NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development:

SITE: 101 Lewisham Scenic Drive, Lewisham

PROPOSED DEVELOPMENT:
EXTENSION OF JETTY

The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Tuesday 28th January 2025.**

Any person may make representation in relation to the proposal by letter or electronic mail (sorell.council@sorell.tas.gov.au) addressed to the General Manager. Representations must be received no later than **Tuesday 28th January 2025.**

APPLICANT: **Marine And Safety Tasmania**

APPLICATION NO: **DA 2024 / 328 – 1**

DATE: **11 January 2025**

Part B: Please note that Part B of this form is publicly exhibited.

Full description of Proposal:	*Use:* existing boat ramp (Pleasure Boat Facility) *Development:* Extension to existing jetty and groyne infrastructure for existing boatramp *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 300,000
Is all, or some the work already constructed:	No: ☐X Yes: ☐
Location of proposed works:	Street address: Lewisham Boat Ramp adjacent to 101 Scenic Drive Suburb: Lewisham Postcode: 7173 Certificate of Title(s) Volume: ..... Folio: ..... No certificate of title
Current Use of Site	existing boat ramp
Current Owner/s:	Name(s) NRE TAS (Property Services)

Is the Property on the Tasmanian Heritage Register?	No: X ☐ Yes: ☐	*If yes, please provide written advice from Heritage Tasmania*
Is the proposal to be carried out in more than one stage?	No: ☐ Yes: X ☐	*If yes, please clearly describe in plans*
Have any potentially contaminating uses been undertaken on the site?	No: X ☐ Yes: ☐	*If yes, please complete the Additional Information for Non-Residential Use*
Is any vegetation proposed to be removed?	No: ☐ Yes: X ☐	*If yes, please ensure plans clearly show area to be impacted* (see marine ~~environmental~~ assessment)
Does the proposal involve land administered or owned by either the Crown or Council?	No: ☐ Yes: X ☐	*If yes, please complete the Council or Crown land section on page 3*
If a new or upgraded vehicular crossing is required from Council to the front boundary please complete the Vehicular Crossing (and Associated Works) application form https://www.sorell.tas.gov.au/services/engineering/		

Part B continued: Please note that Part B of this form is publicly exhibited

Declarations and acknowledgements
• I/we confirm that the application does not contradict any easement, covenant or restriction specified in the Certificate of Title, Schedule of Easements or Part 5 Agreement for the land. • I/we consent to Council employees or consultants entering the site and have arranged permission and/or access for Council's representatives to enter the land at any time during normal business hours. • I/we authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation and have permission of the copyright owner for such copies. • I/we declare that, in accordance with s52(1) of the *Land Use Planning and Approvals Act 1993*, that I have notified the owner(s) of the intention to make this application. • I/we declare that the information in this application is true and correct. *Details of how the Council manages personal information and how you can request access or corrections to it is outlined in Council's Privacy Policy available on the Council website.*
• I/we acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process, for display purposes during public exhibition, and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.
• Where the General Manager's consent is also required under s.14 of the *Urban Drainage Act 2013*, by making this application I/we also apply for that consent.

Applicant Signature:	Signature: ..... Date: 18/12/2023

Crown or General Manager Land Owner Consent
If the land that is the subject of this application is owned or administered by either the Crown or Sorell Council, the consent of the relevant Minister or the Council General Manager whichever is applicable, must be included here. This consent should be completed and signed by either the General Manager, the Minister, or a delegate (as specified in s52 (1D-1G) of the *Land Use Planning and Approvals Act 1993*). Please note: • If General Manager consent if required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au • If the application involves Crown land you will also need a letter of consent. • Any consent is for the purposes of making this application only and is not consent to undertaken work or take any other action with respect to the proposed use or development.
I Jesse Walker Team Leader (Assessments) being responsible for the administration of land at Lewisham boat ramp, adjacent to 101 Scenic Drive, Lewisham declare that I have given permission for the making of this application for marine facilities and rock groyne as detailed in the application.

Sorell Council
Development Application: 5.2024.328.1 - Development Application - 101 Lewisham Scenic Drive, Lewisham - P1 - Copy.pdf
Plans Reference:P1
Date Received: 9/12/2024

Signature of General Manager, Minister or Delegate:	Signature: ..... Date: 9 December, 2024

Instrument of Revocation and Delegation

DELEGATION OF THE DIRECTOR-GENERAL OF LANDS' FUNCTIONS UNDER THE *LAND USE PLANNING AND APPROVALS ACT 1993*

I, JASON JACOBI, being and as the Director-General of Lands appointed under section 7 of the *Crown Lands Act 1976*, hereby revoke any previous delegation made pursuant to section 52(1E) of the *Land Use Planning and Approvals Act 1993* ("the Act") and, acting pursuant to section 52(1E) of the Act, I hereby delegate the functions described (by reference to the relevant provision of the Act and generally) in Schedule 1, to the persons respectively holding the offices of Deputy Secretary (Parks and Wildlife Service) (position number 700451), General Manager (Park Operations and Business Services) (position number 708581), Manager (Property Services) (position number 707556), Unit Manager (Operations) (position number 702124) and Unit Manager (Assessments) (position number 334958) in accordance with the functions delegated to me by the Minister administering the *Crown Lands Act 1976,* by instrument dated 9 November 2023.

SCHEDULE 1

Provision	**Description of Functions**
Section 52(1B)	Signing, and providing written permission for, applications for permits in relation to Crown land.

Dated at HOBART this 29 day of July. 2024

.....

Jason Jacobi

DIRECTOR-GENERAL OF LANDS

Department of Natural Resources and Environment Tasmania
PARKS & WILDLIFE SERVICE

Hobart GPO Box 44, Hobart, Tasmania, 7001
Launceston PO Box 46, Kings Meadows, Tasmania, 7249
Devonport PO Box 303, Devonport, Tasmania, 7310
Ph 1300 368 550
Web nre.tas.gov.au

Enquiries: Anne Maginnity
Email: propertyservices@parks.tas.gov.au
Our ref 23/9145

Tasmanian Government

9 December 2024

Mr Justin Foster
Marine and Safety Tasmania
Hunter Street
HOBART TAS 7000

Email: justin.foster@mast.tas.gov.au
Jim.caulfield@mast.tas.gov.au

Dear Mr Foster,

LODGEMENT OF PLANNING APPLICATION
MARINE AND SAFETY TASMANIA
EXTENSION TO EXISTING JETTY AND GROYNE
LEWISHAM BOAT RAMP ADJACENT TO 101 SCENIC DRIVE, LEWISHAM

This letter, issued pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993*, is to confirm that the Crown consents to the making of the enclosed Planning Permit Application, insofar as the proposed development relates to Crown land managed by the Department of Natural Resources and Environment.

Crown consent is only given to the lodgement of this application. Any variation will require further consent from the Crown.

Please note that there are further matters that require consideration including possible impacts to Aboriginal Heritage, sensitive marine farming receptors, and threatened species such as handfish and marine mammals.

This letter does not constitute, nor imply, any approval to undertake works, or that any other approvals required under the *Crown Lands Act 1976* have been granted. If planning approval is given for the proposed development, the applicant will be required to obtain separate and distinct consent from the Crown before commencing any works on Crown land.

The Department will begin assessments of Council's application to vary the agreement to include this proposal when/if a Planning Permit is obtained. Any variation to the agreement is subject to the relevant delegates discretion.

If you need more information regarding the above, please contact the officer nominated at the head of this correspondence.

Yours sincerely,

Jesse Walker
Team Leader (Assessments)

LEWISHAM
MARINE INFRASTRUCTURE

GENERAL DRAWING LIST:

1869 - 01	DRAWING LIST, NOTES, LOCATION PLAN & PRELIMINARY MEMBER SCHEDULE

MARINE DRAWING LIST:

1869 - 10	OVERVIEW PLAN
1869 - 11	CONCRETE APPROACH SLAB PLAN
1869 - 12	JETTY GENERAL ARRANGEMENT PLAN
1869 - 13	JETTY SECTIONS
1869 - 14	ROCK GROYNE DETAILS
1869 - 15	SOUTHERN JETTY DETAILS
1869 - 16	SOUTHERN JETTY SECTION

GENERAL NOTES:

1. UNLESS NOTED OTHERWISE ON A PARTICULAR DRAWING THESE NOTES APPLY TO ALL DRAWINGS IN THIS SET.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL REDUCED LEVELS ARE METERS TO CHART DATUM (CD) UNO.
4. THESE DRAWINGS ARE FOR CONCEPT PURPOSES ONLY AND SHALL NOT BE USED FOR TENDER OR CONSTRUCTION.

LOCATION PLAN
NTS

PRELIMINARY MEMBER SCHEDULE			
CODE	MATERIAL	CONNECTION	NOTES
PILE (EXTENSION)	Ø400 HDPE PIPE. REINFORCEMENT CAGE. CONCRETE FILLED	2M24 STAINLESS STEEL PIN. 1500 LONG, EPOXY GROUTED 750mm INTO ROCK	
PILE (SOUTHERN JETTY)	Ø630 HDPE PIPE. REINFORCEMENT CAGE. CONCRETE FILLED	2M24 STAINLESS STEEL PIN. 1500 LONG, EPOXY GROUTED 750mm INTO ROCK	
CROSSHEAD	252 x 252 FRP I BEAM	2 x M20 BROOKER ROD, PER PILE (4 REQUIRED FOR WAVESCREEN)	
JOIST	250x100 RHS FRP	2 x M16 BOLT TO CROSSHEAD	SOLID RECYCLED PLASTIC BLOCKING, SCREWED THROUGH JOISTS.
FENDERING	200x100 SEASONED HARDWOOD	1M20 BROOKER ROD TO JOIST, 1M16 BOLT TO WALER	
WALER	254x127 FRP I BEAM	2M16 BOLTS TO STAINLESS STEEL PILE BRACKET EACH END	
DECKING	38mm MINI-MESH	AS PER MANUFACTURE'S DIRECTIONS	
BRACE	252 x 252 FRP I BEAM	2M16 BOLTS TO STAINLESS STEEL PILE BRACKET EACH END	

PRELIMINARY
NOT FOR CONSTRUCTION

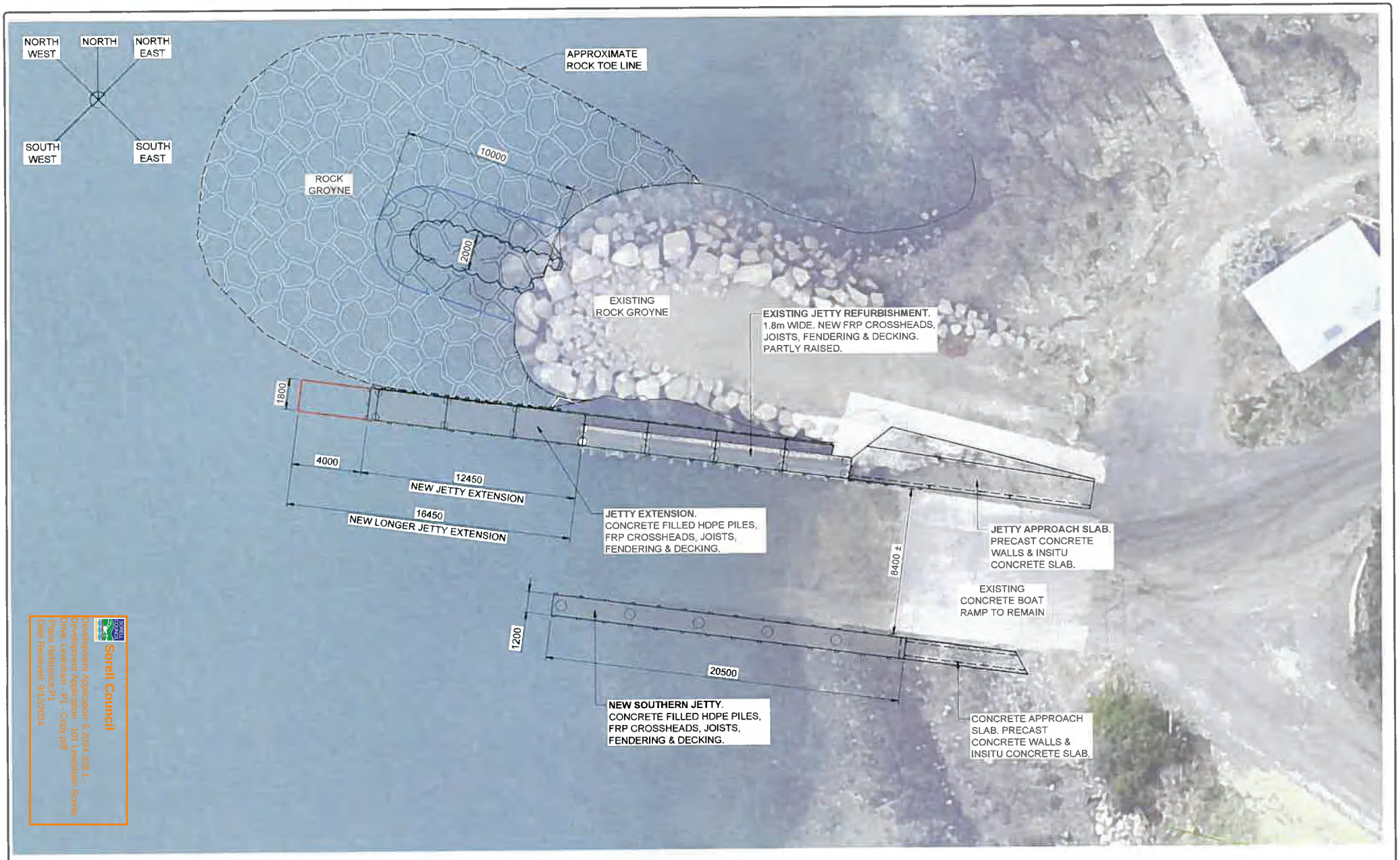
REVISIONS

Rev No.	Revision note	Date	Checked	Approved
A	FOR CLIENT REVIEW & COMMENTS	01/08/23	MS	RP
B	UPDATED	11/10/23	MS	RP
C	UPDATED WITH GROYNE INCLUDED	16/10/23	MS	RP

Burbury
ABN 75 146 719 959
P O. BOX 354
SOUTH HOBART TAS 7004
P (03) 8223 8007
F (03) 8223 1143
E admin@burburyconsulting.com.au

Drawn By	R.PARKER	Date	AUGUST 2023
Designed By	M.SCANLON	Date	AUGUST 2023
Checked By		Date	
Approved By		Date	

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: DRAWING LIST & LOCATION PLAN
Scale: NTS | A3 | Drawing No: 1869 - 01 | Rev: C



Sorell Council
Development Application: 5.2024.328.1 - Development Application - 101 Lewisham Scenic Drive, Lewisham - P1 - Copy.pdf
Plans Reference: P1
Date Received: 9/12/2024

OVERVIEW PLAN
1:200

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REVISIONS

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A	FOR CLIENT REVIEW & COMMENTS	01/08/23	MS	RP
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4 2 0 4 8
SCALE 1:200

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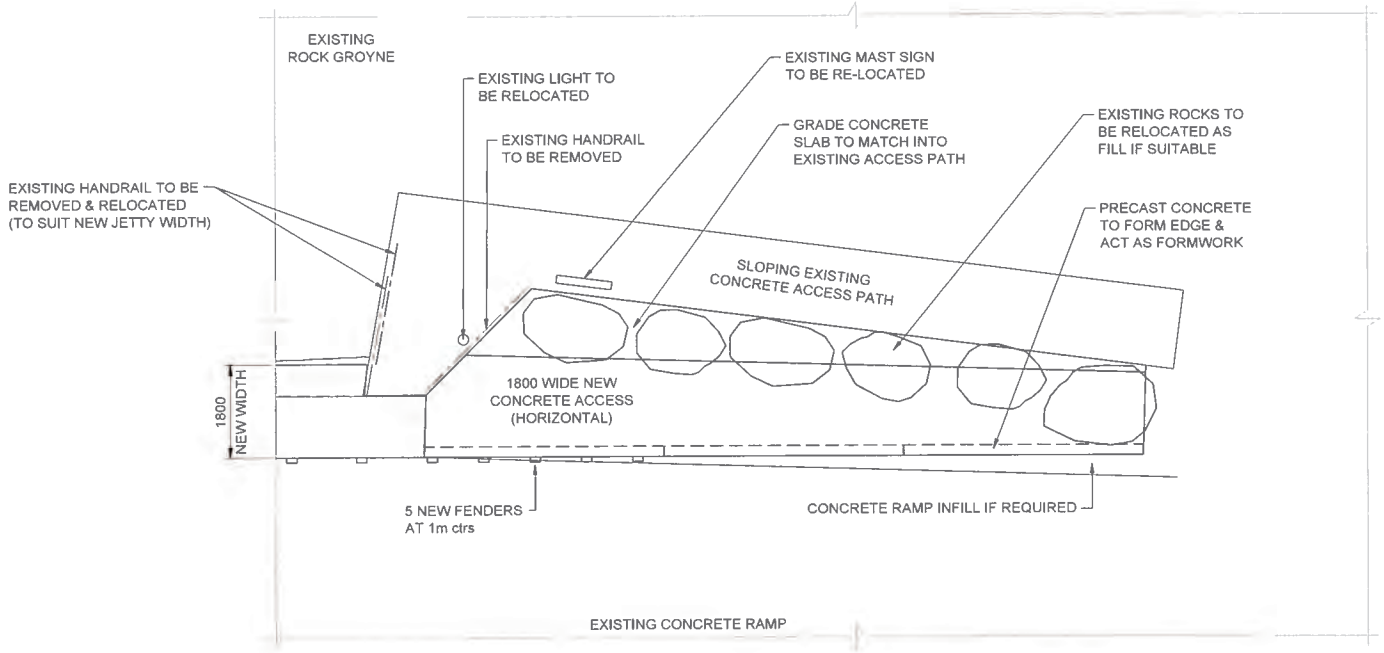
		Date
Drawn By	R.PARKER	AUGUST 2023
Designed By	M.SCANLON	AUGUST 2023
Checked By		Date
Approved By		Date

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: OVERVIEW PLAN
Scale: 1:4000 | A3 | Drawing No: 1869 - 10 | Rev: C



CONCRETE APPROACH SLAB PLAN
1 100

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

Rev No	Revision note	Date	Checked	Approved
A	FOR CLIENT REVIEW & COMMENTS	01/08/23	MS	RP
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2 1 0 2 4m
SCALE 1 100

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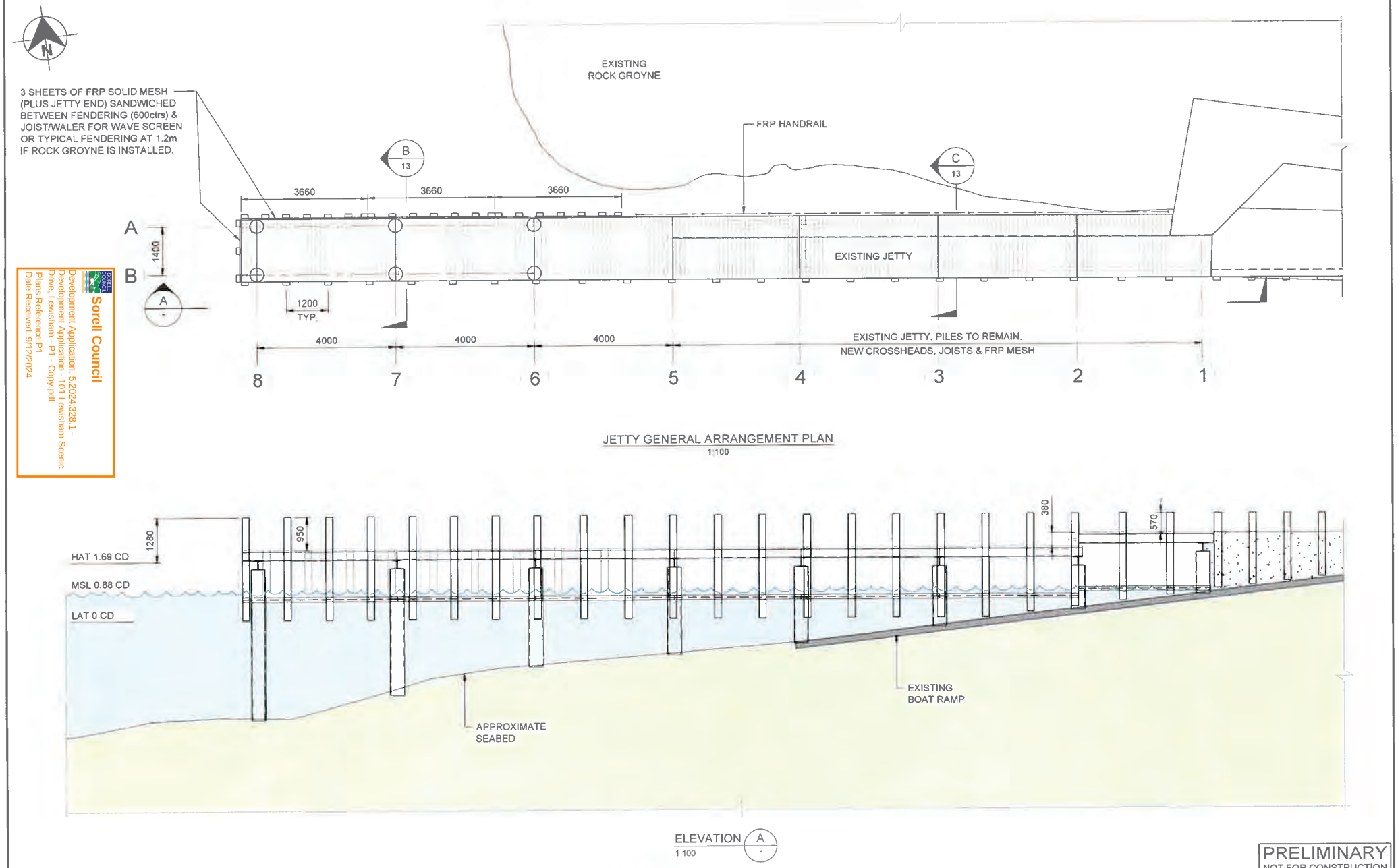
Drawn By	R.PARKER	Date	AUGUST 2023
Designed By	M.SCANLON	Date	AUGUST 2023
Checked By		Date	
Approved By		Date	

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: CONCRETE APPROACH SLAB PLAN
Scale: 1 4000 | A3 | Drawing No. 1869 - 11 | Rev C



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SCALE 1:100

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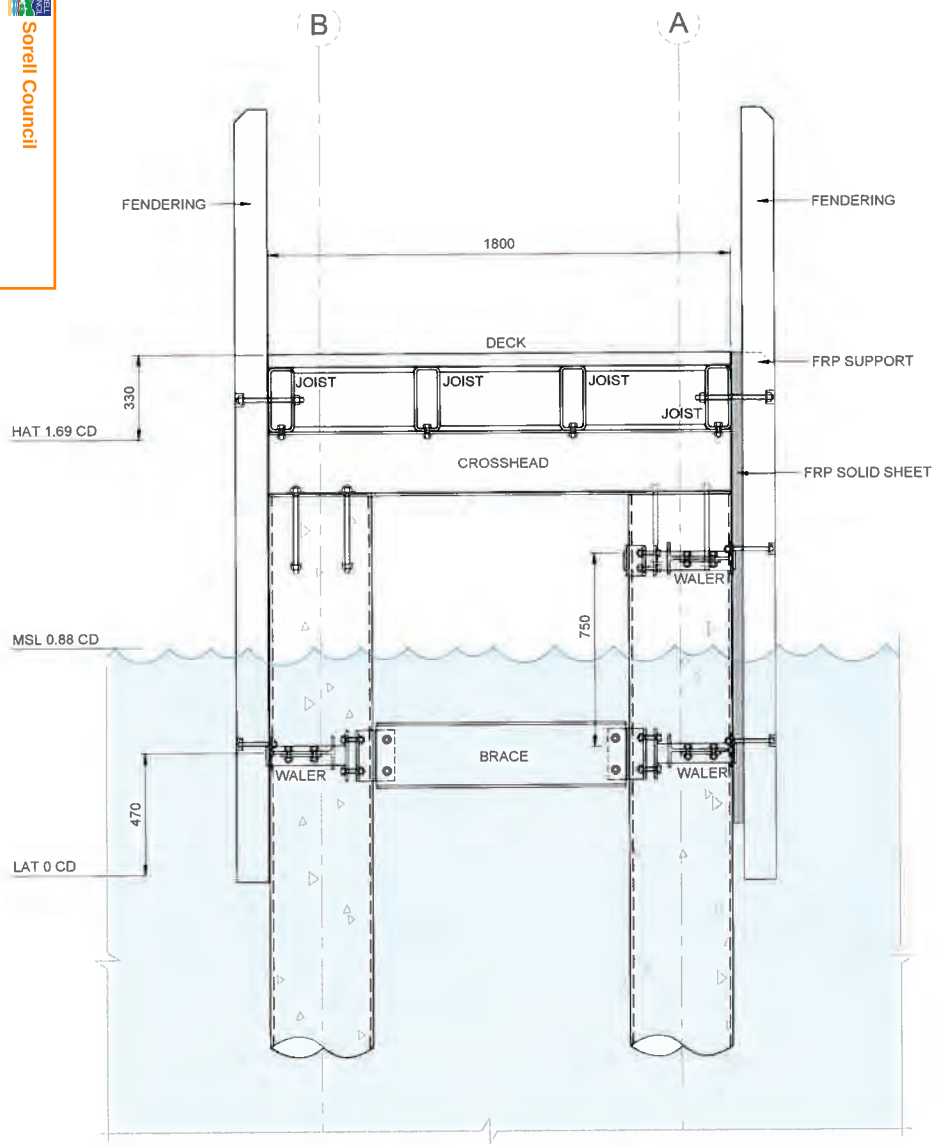
Drawn By	R.PARKER	AUGUST 2023
Designed By	M.SCANLON	AUGUST 2023
Checked By		
Approved By		

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: JETTY GENERAL ARRANGEMENT PLAN
Scale: 1:4000 | A3 | Drawing No: 1869 - 12 | Rev: C



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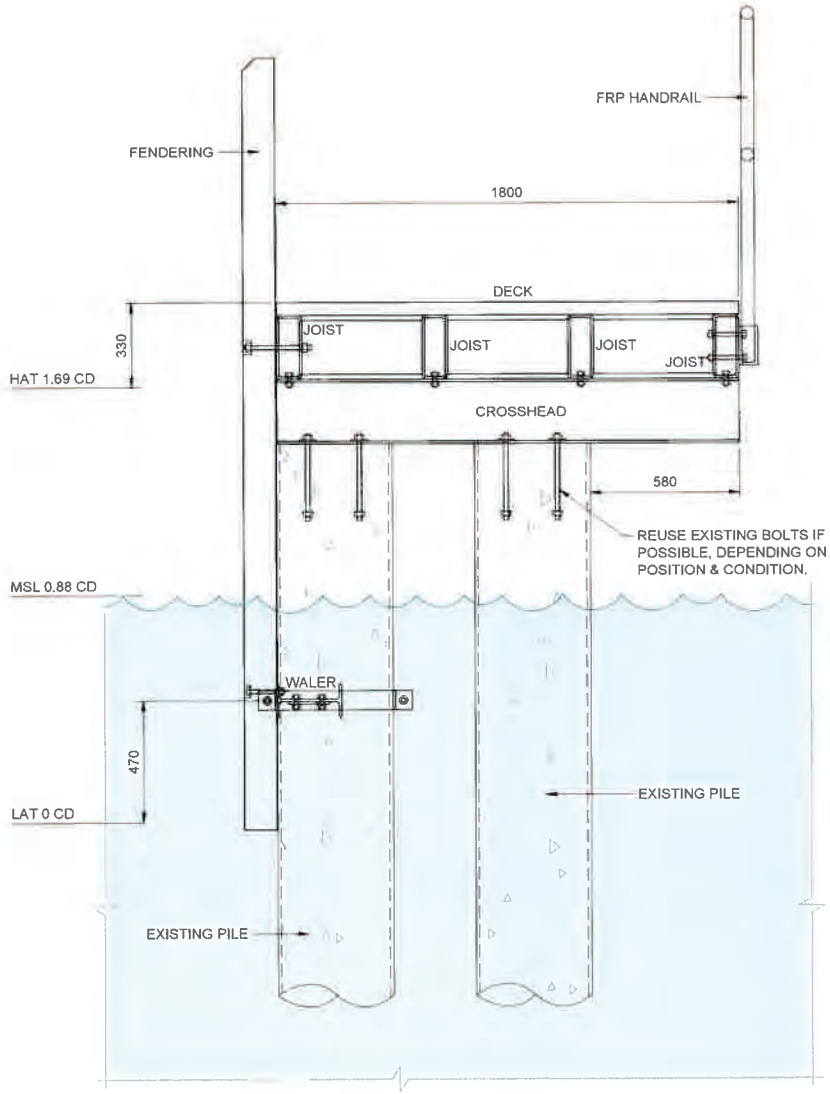

SECTION C 1 20 12

PRELIMINARY
NOT FOR CONSTRUCTION

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SCALE 1 100

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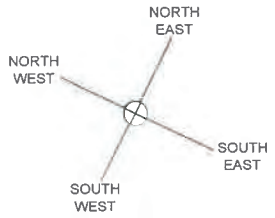
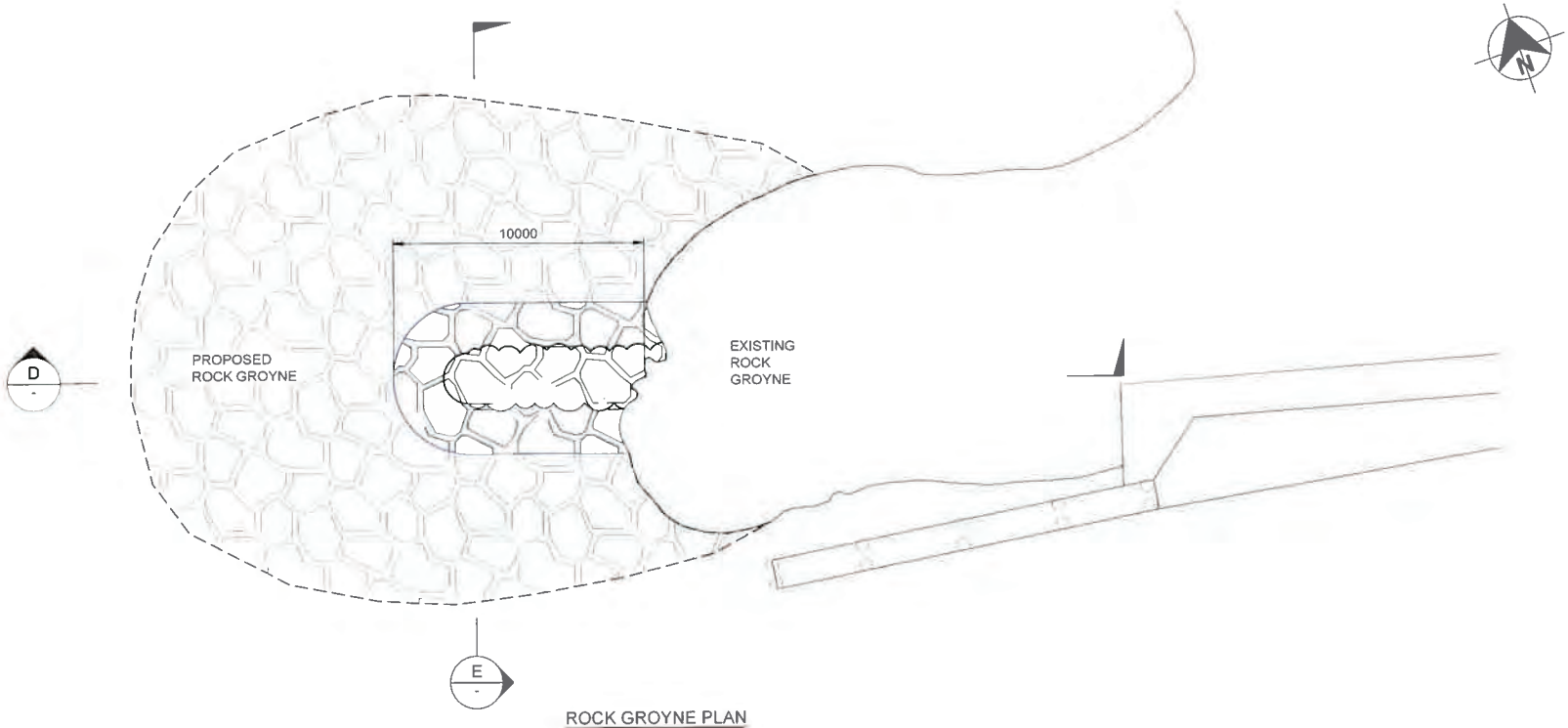
		Date
Drawn By	R.PARKER	AUGUST 2023
Designed By	M.SCANLON	AUGUST 2023
Checked By		
Approved By		

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: JETTY SECTIONS
Scale: 1 4000 | A3 | Drawing No: 1869 - 13 | Rev: C





ROCK GROYNE PLAN
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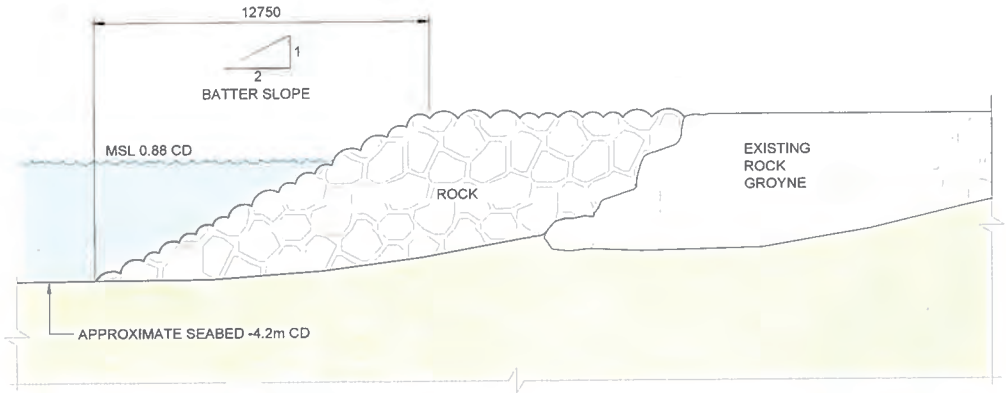

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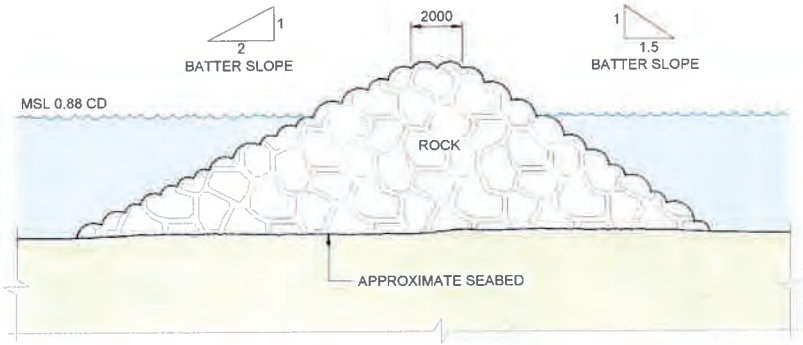

SECTION E
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REVISIONS

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A	FOR CLIENT REVIEW & COMMENTS	01/08/23	MS	RP
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C	UPDATED WITH GROYNE INCLUDED	16/10/23	MS	RP

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SCALE 1:200

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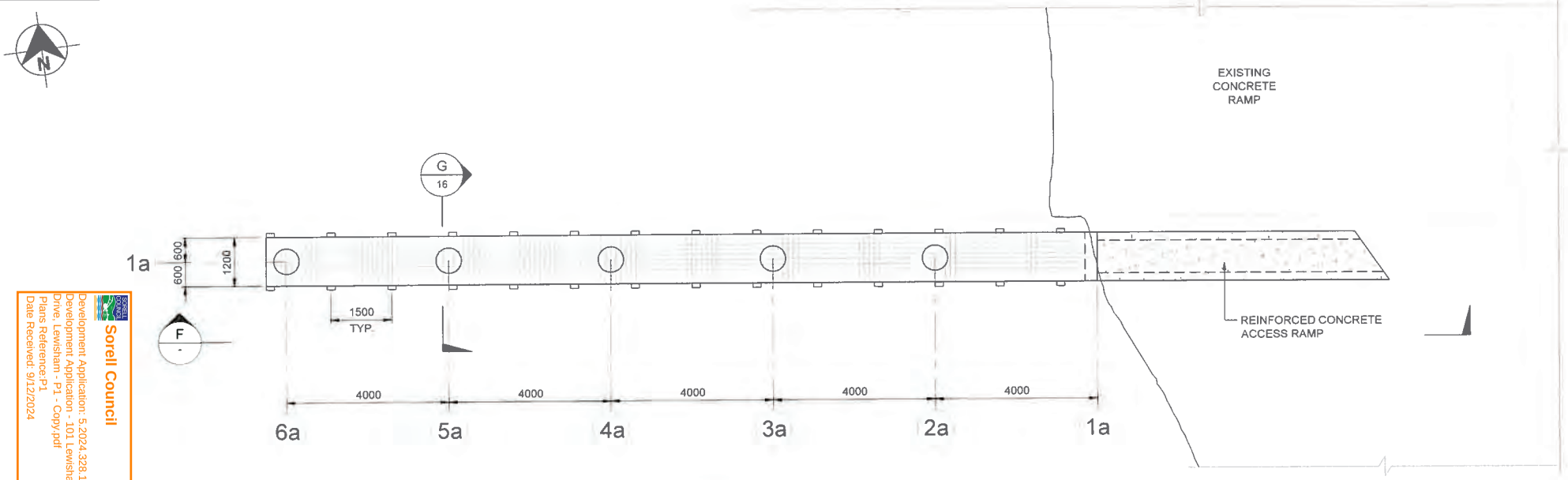
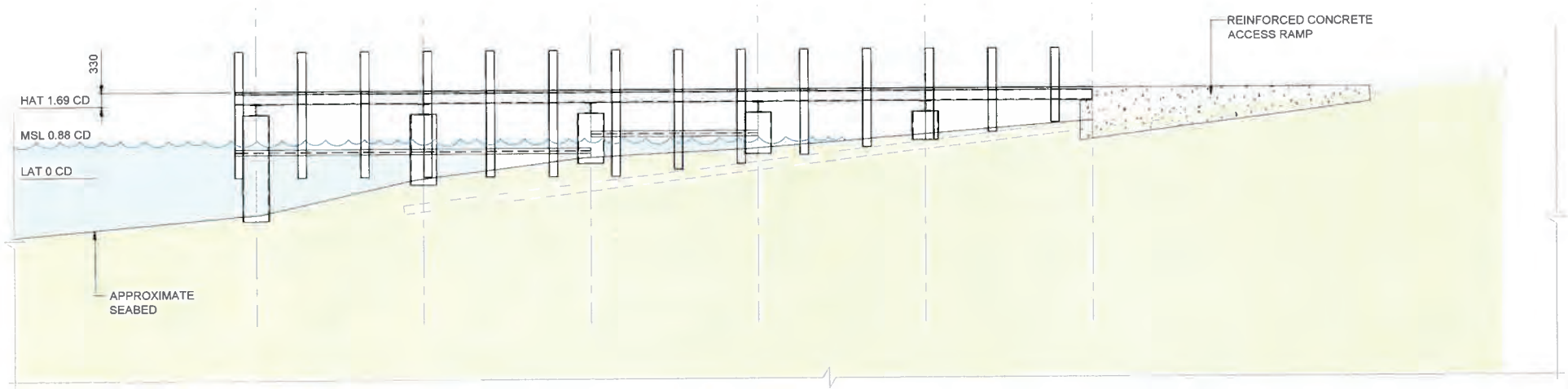
E admin@burburyconsulting.com.au

Drawn By	R.PARKER	Date	AUGUST 2023
Designed By	M.SCANLON	Date	AUGUST 2023
Checked By		Date	
Approved By		Date	

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: ROCK GROYNE DETAILS
Scale: 1:4000 | A3 | Drawing No. 1869 - 14 | Rev C



SOUTHERN JETTY GENERAL ARRANGEMENT PLAN
1:100



ELEVATION F
1:100

PRELIMINARY
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REVISIONS	Rev No	Revision note	Date	Checked	Approved
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2 1 0 2 4m
SCALE 1:100

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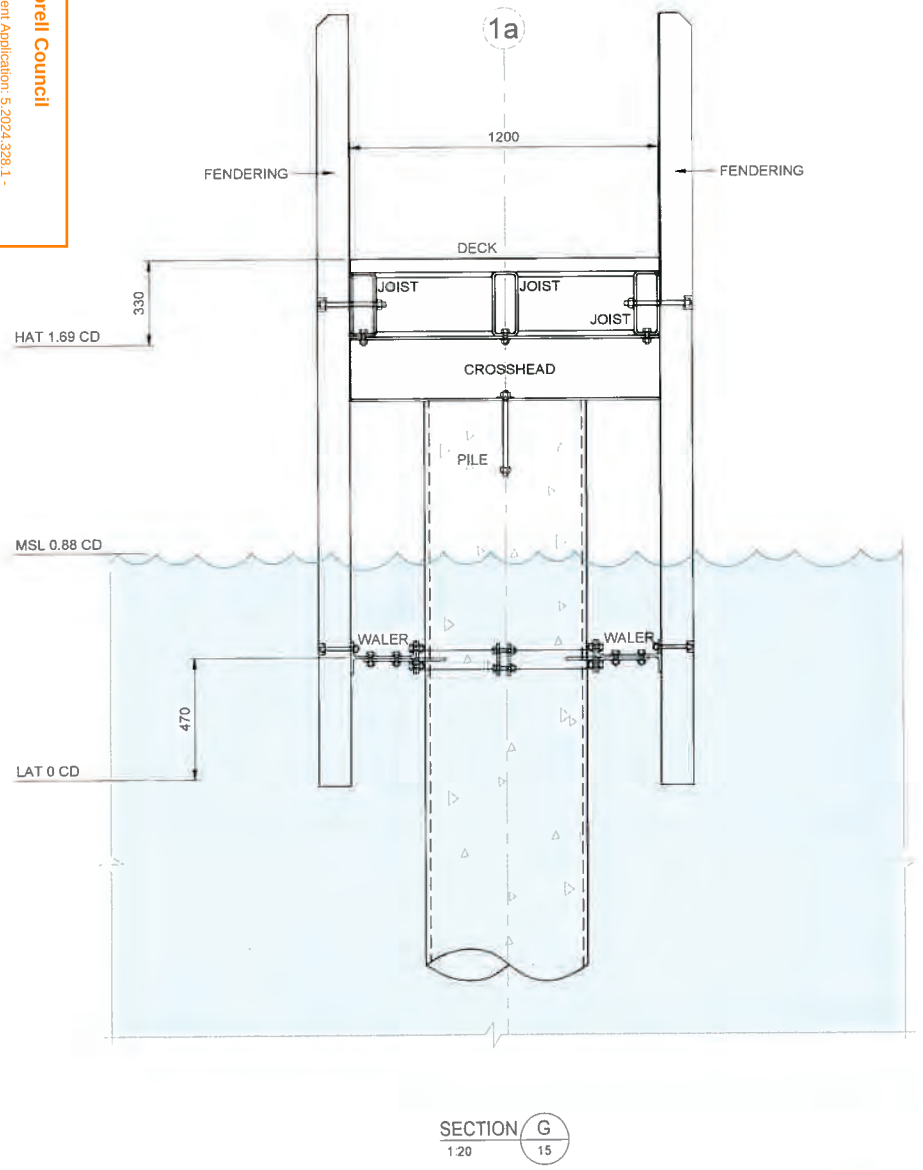
Drawn By	R.PARKER	AUGUST 2023
Designed By	M.SCANLON	AUGUST 2023
Checked By		
Approved By		

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: SOUTHERN JETTY DETAILS
Scale: 1:4000 | A3 | Drawing No. 1869 - 15 | Rev C



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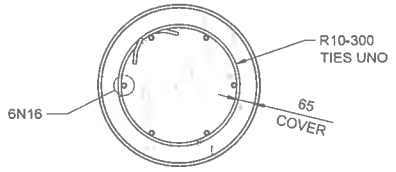

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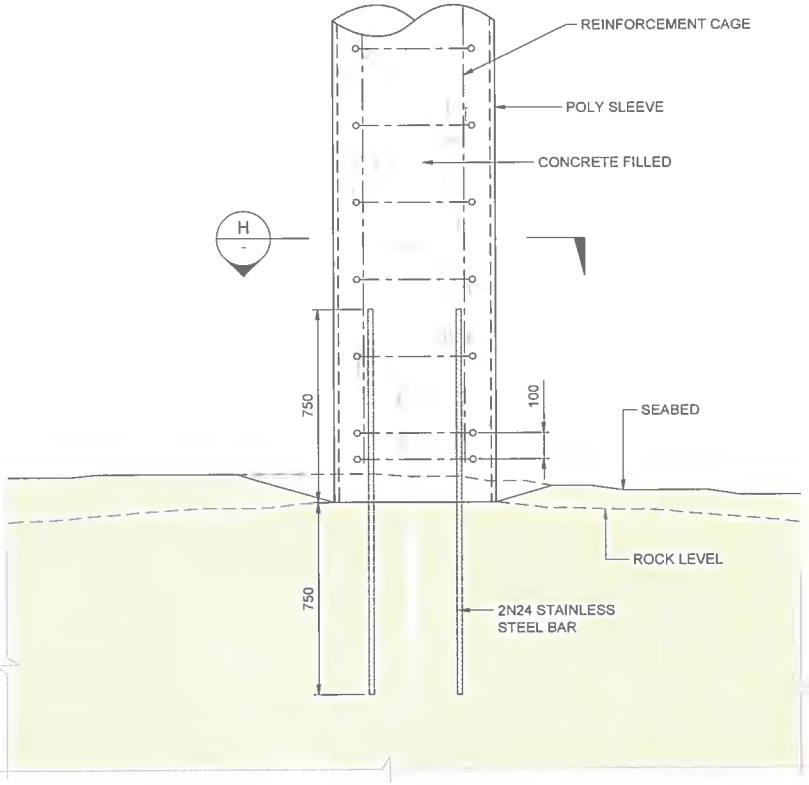

TYPICAL PILE TOE DETAIL
1:20

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

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400 200 0 400 800mm
SCALE 1:20

Burbury

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		Date
Drawn By	R.PARKER	AUGUST 2023
Designed By	M.SCANLON	AUGUST 2023
Checked By		Date
Approved By		Date

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: SOUTHERN JETTY SECTIONS
Scale: 1:400 | A3 | Drawing No. 1869 - 16 | Rev C

AllUrbanPlanning PTY LTD

18 December 2023

Sorell Council
Development Application: 5.2024.328.1 - Development Application - 101 Lewisham Scenic Drive, Lewisham - P1 - Copy.pdf
Plans Reference:P1
Date Received: 9/12/2024

General Manager
Sorrell Council
47 Cole Street
SORRELL 7172

Dear Sir/Madam,

Application for a Planning Permit – Upgrades to existing boat ramp – Lewisham Boat Ramp adjacent to 101 Scenic Drive, Lewisham 7173

All Urban Planning Pty Ltd has been engaged by Marine and Safety Tasmania (MAST) to prepare the following planning assessment for an extension to the existing jetty at the Lewisham boat ramp.

No works or changes are proposed to the existing carpark at 101 Scenic Drive as part of this application. It is understood that Council may make a subsequent application for a planning permit for an upgrade to the existing carpark.

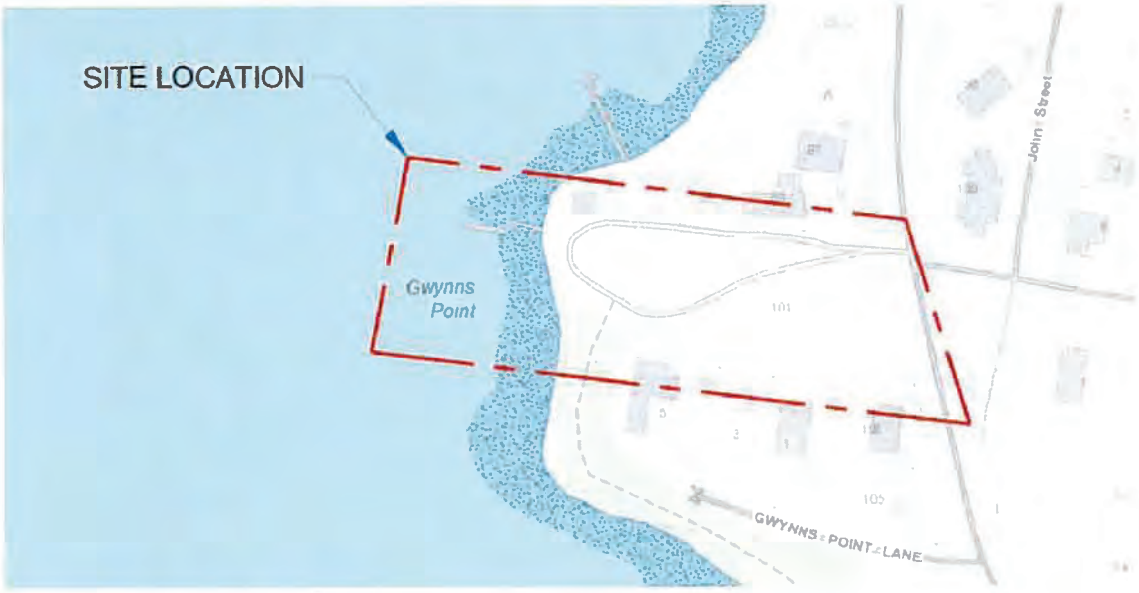

Figure 1 - Location Plan (Source: Burbury Consulting)

The Proposal

It is proposed to upgrade the existing Lewisham boat ramp at Gwynns Point including extensions to the existing jetties and rock groin. The extension to the rock groin will be stage 2 of the work.

The Site

The jetty and rock groyne extensions relates to the waters of Lewisham adjacent to the existing jetty and boat ramp.

The Planning Scheme

The proposal relates to the Sorell Local Provisions Schedule of the Tasmanian Planning Scheme (planning scheme).

The Zone

The proposed works including those below HWM are located within the Sorell municipal boundary and land zoned Environmental Management.

The Use

The existing jetty, boatramp and carpark fall within the *Pleasure Boat Facility* Use Class. The proposed upgrades requiring approval under the Crown Lands Act 1976 is a Permitted use in the Environmental Management Zone (Table 23.2).

There are no applicable Use Standards.

Development Standards (23.4)

Development Area (23.4.1)

The proposed upgrade requiring approval of the Director-General of Lands under the Crown Lands Act 1976 complies with A1.

Building height, setback and siting (23.4.2)

The extension will be less than 6m in height and requires approval under the Crown Lands Act 1976. The proposal therefore complies with A1.

The proposal requires approval of the Director-General of Lands under the Crown Lands Act 1976 also complies with A2.

The proposal is not for a sensitive use. A3 does not apply.

Exterior finish (23.4.3)

The simple jetty structures and rock groin satisfy the requirement for dark natural tones or grey, green and brown. The material and finishes are also to be approved under *the Crown Lands Act 1976*. The proposal therefore complies with A1.

Vegetation Management (23.4.4)

The proposal is accompanied by a marine environmental assessment prepared by Marine Solutions that concludes that subject to the mitigation strategies summarised in Table 3 of that document the development can be undertaken with minimal impact on the surrounding area.

The proposal requires approval under the *Crown Lands Act 1976*. The proposal complies with A1.

Codes

Parking and Sustainable Transport Code

There is no carparking requirement for the proposed extension to the existing *Pleasure Boat Facility* under Table C2.1.

The proposal does not alter the vehicle accessible areas of the existing boat ramp and no issues arise for assessment under this Code.

Natural Assets Code

This code applies to tidal waters.

Buildings and works within a waterway and coastal protection area (C7.6.1)

The proposed jetty and groyne extensions are greater than 20% of the existing boat ramp area and are therefore is to be assessed under P1.

Objective:

That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Performance Criteria	***Assessment***
P1.1 *Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:* *(a) impacts caused by erosion, siltation, sedimentation and runoff;* *(b) impacts on riparian or littoral vegetation;* *(c) maintaining natural streambank and streambed condition, where it exists;* *(d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;* *(e) the need to avoid significantly impeding natural flow and drainage;* *(f) the need to maintain fish passage, where known to exist;*	The proposal is supported by a marine environmental assessment that confirms that the proposal will have minimal impact on the surrounding marine environment. Subject to the mitigation actions outlined in Table 3 of that assessment, the proposal is considered to minimise impacts and satisfy P1.1.

(g) the need to avoid land filling of wetlands; *(h) the need to group new facilities with existing facilities, where reasonably practical;* *(i) minimising cut and fill;* *(j) building design that responds to the particular size, shape, contours or slope of the land;* *(k) minimising impacts on coastal processes, including sand movement and wave action;* *(l) minimising the need for future works for the protection of natural assets, infrastructure and property;* *(m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and* *(n) the guidelines in the Tasmanian Coastal Works Manual.*	
P1.2 *Buildings and works within the spatial extent of tidal waters must be for a use that relies upon a coastal location to fulfil its purpose, having regard to:* *(a) the need to access a specific resource in a coastal location;* *(b) the need to operate a marine farming shore facility;* *(c) the need to access infrastructure available in a coastal location;* *(d) the need to service a marine or coastal related activity;* *(e) provision of essential utility or marine infrastructure; or*	The proposed extension to the existing public jetty and a new rock groyne associated with the boatramp that is reliant on a coastal location satisfies P1.2.

(f) provisions of open space or for marine-related educational, research, or recreational facilities.	

The proposal does not involve a new stormwater discharge and complies with A3.

The proposal does not involve dredging or reclamation and complies with A4.

Coastal Erosion Hazard Code

The proposal is not located within mapped coastal erosion hazard areas. This Code therefore does not apply.

Coastal Inundation Hazard Code

To the extent that the proposal involves any works within the mapped coastal inundation hazard areas, those works are confined to upgrades to the existing walkways and are considered exempt from the planning scheme under

proposal does not involve any works within the mapped coastal inundation areas that are considered exempt under Clause 4.2.7 as 'minor infrastructure' installed by a State authority. This Code does not apply.

Conclusion

The proposed upgrades to the existing boat ramp are supported by a marine environmental assessment and require approval under the *Crown Lands Act 1976*. The proposal complies with the relevant development standards of the Environmental Management Zone and the codes to the extent that they apply.

The proposal is recommended for approval as a Section 57, discretionary application for a permit following public advertising.

I would be pleased to discuss as necessary.

Yours sincerely,

Frazer Read
Principal
All Urban Planning Pty Ltd

Marine SOLUTIONS TASMANIA PTY LTD

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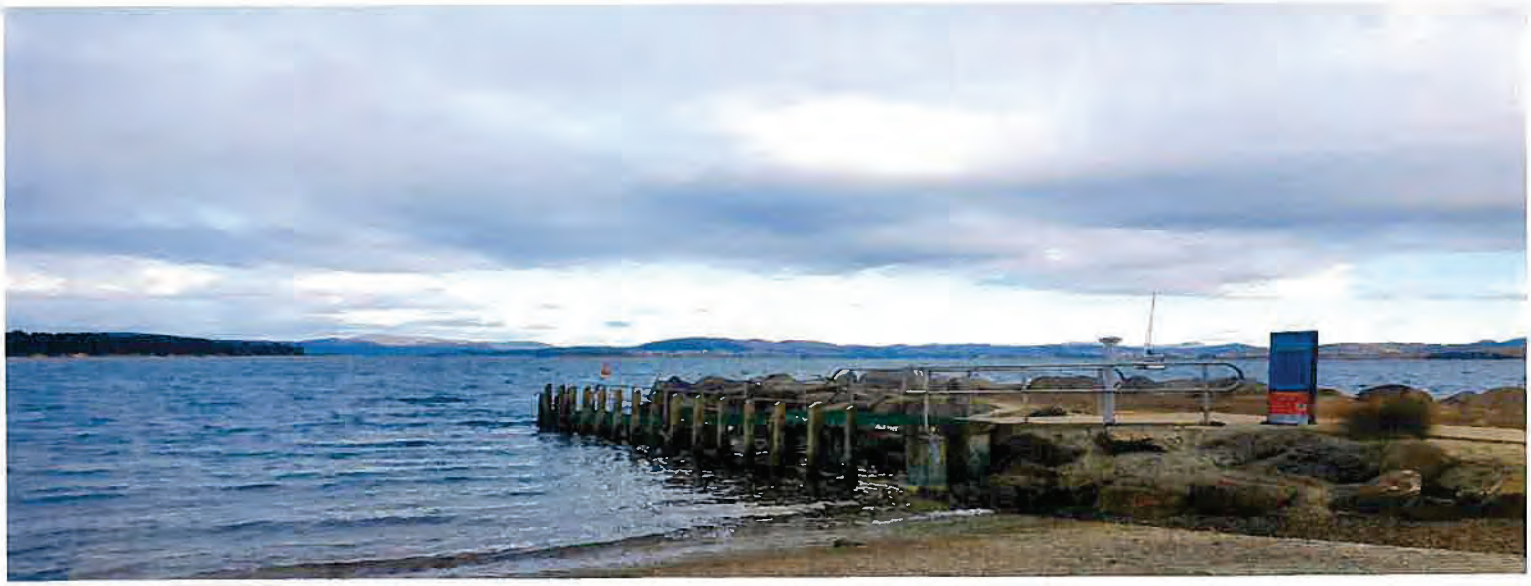
LEWISHAM JETTY DEVELOPMENT

ENVIRONMENTAL IMPACT ASSESSMENT

prepared for

MAST

November 2023



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Version	Contributor/s	Date reviewed	Reviewed by	Notes
1	Ally King			

Cover photo: Lewisham boat ramp, jetty and breakwall (Marine Solutions 2023).

Table of Figures

Executive Summary

Marine Solutions was contracted by Marine and Safety Tasmania (MAST) to conduct an environmental impact statement (EIS). The EIS includes a Marine Natural Values Assessment (NVA) for a proposed extension of boat launching facilities at Lewisham, Tasmania. The resulting NVA assessment includes a desktop review of marine natural values, utilising government tools including the Natural Values Atlas and the EPBC Protected Matters Search Tool. In total fourteen threatened and protected marine species and one threatened ecological community were identified as known to occur or possibly occurring in the area. The desktop review was followed by a field survey which included targeted species-specific searches for threatened and protected marine and intertidal species.

The intertidal environment was dominated by flat dolerite rock with deposits of small rocks and gravel within the depressions. Colonisation of the substrate by intertidal species was sparse, however some limpets and periwinkles were observed. The underwater habitat was typical of south-east Tasmanian shallow reefs, containing common species of macroalgae, molluscs and bivalves. The existing infrastructure appears to act as an artificial reef by providing habitat-forming structures.

In summary, the proposed development has the potential to negatively impact some species in the immediate and surrounding ecological assemblages. However, it should be noted that most of the species inhabiting the site have established due to the presence of human infrastructure. Any ecological risks can be reduced with the adoption of recommended impact mitigations.

1 Introduction

1.1 Location

The proposed jetty development is located within the suburb of Lewisham on the site of the existing public boat ramp (Figure 1). The site is adjacent to a water body ~ 1 km wide that separates Lewisham and Seven Mile Beach. The waterbody is composed of a deep channel on the Lewisham side surrounded by sand flats with patches of seagrass, with small reef systems along the rocky shoreline.

The site is in close proximity to a number of privately owned boat moorings and is ~1.5 km to the south of several shellfish leases (Figure 1: Location of proposed development at the Lewisham public boat ra . There are a number of small jettys, boat ramps and boat sheds along the extended coastline.

Figure 1: Location of proposed development at the Lewisham public boat ramp.

1.2 Proposal description

This environmental impact statement (EIS) details the relevant information regarding the proposal to upgrade the recreational boating facilities at the Lewisham boat ramp.

The proponent MAST wishes to upgrade current facilities at the Lewisham public boat ramp. The existing infrastructure at Gwynns Point, Lewisham includes a dual lane concrete boat ramp accompanied by a jetty that acts as a walkway and a break wall to the north (Figure 1, Figure 2). The existing boat ramp is functional in all tides and is exposed in northwest to southwest weather (MAST 2023). The area is used for boat launching and supports shore-based fishing from the rock wall and jetty.

The proposed upgrade includes a 16.45 m extension of the existing jetty and construction of an additional 20.5 m x 1.2 m jetty on the southern side of the boat ramp (Figure 2). The proposed jetty extension will require the instalment of six additional piles (Figure 4, Figure 5) and the proposed additional jetty will require five supporting piles (Figure 7, Figure 8). In addition, a proposed extension of the current breakwall 10 m in length and 2 m wide is planned, this extension will be supported by rock groyne that spans ~10 m from the extension (Figure 6).

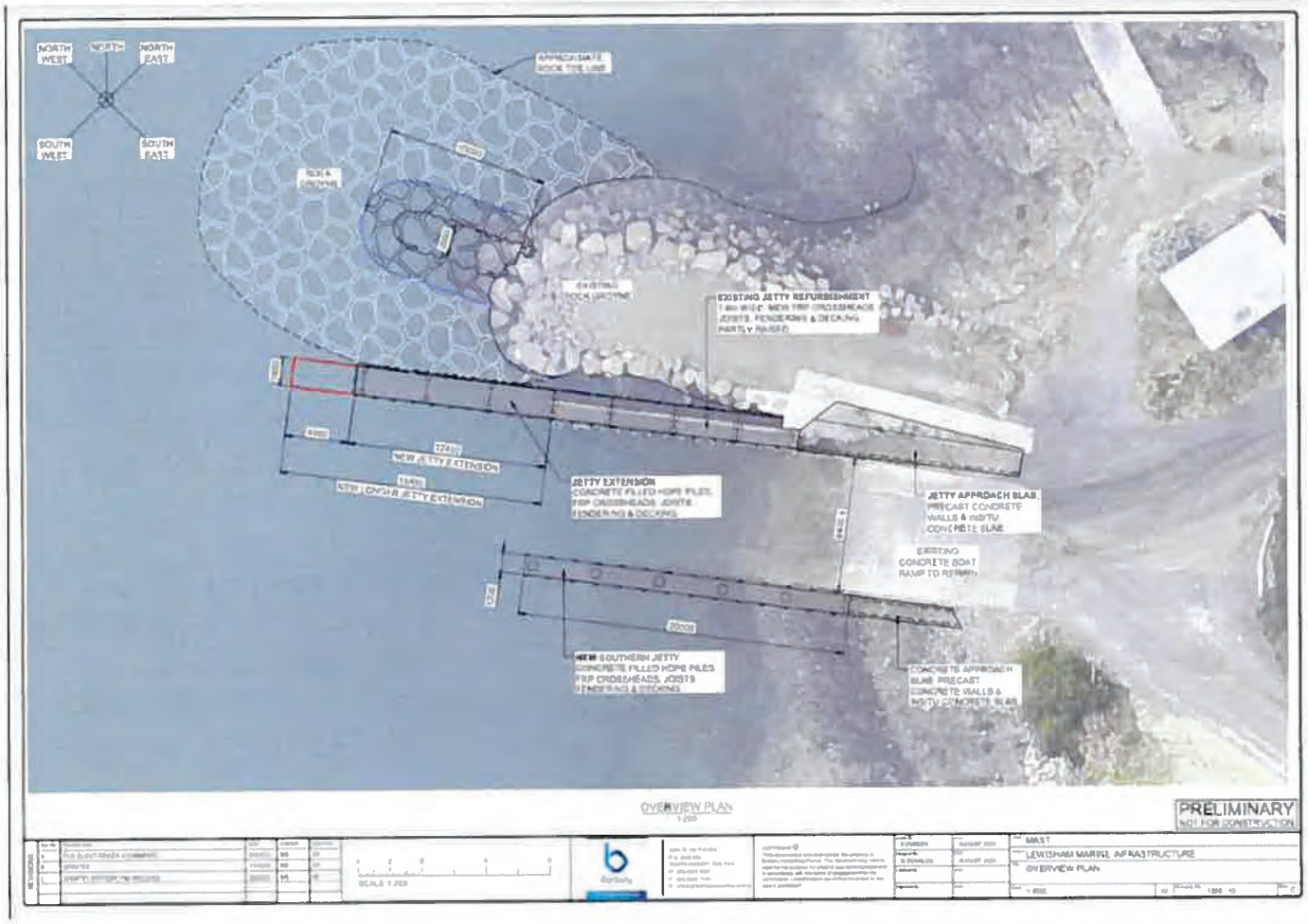

Figure 2: Overview plan for proposed extension (northern jetty)

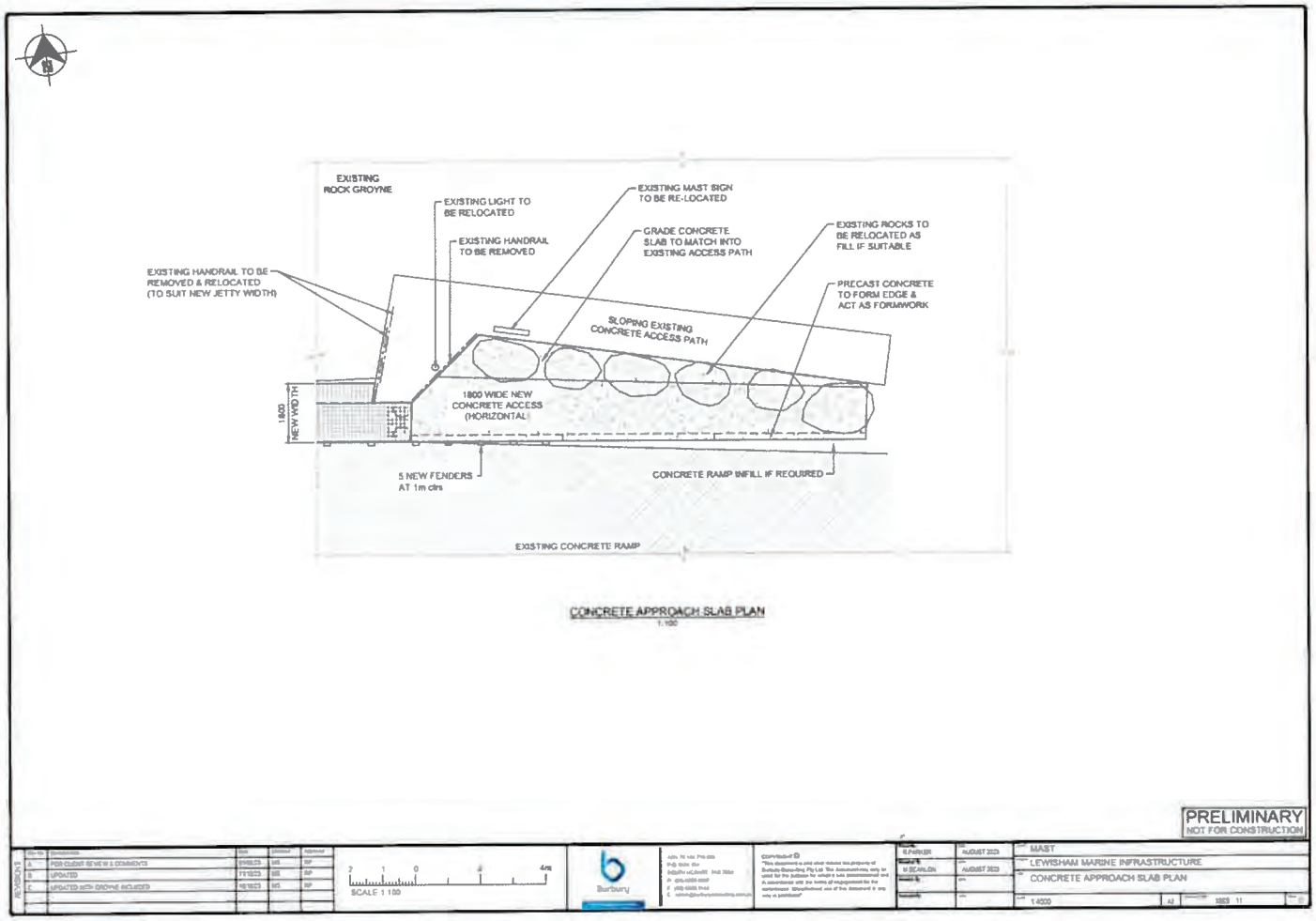

Figure 3: Plan for concrete slab at site.

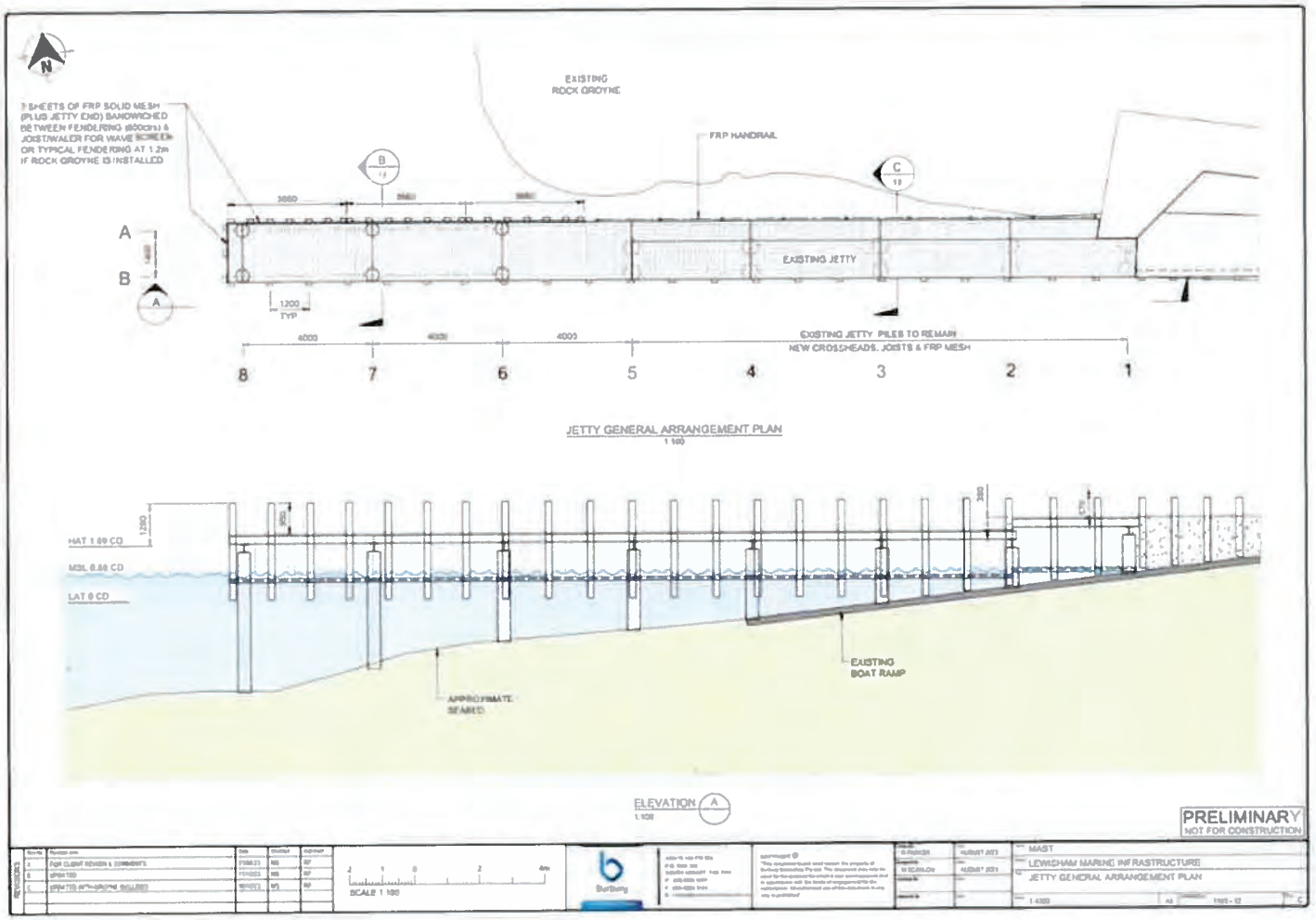

Figure 4: General jetty arrangement plan (northern jetty).

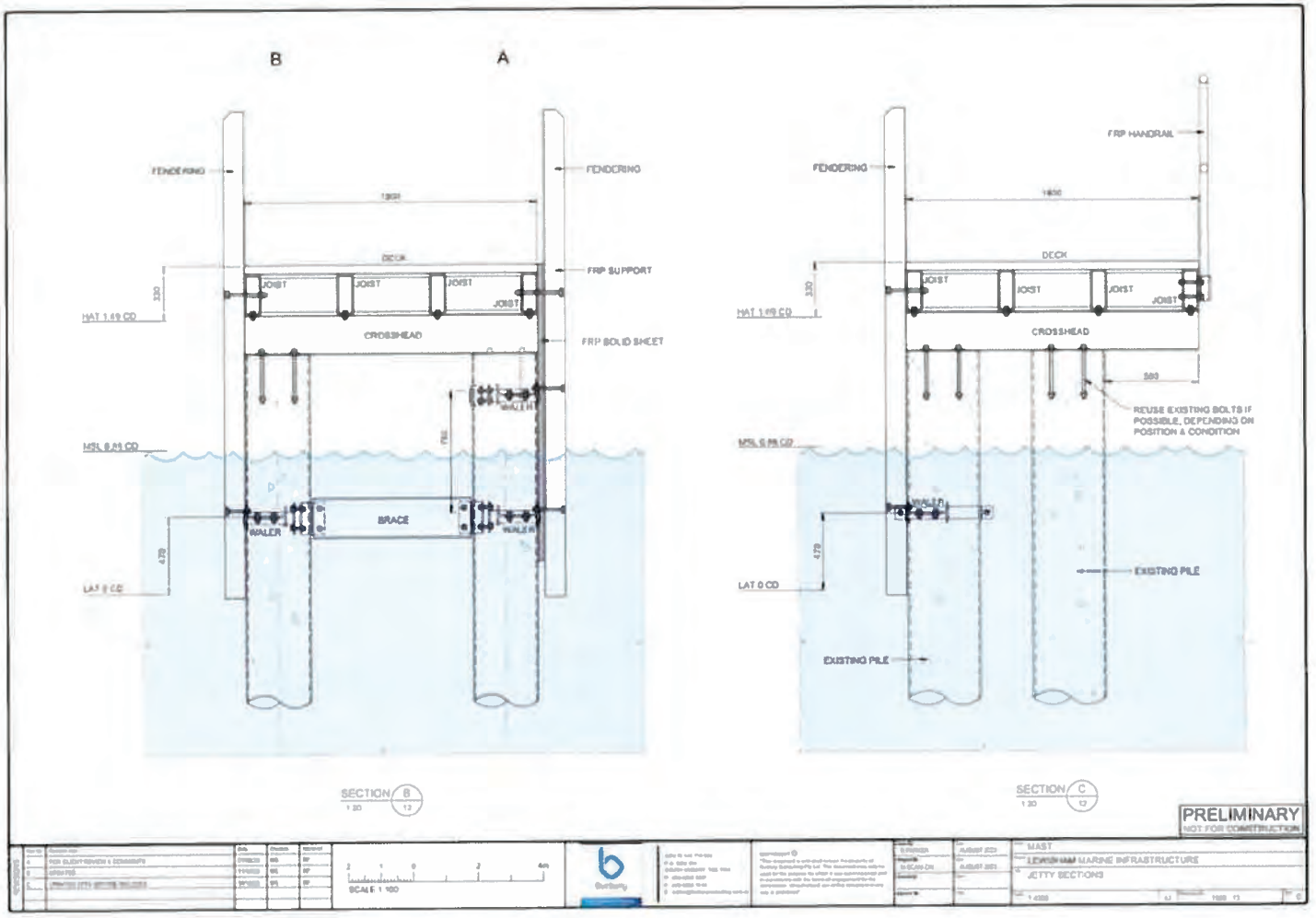

Figure 5: General jetty arrangement plan for piles.

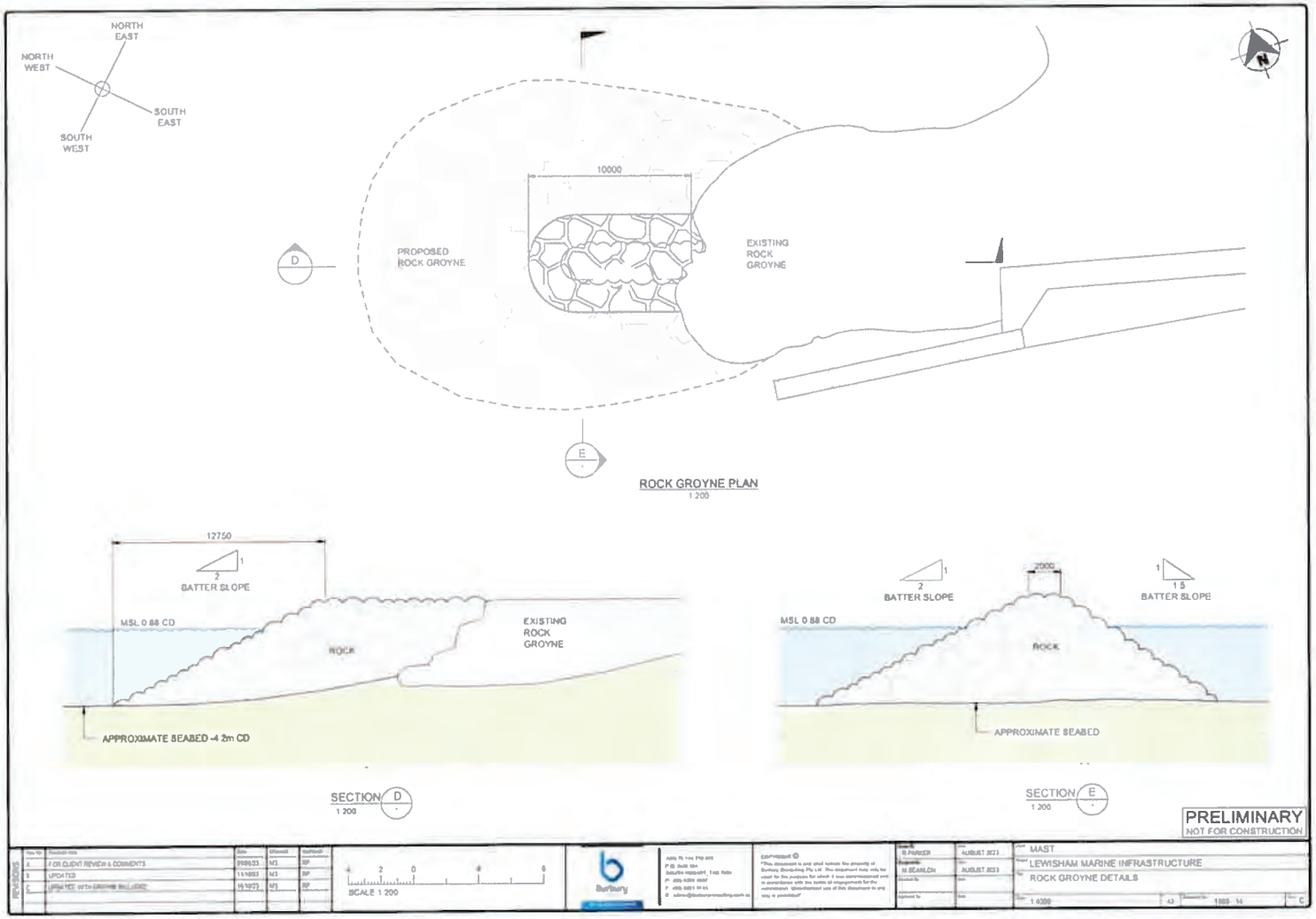

Figure 6: Proposed rock groyne (breakwall) plan.

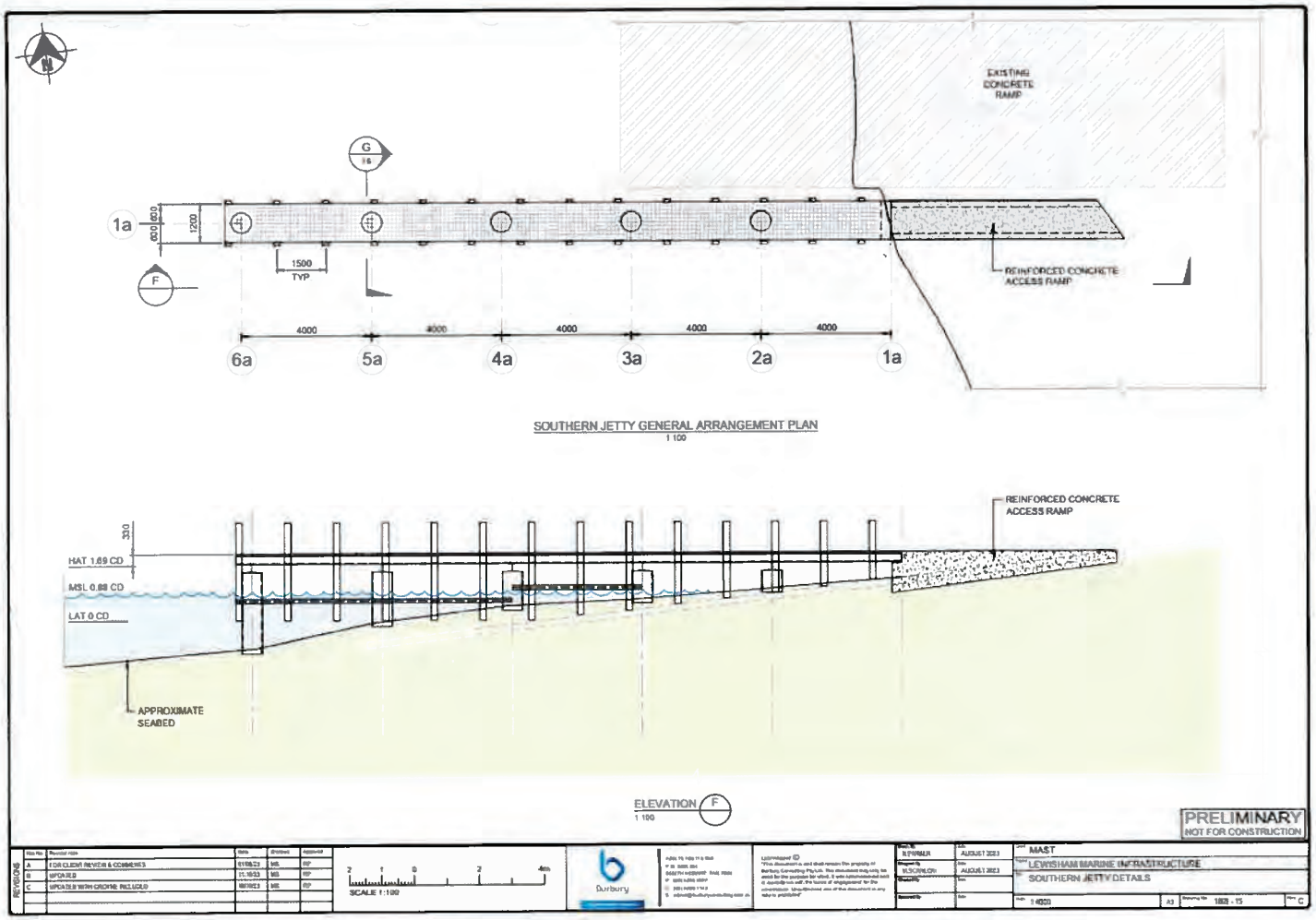

Figure 7: Southern jetty general arrangement plan

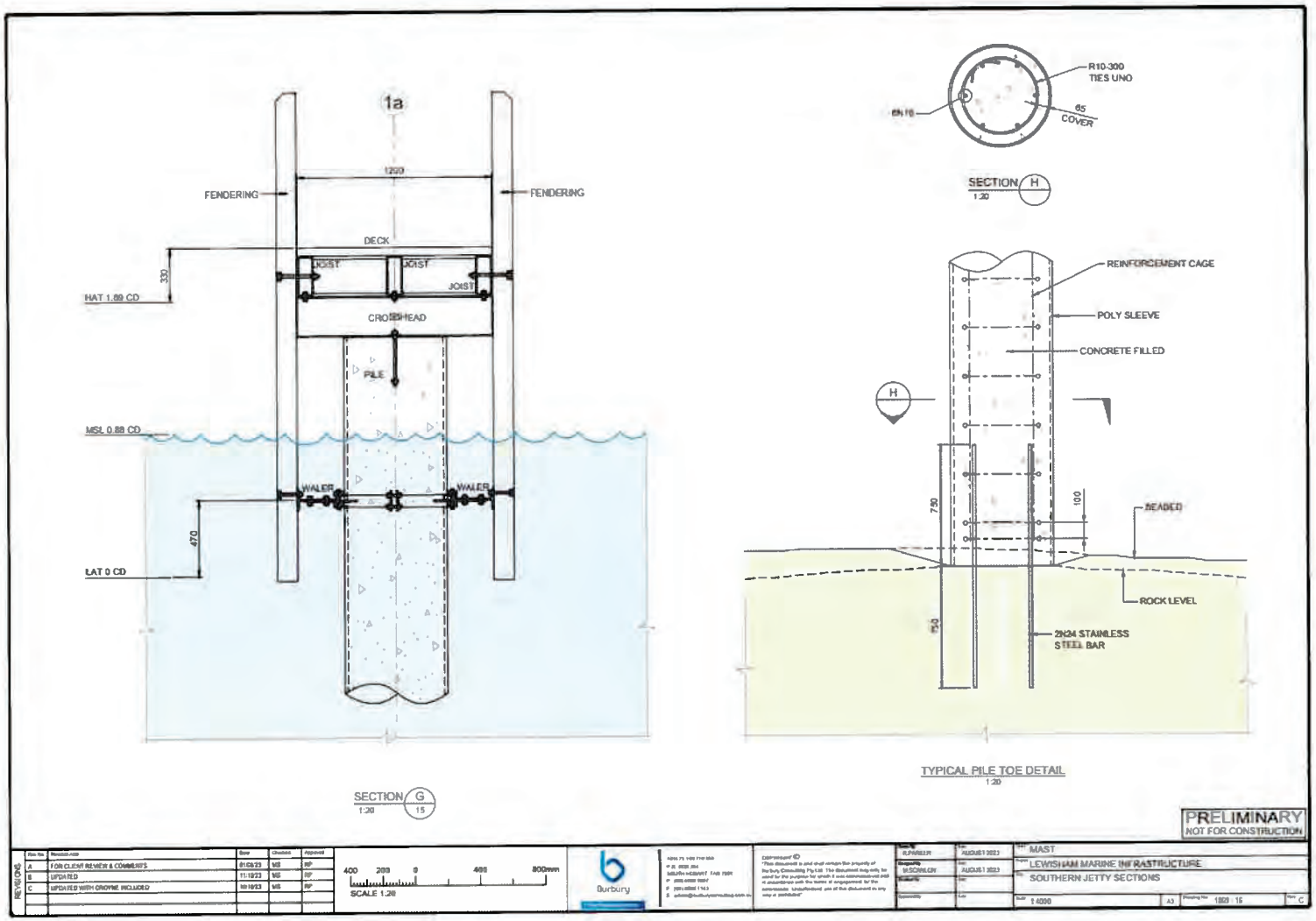

Figure 8: Southern jetty general arrangement plan for piles

2 Desktop Protected Matters Search

The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* Protected Matters Search Tool (PMST) is a tool managed by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) to help determine whether Matters of National Environmental Significance (MNES) or other matters protected by the *EPBC Act* are likely to occur in a given area of interest (Commonwealth of Australia 2023,). The PMST was used to identify protected matters relating the study area, with a buffer of 5km.

The full report is available upon request from Marine Solutions. Marine threatened and protected species are discussed in further detail in Section 3 below.

Table 1: Summary of findings of the EPBC Act PMST.

	Item	# ID'd by PMST	Notes
Matters of National Environmental Significance	World Heritage Properties	None	
	National Heritage Places	None	
	Wetlands of International Importance	1	Pitt Water (within 10 km)
	Great Barrier Reef Marine Park	None	
	Commonwealth Marine Area	None	
	Listed Threatened Ecological Communities	3	Includes 1 marine community (Giant Kelp)
	Listed Threatened Species	64	Includes 9 marine species; refer to section 3.
	Listed Migratory Species	50	Includes 9 marine species
Other Matters Protected by EPBCA	Commonwealth Land	None	
	Commonwealth Heritage Places	None	
	Listed Marine Species	73	
	Whales and Other Cetaceans	9	
	Critical Habitats	None	
	Commonwealth Reserves Terrestrial	None	
	Australian Marine Parks	None	
	Habitat Critical to the Survival of Marine Turtles	None	
Extra Information	State and Territory Reserves	3	
	Regional Forest Agreements	1	
	Nationally Important Wetlands	1	
	EPBC Act Referrals	5	
	Key Ecological Features (Marine)	None	
	Biologically Important Areas	8	
	Bioregional Assessments	None	
	Geological and Bioregional Assessments	None	

3 Protected flora and fauna

There are a number of threatened marine species that may occur in the vicinity of the proposed jetty development. Threatened species are protected under the *Threatened Species Protection* (*TSP*) *Act 1995* (Tasmanian state legislation) and/or the *EPBC Act* (Australian Government legislation).

Under the *TSP Act*, no listed species is allowed to be collected, disturbed, damaged or destroyed without a permit. Under the *EPBC Act*, any action with significant impact on a listed threatened species and/or community is prohibited without approval (Section 18 and 18A).

In addition to threatened species legislation, the *Fisheries (General and Fees) Regulations 2006* under the *Living Marine Resources Management Act 1995* (LMRMA) prohibits the taking/possession of several marine species, including Syngnathids (seahorses, seadragons and pipehorses), handfish, threefin blennies, limpets/false limpets of three superfamilies, and five species of shark. Additional species are protected by the schedules of the *Wildlife (General) Regulations 2010* (Regulations under the *Nature Conservation Act 2002*), under which a person must not take, buy, sell or have possession of any protected wildlife or any product of any protected wildlife without a permit. Threatened species that could potentially occur within the vicinity of the study area are discussed in greater detail in this section.

In a search of the Natural Values Atlas (NRE Tas 2023) and EPBC PMST (Commonwealth of Australia 2023), 14 threatened marine species were identified as possibly occurring in the area or known to occur in the area Table 2).

Table 2: Summary of threatened marine species identified in a search of the Natural Values Atlas and the EPBC PMST. The scope does not extend to terrestrial or avian biota.

	Species/ Community	Listing		NVA findings	EPBC PMST findings
		EPBC Act	TSP Act		
Marine Mammals	Blue Whale *(Balaenoptera musculus)*	Endangered	N/A		Species or species habitat likely to occur within 500m
	Southern right whale *(Eubalaena australis)*	Endangered	Endangered	Species likely to occur within 5000m.	Species or species habitat known to occur within 500m.
	Humpback Whale *(Megaptera novaeangliae)*	N/A	Endangered	Species likely to occur within 5000m.	Foraging feeding or related behaviour known to occur within 500m.
	New Zealand Fur Seal (*Arctocepphalus forsteri*)	N/A	Rare	Species known to occur within 5000m.	
	Subantarctic Fur Seal (*Arctocephalus tropicalis*)	Vulnerable	Endangered	Species known to occur within 5000m.	
Fish/elasmobranchs	Southern Bluefin Tuna *(Thunnus maccoyii)*	Conservation Dependant	N/A	-	Species or species habitat likely to occur within 500m
	Blue warehou *(Seriolella brama)*	Conservation Dependant	N/A	-	Species or species habitat likely to occur within 500m
	Australian grayling (*Prototroctes maraena*)	Vulnerable	Vulnerable	Within 500m	Species or species habitat likely to occur within 500m
	Spotted Handfish *(Brachionichthys hirsutu)*	Critically Endangered	Endangered	Species likely to occur within 5000m	Species or species habitat may to occur within 500m
	Red handfish *(Thymichthys politus)*	Critically Endangered	Endangered	Species likely to occur within 500m	Species or species habitat known to occur within 500m
	Great White Shark *(Carcharodon carcharias)*	Vulnerable	Vulnerable	-	Species or species habitat known to occur within 500m.
Invertebrates	Tasmanian Live Bearing Sea star (*Parvulastra vivipara*)	Vulnerable	N/A		Species or species habitat known to occur within 500m.
	Gunns Screw Shell (*Gazameda gunnii*)	Vulnerable		Species likely to occur within 5000m	
	Giant Kelp Marine Forests of South East Australia ecological community	Endangered	N/A		Community likely to occur in area.

3.1 Marine mammals

All cetaceans are protected under the EPBC Act 1999. The Natural Values Atlas indicates verified records of the southern right whale and humpback whale within 500 m of the proposed development. Southern right whales and humpback whales are frequently observed in Tasmanian coastal waters during their winter migration (DoE 2021a, DoE 2021b). Blue whales also occur in Tasmanian waters however sightings are considered rare.

Threats to marine mammals include acoustic pollution, entanglement (e.g., marine debris, fishing equipment), ship-strike injury and water quality degradation. Marine mammals, particularly cetaceans, use acoustic signals for detecting prey, navigating and communication. Acoustic pollution can significantly impact these species directly through auditory injury, masking of important natural sounds, inducing behavioural changes or inducing stress, and impacts on larvae or prey species may also indirectly affect marine mammals (Todd et al. 2014).

The shallow nature of the proposed development would likely prevent any interactions between this proposed development and whale species. Further, in order to access the area of the proposed site, whales would have to navigate the narrow channel that runs in between Dodges Ferry and Lewisham which is unlikely.

Other species of cetaceans known to be present in the area include common dolphin, bottlenose dolphin, Australian fur seals and New-Zealand fur seals (long nose fur seals). These species tend to be highly transient and fast moving and therefore the proposed jetty extension is unlikely to have any notable impact on these species.

Although this is not expected to significantly impact any of the identified marine mammals considering the specific location of the proposal and the highly mobile and transient nature of marine mammal, minimizing acoustic noise should be considered in construction activities. As a

measure of prudence, standard operating procedures outlined in Underwater Piling Noise Guidelines (Government of South Australia 2012) should be adopted during construction works that may produce underwater acoustic disturbance to minimize potential impacts on marine mammals:

1. A 300 m-radius exclusion zone should be applied around the development footprint.
2. The zone should be monitored for marine mammals prior to commencement of any piling works for at least 30 minutes and during piling operations. Should any marine mammals be sighted within the exclusion zone, construction works should be halted until such time that the observed marine mammal(s) is seen to exit the exclusion zone, or has not been sighted for 30 minutes.
3. A 'soft start' procedure may commence if no marine mammals have been sighted within the exclusion zone, whereby the piling impact energy is gradually increased over a 10-minute time period. This is recommended to alert marine mammals to the presence of piling activities and enable them to move away from the noise source.

3.2 Sharks

3.2.1.1 Great White shark

The great white shark is listed as vulnerable and migratory under the *EPBC Act 1999*. It is unlikely that great white sharks will occur in the proximity of the proposed development, as this is primarily an oceanic species. The process threatening great white sharks is commercial fishing rather than shallow coastal development. It is unlikely that the proposed development would present any risk to white sharks given the shallow nature of the development and that sharks are highly mobile and can avoid any construction works. In addition, the development is unlikely to significantly alter any critical habitat of the white shark.

3.3 Fish

3.3.1 Southern Bluefin Tuna

Southern bluefin tuna are found in open ocean habitats and are generally found in waters off the Tasmanian coastline when currents bring warmer waters to the region. They are actively targeted by commercial fishing fleets and game fishers and are listed as conservation dependent under the *EPBC Act 1999*. The main process threatening this species is overfishing and ongoing fishing pressure (TSSC, 2010). While it is recognised that the proposed development facilitates amenity for fishers, it is not expected to increase fishing pressure; therefore, the proposed development is unlikely to have an impact on the southern bluefin tuna at a population level.

3.3.2 Blue Warehou

The blue warehou is a pelagic and migratory species, undertaking seasonal migrations in response to water temperature with preferred temperature between 10-15 °C. They also move diurnally though the water column, with a known distribution is between 3 and 550 m depth. They more commonly occur on the coastal shelf, upper continental slope, and seamount waters (TSSC 2015). The species is highly valued as both a commercial and recreational catch with the species main threat being overfishing both nationally and in Tasmanian waters. There are no foreseen interactions between the proposed jetty extension to the blue warehou given they are highly mobile and can avoid any construction works. While it is recognised that the proposed development facilitates amenity for fishers, it is not expected to increase fishing pressure; therefore, the proposed development is unlikely to have an impact on the blue warehou at a population level.

3.3.3 Australian Grayling

The Australian grayling is native to Tasmania and southeast mainland Australia. Australian Grayling have a diadromous lifecycle, inhabiting fresh water streams as adults, and migrating to coastal seas as larvae. Spawning takes place in late spring/early summer (Bryant and Jackson 1999). Larvae are transported to sea in stream/river currents, and return as migrating juveniles approximately 4-6 months later (Bryant and Jackson 1999).

The Australian grayling have been recorded in the upper Derwent as larvae en route to sea (late spring/early summer), and as juveniles on migration back into fresh water streams (late autumn/early winter) (Bryant and Jackson 1999).

The most serious threat facing the Australian grayling population is habitat disturbance resulting in barriers to migration. Pollution of waterways is also considered a threat to their survival. There are no foreseen consequences of the proposed jetty extension to the migratory route of the Australian grayling as the proposed development does not result in barriers or increased pollution within the migration route for the species. As such, the proposed development is not deemed to pose a risk to the Australian grayling population.

3.3.4 Handfish

Handfish are small, colourful, slow moving benthic fish found only in south-eastern Tasmania. The main threats to handfish are habitat degradation and loss of spawning substrate, pollution and siltation of waterways, traditional boat moorings, predation by invasive Northern pacific seastar (Commonwealth of Australia 2015). Anthropogenic development activities can impact handfish populations, by impacting water turbidity, sediment quality and reducing available habitat. Potential but low likelihood impacts of the proposed development to handfish include direct injury or disturbance during construction. The EPBC PMST assessment identified two species of handfish or suitable habitat within 500m of the proposed works. The spotted handfish or associated habitat may occur and the red handfish or associated habitat is known to occur in the area.

3.3.4.1 Red Handfish

Red handfish are endemic to south-east Tasmania. Their distribution and populations are small and limited to the coastline of SE Tasmania, although known sightings are limited to very few locations (Commonwealth of Australia 2015). Given the low number of mature individuals and the extremely limited distribution of the species, areas supporting known populations represent critical habitat to the survival of the species (Commonwealth of Australia 2015). Their preferred habitat is on top of rocks, amongst macro-algae, in sandy areas between rocks and the reef-sand interface and on

sediments with weed clumps near reefs, with a depth distribution ranging from 1 to 20 m (Commonwealth of Australia 2015).

Any development activity which disturbs the benthic substrate may have impacts on any undetected handfish populations in the direct development footprint or surrounding environment due to physical habitat disturbance, smothering of eggs and spawning substrata (i.e., seagrass beds) and possible resuspension of pollutants and/or nutrients and subsequent water quality issues.

The EPBC PMST assessment identified that the species or suitable species habitat is known occur within the area of the proposed development; however, there are no verified records of red handfish within the vicinity. This was confirmed by handfish surveys carried out by Marine Solutions for PWS in the area in November 2020. The closest known population of red handfish is located at Primrose Sands ~10km away (Last and Gledhill 2009).

The proposed development is unlikely to result in the loss of potential spawning substrate as the development is extremely localized and does not involve any major modifications to the seabed. Further, the any exiting habitat in the vicinity is exposed to high levels of disturbance due to vessel traffic and associated turbulence from prop wash. It is highly unlikely that this development will not have any negative consequences for handfish populations.

3.3.4.2 Spotted Handfish

The Spotted handfish's current known distribution is restricted to sand, silt and shell-grit environments of the Lower Derwent Estuary between approximately 2 and 30 m depth, south of the Tasman Bridge (Spotted Handfish Recovery Team 2002; Bruce *et al* 1998).

The EPBC PMST assessment identified that the species or suitable species habitat may occur within the area of the proposed development; however, there are no verified records of spotted handfish within the vicinity (ListMAP 2023). Known populations of spotted handfish are generally restricted to the Derwent Estuary and D'Entrecasteaux Channel, ~50 km from the proposed development site (Commonwealth of Australia, 2015).

The likelihood of handfish presence in the vicinity of the proposed development is highly unlikely and therefore the potential risk of impact to any individuals or populations would be very low.

3.4 Marine invertebrates

3.4.1 Live-Bearing Seastar

The Tasmanian live-bearing seastar is a vulnerable species endemic to Tasmania which exists in very isolated sub-populations. These seastars are restricted to rocky reefs in the intertidal zone and live under rocks near the high tide mark (NCHD 2020). The greatest threat to the live-bearing sea star is changes to habitat. They are at risk from direct impacts (habitat modification and destruction), pollution and changes to water quality including eutrophication, sedimentation, storm water and septic runoff (DCCEEW, 2022d).

Populations of the live-bearing sea star have been observed nearby at Pittwater around both Woody and Barren Islands and within the Pittwater Lagoon, these locations are > 4km away from the site (NRE, 2023). Further, the species were not observed within the intertidal survey. Considering there are no known populations of live-bearing sea stars in the vicinity the proposed development, potential impacts to the species are considered highly unlikely.

3.5 Ecological communities

3.5.1 Giant kelp marine forests

Giant kelp (*Macrocystis pyrifera*) grows on rocky reefs in cold temperate waters off south-east Australia. The vertical structure provided by giant kelp forests increases local biodiversity by creating habitat for numerous marine species. The progressive decline of these forests has been most noticeable in Tasmanian waters and is attributed to changing oceanographic conditions, including rising sea surface temperatures and changes to the East Australian Current (DCCEEW 2022).

The Giant Kelp Marine Forests of south-east Australia ecological community is classified as threatened under the *Environmental Protection and Biodiversity Conservation Act 1999* when several

criteria are met, including when plants form a closed or semi-closed canopy at or below the surface and the water is 8 m or deeper.

During the field survey (see Section 7), several strands of giant kelp (*Macrocystis pyrifera*) were observed growing from the existing breakwall and jetty. However, these individual strands did not form a canopy and were in shallow areas (<3 m) and therefore do not meet the Giant Kelp Marine Forests of Southeast Australia ecological community criteria. In addition, considering the sandy nature of the surrounding substrate it is likely the existing infrastructure has provided the structure allowing giant kelp to grow at the site.

Given the shallow depth and small-scale nature of the proposed development, potential impacts to this threatened community are deemed negligible. Further, additional underwater structures from the extension of the jetty and rock wall will likely increase habitat for giant kelp to establish.

4 Sensitive Species

4.1 Seagrass

Seagrasses are subtidal and intertidal plants found mainly in shallow waters of protected estuaries and bays. They are important contributors to coastal productivity and biodiversity. Seagrasses play an important role in nutrient cycling through the uptake of nutrients and can substantially alter the oxygen concentrations in sediments by releasing oxygen through the rhizomes (roots). Due to their extensive rhizome structure, seagrasses are particularly important in maintaining sediment stability.

A range of factors may lead to seagrass habitat decline, including direct contact from boats anchoring, hulls and propellers and prop wash (Sargent *et al.* 1995) or indirectly from the reduction of light availability due to increased nutrients or turbidity (Jordan *et al.* 2002). High levels of nutrients often result in increased epiphytic algal growth that can smother and shade seagrass blades, while higher turbidity reduces that amount of light reaching the beds, with deeper parts of the bed most vulnerable to light reductions (Walker and McComb 1992).

Growth in seagrasses is known to vary spatially and temporally (Jordan *et al* 2002). Fluctuations in sea grass cover has been observed annually and at a decadal scale (Aquenal 2021) however a lack of research means it is often difficult to determine if fluctuations in seagrass beds reflects human impacts or natural variability (Aquenal, 2021, Jordan *et al* 2002,). Previous studies conducted by IMAS found natural fluctuations in the size of seagrass beds, the density and length of seagrass stems and the amount of epiphytic growth varied temporally in response to unknown variables. Additionally, the scarring of seagrass beds by direct contact from boat hulls, propellers and prop wash have all been linked to detrimental effects upon seagrass (Sargent *et al* 1995).

Observations from the field survey (refer to Section 7) confirmed the presence of seagrass (*Zostera tasmanica*) on the seabed around the existing jetty. The seagrass was found fringing the current infrastructure, including the concrete ramp and breakwall.

The proposed development is likely to impact seagrass in the direct footprint of the piles. Interactions between fouling species (e.g., xx?) and sea grass should also be considered. When established colonies of fouling species reach a maximum capacity they can detach and smother seagrass surrounding the piles. Changes in hydrological cycles and an increase in sedimentation rates (see Section 8) may also result in smothering of seagrass at the site. However, these impacts are expected to be minimal and highly localised to the habitat surrounding the jetty piles.

Further, shading from additional infrastructure is likely to reduce light availability to the seabed, resulting in a potential impact to surrounding seagrass. The majority of this impact is likely to come from the addition of the breakwall, as the rock groyne covers an area of approximately 314 m^2. Whilst the installation and extension of the jetty may potentially decrease light availability, it is likely that light will still be able to penetrate the water column through to the seagrass given the elevation of the jetty above the surface. Considering seagrass currently exists on the southern side of the existing jetty, where light is more limited compared with the northern side, impacts of decreased light availability from jetty instalment will likely be negligible.

Given the nature of the shoreline, negative impacts on sea grass are more likely to occur from boating activities such as anchoring and prop wash.

In conclusion, there is a moderate risk to surrounding seagrass beds. This risk will be confined to the immediate area and will not impact seagrass on a population level.

4.2 Limpets

Limpets are group of molluscs that colonise rocks or hard substrate within intertidal zones. Under state legislation (Fisheries (General and Fees) Regulations 2006), limpets/false limpets of the superfamily Siphonaria are protected. This ruling prohibits the taking/possession of the species.

The field survey confirmed the presence of *Siphonaria diemenensis,* (Figure 11) within the intertidal area surrounding the proposed development and on the existing breakwall. The works are unlikely to impact limpets within the intertidal shoreline, as no change is expected to occur to the existing habitat. Some limpets inhabiting the breakwall may be affected, this will likely be limited to a ~ 2 m stretch at the north-west end of the breakwall where the rock groyne will intersect with the intertidal zone on the rock wall.

Although impact to individuals is likely, these impacts will be localised and are unlikely to cause implications for the species on a population level.

5 Migratory Species

Migratory species are those animals that migrate to Australia and its external territories or pass through or over Australian waters during their annual migrations.

The EPBC PMST identified nine migratory marine species as likely or known to occur within the vicinity of the proposed development however the proposed development will not introduce any barriers to migration, and therefore is not considered to pose any threat to migratory species in the area.

6 Invasive Species

Marine pests are introduced into Australian waters and translocated by a variety of vectors (e.g., ballast water, biofouling, aquaculture operations, and ocean current movements). Once introduced, they often thrive as they may lack predators and/or competitors in their new environment (Whitehead 2008). Pests can have a significant impact on human health, fisheries and aquaculture, infrastructure, tourism, biodiversity and ecosystem health. Seven species have been declared as pests under Tasmanian State legislation[1].

The introduction of marine pests is not considered to be an issue for this development. However, it should be ensured that no marine species are translocated because of vessel/equipment movement by adopting a thorough cleaning protocol. Machinery, including vessels which have been used in waters other than Lewisham, should be washed thoroughly with fresh water to remove any sediment and fouling organisms. Machinery and vessels which have the potential to transport waterborne

[1] *Fisheries (General and Fees) Regulations 1996, Part 20: Noxious fish, outlined in the Living Marine Resources Management Act 1995*

viruses or pest species should be disinfected with Virkon spray or similar and allowed to dry prior to being used on site.

7 Field Surveys

7.1 Intertidal Survey

7.1.1 Methods

An intertidal quadrat survey was conducted on 3rd of November 2023, along the shoreline to the north and south of the proposed development site to identify presence of protected or threatened species. A transect was laid every five meters from the proposed development site to the north and to the south, from the high tide line to the water. Four transects were surveyed on the northern side and three on the southern side due to shape of the coastline (Figure 9). Quadrats were placed on high and low water marks, mid-area quadrats were placed in the middle of the marks, along each transect. A total of 21 x 0.5 m^2 quadrats were surveyed along the low, mid, and high-water marks (x7 high, x7 mid, x7 low).

The survey was conducted on a low rising tide to increase access to the low water mark. A search for notable species within each quadrat was conducted and photos of each quadrat were taken to later aid in the identification of species (Figure 10)). A full catalogue of quadrat photos can be supplied on request.

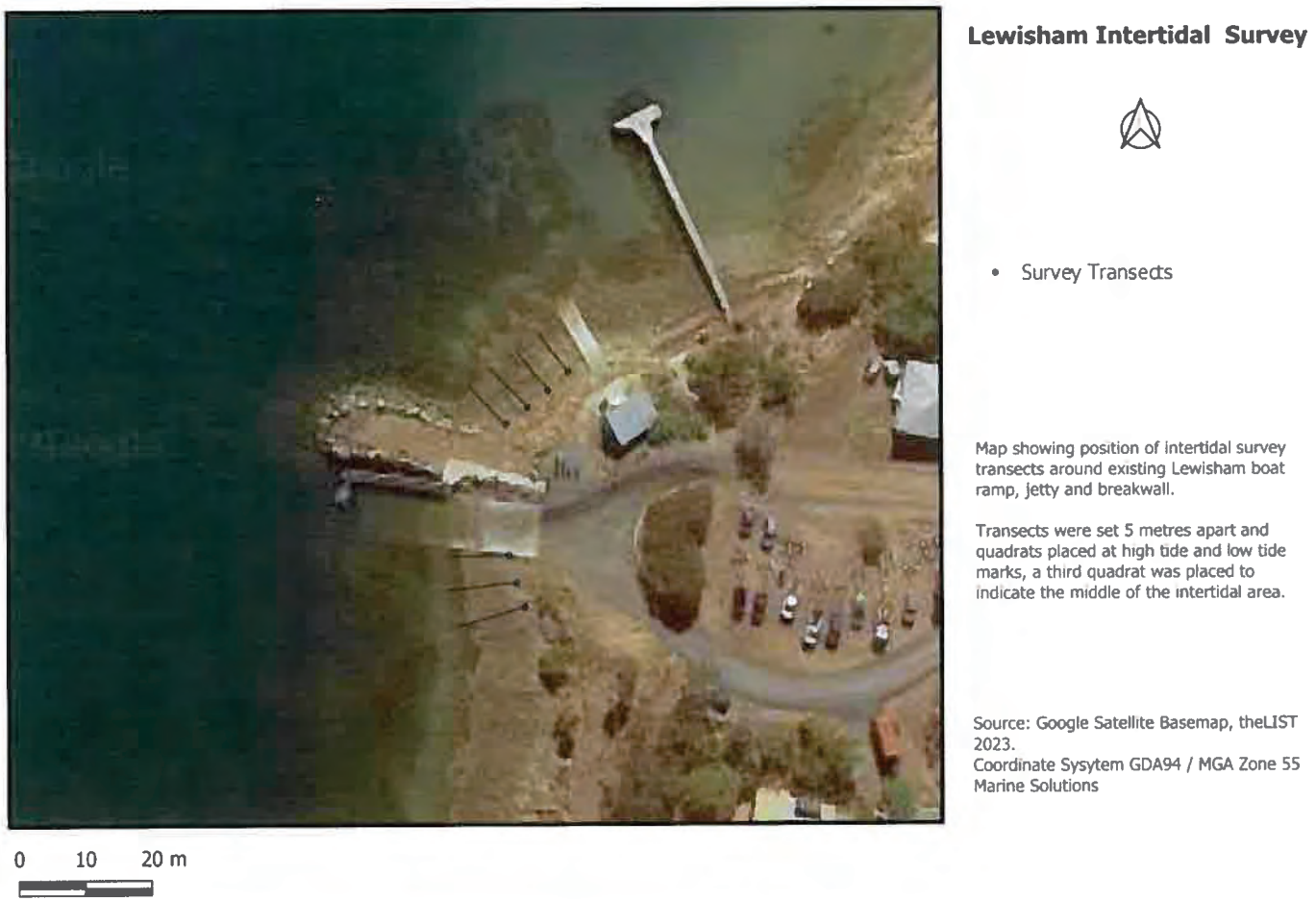

Figure 9: Map of Intertidal survey transects at Lewisham boat ramp, jetty and break wall.

Figure 10: Intertidal survey transects, top left: transect and quadrat layout, top right: high tide mark quadrat, bottom left: mid intertidal zone quadrat, bottom right: low tide mark quadrat.

7.1.2 Results

The shoreline from the low to high tide water marks to the north and south of the existing Lewisham jetty site is composed of relatively flat rock. In various depressions of the rock smaller rocks and pebbles have accumulated. In some areas, particularly the southern side, patches of gravel have accumulated.

There was a low abundance of intertidal species observed in the area and all species found are common to rocky intertidal habitats in south-east Tasmania. Species within the habitat included limpets, true top shell molluscs (family Trochidae) and winkles (family Littirinidae) all of which were observed in mid and low tide areas.

The only notable species observed was the Orange-Edged Limpet (*Siphonaria diemenensis)* which is protected under state legislation (discussed in Section 4.2.

Figure 11: *Siphonaria diemenensis,* protected species of limpet at low water mark

7.2 Field Observations

In preparation for this report an informal survey of the underwater environment was conducted at the location of the proposed development. During this investigation underwater footage was obtained to categorise the flora and fauna.

An established shallow reef ecosystem was observed around the existing break wall, the environment was typical of shallow rocky reefs in south-east Tasmania. Several common species of macroalgae were identified including; *Sargassum spp*, *Ulva spp, Caulerpa brownii, Hormosira banksia, Macrocystis pyrifera* and *Codium fragile (*Figure 12*)*. Seagrass (*Zostera tasmanica*) was also present on the seabed around the existing concrete ramp, rock wall and jetty (Figure 13).

Various invertebrate species including limpets (*Siphonaria diemenensis*), barnacles (*Austrominius modestus*), molluscs (*Austrolittorina unifasciata* and *Turbo undulatus*) and bivalves (*Mytilus galloprovincialis* and *Crassostrea gigas*) were also observed colonising structures at the site (Figure 14). These species are typical of shallow rocky reef systems in south-east Tasmania. Observations of threatened or protected fauna at the site was limited to the limpet *Siphonaria diemenensis* (discussed in Section 4.2).

The rock structure of the existing breakwall, in addition to the jetty piles, have acted as an artificial reef and provided structure to allow these species to colonise in the area. It is likely that without the existing infrastructure the abundance of flora and fauna would be reduced, given the flat sandy habitat. While the development may result in short-term localised declines for some species, it is expected that they will recolonise the additional infrastructure.

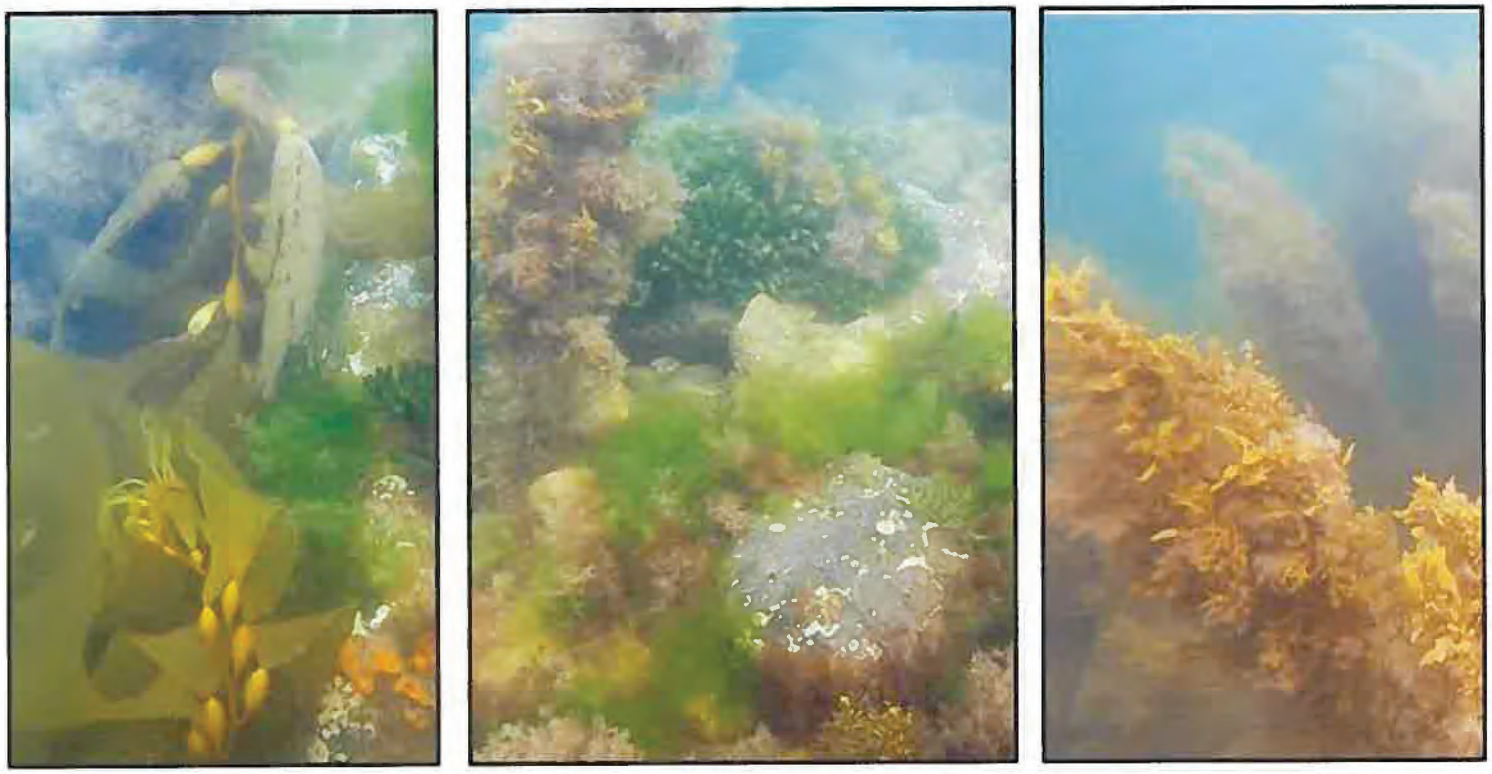

Figure 12: Typical macroalgae community at site showing presence of *Sargassum spp*, *Ulva spp*, *Caulerpa brownii and* giant kelp (*Macrocystis pyrifera)* at site.

Figure 13: Sea grass (*Zostera tasmanica) surrounding breakwall* .

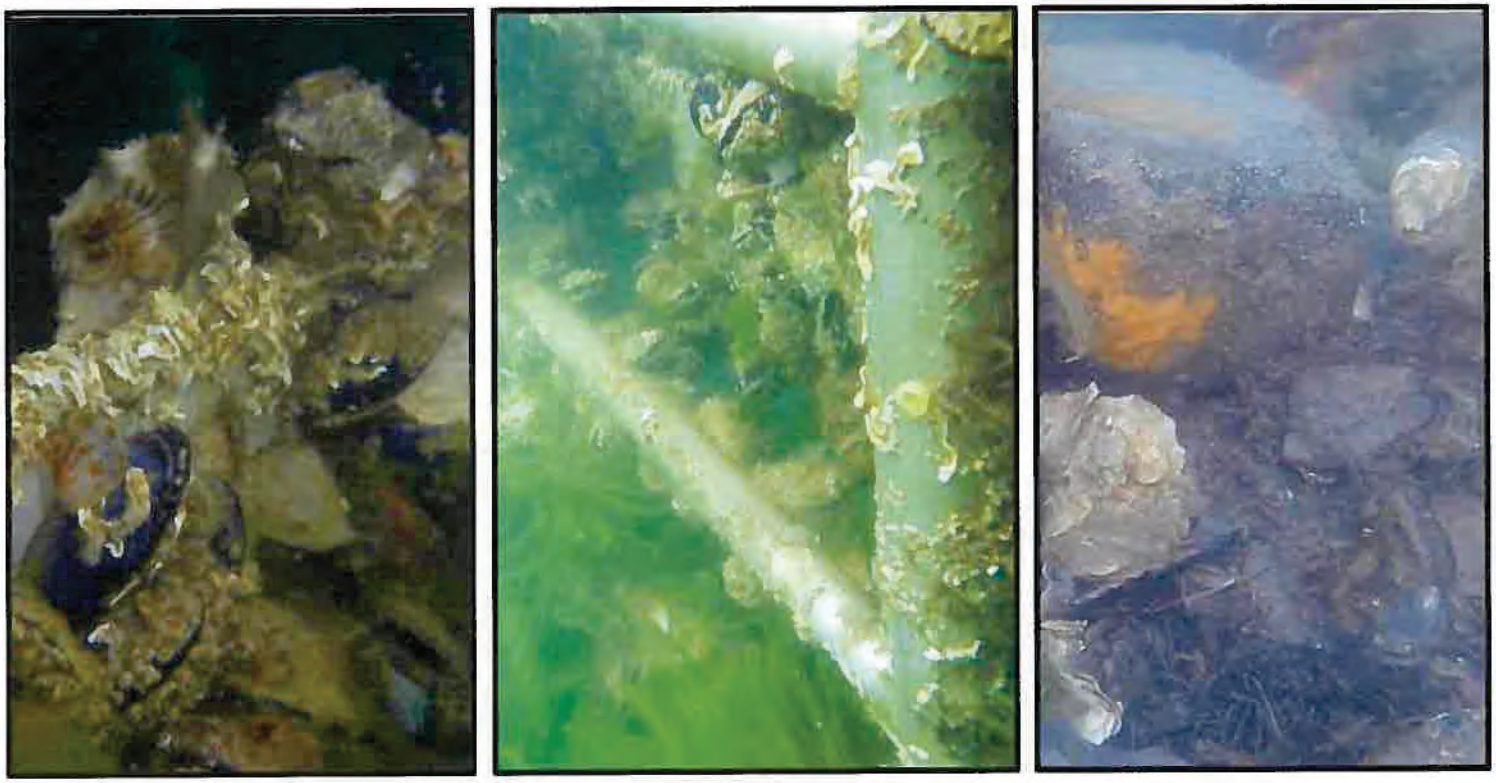

Figure 14: Blue Mussels (*Mytilus galloprovincialis*) Pacific Oysters (*Crassostrea gigas*) and sponge colonising the existing jetty.

8 Hydrology

The proposed upgrades have potential to change the hydrology around the site including current flow and sedimentation rates, via the extension of the northern jetty and breakwall and construction of the southern jetty.

Although a formal study has not been completed, additional infrastructure has the potential to create eddies resulting in an increase to sedimentation rates in the area. The presence of seagrass around the site indicates that the site is currently subject to low sedimentation rates. Given the composition of the shoreline (hard dolerite rock) these interactions are unlikely to result in erosion of the shoreline or interfere with the intertidal habitat.

It is possible that increased sedimentation will have negative impacts on seagrass in the area, as it has the potential to limit light and smother the species. Other flora species are less likely to be impacted considering they inhabit elevated structures within the water column.

The proponent should be aware that increased current and sedimentation rates could result in changes to the existing bathymetry and channel surrounding the development. Whilst this is not a major ecological concern it may impact accessibility and functionality of the facilities.

9 Conclusion

The desktop-based ecological investigation presented in this report found no ecological contraventions to the proposed development and with appropriate risk management strategies in place, the development may be undertaken with minimal impact on the surrounding area.

In a desktop-based search of available online literature and government tools, 14 threatened and protected marine species and one threatened ecological community were identified as possibly occurring in the area or known to occur within 5 km of the proposed development. Mitigations to potential impacts to marine sensitive receptors have been identified where applicable, accounting for ecology, behaviour, and nature of receptors, as well as the nature of the proposed development. Mitigations are summarised in Table 3 below.

With the suggested precautionary mitigation measures in place, risks to the immediate and surrounding ecological assemblages are considered low. There are no contraventions to the proposed works based on marine environmental risk.

Table 3: A summary of the potential impacts and recommended mitigations for the proposed Lewisham jetty extension.

	Potential impacts	Likelihood of impact	Recommended mitigations
Marine mammals	Acoustic disturbance	Low	Cease underwater noise-creating works (during construction) if marine mammals are sighted within 300 m of the area. Slow start up is recommended.
Sharks	Direct injury or disturbance to habitat	Extremely low	None required
Pelagic fish	Direct injury or loss of habitat	Extremely low	None required
Handfish	Direct injury or disturbance to habitat	Extremely Low	None required
Live bearing seastar	Direct injury or loss of habitat	Extremely low	None required
Giant kelp marine forests	None	Extremely low	None required
Seagrass	Localized seagrass destruction and shading	High	None required
Migratory species	Barriers to migration paths.	Extremely low	None required
Invasive species	Potential to translocate marine pests via machinery and equipment	Low	Thorough cleaning protocol of vessels, machinery and equipment
Limpets	Direct injury or disturbance to habitat	High	None required

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11 Appendices

Appendix 1. Operational Summary

Date	Personnel	Time (start)	Time (end)	Cloud	Rain	Swell	Wind	Tide	Works conducted
3/11/2023	A. King E. Johnson	6:25	12:00	95%	light	Wind chop	10-15knts S	Low- Rising	Intertidal survey Informal marine community observations

LEWISHAM
MARINE INFRASTRUCTURE

GENERAL DRAWING LIST:

1869 - 01	DRAWING LIST, NOTES, LOCATION PLAN & PRELIMINARY MEMBER SCHEDULE

MARINE DRAWING LIST:

1869 - 10	OVERVIEW PLAN
1869 - 11	CONCRETE APPROACH SLAB PLAN
1869 - 12	JETTY GENERAL ARRANGEMENT PLAN
1869 - 13	JETTY SECTIONS
1869 - 14	ROCK GROYNE DETAILS
1869 - 15	SOUTHERN JETTY DETAILS
1869 - 16	SOUTHERN JETTY SECTION

GENERAL NOTES:

1. UNLESS NOTED OTHERWISE ON A PARTICULAR DRAWING THESE NOTES APPLY TO ALL DRAWINGS IN THIS SET.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL REDUCED LEVELS ARE METERS TO CHART DATUM (CD) UNO.
4. THESE DRAWINGS ARE FOR CONCEPT PURPOSES ONLY AND SHALL NOT BE USED FOR TENDER OR CONSTRUCTION.

LOCATION PLAN
NTS

PRELIMINARY MEMBER SCHEDULE			
CODE	MATERIAL	CONNECTION	NOTES
PILE (EXTENSION)	Ø400 HDPE PIPE. REINFORCEMENT CAGE. CONCRETE FILLED	2M24 STAINLESS STEEL PIN. 1500 LONG, EPOXY GROUTED 750mm INTO ROCK	
PILE (SOUTHERN JETTY)	Ø630 HDPE PIPE. REINFORCEMENT CAGE. CONCRETE FILLED	2M24 STAINLESS STEEL PIN. 1500 LONG, EPOXY GROUTED 750mm INTO ROCK	
CROSSHEAD	252 x 252 FRP I BEAM	2 x M20 BROOKER ROD, PER PILE (4 REQUIRED FOR WAVESCREEN)	
JOIST	250x100 RHS FRP	2 x M16 BOLT TO CROSSHEAD	SOLID RECYCLED PLASTIC BLOCKING, SCREWED THROUGH JOISTS.
FENDERING	200x100 SEASONED HARDWOOD	1M20 BROOKER ROD TO JOIST, 1M16 BOLT TO WALER	
WALER	254x127 FRP I BEAM	2M16 BOLTS TO STAINLESS STEEL PILE BRACKET EACH END	
DECKING	38mm MINI-MESH	AS PER MANUFACTURE'S DIRECTIONS	
BRACE	252 x 252 FRP I BEAM	2M16 BOLTS TO STAINLESS STEEL PILE BRACKET EACH END	

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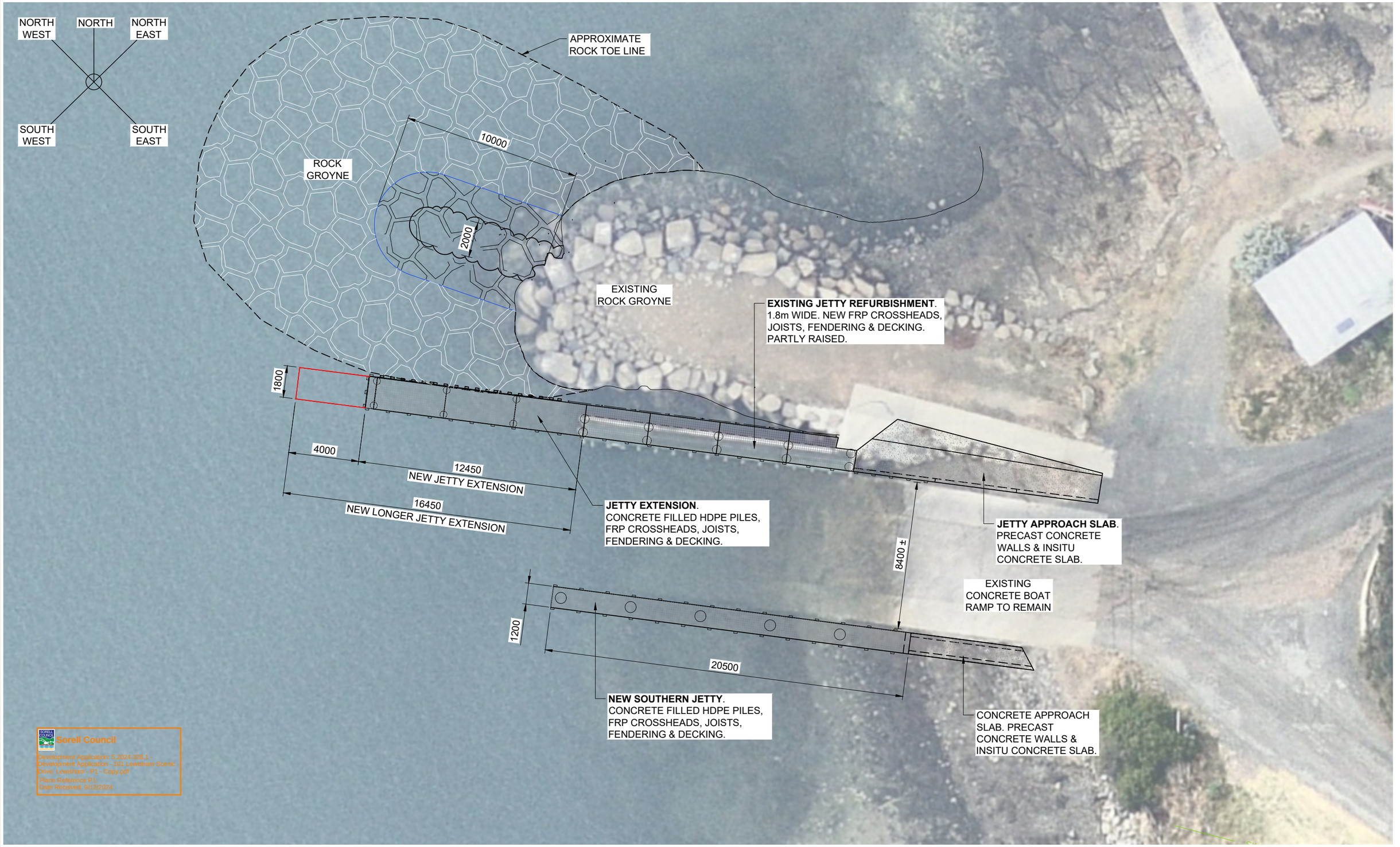

OVERVIEW PLAN
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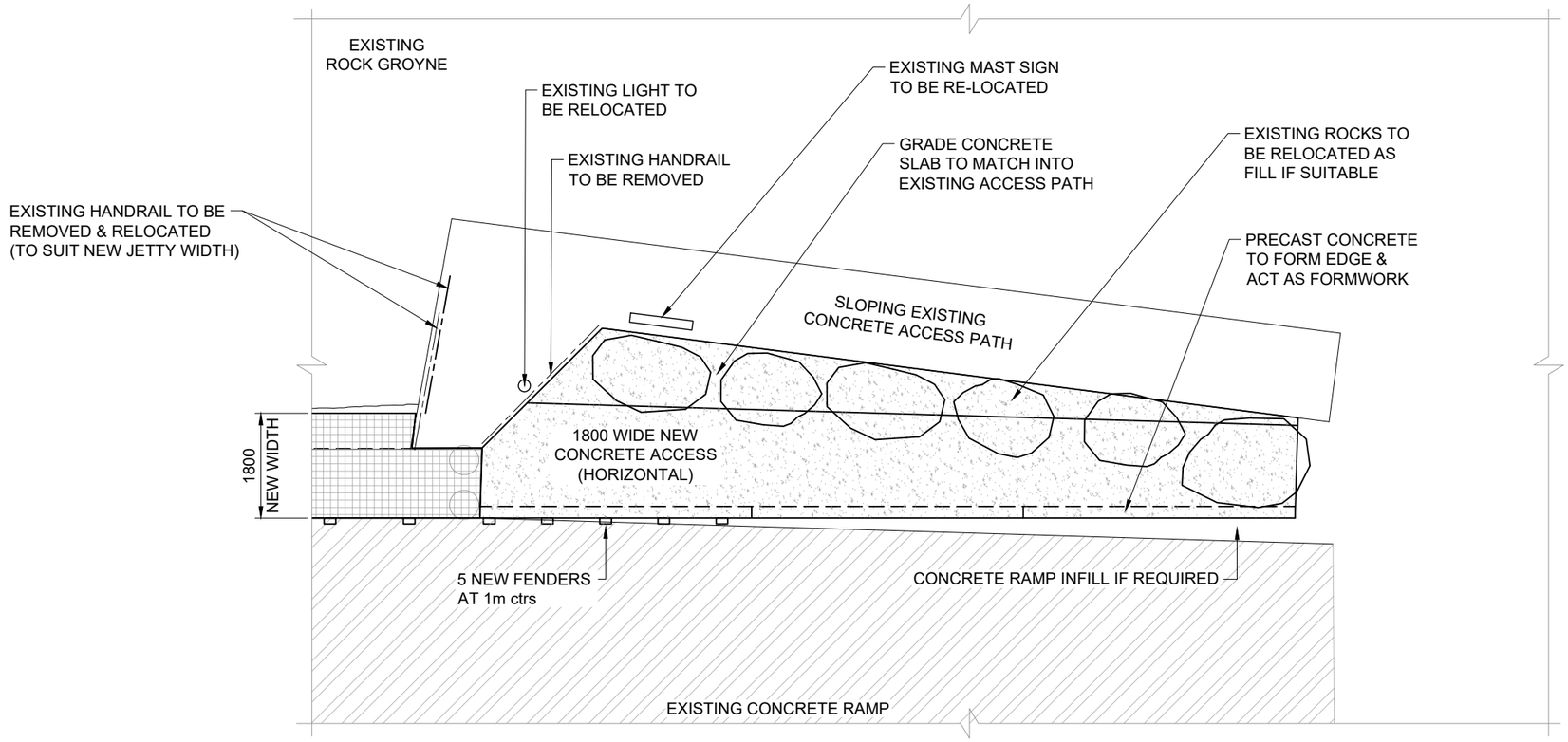

CONCRETE APPROACH SLAB PLAN

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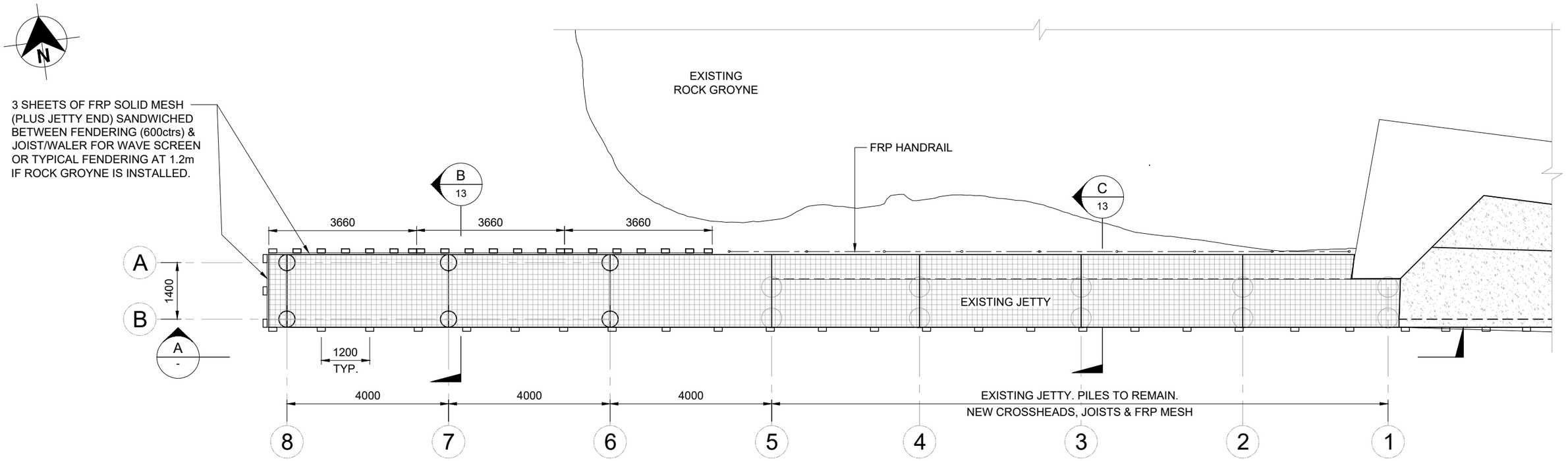

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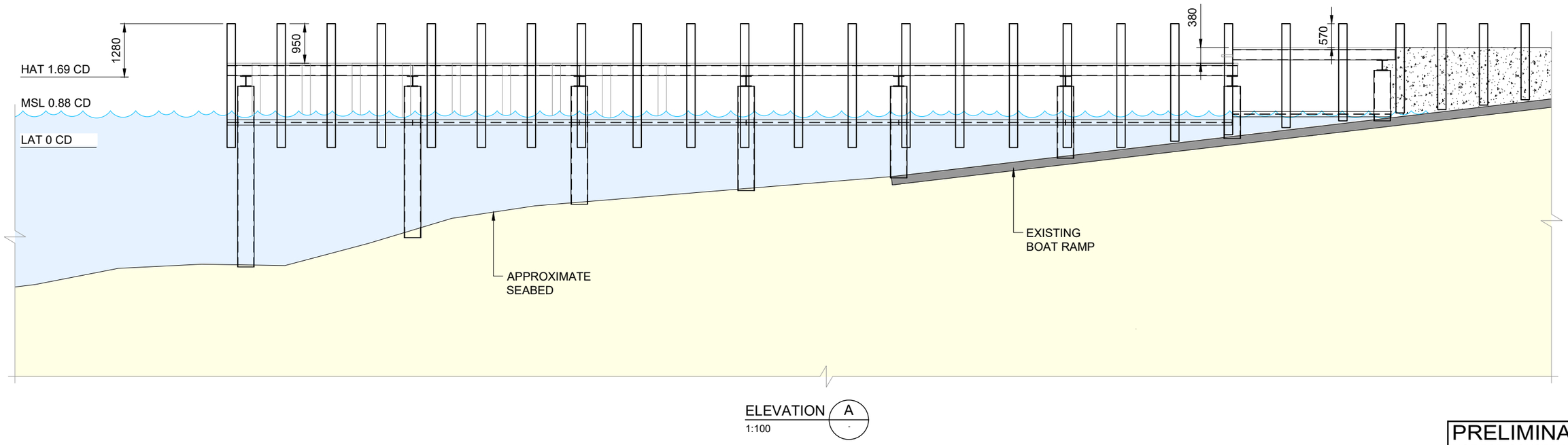

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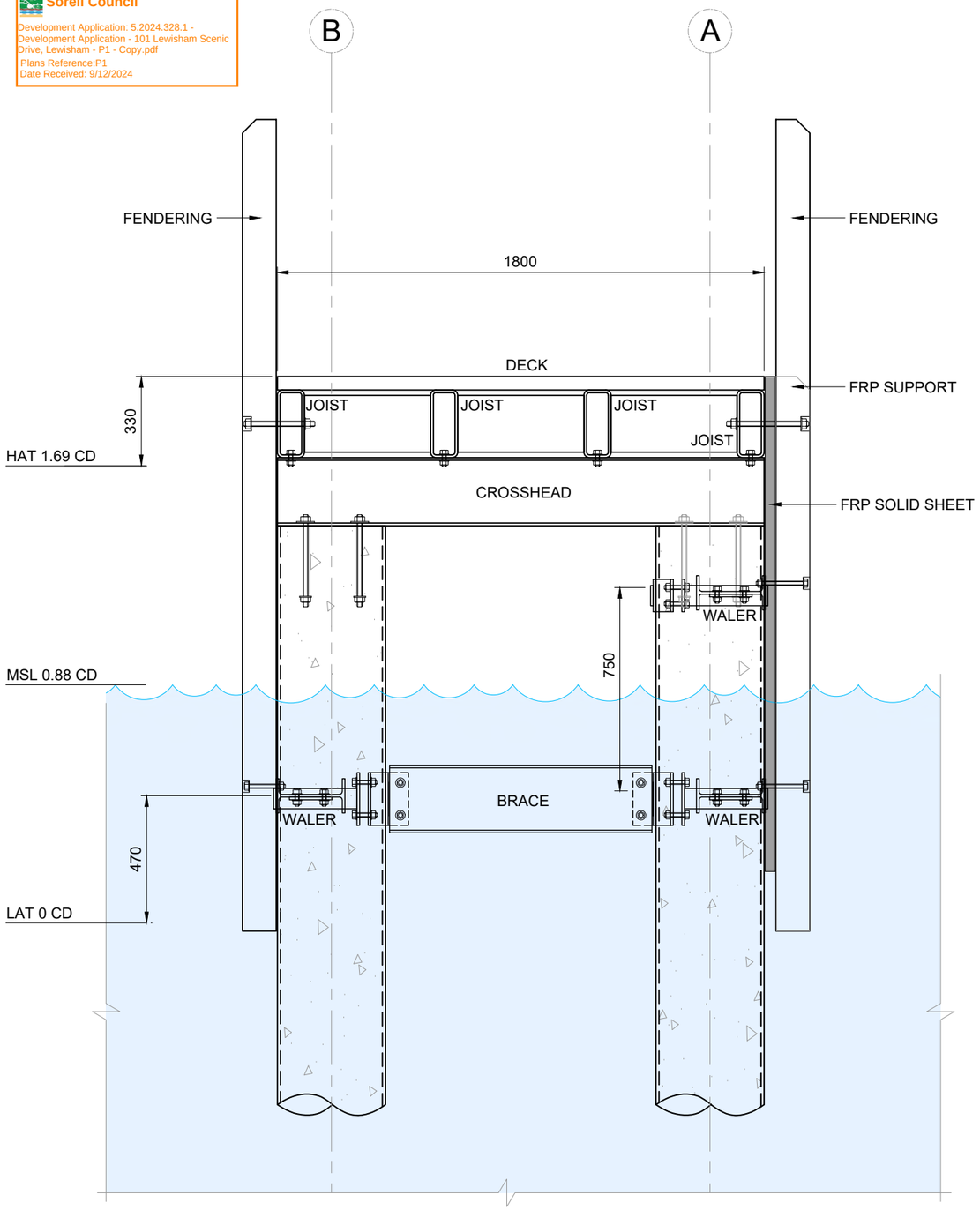

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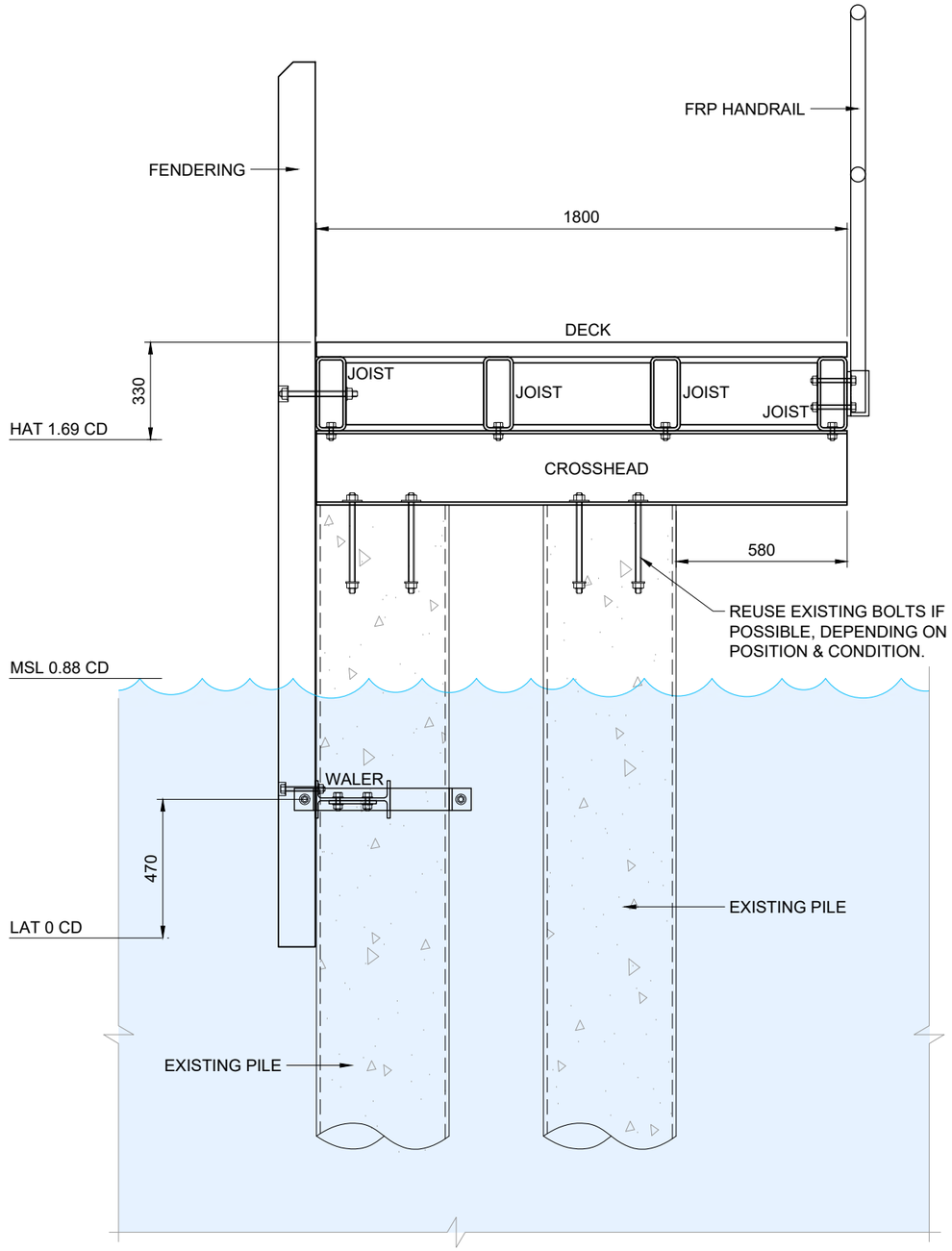

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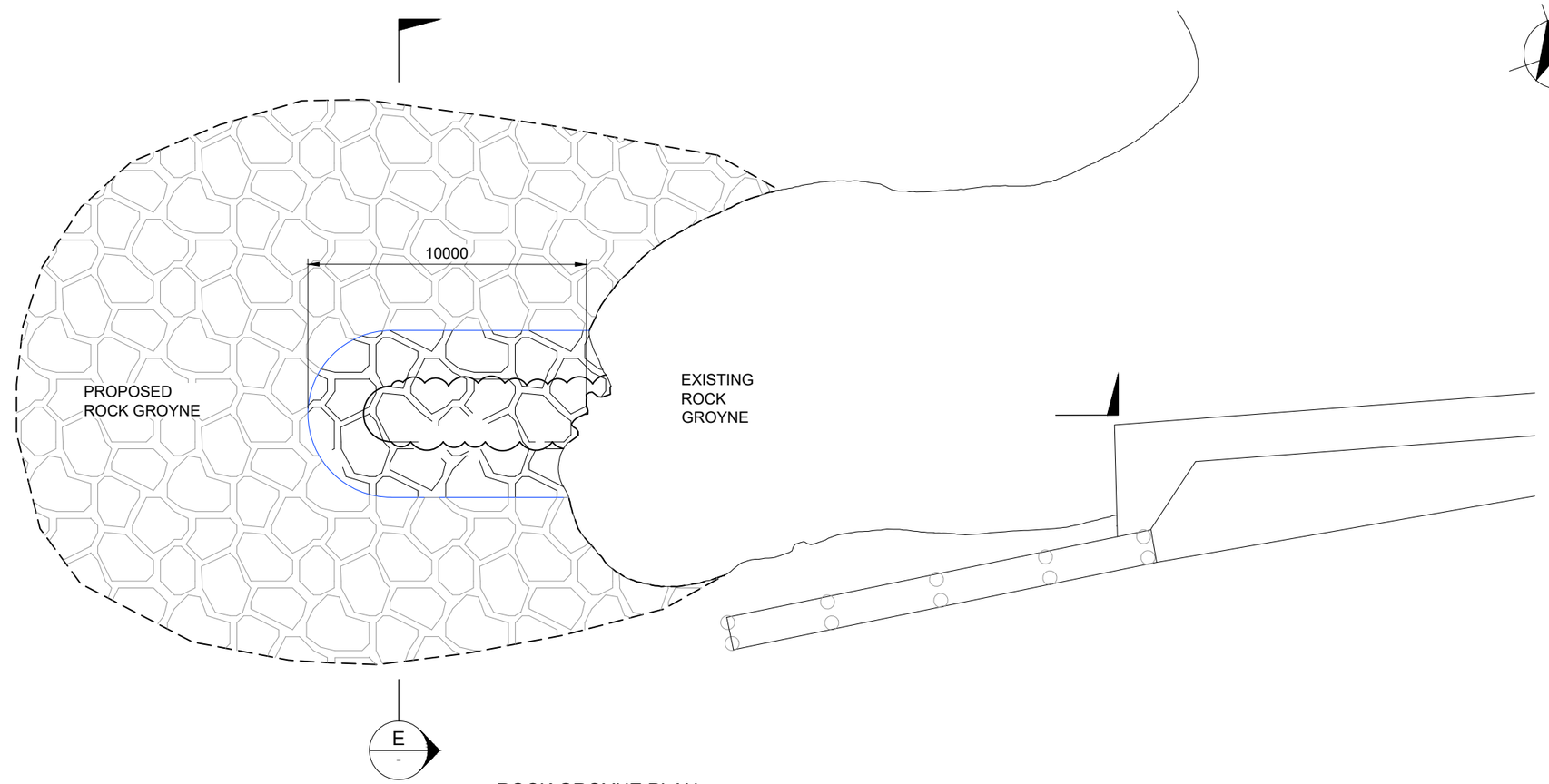

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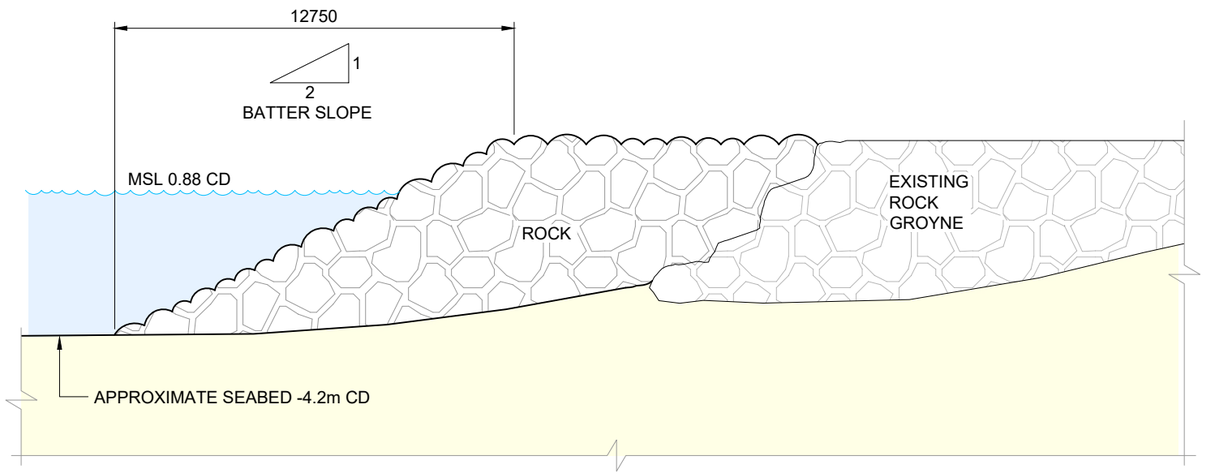

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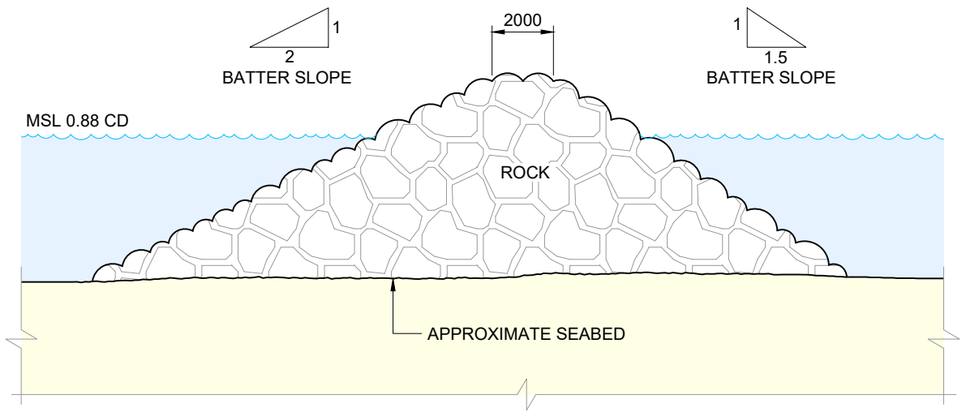

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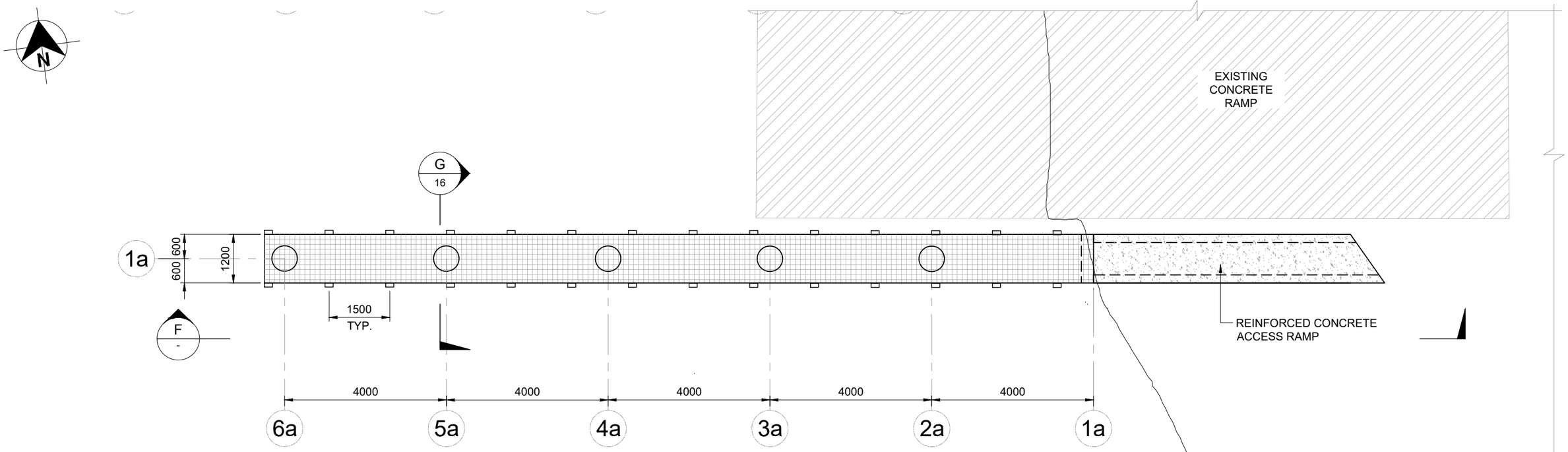

SOUTHERN JETTY GENERAL ARRANGEMENT PLAN
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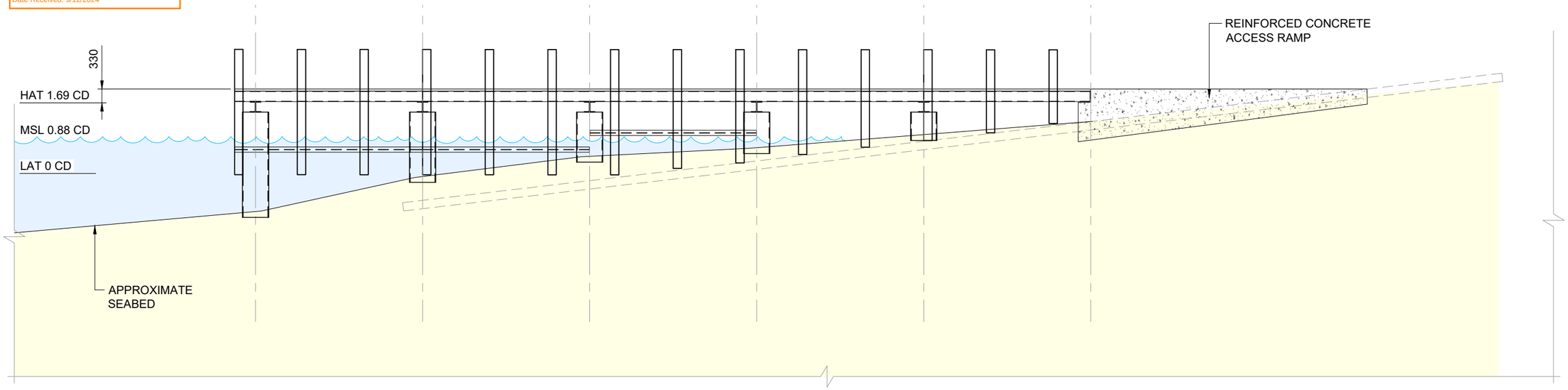

ELEVATION F
1:100

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

Rev No	Revision note	Date	Checked	Approved
A	FOR CLIENT REVIEW & COMMENTS	01/08/23	MS	RP
B	UPDATED	11/10/23	MS	RP
C	UPDATED WITH GROYNE INCLUDED	16/10/23	MS	RP

2 1 0 2 4m
SCALE 1:100

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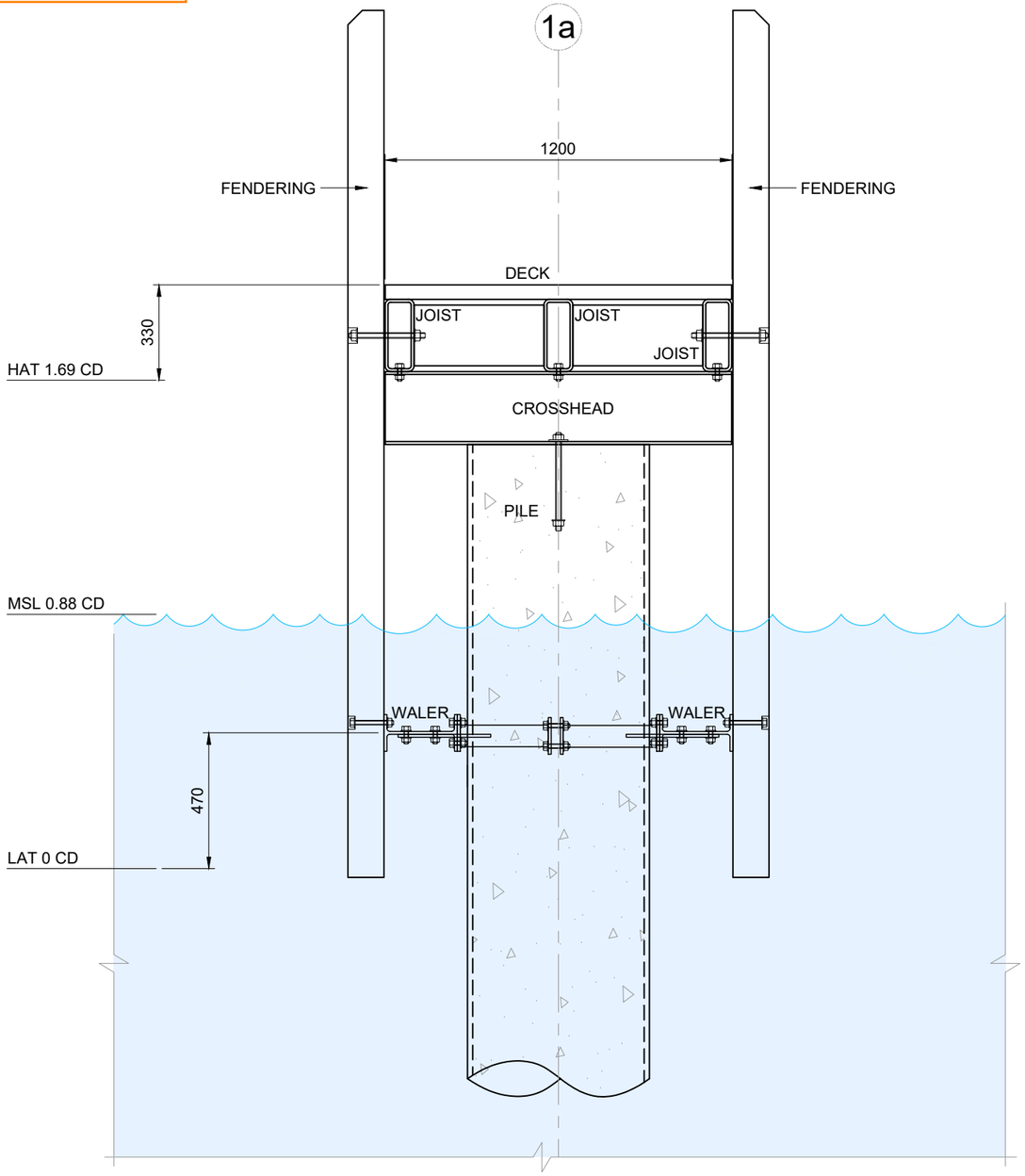
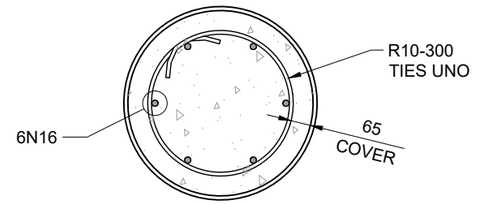
Designed By:	M.SCANLON	Date	AUGUST 2023
Checked By:		Date	
Approved By:		Date	

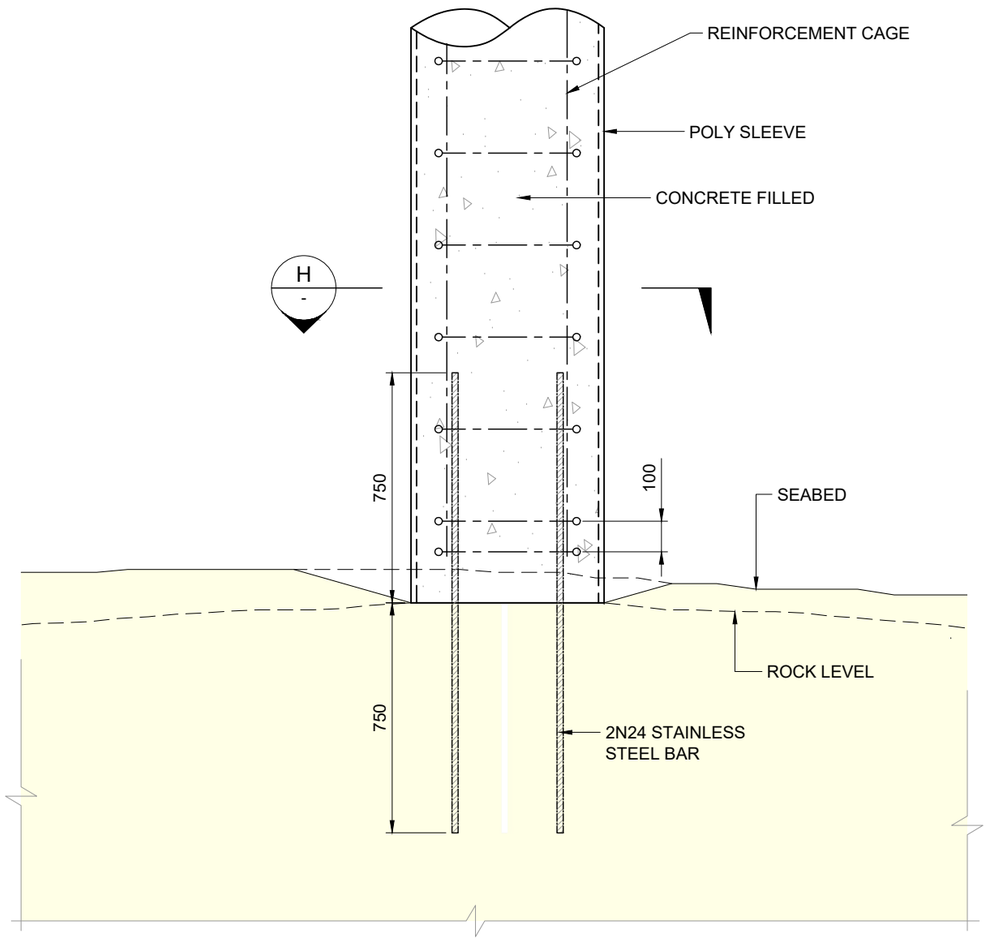
Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: SOUTHERN JETTY DETAILS
Scale: 1:4000 | A3 | Drawing No. 1869 - 15 | Rev C



SECTION G
1:20
15



SECTION H
1:20
-



TYPICAL PILE TOE DETAIL
1:20

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

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A	FOR CLIENT REVIEW & COMMENTS	01/08/23	MS	RP
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C	UPDATED WITH GROYNE INCLUDED	16/10/23	MS	RP

400 200 0 400 800mm
SCALE 1:20

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Approved By:		Date	

Client: MAST
Project: LEWISHAM MARINE INFRASTRUCTURE
Title: SOUTHERN JETTY SECTIONS
Scale: 1:4000 | A3 | Drawing No. 1869 - 16 | Rev C