp

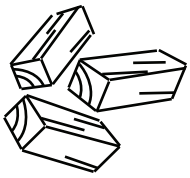


Dry Leaves

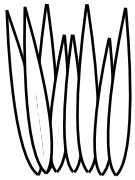


Peanut or coconut husk

NOT SUITABLE BULKING MATERIAL



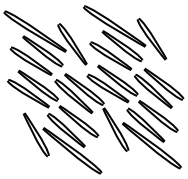
Large wood chips



Lawn clippings

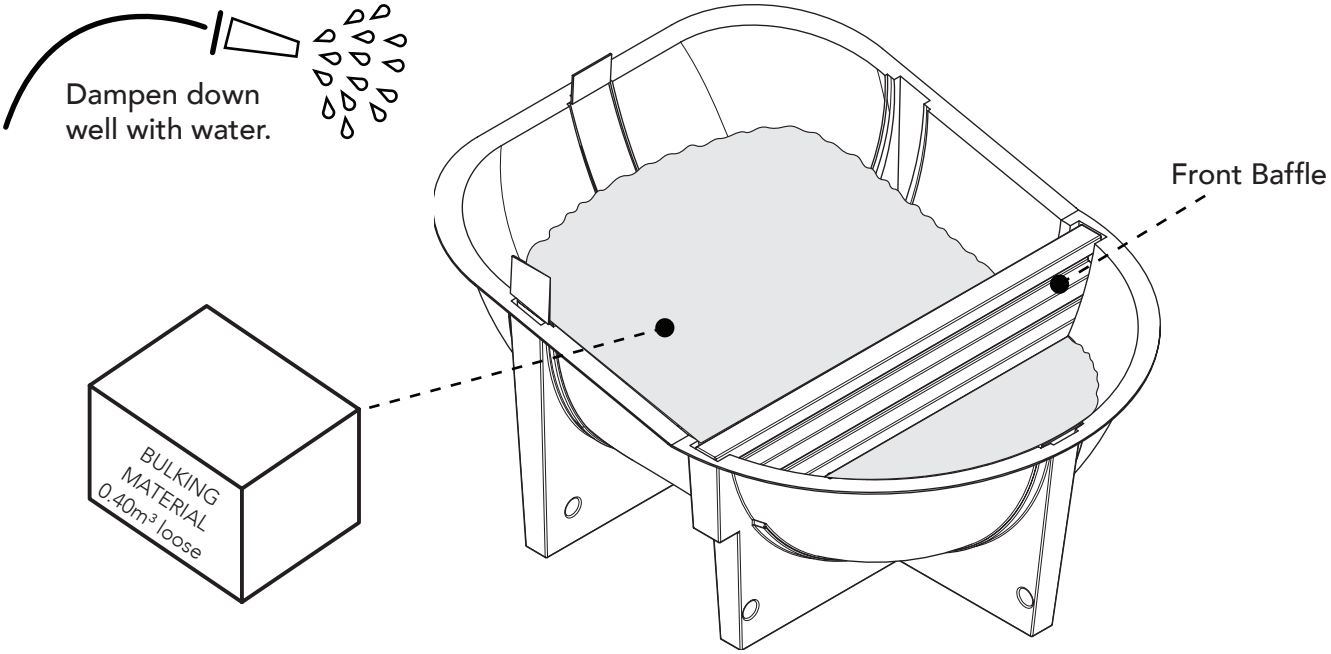


Fine sawdust



Sugar cane mulch

1 Add starter bed of bulking material to underside of baffle.



2



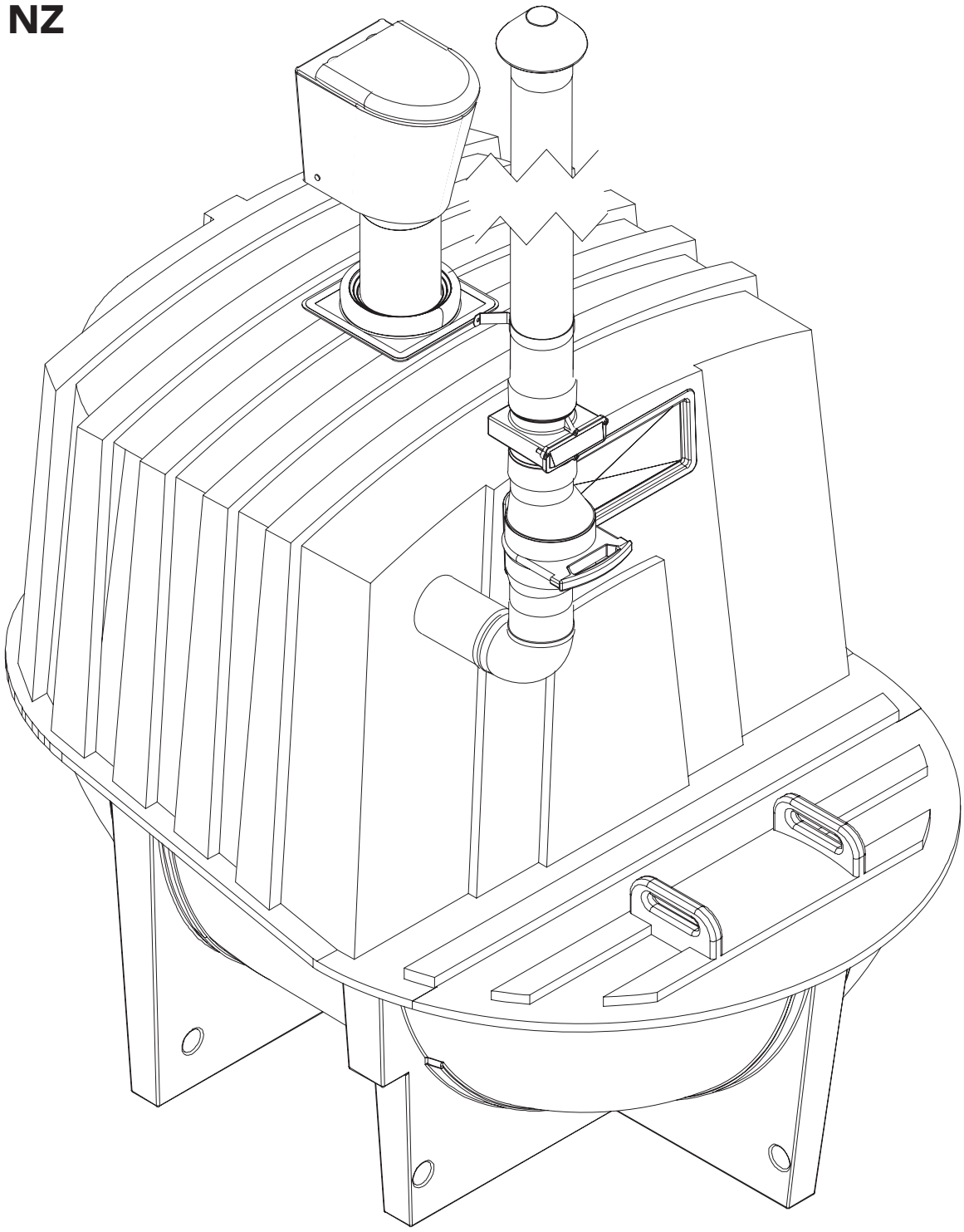
INSTALLATION COMPLETE


clivus
multrum
WATERLESS COMPOSTING TOILETS

CM40

OPERATION & MAINTENANCE MANUAL

AUS | NZ



Certified Product™
Australian Standard
Lic No. SMKH25591
AS/NZS 1546.2
SAI Global

clivus multrum
WATERLESS COMPOSTING TOILETS

OMCM-14.090522

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SAFETY CONSIDERATIONS

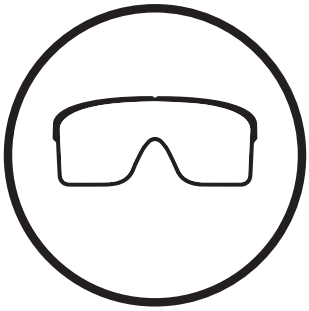
TO BE WORN AT ALL TIMES WHEN SERVICING THE TOILET AND COMPOST CHAMBER.



DUST RESPIRATOR



GLOVES



GLASSES

QUICK SERVICE GUIDE

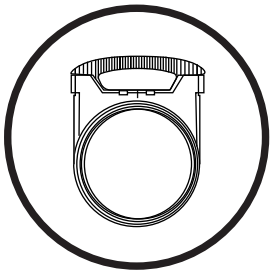
DAILY OR WEEKLY:



Clean fixtures using bio-compatible cleaners



Flush urinal piping using bacterial based cleaner or hot water (for urine diverting pedestal)



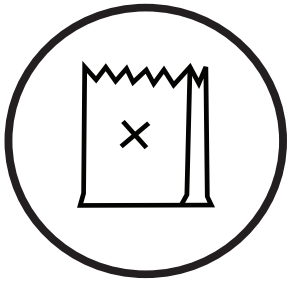
Remove the mesh screen and clean it weekly



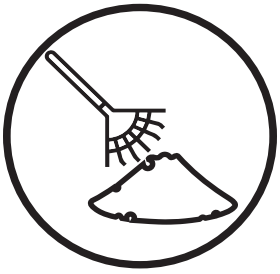
Add bulking agent via pedestal

FOR COMMERCIAL USE	
Option 1: Weekly	1 x Household Bucket/Pedestal
Option 2: Twice Weekly	½ x Household Bucket/Pedestal

MONTHLY:



Add compost enhancing bacteria



Level pile and add bulking agent when cone is 40cm high

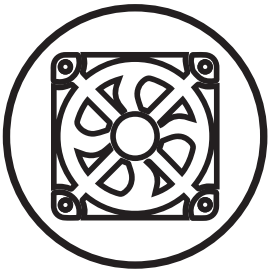


Check pile is moist and crumbly not sodden or dry

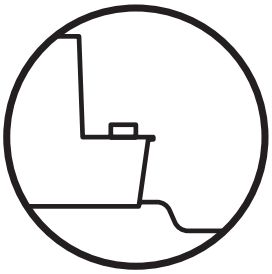
ANNUALLY:



Clear vent system and remove obstructions



Clean fan and ensure correct function



Clean drain line and flush with clean hot water



Remove compost if necessary

STARTER-BED OF ORGANIC MATTER

SUITABLE BULKING MATERIAL



Wood shavings recommended by Clivus Multrum



Hemp

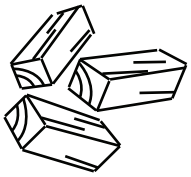


Dry Leaves

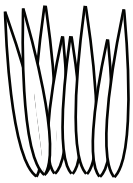


Peanut or coconut husk

NOT SUITABLE BULKING MATERIAL



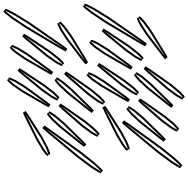
Large wood chips



Lawn clippings



Fine sawdust



Sugar cane mulch

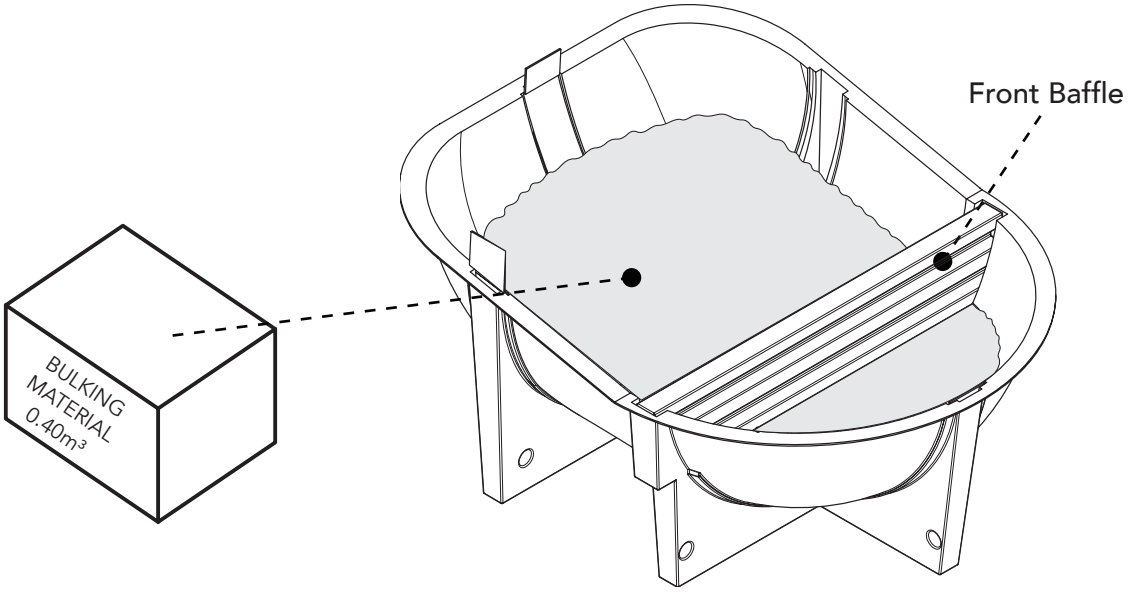
CHOOSING A BULKING AGENT?

Ecoflo recommends the use of wood shavings in your Clivus Multrum system, however if this is difficult to source in your area we recommend any of the following bulking agents with these characteristics:

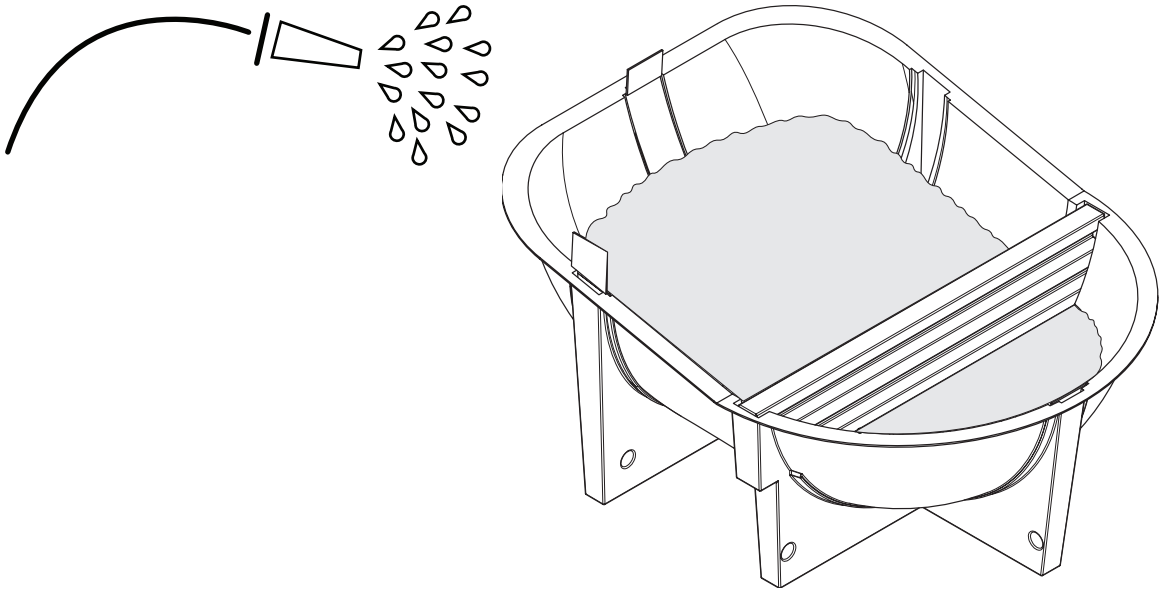
- Dry but readily absorbs moisture
- Has high carbon content greater than 35%
- Does not form a ball or mat when wet
- Traps air and is known to compost well
- Contains no chemical contaminants to affect compost bacteria

OPERATING PROCEDURE

1. This procedure should be followed whenever the tank is completely empty. Add bulking agent into the bottom of the tank spread evenly. Material must come up 50mm behind the bottom edge of the baffle to create a seal between compartments.



2. Dampen the wood shavings with water. This process breaks down the surface tension and allows the bulking agent to begin absorbing the urine as it enters the tank.



3. After normal use for 14 days, starter bacteria can be added. Refer to starter bacteria instructions on packet. Alternative source of bacteria could be to add several buckets full of well composted garden material or commercial compost humus mixed into the top pile.

HOW OFTEN DO YOU ADD BULKING MATERIAL?

FOR COMMERCIAL AND PUBLIC INSTALLATIONS:

The facility should be professionally cleaned at least weekly or twice weekly. When cleaning, bulking agent should be added down the chute.

FREQUENCY	AMOUNT
Weekly	1 x Household Bucket
Twice Weekly	½ x Household Bucket

HOW TO CLEAN

DO

- ✓ Clean inside of pedestal using small amount of water and biodegradable cleaner.

AVOID

- ✕ Harsh disinfectants (eg. bleach, caustic, chlorine, etc.)
- ✕ Chemical toilet waste

CAUTION

- ✕ Items such as disposable nappies and hygiene products
- ✕ Food waste
- ✕ Anything that is inorganic or non-biodegradable

PUBLIC HEALTH CONSIDERATIONS

USE OF END PRODUCT

- The health department requires the end product to be buried under no less than 100mm of top soil, this should be away from where children play.
- Refer to council regulations for further information in your local area around disposal sites.
- It is not recommended to use the finished compost on root vegetables.

IN CASE OF INSECTS

- Insects often appear due to the fan being off for extended periods of time and enter usually through the exit vent. To avoid check to see if the vent fan is functioning.
- Check to see that the top inspection door and bottom access door are on the composting tank are sealing correctly and not left open.
- Power off the fan and spray a pyrethum based insect spray into the pile and let sit for 30 minutes before turning the fan on again. Repeat this step daily over the next week.
- Vinegar flies are usually only active for the first 6 months of a compost tank and this is usually a signal that the compost is too acidic or the starter bacteria is still yet to break down. Check to see if the bulking material being used is recommended as a suitable bulking material in the front of this manual.
- If there is still acidic odor apply a generous amount of garden lime to the pile and rake according. This is to be used as a one time solution only (can be sourced from local nurseries). This should help reset the PH balance of the compost.

More information on dealing with vinegar flies can be found at: ecoflo.com.au/blog/dealing-with-fruit-vinegar-flies-around-your-composting-toilet

MAINTENANCE SCHEDULE

COMPOST PILE

- Inspect the compost chamber for any foreign objects.
- If the pile is forming a cone shape 40-50cm in height, this should be leveled.
- The consistency of the compost should be porous and crumbly with no large clumps.
- The pile should appear moist but not sodden.
- If too wet apply more bulking agent.
- If too dry apply a light spray of water to the pile.
- Add more composting bacteria during periods of high usage.

VENT SYSTEM

- Ensure the vent system is clear of debris and obstruction (cobwebs).
- A slight draft should be felt on the back of a wet hand over the pedestal to ensure proper function of the vent system.
- If installed remove and clean Mozzie Stoppa.

LIQUID DRAIN (NOT INCLUDING PUMP SYSTEMS)

- Ensure this is free of obstructions any more than 3-4cm of liquid buildup in the chamber is cause for concern, refer to troubleshooting guide.

REMOVING FINISHED COMPOST

- It is not required to remove compost until the leveled waste has reached the bottom of the inspection door. Remove a wheelbarrow full of compost and leave material up to the underside of the baffle.

TROUBLESHOOTING

ODOUR IS PRESENT IN THE TOILET ROOM

A properly functioning Clivus Multrum system should not produce odors in the toilet room.

- Check that the power source is connected and voltage is set to 12V and power point is switched on.
- Check that fan vent is operating correctly and that the vent pipe is free of blockages or dense cobwebs.
- Ensure the fan has been installed so the draw of the fan is upward into the vent and not blowing downwards into the compost pile.
- Check that open windows and doors are not 'sucking' air out of the toilet room due to outside air turbulence (venturi effect).

ODOUR IS PRESENT OUTSIDE THE TOILET BUT NOT INSIDE THE TOILET ROOM

Some odor from the top of the vent pipe may occur, but it will rarely be detected at ground level.

- Ensure that the vent pipe is installed correctly and that it clears the roof by 60cm.
- If the house is in a very windy area you could be receiving a swirling effect which is pushing the ventilation back down towards the ground. In this case, extend the vent pipe into the clear air flow.
- If the vent is in the wind shadowing of near by trees or buildings then odor may settle back to the ground, extend the vent pipe into clear air flow.
- Check that all joints in the vent pipes are sealed and are not leaking. Also check for cracks in the vent pipe and seal with silicone sealant and duct tape.
- Strong unpleasant odor is a sign the compost pile is not operating in balance. This usually indicates more bulking agent should be applied more frequently or in greater quantities.

ODOUR IS ASSOCIATED WITH THE END PRODUCT

The end product of a Clivus Multrum system should be virtually odorless, similar to that of garden soil.

- Check the vent fan is functioning properly and ensure there is no buildup of liquid in the removal area.
- Shovel material from the removal area back in through the inspection door; add a substantial quantity of wood shavings and mix through with the maintenance tool.
- Increase the quantity of the wood shavings that are regularly added after each use.

FAN IS MAKING LOUD NOISES

- Check fan for obstruction and that it has been correctly installed in the fan housing and is not rattling.
- Lower the transformer voltage to 7 or 8 Volts.
- Fan may be faulty - Visit Clivus Multrum's website for a replacement.

LIQUID IS PRESENT IN THE REMOVAL ACCESS AREA OF COMPOSTING CHAMBER

- Ensure sufficient wood shavings and/or other organic bulking material has been/and are added to the system according to the operation and maintenance instructions above.
- Check the liquid drain is clear from obstruction and has been correctly installed so it slopes away from the chamber.

LARGE LIQUID BUILDUP IS PRESENT IN THE TANK

- This is mostly due to the drain line becoming blocked, it is recommended to check the tank outlet is not blocked by solids, or roots.
- Check that the liquid drain absorption trench is clear and not damaged, or effected by ground water.
- If liquid is non offensive and a clear "tea" colour, drain off excess liquid and dispose of according to local requirements.
- If liquid is more than 10 cm deep, has an offensive odor or is contaminated with solid or scum; this indicates that the lower part of the compost pile has become anaerobic (no oxygen). This situation is best remedied by emptying the tank and then restarting the compost process from step 1 in this manual. Septic tank clean out contractors can readily pump out the tank and dispose of the contents.

COMPOST PROCESS DOES NOT SEEM TO BE WORKING

Note that the top part of the pile will not be composted unless it has had sufficient residence time in the tank.

- It is normal not to notice any composting for the first 6 months.
- Check that a suitable bulking agent is being used.
- Check that disinfectant or antibacterial cleaners are not being used in the pedestal.
- Add a couple of buckets of damp decaying leaf litter found naturally under trees or material from another compost pile will ensure that the correct micro-organisms are present to break down the waste. An Enzyme pack from Clivus Multrum will also help stimulate the process.

COMPOST TOO DRY

- Use maintenance tool to agitate as much of the compost pile as possible and moisten lightly.
- Spray pile with water via inspection door.

COMPOST TOO WET

- Check the vent fan is operating correctly and the vent pipe is clear of obstruction.
- Increase the amount of the wood shavings added.

SEEMS TO BE TOO MUCH TOILET PAPER VISIBLE ON TOP OF THE PILE

- Ensure sufficient wood shavings are being added regularly.
- Simply dampen down and agitate the top 100mm or so of compost to mix with the wood shavings.

COMPOSTING PILE MAY BE TOO COLD FOR COMPOSTING

If the composting tank has been correctly sized for the usage and climate, this problem will rectify itself in summer. Clivus Multrum systems operate successfully in very cold climates if properly sized and maintained. The following can increase the rate of decomposition.

- Insulate the tank from a concrete floor.
- Insulate the sides and top from of the tank to retain heat in the compost tank.
- If the tank is in a cellar, duct warm air into the cellar.

Visit the website for more information:
www.clivusmultrum.com.au


clivus
multrum
WATERLESS COMPOSTING TOILETS

Appendix 9
Proposed Permanent Road Closure and Offer of Term Lease

adams+sparkes
TOWN PLANNING

File / Ref number 2017/000176

Queensland Government

Department of Resources

19 May 2023

The President
Ellis Beach Surf Life Saving Club
PO Box 114
Clifton Beach Q 4879

Dear Sir

APPLICATION FOR PERMANET ROAD CLOUSURE AND ISSUE OF A TERM LEASE OVER AN AREA SHOWN ON DRAWING LOT 1 ON TSV17014 (version 3)

Reference is made to the Departments letter of offer dated 18 July 2018 and 26 July 2021 and your email dated 2 May 2023 requesting an extension of time to meet the department's Offer requirements.

It is advised that in terms of section 403R of the *Land Act 1994*, your request for an extension of time has been approved to close of business 3 November 2023.

The outstanding offer requirements are.

OUTSTANDING OFFER REQUIREMENTS	DUE BY
Evidence that EBSLC has development approval, including any development permits involving operational work associated with the project.	**3 November 2023**
Evidence from CRC and DTMR that their requirements have been met for continued use and/or replacement of existing public infrastructure controlled by CRC and DTMR that is affected by the proposed development within Lot 1 on TSV17014 (version 3) and the DTMR road corridor, including infrastructure for vehicle, bicycle and pedestrian access.	**3 November 2023**
Preparation of survey plan over the area shown as Lot 1 on TSV17014 (version 3).	**3 November 2023**

FUTURE REQUESTS FOR EXTENSION OF TIME

Any future requests must address the following -

- what action you have taken to comply with the offer conditions; **AND**
- why the conditions cannot be complied with by the due date; **AND**
- period of time requested.

Postal Address:
Resources Atherton
PO Box 210
Atherton
4883 QLD

Telephone: (07)40285626

If you believe you will be unable to comply with the extension date, you should contact Susan Ashley on (07)40285626.

Please quote reference number 2017/000176 in any future correspondence.

Yours sincerely

S Ashley

Signed for and on behalf of
Deanna Holder
A/Manager
a duly authorised delegate of the Minister under the current Land Act (Ministerial) Delegation

Queensland Government

Department of Resources

File / Ref number 2017/000176

26 July 2021

President
Ellis Beach Surf Life Saving Club
PO Box 114
Clifton Beach QLD 4879

Email: president@ellisbeachslsc.com

Dear Len

Amended application area for proposed term lease over Lot A on TSV17014 (Version 4)

Reference is made to the departments letter of offer dated 18 July 2017 for a term lease for Community purpose at Ellis Beach.

The departments original offer dated 18 July 2017 has now lapsed and is now withdrawn, due to a increase in area for permanent road closure.

It is advised that approval will be sought for the permanent road closure and issue of a Term Lease over Lot A on TSV17014 (Version 4), subject to the terms and conditions as set out in the attached Offer of a Term Lease under the *Land Act 1994,* Conditions and notification of acceptance of offer form and compliance with the requirements of that offer.

The revised offer account will incur an increase in fees. The amended offer account has been issued for the total amount of $635.25, however only $40.85 is required to be paid.

The attached form duly signed, together with payment of monies owing, being the amount of $40.85, must be returned to the Department by close of business on 14 August 2021, otherwise this offer lapses.

Payment of the sum of $40.85 together with a copy of the offer account and signed Agreement to Offer can be sent CPL DoR PO Box 5318 Townsville QLD 4810.

All other conditions of this offer must be satisfied by close of business on 26 October 2021 otherwise this offer lapses.

All remaining requirements of offer must be sent to CPL DoR PO Box 5318, Townsville QLD 4810.

Postal :
Resources Atherton
PO Box 5318
Townsville
4810 QLD

Telephone: (07)40285626

If you believe you will be unable to comply with **any** of the conditions of this offer by the specified date, you should apply in writing for an extension of time. Any application for an extension of time should be made **before** the offer lapses and must address the following -

- what action you have taken to comply with the offer conditions; **AND**
- why the conditions cannot be complied with by the due date; **AND**
- the time for which the extension is requested, including reasons for the amount of time required.

If you **do not apply** for an extension of time and **the offer lapses**, a new application and application fee will be required. If you make a new application, the matter will be re-investigated and a new decision will be made that will include re-assessment of the land value and all conditions and requirements applicable to the dealing. This re-assessment may also result in the application being refused.

Note - Section 442 of the Land Act states that if an offer is not accepted in writing within the stated time, the offer lapses. An application to extend the stated time may be made at any time before the time passes.

Once the stated time has passed, an application may only be made within **42 days** after the time has passed. Where an application is made after the stated time has passed but within the following 42 day period, the time can only be extended where exceptional circumstances exist.

No applications for extension of time made after the 42 day period referred to in section 442 will be considered.

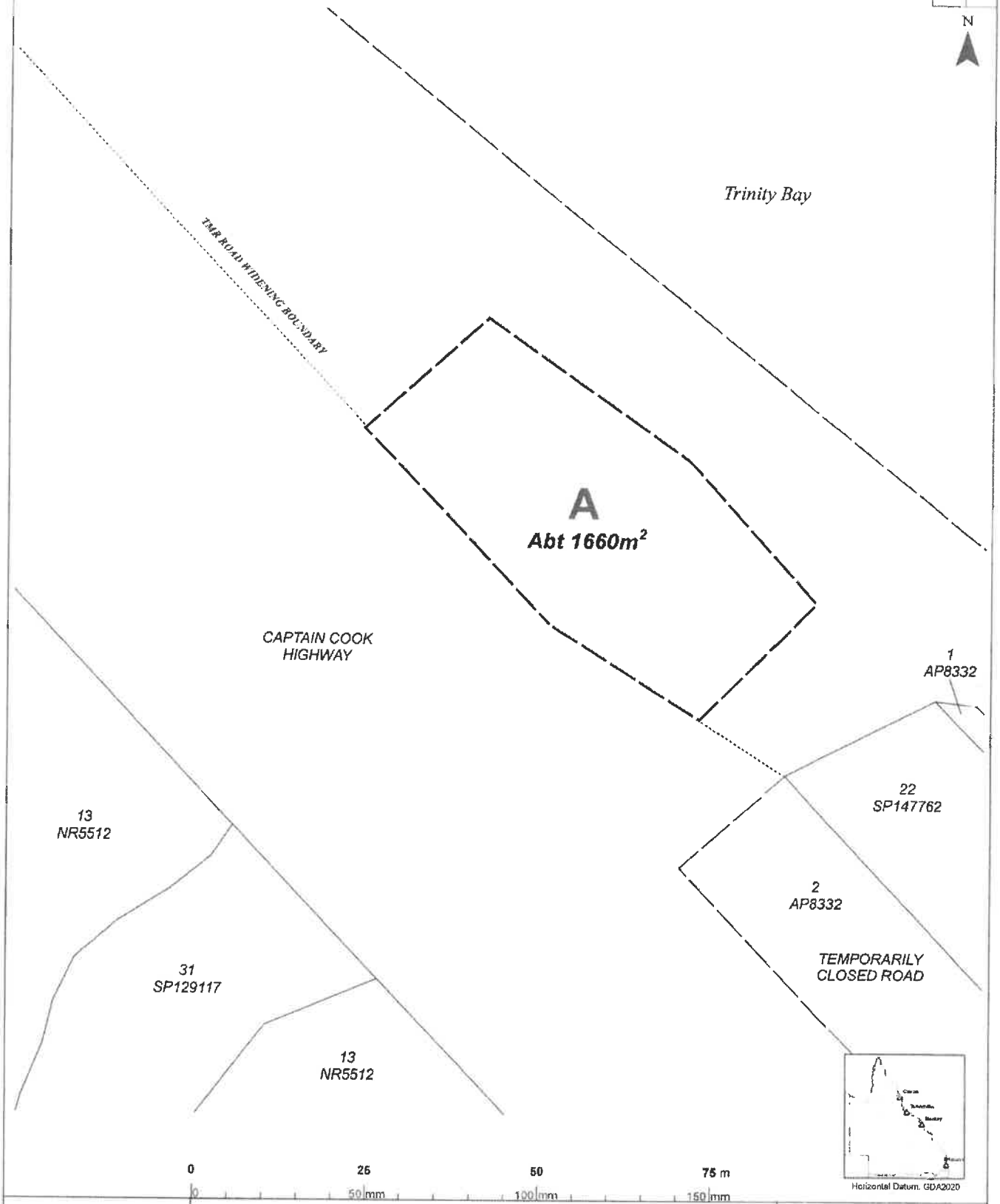
If you wish to discuss other matters in this letter, please contact Susan Ashley on (07)40285626.

All future correspondence relative to this matter is to be referred to the contact Officer at the address below or by email to Townsville.SLAMS@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.

It is recommended that you seek independent legal advice with regard to this offer.

Yours sincerely

Susan Ashley
Land Officer



Horizontal Datum: GDA2020

Prepared by:
SPATIAL INFORMATION
Resources - Level 9
445 Flinders Street
Townsville City
QLD 4810

Queensland Government

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Road Proposed to be Permanently Closed (A)

Over part of Captain Cook Highway
Adjacent to Lot 13 on NR5512 and Lot 22 on SP147762

LOCALITY: ELLIS BEACH
LOCAL AUTHORITY: CAIRNS R.C.

ELVAS Ref: 2017/000176	Drawn by: MAR	Date: 02/06/2021
Compiled from DCDB (extracted June 2021) and UJA Ellis land reshaping drawing		Notings Ref: 17N136

Scale:1:500
Original Size: A3

DRAWING

TSV17014

Version 4

Offer of a Term Lease - Conditions and notification of acceptance of offer

The department's reference number: 2017/000176

1. OVERVIEW

1. Subject to compliance with the conditions of offer as set out in this document, approval will be sought for the issue of a Term Lease, over Lot A on TSV17014 (version 4), on the terms and conditions stated in the attached Conditions Report.

Your completion and return of this form which contains the offer of a term lease in accordance with the provisions of the Land Act ('the offer') together with payment of the attached account within the offer period will for the purposes of the Land Act constitute acceptance of:
(i) the offer; and
(ii) the subsequent issue of tenure on the terms and conditions stated in this form.
(refer to section121 of the Land Act).

Definitions and interpretation:

"offer period" means the length of time stated in this form, or if no time is stated, 3 months (see section 441A of the Land Act).

Terms or phrases used in this form may be defined in the Land Act.

ALL of the conditions contained in Part **Error! Reference source not found.** (both Parts A and B) below MUST be complied with before the offer period ends otherwise this offer will lapse (see section 441A of the Land Act).
Note - the Ministers approval for the issue of a Term Lease will be sought only if you decide to accept and comply with all conditions of the offer.

2. CONDITIONS OF OFFER

Subject to the provisions of the Land Act, this offer will be deemed accepted by you once you fulfil the conditions below (both Part A and Part B)–

PART A - Payments

The following must be satisfied and returned along with the payment of the sum of $40.85 to the department by close of business on 14 August 2021, otherwise this offer will lapse –

1. completion of this form by all proposed tenure holders and return of this completed form to the department.
2. Payment of the amount of $40.85. A copy of the account should be returned to the department along with your payment.

PART B – All remaining conditions of offer

The following conditions of this offer of a term lease must be completed by close of business on 10 December 2021otherwise this offer lapses:
–

2. Evidence that EBSLC has development approval, including any development permits involving operational work associated with the project.
3. Evidence in writing from Cairns Regional Council that their requirements have been met *(Refer to Subheading 14)*.

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4. Evidence in writing from Department of Transport and Main Roads that their requirements have been met *(Refer to Subheading 15)*
5. Preparation of survey plan over the area shown as Lot A on TSV17014 (version 4).

All conditions of this offer must be satisfied by close of business on 26 October 2021 otherwise this offer lapses. **Please return all requirements of offer to CPL DoR PO Box 5318 Townsville Q 4810**

If you believe you will be unable to comply with **any of** the conditions of this offer by the due dates, you should apply in writing for an extension of time. Any application for extension of time is to be made **before** the offer lapses and must address the following -

- what action you have taken to comply with the offer conditions; **AND**
- why the condition/s cannot be complied with by the due dates; **AND**
- the time for which the extension is requested, including reasons for the amount of time required.

Note – If you fail to apply for an extension of time and this offer lapses, you may apply to extend the time only within 42 days after the time has passed. An extension will only be granted where exceptional circumstances exist. If an extension of time is granted the department has discretion to amend the offer in respect of the purchase price in the way provided by the Land Regulation 2020 (see s.442 of the Land Act).

Outside of the 42 day timeframe a new application will be required and will be treated by the department as a new application, requiring re-investigation and assessment of the purchase price, conditions etc.

3. PURPOSE AND CONDITIONS

The Term Lease will be for Community purposes and will be issued subject to the terms and conditions as stated in the attached **Conditions Report** which will be binding on the lessee for the duration of the lease.

4. PARTICULARS OF LAND

Tenure Type -	Term Lease
Description -	Drawing - Lot A on TSV17014 (Version 4)
Term -	Thirty (30) years
Area (ha) -	About 1660 m2 (to be determined by survey)

5. TENANCY DETAILS

The holders of the Term Lease are to be recorded as:-

NAME

Ellis Beach Surf Life Saving Club Incorporated

COMPANY ACN No. (where applicable) 52-049-850-407.

Note – If the proposed Term Lease is the renewal of an existing lease then the name of the holders and the tenancy must be the same as recorded on the existing lease within the Land Registry.

☒ Sole Tenant ☐ Joint Tenants ☐ Tenants in Common

If to be held on Trust, insert name of Trust and provide a copy of the Trust document, if not already held by the Department.

Name of Trust:

If to be held as Tenants in Common, complete the following -

INTEREST	NAME

For example - ½ share For example – John Robert Smith
If insufficient space, please attach separate page.

POSTAL ADDRESS of person or Company to whom correspondence is to be addressed

Town/City: **State:** **Postcode:**

6. RENT

Rental periods for a Term Lease are annual (1 July – 30 June). Invoices for payment of the rent are usually sent out by the department before the last week of July each year.

Unless the rent is set, the rent for a Term Lease is calculated by multiplying the valuation of the land for rental purposes by the percentage rate for the category of the Term Lease, as prescribed in the current Land Regulation.

The first rental determined for this term lease will be based on –

- Rental category - 14.1 Community
- Percentage – Set Rent
- Rental valuation - $425 000.00
- Annual rent – $130.00 (GST Exclusive)

The rent for the Term Lease will be rounded to the nearest whole dollar value. The prescribed minimum rent for tenures of this type in rental category 14.1 is $130.00. If the calculated rent is less than the prescribed minimum rent, the minimum rent is payable.

The rental valuation is subject to reassessment each year in accordance with the *Land Valuation Act 2010.*

Note - If an extension of time is granted to comply with the department's requirements of offer, it should be noted the valuation for rental purposes is subject to review and you will need to pay any revised annual rent and increase in associated fees as a condition of offer.

7. RENT CATEGORY

The Term Lease will be designated Category 14.1 under the current Land Regulation. This category is defined as Community.

Upon issue of the Term Lease you will be entitled, pursuant to section 31 of the Land Regulation 2020, to appeal against the category of the Term Lease.

The appeal must be lodged within forty-two (42) days from the date of advice of the issue of the Term Lease. An appeal must be made on the department's application form, ***Form LA14 - Application for an Internal Review of an Original Decision*** and is available from any Service Centre upon request, or at https://www.qld.gov.au/environment/land/state/application . The internal review process is a pre-requisite to your appeal proceeding to the Land Court if you determine to do so.

8. GOODS AND SERVICES TAX (GST)

Goods and Services Tax (GST) is payable on all land transactions in accordance with *A New Tax System (Goods and Services Tax) Act 1999* unless it is an input taxed supply under Division 40 or specifically exempted from GST under Division 38 of that Act.

Where GST is payable, the annual rental payable by the lessee to the department shall be increased by the amount equal to that which the department is obliged to remit to the Deputy Commissioner of Taxation as GST on the supply.

9. TAX INVOICE

A tax invoice for obtaining the Term Lease will be issued to the lessee within 28 days of the date of issue of the Term Lease.

10. PLAN REQUIREMENTS

The department requires a plan to be prepared at your expense to satisfy the requirements of this offer and arrangements should be made with a Consulting Cadastral Surveyor to prepare the plan.

TMR also have survey requirements listed below:

- the whole of area Lot A on Plan TSV17014 is to the east of TMRs Road widening boundary as shown on TMR layout plan, and
- that the draft survey plan be forwarded to TMR for written approval to confirm setback requirements prior to registering the survey plan.

Please liaise directly with Peter McNamara Principal Engineer (Civil) contact No: (07) 40457210 email: peter.j.mcnamara@tmr.qld.gov.au

The plan must show the new lease as one lot as per drawing Lot A on TSV17014 – (version 4).

Your Consulting Cadastral Surveyor should contact the department's Principal Surveyor or Senior Surveyor, Resources Cairns Office, if there are any questions or concerns in relation to any survey or plan requirements.

If a new survey plan includes the requirement to survey out an existing road from the lease area, then the consent of the relevant road manager is required to be submitted with the new survey plan.

11. APPROVALS AND/OR REQUIREMENTS OF THE COMMONWEALTH, STATE OR LOCAL GOVERNMENT

It should be noted that whilst the proposed Term Lease will issue for Community purposes, it is the lessee's responsibility to ensure that all other necessary approvals and/or requirements of the Commonwealth, State or local government in respect of the use of the area are obtained and/or satisfied.

EBSLC has obtained the necessary development approvals, including any development permits involving operational work associated with the project.

A Term Lease may be subject to rates which are charged by the local government.

12. FOREIGN OWNERSHIP

Your attention is drawn to the requirements of the *Foreign Ownership of Land Register Act 1988* that a foreign person (as defined in that Act) or a trustee of a foreign person or foreign trust, must lodge a Notification of Ownership Form for each interest acquired. No fee is payable and further enquiries should be directed to the Foreign Ownership of Land Registry on 1300 255 750 or email info@titlesqld.com.au.

If you are a permanent resident of Australia, an Australian Citizen or wholly owned Australian Company, there is no requirement for you to take further action in this matter.

13. ABORIGINAL OR TORRES STRAIT ISLANDER CULTURAL HERITAGE

All significant Aboriginal and Torres Strait Islander cultural heritage in Queensland, is protected under the *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003*, and penalty provisions apply for any unauthorised harm. Under the legislation a person carrying out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage. This applies whether or not such places are recorded in an official register and whether or not they are located in, on or under private land.

Aboriginal cultural heritage which may occur on the subject land is protected under the terms of the *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003* even if the Department of Aboriginal and Torres Strait Islander Partnerships has no records relating to it.

Please refer to the website - https://www.datsip.qld.gov.au/people-communities/aboriginal-torres-strait-islander-cultural-heritage for a copy of the gazetted Cultural Heritage Duty of Care Guidelines which set out reasonable and practical measures for meeting the duty of care.

Further assistance or advice in relation to this matter please contact the Cultural Heritage Unit on 1300 378 401.

14. CAIRNS REGIONAL COUNCIL

Cairns Regional Council requirements:

- Any development of the site, especially sewer and water, must include ongoing involvement with Council's planning area.
- Continued use and/or replacement of existing public infrastructure controlled by Council that is affected by the proposed development within Lot A on TSV17014 (version 4).

15. DEPARTMENT OF TRANSPORT AND MAIN ROADS

TMR require that at the time of lodging your Client's development application to Council, Ellis Beach Life Saving Surf Club are to include a detailed site layout plan identifying proposed vehicular, cycle and pedestrian movements to and from the site to enable TMR to properly identify and remedy any traffic conflicts or safety concerns.

TMRs survey requirements as listed below please with regards to the below requirements:

- the whole of area Lot A on Plan TSV17014 is to the east of TMRs Road Widening Boundary as shown on TMR layout plan, and
- that the draft survey plan be forwarded to TMR for written approval to confirm setback requirements prior to registering the survey plan.

16. TELSTRA REQUIREMENT

Telstra has advised that its plant records indicate that there are no Telstra assets within the area of the proposal. It should be noted that all individuals have a legal "Duty of Care" that must be observed when working in the vicinity of Telstra's communication plant. It is the constructor's/land owner's responsibility to anticipate and request the nominal location of Telstra plant via Dial Before You Dig "1100" number in advance of any construction activities in the vicinity of Telstra's assets (phone 1100 or visit www.1100.com.au). On receipt of plans, notwithstanding the recorded location of Telstra's plant, the constructor/landowner is responsible for obtaining a Telstra accredited Asset Plan Locator to perform a cable location, potholing and physical exposure to confirm the actual location of the plant prior to the commencement of site civil work. Telstra reserves all rights to recover compensation for loss or damage caused by interference to its cable network or other property.

In the event Telstra's assets require relocation, please engage Telstra's Asset Relocation team to obtain a quote to relocate the assets from the location in question. The relocation of the assets would be carried out at your cost, however the relocation would ensure that the land/s and its projected use would not be hindered or restricted by easements.

In this regard, contact should be made directly with Telstra on telephone 1800 810 443 (opt 1) or by email to F0501488@team.telstra.com quoting reference number QG196808-1 to arrange for asset relocation at the property.

DECLARATION

The information provided in this form and any attachments is authorised under the Land Act 1994 and is being used to process your application. The department will endeavour to maintain the confidentiality of information relating to your application. However, consideration of your application may involve consultation with other parties and if so, details of your application may be disclosed to third parties. This information will not otherwise be disclosed outside of the department unless required or authorised by law such as under the Right to Information Act 2009. If the proposed Term lease issues, the details of the Term Lease, including the lessees will be registered in the Land Registry which is available to the public to search.

I/We agree, subject to compliance with the conditions of offer, to the issue of the Term Lease on terms and conditions stated in this document and the attached Conditions Report and note that this acceptance shall not be effective until I/We have fulfilled the conditions of offer.

DECLARATION BY AN INDIVIDUAL

Name and Signature of all applicants	In the presence of: Full Name and Signature of Witness
LEONARD JOHN WANKLYN	GRAEME BOOTHE.

Dated 12-01-2022 **day of** JANUARY. **Year** 2022.

NOTE - This document must be signed by all persons who are nominated as the holder/s of the proposed Term Lease. If insufficient space please add additional information as an attachment.

DECLARATION BY A CORPORATION

Executed for and on behalf of:

Corporation name

ELLIS BEACH SURF LIFE SAVING CLUB INC.

If a Corporation then record ☐ **ACN** ☐ **ARBN** ☒ **ABN** 52-049-850-407.

In accordance with section 127 of the *Corporations Act 2001*,

Name and Signature of authorised person/s

Dated 12 **day of** JANUARY **Year** 2022.

Note – Sole Director companies simply insert name, position title and sign as sole director. Other Companies require signature and position title of two Directors or by a Director and Secretary. Where an attorney or other agent executes this form on behalf of a company, the form of the execution must indicate the source of this authority and a certified copy of authority must be provided to the Department. A witness is only required for an attorney or other agent where the source of authority requires a witness.

In relation to this form containing the terms of the offer of a term lease, it is recommended you seek independent legal advice.

Postal :
Resources Atherton
25 Mabel Street
Atherton
4810 QLD

Email:
Townsville.SLAMS@resources.qld.gov.au
Telephone: (07)40285626

END OF DOCUMENT

Draft Conditions for

Case: 2017/000176 Action: 2 As at: 12 Jul 2021

A137

SPECIFIED CONDITIONS FOR: Lease for a Term of Years

PURPOSE: Community

MANDATORY CONDITIONS:

Statutory conditions are the general mandatory conditions of a lease and binds the lessee in accordance with Part 2 Division 1 of the Land Act.

1. **Permitted Use:** The lessee must use the land only for the purpose for which the tenure was issued under the *Land Act 1994*.
2. **Duty of Care:** The lessee has the responsibility for a duty of care, for the land under the *Land Act 1994*.
3. **Rent/Instalment:** The lessee must pay the annual rent/instalment in accordance with the *Land Act 1994* and the Land Regulation 2009.

   For further information on how annual rent is determined, refer to the department's website at www.dnrm.qld.gov.au.
4. **Noxious plants:** The lessee must keep noxious plants on the land under control. If the lessee does not comply with this condition, the Minister may bring the noxious plants under control, the cost of which will be recovered from the lessee.
5. **Information to Minister:** The lessee must give the Minister administering the *Land Act 1994*, information the Minister asks for about the tenure.
6. **Monies for Improvements:** No money for improvements is payable by the State on the forfeiture, cancellation, surrender or expiry of this lease but money may be payable if the State receives payment from an incoming lessee or buyer for the improvements on the land. However, the previous lessee may apply to the Minister to remove the improvements that belong to the lessee, within a period of 3 months from the date of the forfeiture, surrender, or expiry of this lease. The lessee may only undertake the removal of the improvements in the presence of an authorised representative of the department, if required by the Minister. The lessee may only remove those improvements if all monies due from the lessee to the department under this lease have been paid.

REGULATORY CONDITIONS; OR IMPOSED CONDITIONS - SECTION 210:

A regulatory condition relates to a lease, in accordance with the Land Regulation.

1. **Indemnity:** The lessee indemnifies and agrees to keep indemnified the Minister, and the State of Queensland and its Representatives, (the "Indemnified parties") against all liability, costs, loss and expenses including claims in negligence (including any claims, proceedings or demands brought by any third party, and any legal fees, costs and disbursements on a solicitor and client basis) ("Claim") arising from or incurred in connection with:

    a. the granting of this lease to the lessee;
    b. the lessee's use and occupation of the land; or
    c. personal injury (including sickness and death) or property damage or loss in connection with the performance (or attempted purported performance or non-performance) of the lease or a breach of the lease by the lessee.

    The lessee hereby releases and discharges to the full extent permitted by law, the Indemnified parties from all actions, claims, proceedings or demands and in respect of any loss, death, injury, illness or damage (whether personal or property and whether special, direct, indirect or consequential financial loss) arising out of the use and occupation of the lease.

    To the full extent permitted by law, the Minister, the State of Queensland and their Representatives will not be liable to the lessee for any special, indirect or consequential damages, including consequential financial loss arising out of the use and occupation of the lease.

2. **Public Liability:** The lessee must effect a public liability insurance policy with an insurer authorised under the *Insurance Act 1973* (Commonwealth) or, if not so authorised then only with the Minister's approval, which can be given or withheld in the Minister's sole discretion, naming the lessee as the insured covering legal liability for any loss of, or damage to any property and for the injury (including death) to any person arising out of anything done or omitted on or about the land or any improvements thereon and against all claims, demands, proceedings, costs, charges, and expenses whatsoever (including claims in negligence) Such policy must:

    a. be for an amount of not less than $20 Million and have no per event sublimit or such higher amounts as the Minister may reasonably require.
    b. be effected on a "claims occurring" basis; and
    c. be maintained at all times during the currency of the lease, and upon receipt of any notice of cancellation, the lessee must immediately effect another public insurance policy in accordance with the terms of the lease.

    The lessee must, as soon as practicable, inform the Minister, in writing, of the occurrence of any event that the lessee considers is likely to give rise to a claim under the policy of insurance effected and must ensure that the Minister is kept fully informed of subsequent actions and developments concerning the claim.

    The lessee must renew such policy, at the lessee's expense, each year during the currency of this lease.

    The condition will be satisfied if the lessee is the State of Queensland or a statutory authority eligible for cover under the Queensland Government Insurance Fund and is insured and continues to be insured by the Queensland Government Insurance Fund.

    This condition will be satisfied if the lessee is the Commonwealth of Australia or a statutory authority eligible for cover under the Comcover Insurance Fund and is insured and continues to be insured by Comcover.

3. **Access:** The provision of access, further access or services to the land will not be the responsibility of the State.

4. **Survey Costs:** If the land needs to be surveyed or re-surveyed the lessee must do this at its own cost under the *Survey and Mapping Infrastructure Act 2003.* This survey plan must be lodged in the land registry within the specified time.

5. **Jurisdiction:** The lease is subject to the *Land Act 1994* and all other relevant Queensland and Commonwealth legislation.

6. **Compliance with Laws:** The lessee must comply with all lawful requirements of the:

    a. Local Government; and
    b. any department within the Queensland or Commonwealth governments (including the department administering the *Land Act 1994*), local authority or statutory instrumentality having jurisdiction over the land, or the development, use and occupation of the land, in regard to its use, occupation and development of the land.

IMPOSED CONDITIONS:

These conditions relate to this lease.

Conversion or renewal of the lease

1. The lessee of this lease is not allowed to make an application for conversion of this lease in terms of the *Land Act 1994.*

Quarry Material and Forest Products

1. The lessee must allow any persons authorised under the *Forestry Act 1959* access to the leased land for the purpose of cutting and removing timber or removing other forest products, or quarry material, or other material from the land.

   The lessee must not interfere with any forest products or remove any quarry material (including any stone, gravel, sand, earth, soil, rock, guano or clay which is not a mineral within the meaning of the *Mineral Resources Act 1989*) or other material upon the land without the permission of the Minister administering the *Land Act 1994* except under the authority of and in compliance in every respect with the requirements of a permit, licence, agreement or contract granted or made under the *Forestry Act 1959.*

Offer Account

(This is not a Tax Invoice)

Issued

Queensland Government

Department of Resources

Payment Reference:	639366
Offer Account Date:	26/07/2021
Enquiry Reference:	2017/000176/2
Account No:	1702000176
Account Due Date:	24/08/2021
Applicant:	Ellis Beach Surf Life Saving Club Inc PO Box 114 Clifton Beach QLD 4879 Australia
ABN No.	52 049 850 407
ACN/ARBN No.	

Item Description	Quantity	Amount ($)	Amount Due ($)
Deposit (Estimate of First Years Rent)	1	147.40	147.40
Lease/Licence/Permit Fee (Div 81)	1	76.85	76.85
Plan Lodgement Fee (Div 81)	1	411.00	411.00
Total Payable at Acceptance/Settlement:			**$635.25**

Comment:

Please Note Only $40.85 is required to be paid.

Payment Methods:

Payment options are cash (in person only), EFTPOS (in person at some centres only, cheque (in person or by post), BPOINT or BPay (details below).

Cheques should be made payable to 'Department of Resources' and marked 'not negotiable'.

Forward your cheque, together with a copy of this account to: Department of Resources, PO Box 15216 City East Q 4002.

BPAY

Biller Code: 928549
Ref: 100000006393664

Pay By Phone:
Call 1300 276 468

BPAY only amounts greater than $50

BPOINT

Pay on line via credit card www.bpoint.com.au or contact your financial institution to make this payment directly from your cheque, savings or credit account

BPOINT amounts between $10 and $100,000

BPAY or BPOINT Transaction ID

If applicable a Tax Invoice will be provided on completion of this dealing.

26-Jul-2021

Offer Account

(This is not a Tax Invoice)

Issued

Queensland Government

Department of Resources

Payment Reference:	639366
Offer Account Date:	26/07/2021
Enquiry Reference:	2017/000176/2
Account No:	1702000176
Account Due Date:	24/08/2021
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Comment:

Please Note Only $40.85 is required to be paid.

Payment Methods:

Payment options are cash (in person only), EFTPOS (in person at some centres only, cheque (in person or by post), BPOINT or BPay (details below).

Cheques should be made payable to 'Department of Resources' and marked 'not negotiable'.

Forward your cheque, together with a copy of this account to: Department of Resources, PO Box 15216 City East Q 4002.

BPAY

Biller Code: 928549
Ref: 100000006393664

Pay By Phone:
Call 1300 276 468

BPay only amounts greater than $50

BPOINT

Pay on line via credit card www.bpoint.com.au or contact your financial institution to make this payment directly from your cheque, savings or credit account

BPOINT amounts between $10 and $100,000

BPAY or BPOINT Transaction ID

If applicable a Tax Invoice will be provided on completion of this dealing.

26-Jul-2021

Appendix 10

Surf Club Water Licence

adams+sparkes
TOWN PLANNING

Client Ref: 192932
File Ref: MAR/515/000(3671)

Queensland Government

30 March 2011

Department of
Environment and Resource Management

ELLIS BEACH SURF LIFE SAVING CLUB INC.
PO BOX 114
CLIFTON BEACH QLD 4879

Dear Sir/Madam

Application for Renewal of Water Licence: reference 56834K, application reference 530799

Attached is a Water Licence granted in accordance with the provisions of the *Water Act 2000*.

Please note that this Water Licence does not negate the requirement to obtain any other approvals or to enter into other statutory arrangements, such as those relating to Aboriginal cultural heritage, which may be required. In particular, the *Aboriginal Cultural Heritage Act 2003*, places a duty of care on anyone undertaking an activity to protect Aboriginal Cultural Heritage. Please refer to the attached information sheet for further information on this legislation.

If you have any further enquiries please call (07) 40484850.

Yours Sincerely

Cyrene Torrisi
Administration Officer (Licensing)

28 Peters Street MAREEBA
PO Box 156
MAREEBA 4880
Telephone +61 7 40484850
Facsimile +61 7 40922366
Website http://www.derm.qld.gov.au/
ABN 46 640 294 485

Queensland Government

Cultural heritage - your duty of care

The *Aboriginal Cultural Heritage Act 2003* (the Act) protects all Aboriginal cultural heritage in Queensland. This protection applies whether or not the Aboriginal cultural heritage has been identified or recorded in a database. The Department of Environment and Resource Management is responsible for administering this legislation.

The Act requires anyone who carries out a land-use activity to exercise a duty of care, that is, they must take all reasonable and practical measures to ensure their activity does not harm Aboriginal cultural heritage. The duty of care applies to any activity where Aboriginal cultural heritage is located, including freehold land. Identifying the cultural heritage values of an area can be difficult. The area may be secret or sacred, incorporated into the landscape or under the soil surface.

The Act, together with gazetted duty-of-care guidelines, provides guidance on how to proceed.

Duty-of-care guidelines

Duty-of-care guidelines have been gazetted under the Aboriginal Cultural Heritage Act and set out reasonable and practical measures to avoid harming Aboriginal cultural heritage and to meet duty-of-care requirements. They also provide guidance on identifying features likely to contain or constitute cultural heritage.

Following the duty-of-care guidelines will ensure land-use activities proceed lawfully in relation to Aboriginal cultural heritage. The guidelines recognise that some activities (such as driving along existing roads and tracks or cultivating areas currently subject to cultivation) are unlikely to harm Aboriginal cultural heritage. They also recognise that the nature and extent of past land uses in an area (such as development) may mean that any further activity in the area is unlikely to harm Aboriginal cultural heritage. Unfortunately, harm is likely to have already been caused to the Aboriginal cultural heritage. Despite this, it is recognised that Aboriginal cultural heritage may continue to lie below the surface. For this reason, the guidelines provide that, if at any time during your activity you excavate, relocate, remove or harm a cultural heritage find, you must notify the relevant Aboriginal party immediately and seek their advice on how best to proceed. Where the nature and extent of the past land use of an area is not inconsistent with the continued presence of Aboriginal cultural heritage, you should exercise greater caution before proceeding.

Be safe

Before undertaking a land-use activity, it is advisable to check the duty-of-care guidelines and decide what, if any, precautions you need to take to adequately address the issue. This will not only ensure you avoid the risk of a substantial fine under the Act, but also that you are doing your bit to preserve our history and Queensland's Aboriginal cultural heritage.

Financial penalty

Fines of up to $75 000 for an individual and $750 000 for a corporation apply for causing unlawful harm to Aboriginal cultural heritage or for breaching your duty of care.

Further information

For further information on cultural heritage duty of care visit the Department of Environment and Resource Management website http://www.derm.qld.gov.au/ or contact:

Cultural Heritage Coordination Unit
Department of Environment and Resource Management
Locked Bag 40
Coorparoo Delivery Centre QLD 4151

Telephone: (07) 3239 3647
Fax: (07) 3238 3842

WATER LICENCE
Water Act 2000

Queensland Government

Reference	56834K	**Expiry Date**	31/03/2031
Licensee	ELLIS BEACH SURF LIFE SAVING CLUB INC.		
Authorised Activity	The taking of watercourse water from Spring Creek with the point of take on or adjacent to Lot 13 on NR5512.		
Authorised Purpose	Domestic Supply		
Description of Land	Attached to the land described as Lot 20 on NR7199.		
Nominal Entitlement	0.208 Megalitres		
Maximum Rate	1 Litres per second		

This water licence is subject to the conditions endorsed hereon or attached hereto.

Under the *Sustainable Planning Act 2009* a development permit may be required for operational works to take or interfere with the water described in this licence. The licensee must ensure that the relevant development approvals have been obtained prior to installing or constructing new or additional operational works.

Given at Mareeba this THIRTIETH day of MARCH 2011.

John Bradley
Director-General
Department of Environment and Resource Management

Queensland Government

Conditions: Schedule A

1.15
The water year is the period from 1 July to 30 June.

Queensland Government

Conditions: Schedule B

SPEC01
Maximum monthly allocation 16 kilolitres.

SPEC02
Maximum weekly allocation 4 kilolitres.

Appendix 11

DSDILGP Pre-Lodgement Advice

adams+sparkes
TOWN PLANNING

Our reference: MPL-0523-0428

Queensland Government

Department of
State Development, Infrastructure, Local Government and Planning

7 June 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 – Ellis Beach 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:	31 May 2023

Site details

Street address:	Captain Cook Highway, Ellis Beach
Real property description:	Lot A on TSV17014
Local government area:	Cairns Regional Council (the council)
Existing use:	Unallocated State Land (road reserve)

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:	Ellis Beach Surf Life Saving Club

State interests relevant to the assessment:	• Biodiversity – MSES - Regulated vegetation (category R), MSES - Regulated vegetation (intersecting a watercourse) • Coastal environment - Coastal management district • Natural hazards, risk and resilience – flood hazard area (Local government flood mapping area), Bushfire prone area (Very High Potential Bushfire Intensity, Potential Impact Buffer), Erosion prone area, Medium storm tide inundation area • Transport infrastructure - State-controlled road • Water quality – Climatic regions – stormwater management design objectives

Supporting information

Plan / Report title	Author	Ref no.	Date
Proposal Plans	Clarke and Prince Architects	1531-SD	04/05/2023

Written advice

Item	Advice
Overview of MID proposal	
1.	The MID proposal seeks to relocate the existing surf life saving club to the eastern side of the Captain Cook Highway to unallocated state land, being the road reserve, and involves the following works: • A new two storey surf club building comprising: - ground floor facilities associated with surf life saving activities (equipment room, training room, patrol and first aid room, amenities and change rooms), and ancillary function room and canteen. - an upper floor caretaker's residence. • A new 32 space car parking facility. • External works to Captain Cook Highway to include a right turn lane for vehicular access. • Relocation of the Wangetti walking Trail • New lease area over the state land.
Lease Arrangement	
2.	The site is currently unallocated state land / road reserve. The MID proposal should provide details of the lease arrangement for the land, as well as address any requirements / conditions of the lease arrangement including TMR road widening requirements and council servicing requirements.
Transport	
3.	A traffic impact assessment should be provided in support of the MID proposal that addresses the following: • impacts on the local and state road network and any required

	upgrades/mitigation works • access arrangements to the site (interim and ultimate) including pavement widening and impacts to the existing Bar and Grill access. • TMR road widening and setback requirements. • parking and on-site manoeuvring for all expected vehicles • public and active transport including cycle parking and the cycle/pedestrian path network upgrades.
Coastal management	
4.	The site is mapped within a coastal management district, erosion prone area, and medium storm tide inundation area. The MID proposal should include a coastal hazard assessment that demonstrates that there will be no impact to natural coastal processes as a result of the proposed development and details any proposed coastal protection works.
Biodiversity	
5.	The site is mapped as containing various MSES and will require removal of vegetation. The MID proposal must ensure impacts to MSES are minimised, including for any bushfire mitigation measures. The MID proposal should be supported by an Ecological Assessment that assesses the impacts of and recommends measures that compensate for the environmental impacts.
Stormwater	
6.	A site-based stormwater management plan should be provided in support of the MID proposal that addresses the following: • stormwater quantity measures to avoid material worsening to adjoining and downstream properties and adjacent railway infrastructure • a lawful point of discharge • stormwater quality measures that meet the relevant stormwater management design objectives
Bushfire	
7.	The site is mapped as containing Medium potential bushfire intensity and Potential impact buffer. The MID proposal should be supported by a Bushfire Management Plan that assesses bushfire risk and recommends mitigation measures. Bushfire management measures should be able to be carried out within the MID boundary. Where bushfire buffer areas require disturbance outside the proposed MID boundary, these need to be detailed, including how these areas are proposed to be managed, and any agreements in place regarding bushfire management.
Amenity	
8.	The proposal may result in amenity impacts to nearby sensitive uses (caravan park), dependent on the proposed use and operation of the club. The MID proposal should include detail on the proposed operation and other detail to demonstrate the proposal will not involve noise impacts in excess of the desired standards. Where the proposal will result in undesirable noise impacts, the MID

	proposal should be supported by an acoustic report to assess the sites acoustic impacts and recommends mitigation measures. The MID proposal should also consider potential amenity impacts at adjoining sensitive receptors, including lighting, visual and privacy.
On-site waste water treatment	
9.	The proposal includes on site waste water treatment and the MID proposal should be supported by an on site effluent disposal report
Water License	
10.	The existing water license may need to be amended to reflect the new lease area. The MID proposal should be supported by information regarding any water license application requirements if required to service the club.
Funding and Timing	
11.	The MID proposal and endorsement request should identify details of timing for the delivery of the project phases as it relates to any funding.
Recommended technical reporting	
12.	It is recommended that the entity consider the following matters when preparing the infrastructure designation request: • traffic impact assessment • bushfire management plan • coastal hazard assessment • ecological assessment • stormwater management plan • acoustic report, dependent on hours of operation. • landscape plans • preliminary engineering services report / plans, including on-site waste water report • architectural plans including buildings elevations and materials/colour palette

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:

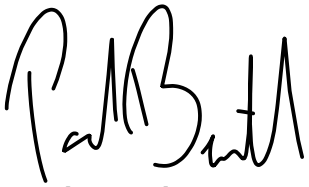
- the required material for making a MID specified in Schedule 3 of the Minister's Guidelines and Rules
- the matters raised in these pre-lodgement minutes.

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.

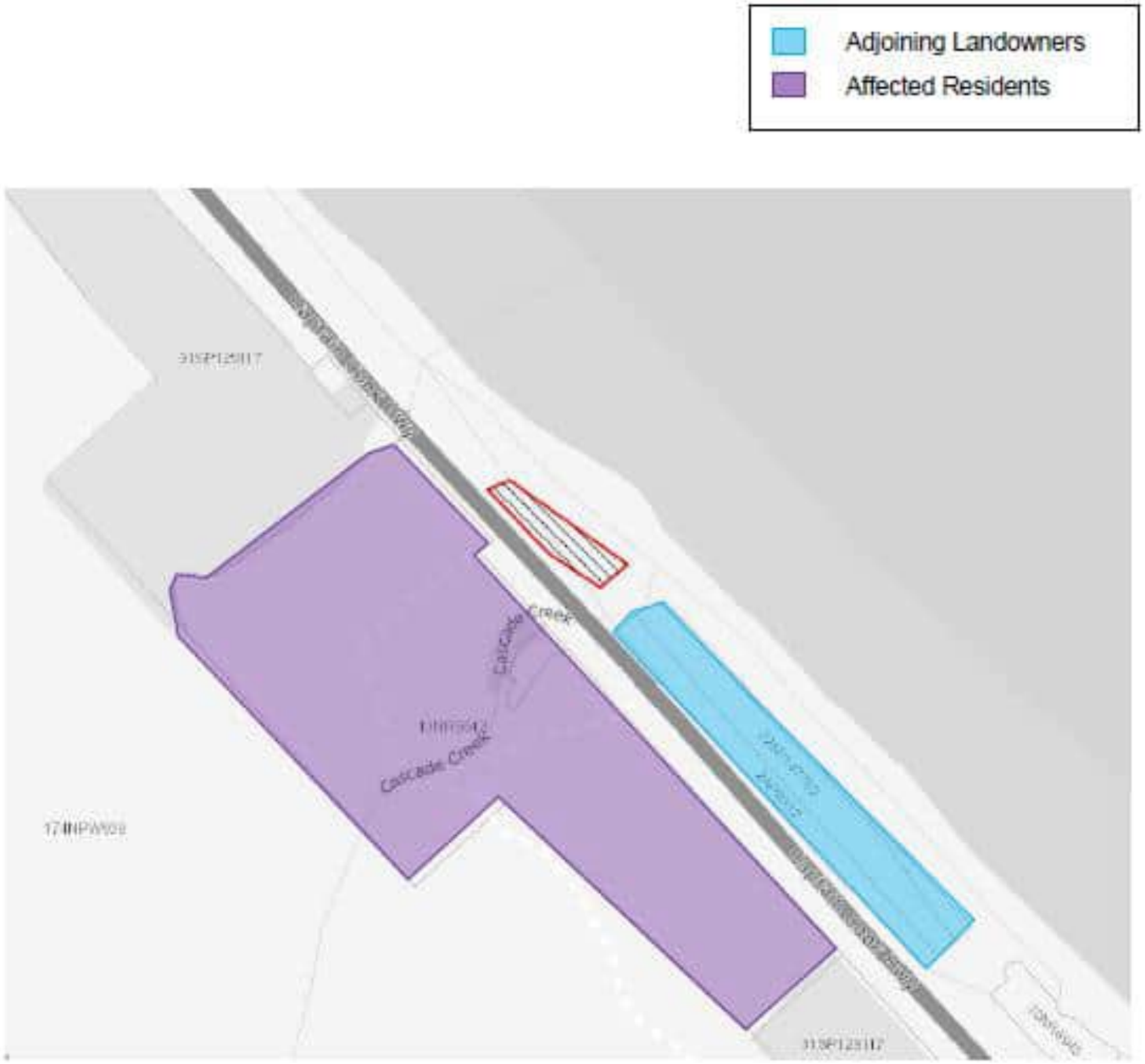
If you require any further information, please contact Harrison Gordon-Brown, Senior Planner on 3035 2032 or harrison.gordonbrown@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely



Paul Beutel
MANAGER

Attachment 1 – Preliminary engagement plan



Appendix 12

Cultural Heritage Register Search

adams+sparkes
TOWN PLANNING

Cultural Heritage Database and Register Search Report

Search report reference number: 145044

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@dsdsatsip.qld.gov.au or telephone: 1300 378 401.

Queensland Government

Cultural Heritage Database and Register Search Report



LEGEND

- CH Parties
- CH Bodies
- CHMPs
- Study Areas
- DLAs

Reference Number: 145044
Latitude: -16.724593
Longitude: 145.644992
Buffer Distance: 100 m
Shire: Cairns Regional

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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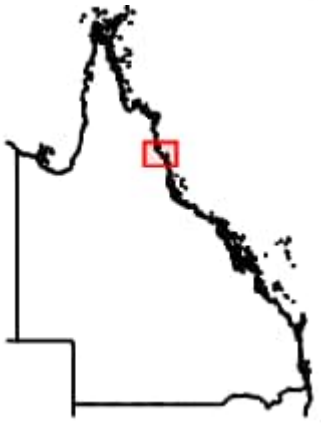
Map produced by the Cultural Heritage Unit, DSDSATSIP, Brisbane, Queensland, Australia on 10 October 2023.

Queensland Government

1:7,175

Metres 100 200 300

LOCALITY



Search report generated on Oct 10, 2023, 10:05 AM

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
QC2016/008	QUD692/2016	Djabugay Nation Native Title Claim	Djabugay Nation Native Title Claim c/-North Queensland Land Council PO Box 679 CAIRNS QLD 4870 Phone: (07) 4042 7000 Email: reception@nqlc.com.au

Cultural Heritage Body/ies for the area:

Departmental Reference No.	Name	Contact Details	Registration Date
CHB014001	Yirrganydji Gurabana Aboriginal Corporation	Yirrganydji Gurabana Aboriginal Corporation Po Box 717 MANUNDA QLD 4870 Phone: (07) 4032 4854 Email: yirrganydjigurabana@gmail.com	30/01/2014

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.

Heritage Related Areas (QLD Subset) for the area:

Data Source	Name
National Heritage Areas	Great Barrier Reef
Traditional Use of Marine Resources Agreement	Yirrganydji
World Heritage Areas	Great Barrier Reef

Traditional Use of Marine Resources Agreement: 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

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:
    - there is no other registered native title claimant for the area; and
    - 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

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 13

Endorsement Correspondence

adams+sparkes
TOWN PLANNING

From:	Alan Houston <Alan.Houston@dsdilgp.qld.gov.au>
Sent:	Monday, 7 August 2023 10:31 AM
To:	Admin @ ASTPD
Subject:	RE: Request to Minister for Endorsement to Proceed - MPL-0523-0428 - relocation of Ellis Beach Surf Life Saving Club (ASTP 211219)
Attachments:	ENTITY CONSULTATION TEMPLATE - Sign on the land - MGR 2020 - updated 2 Sept 2021.doc; ENTITY CONSULTATION TEMPLATE - letter to stakeholders - MGR 2020 - updated 2 Sept 2021.docx; ENTITY CONSULTATION - Published notice TEMPLATE - MGR 2020 - update 2 sept 2021.docx

Hi Erin

I am pleased to advise that Ellis Beach Surf Life Saving Club has been endorsed for the Ministerial Infrastructure Designation (MID) assessment process. You may now 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 State Development, Infrastructure, Local Government and Planning

*Microsoft teams – **meet now***

P 3452 7627
Level 13, 1 William Street, Brisbane QLD 4001
PO Box 15009, City East QLD 4002

statedevelopment.qld.gov.au



I acknowledge the traditional custodians of the lands and waters of Queensland. I offer my respect to elders past, present and emerging as we work towards a just, equitable and reconciled Australia.

Appendix 14

Surrounding Properties Consultation Map

adams+sparkes
TOWN PLANNING



0 75 150 225 300

Scale at A3 in metres

Proposed Infrastructure Designation for Relocation of Ellis Beach SLSC
ASTP Ref: 211219.01

Ellis Beach Surf Life Saving Club Inc
Captain Cook Hwy, Ellis Beach
Local Govt: Cairns Regional Council

Contact: Cameron Adams
Ph: 07 5313 7705
admin@astpd.com.au

adams+sparkes TOWN PLANNING

CONSULTATION STRATEGY
Identified landowners and affected entities to notify for formal consultation

Date: 11/10/2023

Appendix 15

Council Preliminary Engagement Comments

adams+sparkes
TOWN PLANNING

ENQUIRIES: Ali Davey
PHONE: (07) 4044 3014
YOUR REF: 211219.01
FILE REF: 70/4/2 (7236920)
REFERENCE: **2023** / 1431

4 August 2023

Ellis Beach Surf Life Saving Club Inc
C/- Adams + Sparkes Town Planning
Lvl 3, 26 Duporth Ave
MAROOCHYDORE QLD 4558

By Email: admin@astpd.com.au

Dear Sir/Madam

Response for Preliminary Stakeholder Engagement – Proposed Ministerial Infrastructure Designation for Ellis Beach Surf Lifesaving Club

Property Address:	Captain Cook Highway, Ellis Beach
Property Description:	Adjacent to Lot 22 on SP147762

Reference is made to the recent correspondence received by Council on 13 July 2023 (Council Reference: #7231898) regarding the proposal to relocate Ellis Beach Surf Lifesaving Club under a Ministerial Infrastructure Designation (MID). Council welcomes the opportunity to provide preliminary comment on the proposal before the formal infrastructure designation process occurs under Chapter 2, Part 5 of the *Planning Act 2016*.

At this early stage of the project, Council officers would like to provide the following high-level planning comments for consideration.

Ellis Beach Foreshore

Council is currently preparing the Ellis Beach Foreshore and Landscape Improvement Plan which considers the existing needs at Ellis Beach and the future impacts of the Wangetti Trail (Section 1 will be in Ellis Beach). The proposal plans for the relocation of the Ellis Beach Surf Lifesaving Club present some conflicts with the draft plans prepared by Council. It is recommended that the developer engages with Council's Project Management Office on the design of the proposed development to ensure it complements the Foreshore and Landscape Improvement Plans.

Coastal Processes Overlay

Council raises concerns regarding the ability of the development to reduce risk/minimise exposure to people and property from coastal processes. The development is within an erosion prone area and would result in the intensification of

development within an erosion prone area. Additionally, it is not considered to be coastal dependent development nor is it temporary or readily relocatable. Further information is requested detailing how the development will manage the risks from being within an erosion prone area and detail if any coastal protection works are required as a result of the development.

Should the development proceed, the development must maintain the amenity and use of the beach and take into consideration the need to allow for natural fluctuations of the coast, including allowances for climate change and sea level rise.

Landscape Values

The proposed location of the building is within the Coastal Scenery Zone. The purpose of the Landscape Values Overlay Code requires that the landscape values of the Coastal Scenery Zone are managed to integrate and limit the visual impact of the development and that the coastal landscape character is predominantly natural and undeveloped in appearance to retain the natural landscape character. Development should also be consistent with the prevailing landscape character of its setting and be neither visually dominant nor visually intrusive.

It is recommended that a Visual Impact Assessment is prepared in accordance with the *Planning Scheme Policy – Landscape Values* to demonstrate compliance with Performance Outcomes PO3 and PO4 and the Landscape Values Overlay Code more broadly.

Natural Areas

The development is within an area identified as MLES – Non-urban waterway trigger area, MSES – regulated vegetation (Category R) and is adjacent to high ecological value waters (wetland).

The development should be accompanied by an Ecological Assessment Report to demonstrate that there will be no direct and indirect adverse impacts on areas of environmental significance (both on-site and off-site) or the quality and integrity of water in the Great Barrier Reef World Heritage Area, that the ecological and hydrological functions of waterways, wetlands and waterway corridors are maintained and rehabilitation of degraded areas of environmental significance is undertaken and to offset the impacts of the development.

Planning Scheme Policy – Natural Environment provides guidance on preparing an ecological assessment report.

Geotechnical Requirements

While the development would be outside of the Potential Landslip Hazard Overlay area, any earthworks on the site should be supported by a Geotechnical Report that demonstrates the stability of the in-situ material (sand).

Water and Sewerage

A water supply connection is required to service the development so that it has an adequate, safe and reliable supply of potable, firefighting and general use water. It is noted that the Ellis Beach area is not serviced by Council's reticulated water supply network. As such, on-site water storage tank(s) must be supplied and installed with sufficient capacity to service the development.

Additionally, the Ellis Beach area is not serviced by sewer infrastructure and an on-site sewage facility or similar is required for treating and disposing of sewage. An On-Site Sewerage Disposal Report should be prepared in accordance with the *Plumbing and Drainage Act 2018* and any relevant requirements of the *FNQROC Development Manual* to ensure the development is provided with an adequate facility for treatment and disposal of wastewater. Additionally, a grease trap will be required to capture water-borne waste (liquid) discharged from the premises.

The development will need to be designed to be serviced by bulk bins for both waste and recycling and be collected by a private waste contractor. The bulk bin storage facilities must be designed, located and managed to avoid adverse impacts on the development, the neighbouring development and public spaces and allow for safe and efficient collection of the bins.

Traffic

The land achieves direct access from a State-Controlled Road and it is acknowledged that the Department of Transport and Main Roads will address requirements for traffic matters.

The driveway must be designed and constructed in accordance with the Planning Scheme and *FNQROC Development Manual* to a commercial/industrial standard.

The development must provide on-site carparking and bicycle spaces not less than the minimum rates outlined in Table 9.3.7.3.b and Table 9.3.7.3.c of the Parking and Access Code in the Planning Scheme. Where there is a shortfall of carparking and/or bicycle spaces, it should be demonstrated that there are sufficient spaces to accommodate the demand generated by the development.

The carparking spaces and layout must be designed in accordance with the *AS2890.1:2004 Parking Facilities – Off-Street Car Parking*, *AS2890.6:2009 – Parking Facilities Off-street Parking for People with Disabilities*, *Austroads* and good engineering design.

Space must be provided on-site for vehicles to turn around so that all vehicle(s) anticipated to utilise the development (including service and refuse collection vehicles) can enter and exit in a forward direction. It is suggested that vehicle swept path plan(s) be prepared to demonstrate that this can occur. Swept paths should also be provided for the ingress/egress to the site and demonstrate that manoeuvring/circulation clearances are not encroached.

All parking, queuing, loading, servicing, unloading and vehicle manoeuvring areas must be provided within the development's use area.

Drainage & Flooding

Council's flood searches indicate that the site is located within the 1% AEP storm surge flood event. The estimated 1% AEP storm surge level in the general area is approximately 3.7 metres AHD to 3.9 metres AHD. Where located within the flood and inundation area, the finished floor level of all buildings must be a minimum of 300mm above the defined inundation event level. All car parking areas must be at or above the 5% AEP defined inundation event level.

The Applicant/Developer must prepare a Drainage Plan for the land and associated design which provides for a stormwater point of discharge. The Drainage Plan must address the following:

a. All internal and external contributing catchment boundaries;

b. Provide flow paths and grading of the site, demonstrating that it is free draining;

c. Demonstrate any work (including grading of the site) required to direct runoff to a lawful point of discharge.

The Drainage Plan (and associated site levels/grading plan) must demonstrate that all necessary drainage management is designed in accordance with Section D4 of the *FNQROC Development Manual*.

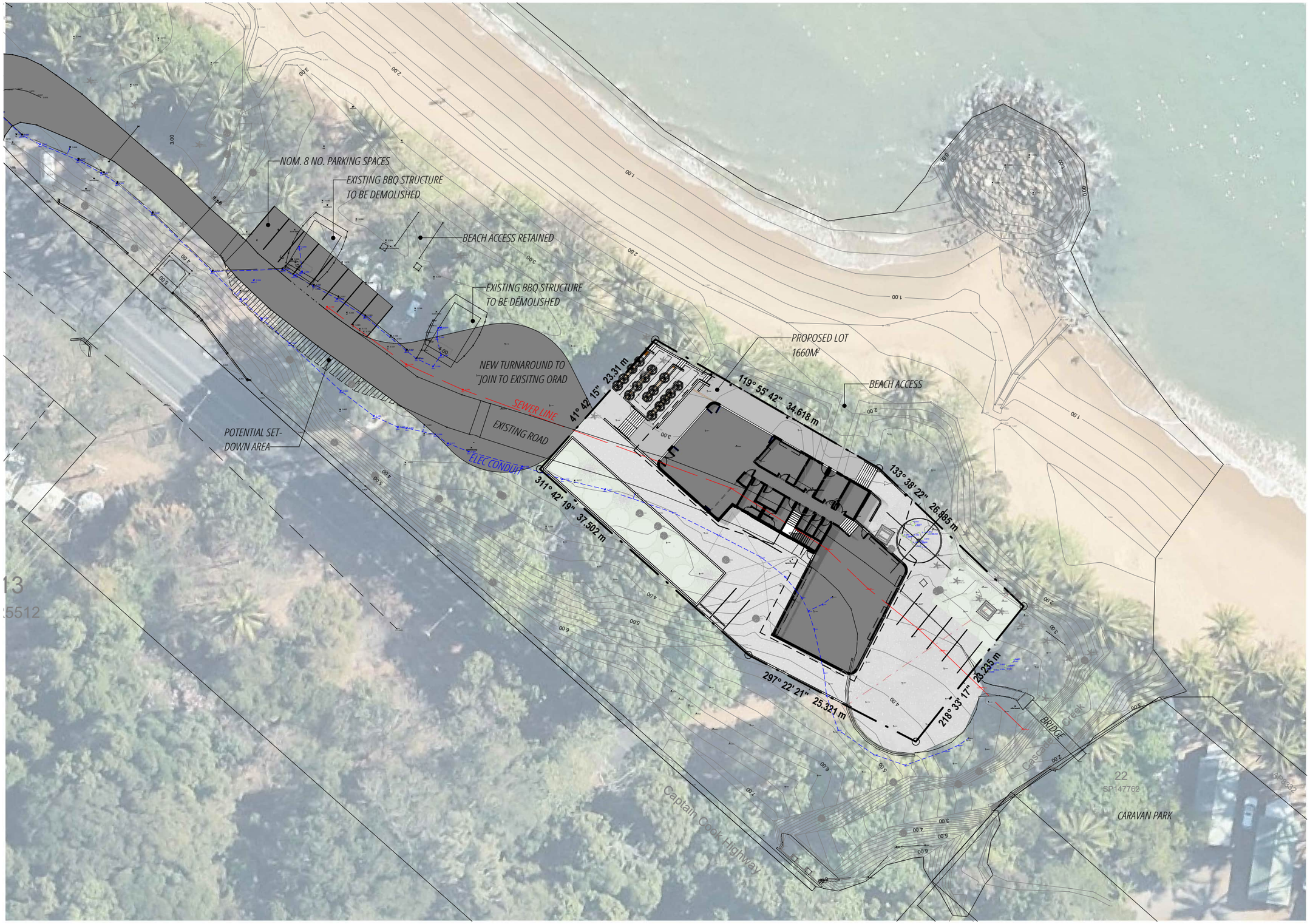
Should you require any further information or assistance, please contact Ali Davey of Council's Development Assessment Team on telephone number (07) 4044 3014.

Yours faithfully



Keanu Johnston
A/Executive Manager Development & Planning

Appendix 1 - Proposal Plans



1 A109 **SITE PLAN**
SCALE - 1 : 500

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	06-04-2023
P2	CLIENT ISSUE	04-05-2023
P3	FOR DISCUSSION	20-06-2023

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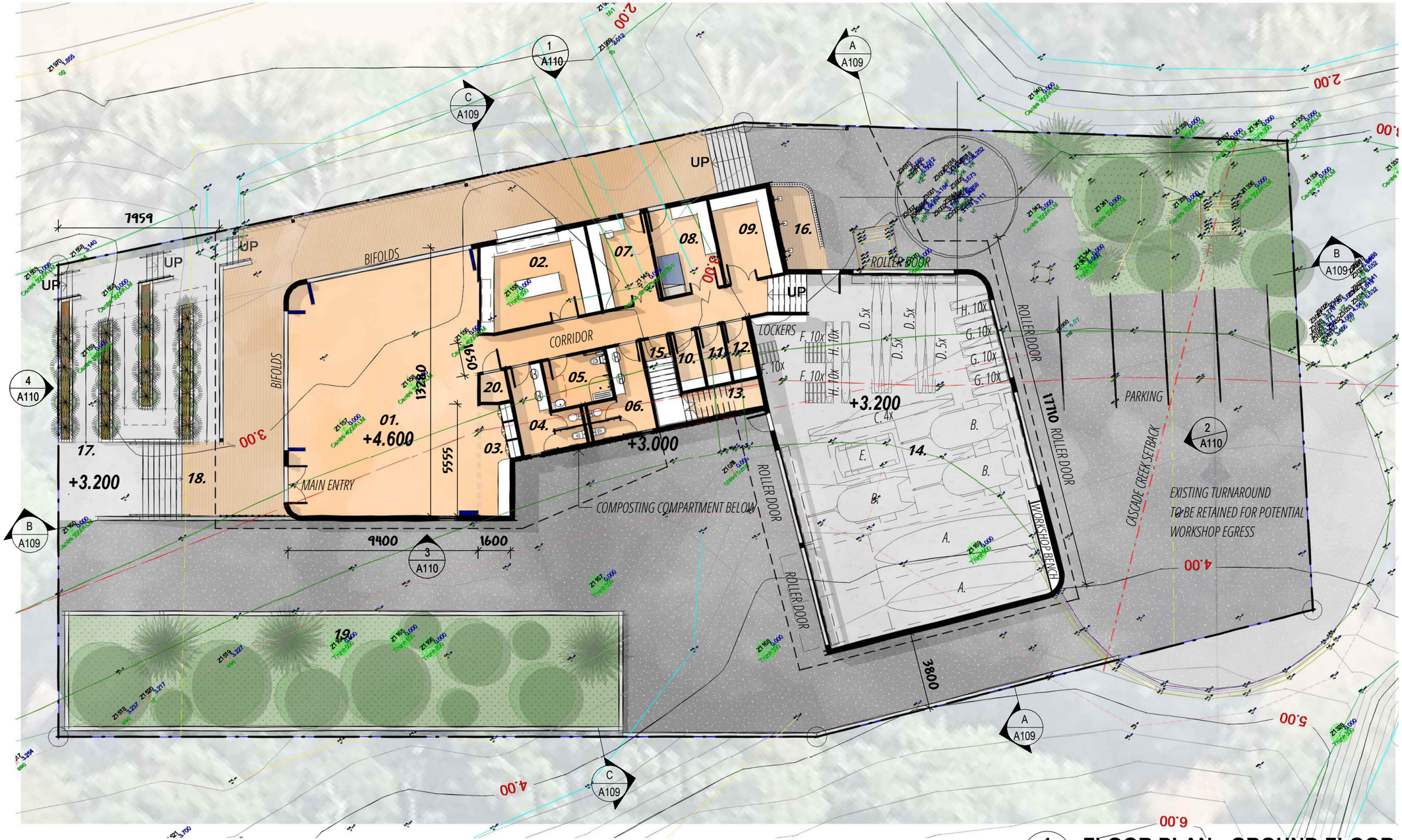
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DRAWN	BM	SCALE 1 : 500	SIZE A3
APPROVED	DI	DATE MARCH 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE PLAN**
DWG No. **1531-SD A101** | STAMP PRELIMINARY | ISSUE **P3**

EQUIPMENT

A. SURFBOAT (2 NO.)
B. IRB (3 NO.)
C. DOUBLE SKI (4 NO.)
D. SINGLE SKI (20 NO.)
E. ATV (1 NO.)
F. RACING PADDLE BOARD (MAL) (30 NO.)
G. NIPPER BOARDS (30 NO.)
H. FOAM BOARDS (30 NO.)



2 0 2 4 6 8 10M
SCALE 1:200 AT A3

ROOMS

01. FUNCTION/ TRAINING SPACE
02. CANTEEN
03. TRAINING STORE
04. MALE BATHROOM
05. PWD
06. FEMALE BATHROOM
07. PATROL
08. FIRST AID
09. STORE
10. CHANGE ROOM 1
11. CHANGE ROOM 2
12. CHANGE ROOM 3
13. STAIRS
14. EQUIPMENT AND VEHICLE STORE
15. HOT WATER/MSB
16. SHOWERS
17. RAMP
18. ENTRY STAIRS
19. TRANSPIRATION
20. CLEANER'S

GROUND FLOOR AREA SCHEDULE

CANTEEN	24 m²
PWD	8 m²
MALE BATHROOM	10 m²
FEMALE BATHROOM	10 m²
TRAINING STORE	9 m²
FUNCTION SPACE	115 m²
PATROL	13 m²
FIRST AID	13 m²
STORE	12 m²
EQUIPMENT STORE	208 m²
CHANGE ROOM 1	3 m²
CHANGE ROOM 2	3 m²
CHANGE ROOM 3	3 m²
SHOWERS	Not Enclosed
CLEANER'S	2 m²
STAIRS	* 12 m²
TOTAL APPROX.	447 m²

* NOT INCLUDING WALLS OR CORRIDOR

1 A109 **FLOOR PLAN - GROUND FLOOR**
SCALE - 1 : 200

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	06-04-2023
P2	PRELIMINARY ISSUE	12-04-2023
P3	PRELIMINARY ISSUE	17-04-2023
P4	PRELIMINARY ISSUE	19-04-2023
P5	CLIENT ISSUE	04-05-2023

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DRAWN	BM	SCALE As indicated	SIZE A3
APPROVED	DI	DATE APRIL 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **FLOOR PLAN - GROUND**
DWG No. **1531-SD A106** | STAMP PRELIMINARY | ISSUE **P5**



2 0 2 4 6 8 10M

SCALE 1:200 AT A3

ROOMS

01. DINING
02. KITCHEN
03. LAUNDRY
04. LIVING
05. CORRIDOR
06. BEDROOM 1
07. BATHROOM
08. BEDROOM 2
09. STORE
10. DECK

FIRST FLOOR AREA SCHEDULE	
BED 1	14 m²
DINING	6 m²
LAUNDRY	8 m²
BATHROOM	6 m²
CORRIDOR	19 m²
BED 2	12 m²
KITCHEN	11 m²
LIVING	6 m²
STORE	3 m²
DECK	20 m²
TOTAL APPROX.	* 105 m²

* NOT INCLUDING WALLS OR STAIRS

3 / A109 **FLOOR PLAN - FIRST FLOOR**

SCALE - 1 : 200

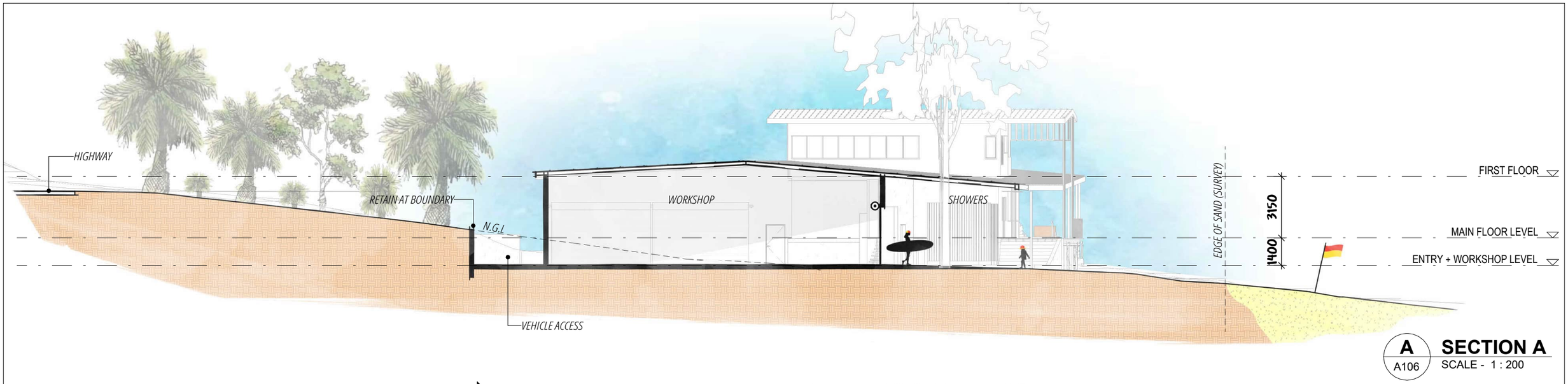
AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	12-04-2023
P2	PRELIMINARY ISSUE	17-04-2023
P3	PRELIMINARY ISSUE	19-04-2023
P4	CLIENT ISSUE	04-05-2023

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APPROVED	DI	DATE APRIL 2023	

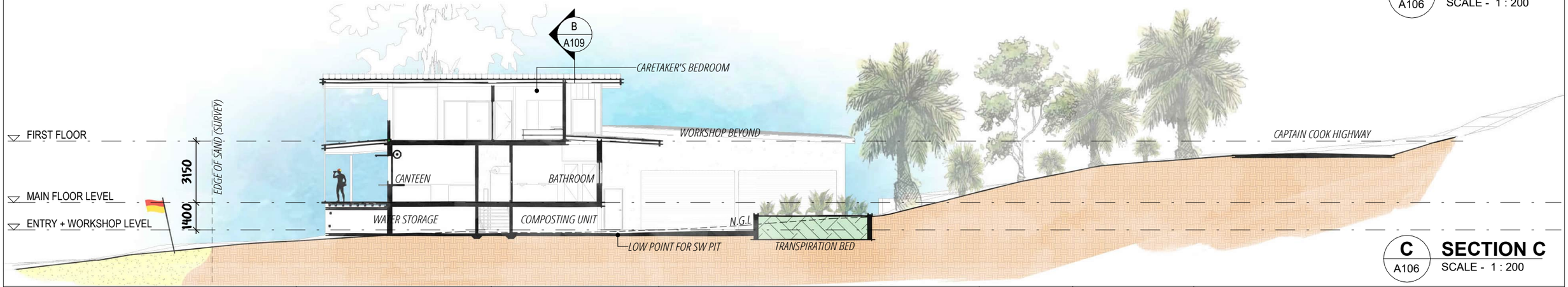
PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **FLOOR PLAN - FIRST FLOOR**
DWG No. **1531-SD A107** | STAMP PRELIMINARY | ISSUE **P4**



A A106 **SECTION A**
SCALE - 1 : 200



B A106 **SECTION B**
SCALE - 1 : 200



C A106 **SECTION C**
SCALE - 1 : 200

AMENDMENTS		DATE
P1	PRELIMINARY ISSUE	19-04-2023
P2	CLIENT ISSUE	04-05-2023

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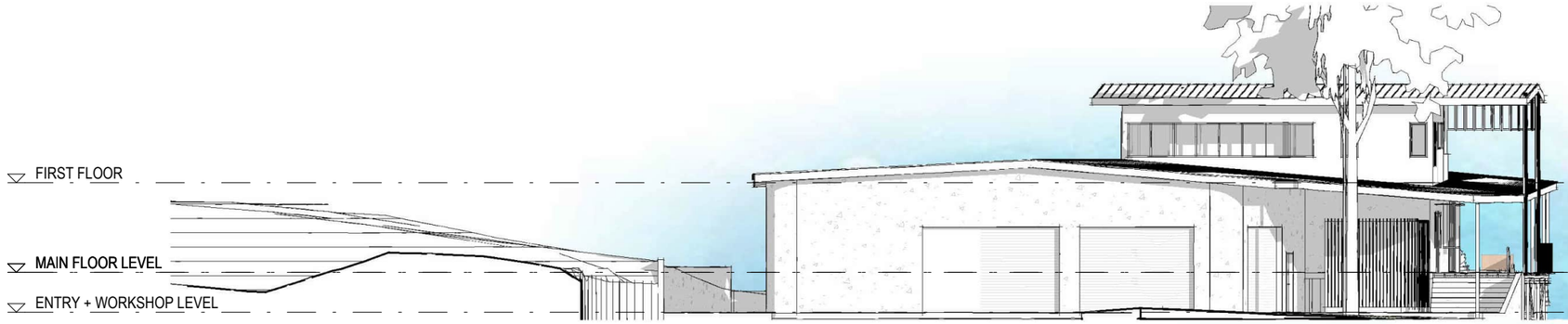
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APPROVED	DI	DATE APRIL 2023	

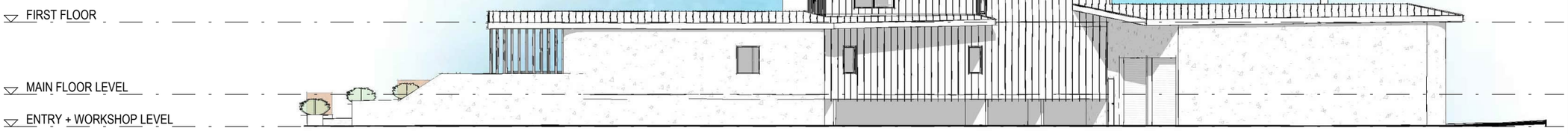
PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **SITE SECTIONS**
DWG No. **1531-SD A109** | STAMP PRELIMINARY | ISSUE **P2**



1 A106 ELEVATION A
SCALE - 1 : 200



2 A106 ELEVATION B
SCALE - 1 : 200



3 A106 ELEVATION C
SCALE - 1 : 200



4 A106 ELEVATION D
SCALE - 1 : 200

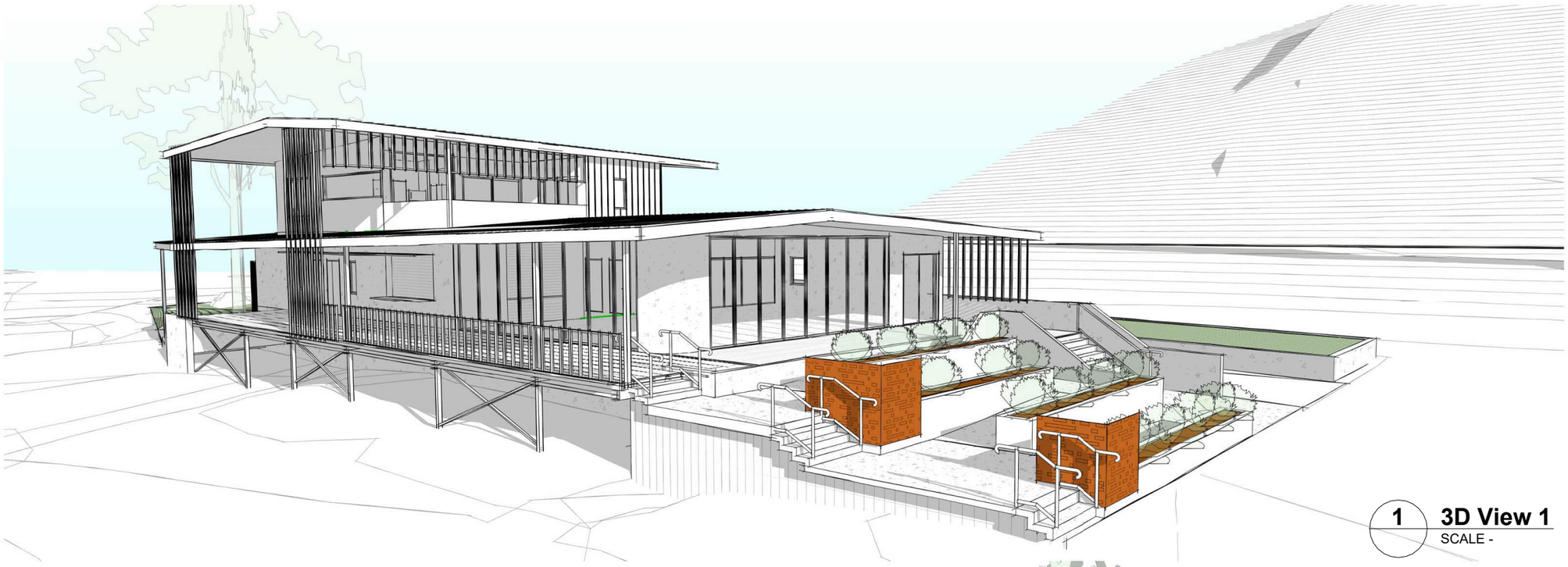
AMENDMENTS	DATE
P1 CLIENT ISSUE	04-05-2023

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APPROVED	DI	DATE	MAY 2023

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **ELEVATIONS**
DWG No. **1531-SD A110** | STAMP PRELIMINARY | ISSUE **P1**



1 **3D View 1**
SCALE -



2 **3D VIEW 2**
SCALE -

AMENDMENTS	DATE
P1 CLIENT ISSUE	04-05-2023

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DRAWN	BM	SCALE	SIZE A3
APPROVED	DI	DATE	MAY 2023

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **3D PERSPECTIVES**
DWG No. **1531-SD A111** | STAMP PRELIMINARY | ISSUE **P1**



1 A109 **MASTERPLAN**
SCALE - 1 : 1000

AMENDMENTS		DATE
P1	FOR DISCUSSION	20-06-2023
P2	INTERSECTION UPDATE	30-06-2023

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DRAWN	BM	SCALE 1 : 1000	SIZE **A3**
APPROVED	DI	DATE MARCH 2023	

PROJECT **ELLIS BEACH SURF LIFESAVING CLUB**
CAPTAIN COOK HIGHWAY, ELLIS BEACH
FOR **ELLIS BEACH SURF LIFESAVING CLUB**
DWG **MASTERPLAN**
DWG No. **1531-SD A113** | STAMP PRELIMINARY | ISSUE **P2**

Appendix 16

Hon Craig Crawford Preliminary Engagement Response

adams+sparkes
TOWN PLANNING

Subject: FW: Relocation of Ellis Beach Surf Club - Preliminary Consultation (ASTP ref 211219.01)

From: Barron River Electorate Office <Barron.River@parliament.qld.gov.au>
Sent: Friday, September 8, 2023 1:28 PM
To: Admin @ ASTPD <admin@astpd.com.au>
Cc: Cameron Adams <cameron@astpd.com.au>; Adam Seaton <a.seaton@astpd.com.au>
Subject: RE: Relocation of Ellis Beach Surf Club - Preliminary Consultation (ASTP ref 211219.01) [Filed 08 Sep 2023 17:16]

Hi all,

Apologies for the late response from our office. I only just returned from maternity leave after this email was sent and I missed it.

Craig is completely supportive of this project.

Are you happy for the design to go up on Craig's social media? This was an election commitment of Craigs from 2020 so we would like to keep the community updated to know this is happening.

Kind regards,

Susan Lear
Electorate Officer
Office of Hon Craig Crawford MP
Member for Barron River
Minister for Child Safety
Minister for Seniors and Disability Services

P 07 4229 0100 E barron.river@parliament.qld.gov.au
2.2/2 Chelsea Lane, PO BOX 327 REDLYNCH 4870
Facebook Twitter Website

** Please note, I work Wednesday, Thursday and Fridays.

Appendix 17
Project Phases Relating to Funding

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TOWN PLANNING

a Sep. 22-29 final design & MD Process

ANNEXURE A

Table of Milestones, Reports and Funding payments relating to the Activity

Report	Milestone(s) / Information covered by the Report	Milestone Completion Date	Payment amount (GST Exclusive)	Due Date for Report	Due Date for Funding Payment
Progress Report 1	Evidence acceptable to the Commonwealth that the following have been achieved: • Confirmation of final designs; • Confirmation of final costs; • the Activity at A.5 is reviewed, and, if necessary, a variation request is submitted to the department in line with final designs; • 10 per cent of the Project is completed and certified by the Project Manager, Quantity Surveyor, or similar.	1 June 2023	$350,000	3 July 2023	17 July 2023
Progress Report 2	Evidence acceptable to the Commonwealth that the following have been achieved: • Confirmation of final plans for the car park and landscaping; • Confirmation of all relevant approvals; • Confirmation of water and Sewerage infrastructure; • 30 per cent of the Project is completed and certified by the Project Manager, Quantity Surveyor, or similar.	1 December 2023	$700,000	2 January 2024	16 January 2024

I checked with Julie (23.08) if designs must be "final" for this Progress Report 1, "yes" was her response

Report	Milestone(s) / Information covered by the Report	Milestone Completion Date	Payment amount (GST Exclusive)	Due Date for Report	Due Date for Funding Payment
Progress Report 3	Evidence acceptable to the Commonwealth that the following have been achieved: • 45 per cent of the Project is completed and certified by the Project Manager, Quantity Surveyor, or similar.	3 June 2024	$525,000	1 July 2024	15 July 2024
Progress Report 4	Evidence acceptable to the Commonwealth that the following have been achieved: • 65 per cent of the Project is completed and certified by the Project Manager. Quantity Surveyor, or similar.	2 December 2024	$700,000	2 January 2025	16 January 2025
Progress Report 5	Evidence acceptable to the Commonwealth that the following have been achieved: • an Event Invitation has been submitted to the Department as required at Item I of the Schedule; • 85 per cent of the Project is completed and certified by the Project Manager, Quantity Surveyor, or similar.	2 June 2025	$700,000	2 July 2025	16 July 2025

Report	Milestone(s) / Information covered by the Report	Milestone Completion Date	Payment amount (GST Exclusive)	Due Date for Report	Due Date for Funding Payment
Project Completion Report	Evidence acceptable to the Commonwealth that the following has been achieved: • the Activity, at Item A.5 of the Schedule, is complete; • the Project, at Item A.2 of the Schedule, is complete; • all approvals required to enable public access and use of the facility have been met; and • the Project is fully Operational.	1 December 2025	$525,000	2 January 2026	16 January 2026

Appendix 18

Cultural Heritage Assessment Report

adams+sparkes
TOWN PLANNING

EVERICK HERITAGE

QLD.10255 DNNTC Ellis Beach SLSC

Cultural Heritage Assessment Report

Prepared for the Djabugay Nation Native Title Claim and Ellis Beach Surf Life Saving Club

Everick Heritage Pty Ltd



Report Reference:

Everick Heritage 2023. DNNTC Ellis Beach SLSC: *Cultural Heritage Assessment Report*. Everick Heritage Pty Ltd unpublished report prepared for the Djabugay Nation Native Title Claim and Ellis Beach Surf Life Saving Club.



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Ver.	Author(s)	Sections Edited	Date	Authorised
Draft	R. Mazlin	All	04.10.23	J. Wallace
Internal Draft Review	E. James	All	04.10.23	J. Wallace
Addressing DNNTC Draft Comments	R. Mazlin	Exec. Summ., 5.	11.10.23	J. Wallace
Addressing Client Draft Comments – Final	R. Mazlin	4.4.1, Exec. Summ.	23.10.23	J. Wallace

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Executive Summary

Everick Heritage have been commissioned by the Ellis Beach Surf Life Saving Club (the Proponent) to assist the Djabugay Nation Native Title Claim (DNNTC) in undertaking a cultural heritage assessment of land proposed for the construction of a new surf life saving club house at Ellis Beach, QLD (the Project). The lands subject to this assessment comprise part of the Captain Cook Highway reserve and an adjacent road reserve land parcel to the east (the Study Area) (Figure 1).

Ellis Beach Surf Life Saving Club intends to construct a new surf lifesaving club and associated ancillary infrastructure including road access and carpark (Figure 2). Everick Heritage have been nominated by the Aboriginal Party, DNNTC, to act as their Technical Advisor for the project.

This report provides cultural heritage management strategies to be implemented during the design and construction stages of the Project, in compliance with the *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act), and all relevant legislation as described in Section 2 of this Report.

Results

- A search of the DSDSATSIP Cultural Heritage Database was conducted on 19 September 2023 for the Study Area and surrounds (Reference Number: 143509). The DSDSATSIP search identified no registered Aboriginal cultural heritage sites within Study Area or within a buffer of 1000 m of the Study Area.
- However, isolated sites are known to exist to the southeast, identified as part of the ongoing Wangetti Trail project.
- A pedestrian survey of the Study Area was undertaken on 21 September 2023.
    - Ground surface visibility (GSV) was restricted throughout the Study Area which limited the ability to identify surface cultural material.
    - No archaeological sites or features were identified during the pedestrian survey.
    - However, mature vegetation was identified as holding cultural value to the DNNTC. These environmental features serve as a tangible link to traditional lifeways for the DNNTC.
    - The Study Area contains environmental features that are associated with Aboriginal archaeological sites and may contain physical cultural heritage that was not identified during field survey.

Recommendations

The recommendations listed in Section 5 have been formulated from the results of the consultation with the DNNTC, desktop assessment and field survey. The recommendations aim to provide the Proponent with a management framework that demonstrates they have taken, and are continuing to take, reasonable and practicable measures to meet their obligations under the ACH Act.

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Definitions

The following definitions apply to the terms used in this report.

Aboriginal Cultural Heritage or **Cultural Heritage** means the same as described in the *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act). Namely, that it is a Significant Aboriginal Area, or a Significant Aboriginal Object, or evidence, of archaeological or historic significance, of Aboriginal occupation of an area of Queensland.

ACH Act means the *Aboriginal Cultural Heritage Act 2003* (Qld).

Artefact means "any moveable object that has been used, modified or manufactured by humans" (Thomas 1998:69).

BVG means broad vegetation groups.

Consultant means qualified archaeological staff of Everick Heritage Pty Ltd.

Cultural Heritage Feature or **Feature** means cultural heritage individual items, components or elements within a site.

DES means the Department of Environment and Science.

DNNTC means the Djabugay Nation Native Title Claim.

DoC Guidelines means the guidelines established under s.1.1, 1.2 and s.28 of the ACH Act.

DOR means Department of Resources.

DSDSATSIP means the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships.

DTIS means the Department of Tourism, Innovation and Sport.

Duty of Care or **DoC** means the Aboriginal Cultural Heritage Duty of Care, as defined in s.23 of the ACH Act.

Everick Heritage means Everick Heritage Pty Ltd.

GSV means ground surface visibility.

LGA means Local Government Area.

Project means the proposed surf life saving club construction and associated ancillary infrastructure at Ellis Beach, QLD (Figure 2).

Project Activities means all works (design, construction, operation and maintenance) associated with the Project.

Proponent means Ellis Beach Surf Life Saving Club.

QHA is the abbreviation of the *Queensland Heritage Act 1992*.

QHC means the Queensland Heritage Council.

QHR is the abbreviation of the Queensland Heritage Register which is the list of places that have cultural heritage significance to the people of Queensland and administered under the QHA.

Significant Aboriginal Area means an area of particular significance to the Aboriginal parties as defined under the *Aboriginal Cultural Heritage Act 2003* (Qld).

Significant Aboriginal Object means the same as described in the *Aboriginal Cultural Heritage Act 2003* (Qld). Namely, any object of particular significance to Aboriginal Peoples because of Aboriginal tradition or the history, including contemporary history, of an Aboriginal Party for an area.

Significant Ground Disturbance means the same as described in the Duty of Care Guidelines.

SLSC means surf life saving club.

Study Area means the proposed surf life saving club and ancillary infrastructure footprints as show in Figure 1 and Figure 2.

1. Introduction

Everick Heritage have been commissioned by the Ellis Beach Surf Life Saving Club (the Proponent) to assist the Djabugay Nation Native Title Claim (DNNTC) in undertaking a cultural heritage assessment of land proposed for the construction of a new surf lifesaving club house at Ellis Beach, QLD (the Project). The lands subject to this assessment comprise part of the Captain Cook Highway reserve and an adjacent road reserve land parcel to the east (the Study Area) (Figure 1).

Ellis Beach Surf Life Saving Club intends to construct a new surf lifesaving club and associated ancillary infrastructure including road access and carpark (Figure 2). Everick Heritage have been nominated by the Aboriginal Party, DNNTC, to act as their Technical Advisor for the project.

1.1. Assessment Scope and Methodology

This report provides cultural heritage management strategies to be implemented during the design and construction stages of the Project, in compliance with the *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act), and all relevant legislation as described in Section 2 of this Report.

The Cultural Heritage Assessment Report includes:

- a legislative review;
- a search of applicable registers, including the Native Title Register; the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP) Cultural Heritage Database; and all other relevant national, state and local heritage registers;
- a review of relevant cultural heritage and environmental resources;
- the results of a site inspection assessing the potential for the Study Area to contain Aboriginal cultural heritage;
- GIS mapping of any archaeologically / culturally sensitive areas;
- an outline of any risks to Aboriginal cultural heritage in accordance with the ACH Act; and
- management recommendations addressing CRC's statutory obligations under the ACH Act.

1.2. Project Details

Ellis Beach Surf Life Saving Club intends to complete the design, construction, operation and maintenance of a new surf life saving club and associated ancillary infrastructure including road access and carpark at Ellis Beach, QLD (Figure 1 and Figure 2). The Project will involve the following activities that may impact Aboriginal cultural heritage values:

- Clearing of vegetation;
- Demolition of existing picnic shelters and other day-use facilities;
- Excavation of upper soil profiles to allow for building construction;
- Excavation of upper soil profiles to allow for road, carpark and turnaround construction;
- Introduction of ancillary laydown / stockpiling areas; and
- Ongoing maintenance that may include movement and / or excavation of upper soil profiles.

1.3. Report Authorship

This report was prepared by Senior Archaeologist Robbie Mazlin. GIS Mapping was undertaken by Geospatial Specialist Karolina Gustafsson. The report was reviewed by Senior Heritage Consultant Dr Emma James. Consultation with Ellis Beach SLSC and DNNTC was conducted by Robbie Mazlin.



Figure 1: Study Area.



Figure 2: Ellis Beach Surf Life Saving Club Site Layout.

2. Legislative and Planning Context

2.1. Aboriginal Cultural Heritage Act 2003 (Qld)

The intent of the *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act) is to provide effective recognition, protection, and conservation of Aboriginal cultural heritage. The ACH Act recognises that Aboriginal people are the primary guardians, keepers and knowledge holders of Aboriginal cultural heritage, and actively involves them in the protection and conservation process. The meaning of Aboriginal cultural heritage protected by the Act includes a significant Aboriginal area in Queensland; a significant Aboriginal object; or evidence, of archaeological or historic significance, of Aboriginal occupation of an area in Queensland. This definition allows for the protection of tangible and intangible Aboriginal cultural heritage.

The key components are:

- granting a statutory right to Aboriginal peoples to determine cultural significance, without the need for any reference to scientific values;
- providing Aboriginal people with substantial control over the impact assessment process (in certain circumstances), including the discretionary right to seek independent archaeological advice;
- the protection of areas holding significant intangible cultural values to Aboriginal peoples; and
- the establishment of a system of negotiations between land-users and Aboriginal peoples over heritage management, with a largely hands-off role for government administrators.

Aboriginal heritage to be protected under the ACH Act was defined as either a 'significant Aboriginal place' or a 'significant Aboriginal area' which is of particular significance due to:

- Aboriginal tradition; or
- the history, including contemporary history, of any Aboriginal Party for the area.

Section 34 of the ACH Act prescribes the hierarchy of identifying native title parties; Aboriginal parties (Section 35) or registered Aboriginal cultural heritage bodies (Section 36) for the purposes of consultation and management of Aboriginal cultural heritage. Section 34 specifically documents the meaning of a Native Title Party as registered native title claimants and holders, either current or past.

2.1.1. Duty of Care Guidelines

Under the ACH Act, Section 23, a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage. This is known as the 'cultural heritage duty of care' and is described in the ACH Act Duty of Care (DoC) Guidelines (DSDSATSIP, 2004). The DoC Guidelines are the sole method of cultural heritage assessment and reporting in Queensland.

The DoC Guidelines are based on the concept of ground disturbance; both the previous ground disturbance to a location, and the proposed ground disturbance which will be carried out by the intended project. In summary, the type of ground disturbance is classified into five categories under the DoC Guidelines:

Category 1 – No ground surface disturbance. This category means there is no further ground surface disturbance, and therefore no threat to physical Aboriginal Heritage. Proposed works that are assessed as falling into this category may proceed without further investigation.

Category 2 – No additional surface disturbance. This category means that ground surface disturbance has occurred in the past in the area, and the proposed activities are the same or similar to what has occurred previously. Examples given of a Category 2 disturbance are grazing cattle on paddocks already used for grazing cattle, and maintaining and using existing roads and vehicle tracks.

Category 3 - Developed area. This category is comparable to Category 2, where proposed works will be impacting an already disturbed area. Category 3 specifically applies to works of infrastructure (e.g., sewer maintenance, road upgrades, electrical infrastructure etc).

Category 4 – Areas previously subject to significant ground disturbance. This category applies to landscapes that initially may not fall into the proceeding categories but in which Aboriginal cultural heritage is unlikely to be harmed. A Category 4 landscape may be the continued logging of timber where timber logging has already occurred. Care must be taken, however, with this category as residual Aboriginal cultural heritage value may remain, particularly ceremonial or spiritual value which may not have been impacted by the 'significant ground disturbance'.

Category 5 – Any activity or area that does not fall into the preceding categories.

'Significant ground disturbance' as mentioned in Category 4 means:

- disturbance by machinery of the topsoil or surface rock layer of the ground such as by ploughing, drilling, creating bore holes, or dredging; and
- the removal of native vegetation by disturbing root systems and exposing underlying soil.

Where a development will result in no additional ground disturbance, or will be limited to areas that have seen significant ground disturbance, the Duty of Care Guidelines state that a development is unlikely to harm Aboriginal heritage.

3. Cultural Heritage Desktop Assessment

3.1. Heritage Register Search Results

3.1.1. DSDSATSIP Cultural Heritage Database

A search was conducted on 19 September 2023 of the DSDSATSIP Cultural Heritage Database for the Study Area polygon (Reference Number: 143509). The search was performed with a 1000 m buffer applied. The full DSDSATSIP search results have been included under Appendix A.

The DSDSATSIP search demonstrated the Djabugay Nation Native Title Claim are the Aboriginal Party for the Study Area. Their contact details are as follows.

Djabugay Nation Native Title Claim
c/-North Queensland Land Council
PO Box 679
CAIRNS QLD 4870
Phone: (07) 4042 7000
Email: reception@nqlc.com.au

The DSDSATSIP search identified no registered Aboriginal cultural heritage sites within the Study Area or within a buffer of 1000 m of the Study Area (see Appendix A). However, isolated sites are known to exist to the southeast, identified as part of the ongoing Wangetti Trail project.

3.1.2. Other Heritage Registers

A search was undertaken of the following heritage registers to identify any listings of cultural heritage that may be affected by the Project. Table 1 provides an overview of the search results for each register that was examined.

Table 1: Heritage register search results.

Register	Access Date	Outcome
World Heritage List	04 October 2023	Wet Tropics of Queensland, Cairns, QLD, Australia (Place ID: 105080)

Register	Access Date	Outcome
Commonwealth Heritage List (Australian Heritage Database), including Register of the National Estate (RNE)	04 October 2023	Wet Tropical Forests of North Queensland, Cairns, QLD, Australia (Place ID: 14840)
National Heritage List	04 October 2023	Wet Tropics World Heritage Area (Indigenous Values), Cairns, QLD, Australia (Place ID: 106008) Wet Tropics of Queensland, Cairns, QLD, Australia (Place ID: 105689)
Queensland Heritage Register (QHR)	04 October 2023	No sites or features
National Trust of Australia (Queensland) (NTAQ) Heritage Register	04 October 2023	No sites or features
Cairns Regional Council Heritage Places Register	04 October 2023	No sites or features

3.2. Environmental Context

3.2.1. Watercourses and Topography

The topography of the Study Area is essentially level above the high tide line, sloping sharply up an introduced bench toward the Captain Cook Highway in the west (Figure 3). Cascade Creek runs to the immediate south of the Study Area. This watercourse includes semi-permanent freshwater holes both up and down stream of the Captain Cook Highway and would likely have retained accessible freshwater for periods following rainfall (Figure 3).

3.2.2. Geology

The Study Area contains the geological units outlined in Table 2 and Figure 4. Geology mapping is provided by the State of Queensland (DOR 2018).

Table 2: Geology of the Study Area.

Geological Unit	Age	Dominant Rock	Description
Qh/m (Hodgkinson Formation/m)	Early Devonian - Late Devonian	Mudrock	Mainly dark grey, thin bedded, mudstone, subordinate thin to thick bedded arenite beds, minor chert and basalt

3.2.3. Vegetation

The Study Area contains the vegetation communities outlined in Table 3 and Figure 5. Vegetation mapping is provided by the State of Queensland (DES 2018).

Table 3: Vegetation of the Study Area.

BVG Code	Description
9b	Moist to dry eucalypt open forests to woodlands usually on coastal lowlands and ranges. Moist to dry woodlands dominated by *Eucalyptus platyphylla* (poplar gum) and/or *E. leptophleba* (Molloy red box). Other frequent tree species include *Corymbia clarksoniana* (grey bloodwood), *E. drepanophylla* (grey ironbark) and occasionally *E. chlorophylla*.



Figure 3: Topography and Hydrology of Study Area.



Figure 4: Geology of Study Area.



Figure 5: Vegetation of Study Areas.

3.3. Relevant Cultural Heritage Assessments

A review of previous archaeological assessments forms part of the basis for making predictive statements as to the type and densities of cultural heritage sites and the environmental contexts in which they might be found. Under the ACH Act, there is no requirement to make archaeological research in Queensland publicly available. As a result, few contemporary reports are accessible to support accurate archaeological modelling. Everick Heritage is aware of the following previous and relevant cultural heritage assessments.

In 2021 Niche Environment and Heritage were commissioned by the Dawul Wuru Aboriginal Corporation and DTIS to complete an Aboriginal cultural heritage assessment for the Wangetti Trail Project – South Section (Palm Cove to Ellis Beach). As a result of field surveys, seven cultural heritage sites were identified. These sites included four rock shelters and three culturally important trees. It is understood that most of the recorded sites were in the vicinity of Ellis Beach, however information pertaining to two of the sites was restricted at the request of the Dawul Wuru Aboriginal Corporation.

Everick have recently been engaged by DNNTC and DTIS to complete additional heritage management in relation to the Wangetti Trail project. Survey and monitoring have identified numerous isolated artefacts, mostly grinders / pounders, as well as an in-situ nut cracking stone and culturally significant environmental features. The trail alignment runs to the west of the Study Area and serves as a robust example of the physical cultural heritage that likely exists.

In the year 2000, archaeologists Sean Ulm and Jill Reid developed an index of dates from archaeological sites in Queensland, including conventional radiocarbon (14C), accelerator mass spectrometry (AMS), thermoluminescence (TL) and optically stimulated luminescence (OSL) determinations (Ulm and Reid 2000). This work expanded on Kelly's (1982) list of dated archaeological sites in Queensland, which had not been continually updated by archaeologists since the time it was published. Included in the index were conventional radiocarbon dates for the Cape York Peninsula, including Aboriginal occupation at Mossman (Ngarrabullgan Cave) at >37170 BP, Atherton (Fern Cave) at 30300 ± 800 BP, Innisfail (Jiyer Cave) at 5130 ± 140 and Cairns (Mulgrave River 2) at 2690 ± 100 BP. The site at Mossman, less than 45 kms from Palm Cove, provided the oldest date included in the index.

An Environmental Impact Statement (EIS) was prepared by Reever and Ocean Developments Pty Ltd (n.d.) for the KUR-World Integrated Eco-Resort project proposed for development at Myola, 4 km west of Kuranda. Included in this document (EIS) is a chapter assessing cultural heritage impacts of the development, including the results of consultation with the Aboriginal Party, site visits, and the preparation of a Cultural Heritage Management Plan. It was noted that archaeological research in north Queensland,

particularly in the semi-arid inland areas of Laura, Chillagoe and Ngarrabullgan, has demonstrated occupation of the region for over 30,000 years. Low level occupation of rainforest environments from 7,500 years ago was recorded on the Atherton Tablelands. Various individual sites were recorded during the site visit to the KUR-World site, including portable nut cracking rocks, nut cracking holes in the creek bed, flakes, an axe blank and a circular top stone/pestle.

3.4. Predictive Cultural Heritage Model (Pre-Archaeological Survey)

The environmental context, the level and type of past ground disturbance, and the results of past cultural heritage assessments must be considered when assessing potential for archaeological site types within the Study Area. Archaeological modelling for the Study Area indicates level lands near water and resource areas correlate with Aboriginal campsites. Archaeological deposits would likely have been concentrated on elevated areas close to watercourses and at the crest of low ridges as well as in sandy substrates adjacent to open beaches.

Site types that may be identified within the Study Area include:

Artefact scatters (denser concentration of artefacts): occur when the density of artefacts reaches a threshold of size or density, or both. These types of sites usually have a variety of artefact types and sizes made often from different raw materials. Artefact scatters are often interpreted as indicative of a purposeful action of Aboriginal Peoples within the landscape or representing a specific action event. There is the potential for artefact scatters to exist in the Study Area provided that past ground disturbances have not removed site integrity.

Background scatter: is an archaeological term used to describe the general distribution of artefacts throughout all of Australia which supports the theory that evidence of Aboriginal occupation is ubiquitous throughout the entire continent of Australia. The 'background scatter' is different to discrete, higher density artefact scatters which are evidence of localised, concentrated human activity – for example a camp site, a ceremonial place, or a grave site.

Isolated artefacts: usually made from stone, which may / may not have been used as tools. Isolated artefacts can be found throughout any landscape at any point. Isolated artefacts may have been left where they were discarded by Aboriginal Peoples as they moved through the landscape, rather than having arrived at a location due to a particular event or premediated action. There is the potential for isolated stone artefacts to exist within the Study Area.

Scarred trees or resource areas: there is the potential for scarred trees to be encountered within the Study Area in the areas that have not been subject to significant land clearing. Scar trees are more likely to occur in areas which have been subject to less clearing activities and still contain mature growth trees. Evidence of traditional food processing locations, such as nut cracking stones and grinding grooves may also be present where geology is exposed at surface.

Middens: are deposits dominated by shellfish remains. Middens are usually situated near a source of shellfish and often comprise mature oyster, pipi, whelk, cockle and cartrut species in addition to terrestrial animal and fish bone, stone artefacts, charcoal and ash from fireplaces. Middens may be composed of deep compacted debris reflecting consistent use over long periods of time, or thin scatters of shell which reflect use on a single occasion by a small group, perhaps in transit or gathering food away from a large campsite. Human burials have been sometimes associated with middens. Middens are commonly identified in dunes and other sand-dominated substrates.

Hearths: often comprised of small concentrations of heated stones or clay nodules that have been used as heat retainers by Aboriginal people during cooking or for small campfires. Hearths are a common feature on the Australian landscape, especially along flat areas above watercourses.

Everick Heritage cannot provide an assessment or interpretation of any non-physical cultural values that the Aboriginal Peoples of the region may hold for the Study Area. Such site types may include dreaming places, songlines, medicine and food trees, birthing places, and other places linked to their spiritual beliefs.

4. Field Survey

4.1. Survey Team

A field survey of the Study Area was undertaken by DNNTC representatives on Thursday 21 September 2023 along with Everick Archaeologist Georgina Skelly Mazlin. A breakdown of the survey team is provided below in Table 4.

Table 4: Survey personnel.

Date	DNNTC Personnel	Everick Representative
21 September 2023	Bruce Banning Ivan Brim Victor Palmer Lassiman Baird Levi Newbury.	Georgina Skelly

4.2. Survey Methods

Field inspection of the Study Areas was undertaken by pedestrian survey, involving traversing the Study Area on foot. The field survey focused on exposed ground surfaces within the Study Area, as conditions would allow, to record any archaeological material found and assess its significance, ground truth the level of ground disturbance, and examine the potential for concealed or subsurface Aboriginal archaeological sites. If artefacts or sites were identified during survey, they were recorded in situ with a GPS (using GDA2020 datum) point via Apple iPad. Everick Heritage utilise Esri Fieldmaps, a digital location tracking and data collection platform. Fieldmaps records GPS points, track logs, enables photographs to be taken with GIS data, artefact details and measurements, degree of GSV, ground cover, vegetation, land use, geography, geology, and any other relevant features. Digital data from Fieldmaps was uploaded to the Cloud after the survey.

4.3. Survey Coverage and Constraints

An assessment of the constraints to site detection contributes to determining the effectiveness of the field inspection to find Aboriginal sites and cultural materials. The assessment assists in determining the likelihood of concealed or subsurface sites, keeping in mind a site-specific knowledge of the impacts that

European land use and natural processes may have had on the survivability of Aboriginal sites within the Study Area.

GSV is a measurement of how much ground surface was visible at the time of the survey to accurately assess the presence of Aboriginal cultural heritage. GSV is calculated by assessing a one-meter by one-meter area and estimating the percentage of ground surface visible through the vegetation cover. GSV levels under 40% generally trigger either a post-clearance assessment or monitoring of initial ground disturbing activities. GSV was restricted during the field survey due to leaf litter and ground cover vegetation. GSV was further limited by existing infrastructure including bitumen tracks/carparks and ancillary day use facilities. GSV across the site was less than 20%.

4.4. Survey Results

4.4.1. Physical Cultural Heritage

The Study Area comprises an area of land between the Captain Cook Highway and Ellis Beach north of an existing beach front accommodation complex, including a portion of the riparian zone (Figure 7 and Figure 8). Land use currently consists of recreational day-use facilities including picnic shelters, barbeques, taps and associated sealed and unsealed access tracks/carparks (Figure 9). Lands in the west of the Study Area have been impacted by the construction of the Captain Cook Highway through the introduction of a raised bench which likely involved cut and fill earthworks to terraform the original toe slope and the introduction of fill to achieve the desired elevations (Figure 10). The Study Area also includes less disturbed lands surrounding these facilities as evidenced through the presence of reworked original upper soil profiles and the occurrence of mature vegetation.

Where visible, soils were observed to comprise sands with a moderate organic content, consistent with the reworking of humic upper profiles. As mentioned above, mature vegetation was noted within the Study Area. This includes, but is not limited to, two large melaleuca trees located in the southern extent of the Study Area (Figure 12 and Figure 13). These environmental features hold cultural values to the DNNTC and serve as a tangible link to traditional lifeways. During the field survey it was noted by DNNTC representatives that where possible mature vegetation should be avoided, and that additional consultation with appropriate Elders be completed if avoidance is not possible.

No stone artefacts or other physical cultural heritage was identified during the field survey. However, the potential for subsurface archaeological deposits was noted. The environmental conditions of the Study Area provide a setting that would have been highly conducive to Aboriginal occupation, with access to

nearby marine and aquatic subsistence resources, semi-permanent freshwater, sandy well-drained substrates, and access to lithic raw material in the adjacent ranges. The potential for physical cultural heritage to remain within the Study Area is considered to be moderate-high, despite the disturbance history. Sandy contexts, such as those present within the Study Area, are known to be dynamic, mobile, and prone to regular natural reworking. The result is that archaeological deposits are regularly concealed through aeolian and fluvial action, to be re-exposed and reburied as landforms evolve. The potential for buried archaeological deposits thus exists within the Study Area.

4.4.2. Intangible Heritage Values

During the course of the field survey consultation was undertaken with the DNNTC representatives as to the intangible heritage values of the Study Area and its surrounds. Areas to the south, in Palm Cove, have been noted as having been meeting places for the carrying out of ceremonial activities as well as for trade and negotiation. Additionally, traditional pathways were noted within the lower slopes of the Kuranda State Forest. The environmental values of the Project Area were highlighted, as referenced in Section 4.4.1 above. This includes Cascade Creek which runs to the immediate south of the Study Area. Cascade Creek is known by DNNTC representatives to be a habitat for the critically endangered Opal Cling Goby (*Stiphodon semoni*).

No other specific intangible heritage values were noted in relation to the Study Area, however any comments received on this report or intangible values mentioned during forthcoming consultation will be included in this section of the report.



Figure 6: Survey results.



Figure 7: Typical survey conditions, view southeast.



Figure 8: Typical survey conditions, view northwest.



Figure 9: Existing day use facilities, view southeast.



Figure 10: View west showing benching / fill associated with Captain Cook Highway.

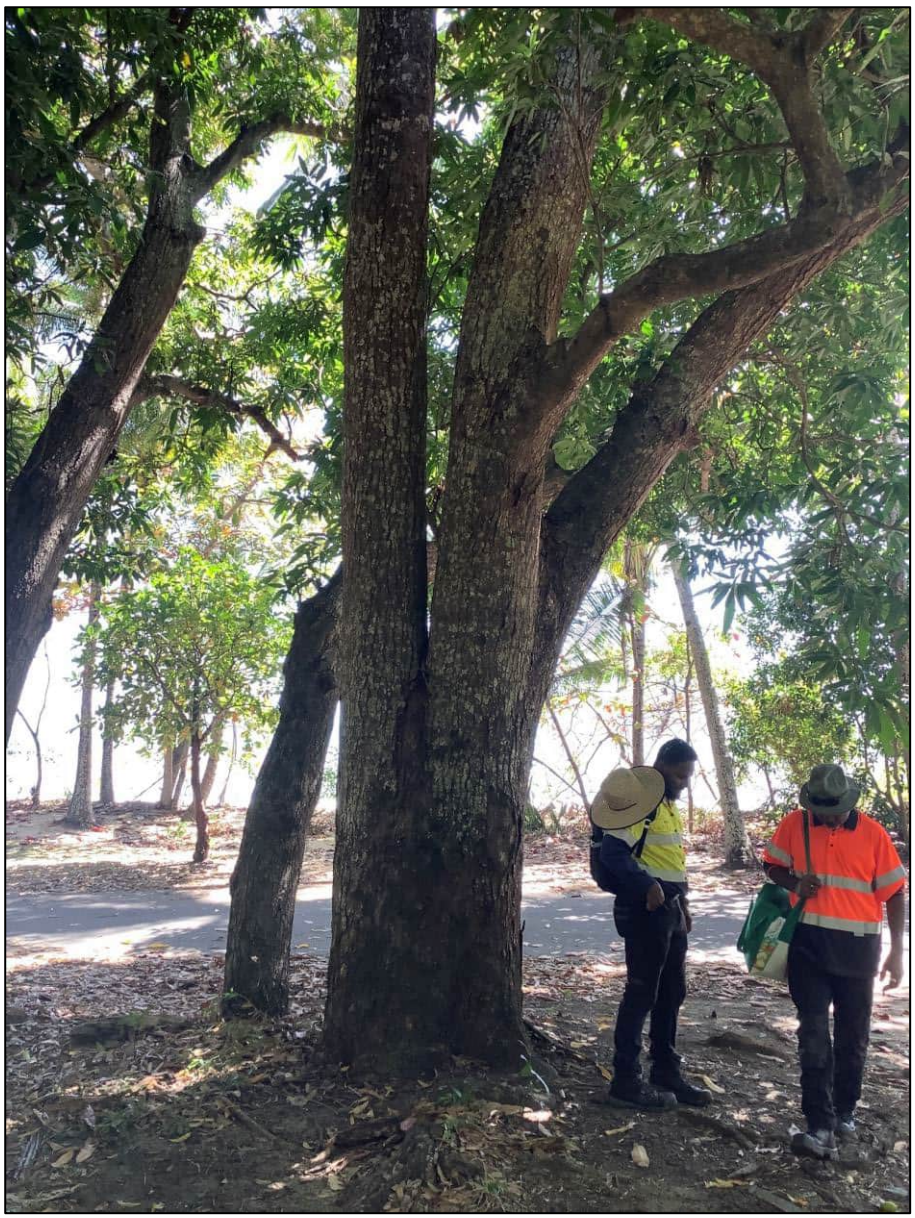


Figure 11: Example of mature vegetation.



Figure 12: Example of mature melaleuca located in east of Study Area.



Figure 13: Example of mature melaleuca located in far south of Study Area.

5. Recommendations for the Project

The recommendations listed below have been formulated from the results of the consultation with the DNNTC, desktop assessment and field survey. The following recommendations aim to provide the Proponent with a management framework that demonstrates they have taken, and are continuing to take, reasonable and practicable measures to meet their obligations under the ACH Act.

Recommendation 1: Cultural Heritage Monitoring

It is recommended that two DNNTC representatives are engaged as cultural heritage monitors during the ground disturbing phases of the project in order to mitigate any potential harm to cultural heritage values. Monitors should be present for initial earthworks involving excavation and movement of upper topsoil profiles, including vegetation removal where root balls will be disturbed. If there is a find identified as significant, or the monitors are unsure of the archaeological significance of the find, it is recommended that work stops in that area and the find is fenced off with a minimum 10 m buffer zone from all Project Activities. It is recommended that Senior DNNTC Representatives and the Technical Advisor are consulted to determine the significance of the find.

Recommendation 2: Avoidance of Mature Vegetation

A general principle of avoidance of all mature vegetation is recommended. These environmental features hold cultural values to the DNNTC and serve as a tangible link to traditional lifeways. Where possible, Project Activities should also avoid the root systems of mature vegetation to ensure the long-term health of the plants is not impacted. If avoidance of mature vegetation is not possible, DNNTC have requested additional consultation be undertaken with appropriate Elders.

Recommendation 3: DNNTC Input on Selection of Vegetation Removal Contractor

It is acknowledged that a degree of vegetation removal will be required to allow for the proposed Project Activities. While it is recommended that mature vegetation is avoided, other sub-mature vegetation will need to be removed. It is recommended that DNNTC be provided the opportunity to have input on the selection of the vegetation removal contractor. The selection of a local Aboriginal-owned business is preferred and DNNTC are in a position to provide advice on this process.

Recommendation 4: DNNTC Use of Felled Timber

DNNTC representatives have requested that felled trees be made available to DNNTC for their use in cultural activities. The specific felled timber to be taken by DNNTC will be guided by the monitors on site during vegetation removal activities, however species of particular importance include wattle and beach almond. Storage and transport of timber is to be handled by DNNTC unless otherwise agreed.

Recommendation 5: Management of Sediment Run-Off

Cascade Creek runs to the immediate south of the Study Area and may be impacted by sediment run-off unless adequate management protocols are implemented during the construction phase. Cascade Creek is known by DNNTC representatives to be a habitat for the critically endangered Opal Cling Goby (*Stiphodon semoni*). DNNTC have highlighted that the Proponent must ensure any potential sediment run-off does not enter Cascade Creek.

Recommendation 6: DNNTC Input on Rehabilitation Works

DNNTC representatives have requested that DNNTC be provided notification of intended rehabilitation works. This will ensure DNNTC have the opportunity to provide input on the selection of vegetative species from a cultural perspective.

Recommendation 7: Cultural Heritage Find Procedure

If suspected Aboriginal material/s are uncovered as a result of Project Activities within the Study Area, it is recommended that:

- work in the surrounding area is to stop immediately;
- a temporary fence is to be erected around the site, with a buffer zone of at least 10 m around the known edge of the site;
- a cultural monitor from DNNTC should be engaged to identify the find, assisted by an appropriately qualified archaeological consultant, if reasonably required; and
- if the material is found to be of Aboriginal origin, DNNTC should be consulted over the management of the find. Any management agreement should be clearly documented in writing and signed by both parties.

Recommendation 8: Aboriginal Human Remains

Although it is highly unlikely that human remains will be located at any stage during development within the Study Area, if human remains are located within the Study Area, all works must halt in the immediate area to prevent any further impacts to the remains. The area should be cordoned off and the remains should be left untouched.

The nearest police station and the DSDSATSIP office are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the site for criminal activities, DNNTC should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

References

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Appendix A: DSDSATSIP Results (#143509)

Cultural Heritage Database and Register Search Report

Search report reference number: 143509

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.

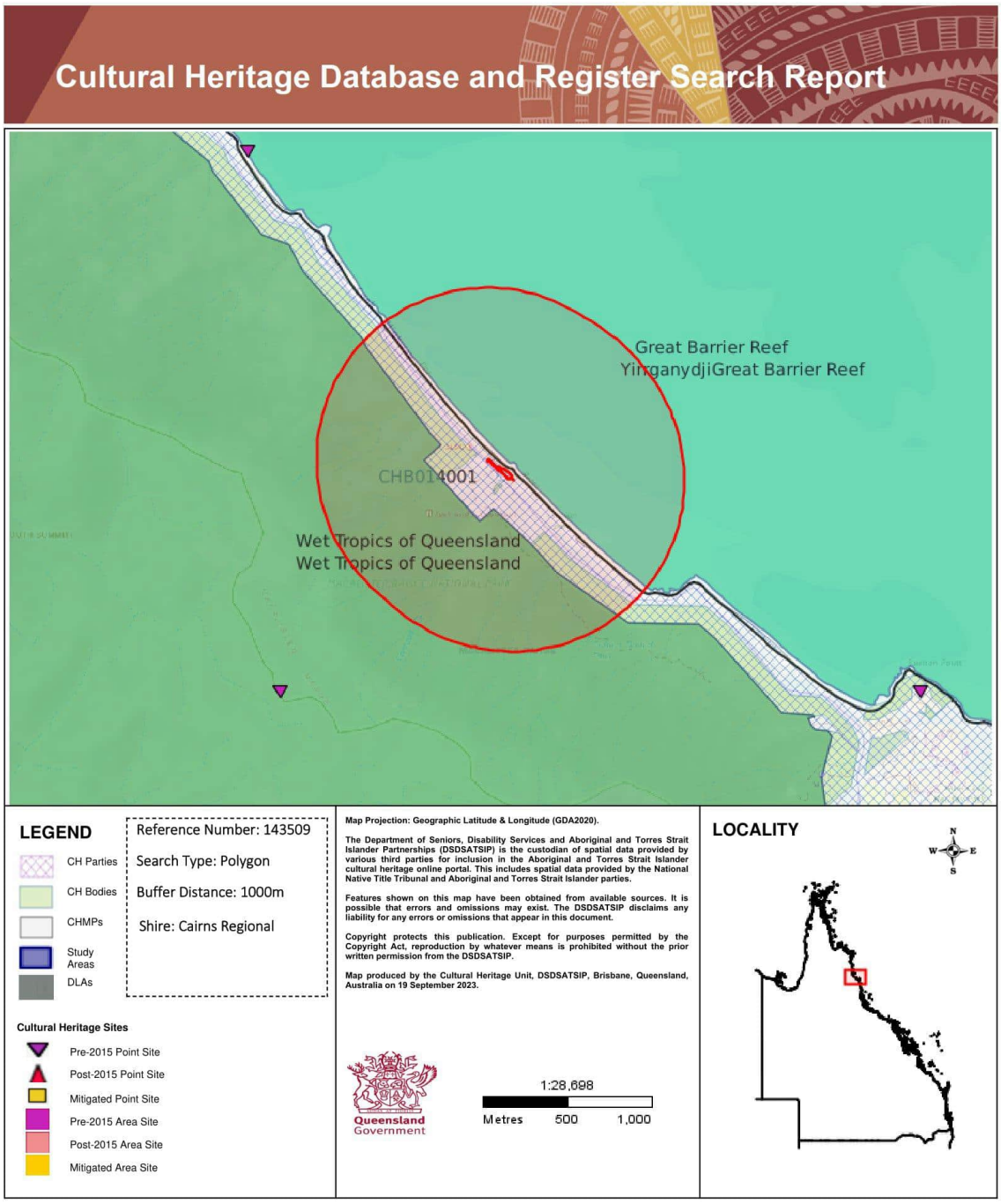
Please refer to the Department website https://www.qld.gov.au/firstnations/environment-land-use-native-title/cultural-heritage/cultural-heritage-duty-of-care to obtain a copy of the gazetted Cultural Heritage Duty of Care Guidelines, which set out reasonable and practicable measure for meeting the cultural 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@dsdsatsip.qld.gov.au or telephone: 1300 378 401.

Queensland Government



Search report generated on 19 Sep 2023 15:12

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
QC2016/008	QUD692/2016	Djabugay Nation Native Title Claim	Djabugay Nation Native Title Claim c/-North Queensland Land Council PO Box 679 CAIRNS QLD 4870 Phone: (07) 4042 7000 Email: reception@nqlc.com.au

Cultural Heritage Body/ies for the area:

Departmental Reference No.	Name	Contact Details	Registration Date
CHB014001	Yirrganydji Gurabana Aboriginal Corporation	Yirrganydji Gurabana Aboriginal Corporation Po Box 717 MANUNDA QLD 4870 Phone: (07) 4032 4854 Email: yirrganydjigurabana@gmail.com	30/01/2014

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.

National Heritage Areas (Indigenous values) for the area:

Place ID	Name
106008	Wet Tropics World Heritage Area (Indigenous Values)

Heritage Related Areas (QLD Subset) for the area:

Data Source	Name
National Heritage Areas	Great Barrier Reef
National Heritage Areas	Wet Tropics of Queensland

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Heritage Related Areas (QLD Subset) for the area:

Data Source	Name
Traditional Use of Marine Resources Agreement	Yirrganydji
World Heritage Areas	Great Barrier Reef
World Heritage Areas	Wet Tropics of Queensland

Traditional Use of Marine Resources Agreement: 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

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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:
  - there is no other registered native title claimant for the area; and
  - 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



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.