

## MEETING NOTES

### Leichhardt Council Meeting No. 1

24 April, 2015 at 1:30 pm

Leichhardt Council Chambers, Leichhardt

Council officers:		
	Rick Jarvis	Manager, Parks and Assets
	Ellie Simpson	Transport Planning
	Clare Harley	Transport Planning
	Aaron Callaghan	Transport Planning
Roads and Maritime Service Wharf Upgrade team:		
	Bob Rimac	Project Manager
	Rowena Lennings	Stakeholder Engagement and Communications
Meeting notes:	Rowena Lennings	

#### **1. Welcome, introductions, background and purpose of meeting**

Roads and Maritime Services (RMS) representatives outlined the NSW Government's recent announcement of its proposal to upgrade various wharves including Birchgrove Wharf and interchange in the Leichhardt local government area.

RMS representatives explained that they are delivering the second phase of the Wharf Upgrade program which is funded under the Transport Access Program on behalf of Transport for NSW (TfNSW). Hansen Yuncken (HY) has been appointed by RMS as the managing contractor for concept design of projects. Bob Rimac from RMS is the Program Manager.

The purpose of this meeting is to provide an introduction to the project, prior to inviting Council's input into the development of concept plans for the wharf interchange and to advise Council of the initial community feedback sessions planned for Birchgrove.

#### **2. Over view of Wharf Upgrade Program**

The RMS Wharf Upgrade Project Team outlined the primary focus of the Wharf Upgrade Program as being to improve customer experience including amenity, safety, and improving access for mobility impaired customers, along with increasing efficiency of ferry operations leading to greater ferry patronage.

The designs for the upgraded wharf structures are floating pontoons, in view of their superior safety and efficiency in loading and unloading passengers. All upgraded wharves are constructed of high quality materials to ensure low maintenance.

It was pointed out that while recently delivered wharf upgrade (known as Wharf Upgrade Package One) had focused largely on the wharf, the current package (known as Wharf Upgrade Package Two) would also focus on the interchange and its land side elements including linkages with other modes of transport including buses, cycling, pedestrian linkages etc and provision of relevant

facilities to improve ferry customer experience such as improved way-finding signage.

The Wharf Upgrade team is keen to work closely with Council in designing and upgrading the wharf interchange area including incorporation of and treatment of landside elements.

### **3. Overview of consultation process**

RMS explained that an initial round of community feedback drop in sessions has been tentatively scheduled as the first step in an ongoing community consultation process. We want to understand community and stakeholder concerns, ideas and priorities so we can consider them in developing plans for a more accessible wharf and interchange. At these sessions participants will be invited to share their views and ideas for improvement.

An initial round of consultation has been scheduled as the first step in an ongoing process. Community members have been invited to visit an information session at St John's Church Hall, Birchgrove. RMS will be handing out surveys in order to gather feedback, so as to guide our plans for a more accessible wharf and interchange. Details are as follows:

#### **Birchgrove Wharf upgrade community information session:**

**Where:** St John's Church Hall, Corner of Thomas and Spring Street, Birchgrove

**When:** Thursday 7 May, 2015 between 5pm -7pm

Members of the project team will be available to provide information and answer questions about the upgrade. There will be further consultation on a preferred option for the upgraded Birchgrove Wharf and interchange later in the year.

RMS confirmed that these events have been advertised in local newspapers and local residents have also been advised by letterbox drops. The Birchgrove Precinct Committee has been informed and distributed information amongst their membership. Posters promoting this event are displayed on the wharf. Council's advice and recommendations are welcome. Further consultation will be held in subsequent months on a preferred option for the new and upgraded wharves and interchanges and then as part of the environmental assessment and construction phases.

### **4. Overview of Birchgrove Wharf Upgrade**

RMS confirmed that as Birchgrove Wharf is part of the ferry network it needs to be upgraded to meet Disability Discrimination Act (DDA) requirements. Landside elements including pedestrian access from the wharf to the surrounding park will form part of this review.

It was noted that full compliance with the in relation to the landside elements would be hard to achieve in view of the geographical constraints of this area. A concept design has not yet been developed.

RMS confirmed that their role is to manage the upgrade process. The upgrade plans will take into account current services and consider future services, including the implications of the future Barangaroo ferry hub and the additional ferry fleet the NSW Government has committed to purchase.

RMS explained that the upgraded wharves largely adhere to a standardised designs consisting of a floating pontoon with an 18m gangway. The size of the pontoon in this location would be based on engineering requirements rather than patronage.

**Council raised the following issues:**

Ferry service and location of wharf

- Council would not support a reduction in ferry services and would prefer to see a supplementary ferry wharf in addition to Birchgrove Wharf.
- Council mentioned that some residents supported relocation of the wharf to an area such as Grove Street which has good connectivity with public transport.

Yurulbin Park:

- This park is owned by Leichhardt Council and listed on their heritage register.
- Council is planning an overhaul of Yurulbin Park, this will mostly consist of re-planting to revitalise its original design by Bruce Mackenzie, part of the original Sydney school of landscape architects.

Louisa Road:

- The turning circle at the end of the access road to the wharf, Louisa Road, is sub-standard.

Sea Wall

- Council expressed concern about the heritage listed seawall. RMS confirmed that the 18m gangway will clear the seawall.

Obstruction of views

- Council will be concerned about impacts on views. RMS mentioned that the preferred option will be subject to a Review of Environmental Factors that will include an urban design assessment including assessment of visual impacts and views.

Planned work in the area

- Council confirmed that the restoration of Yurulbin Park is the only work planned in the area.

**5. Next steps**

Council and RMS to meet again along with the design consultants Hansen Yuncken to develop the concept for the upgraded wharf and landside elements.



Birchgrove Wharf

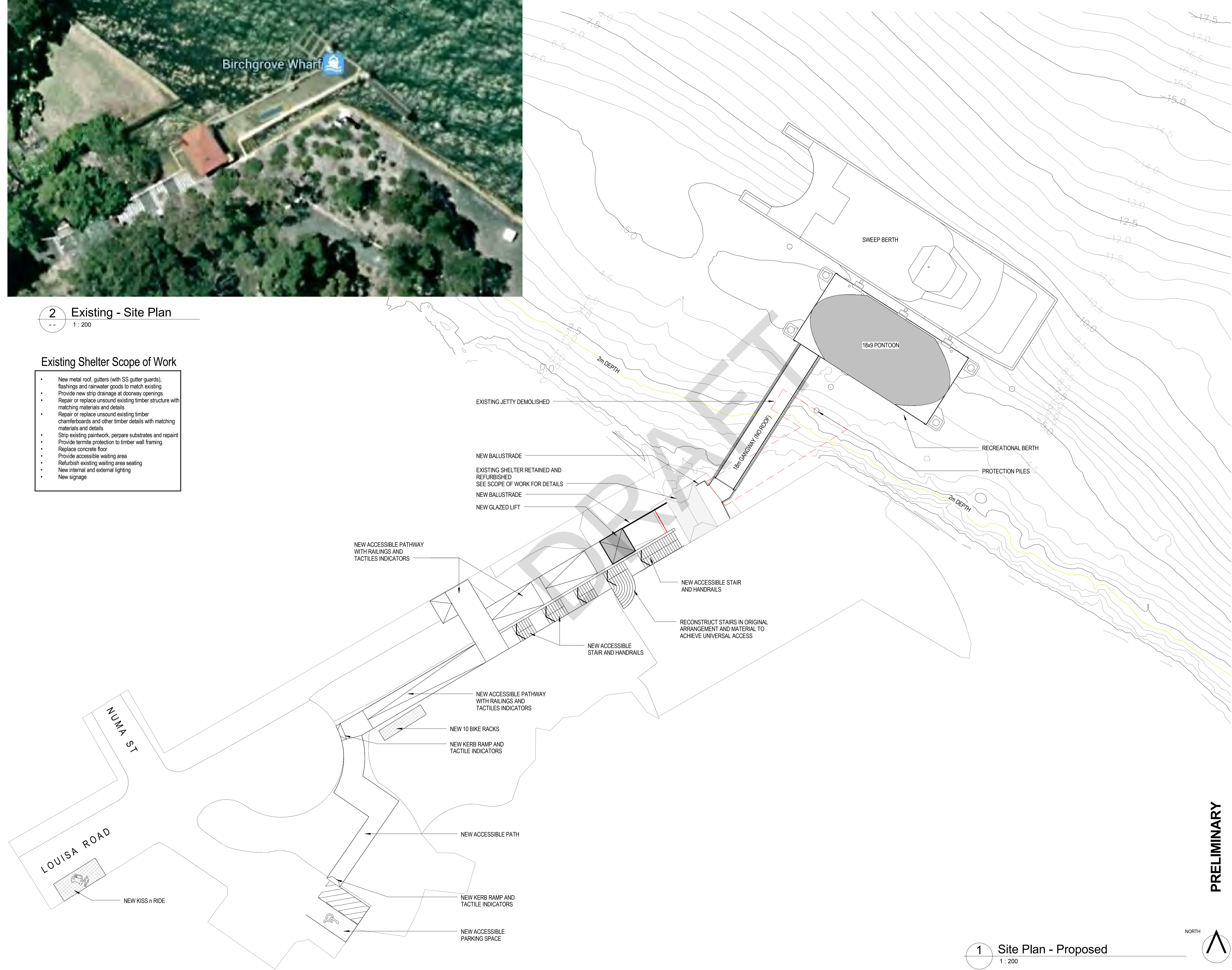
2 Existing - Site Plan  
1 : 200

Existing Shelter Scope of Work

- New metal roof, gutters (with SS gutter guards), flashings and rainwater goods to match existing
- Provide new strip drainage at doorway openings
- Repair or replace unsound existing timber structure with matching materials and details
- Repair or replace unsound existing timber chamferboards and other timber details with matching materials and details
- Strip existing paintwork, prepare substrates and repaint
- Provide termite protection to timber wall framing.
- Replace concrete floor
- Provide accessible waiting area
- Refurbish existing waiting area seating
- New internal and external lighting
- New signage

SCALE CHECK

REV	DESCRIPTION	DATE	APPD
1	DRM Issue	17.08.15	
2	Post DRM Issue	20.10.15	
3	Site Plan Revised	21.10.15	



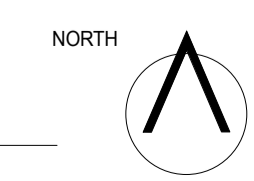
CONRAD GARGETT ANCHER MORTLOCK WOOLLEY

PROJECT  
Ferry Wharves Upgrade Program 2 - Birchgrove Wharf

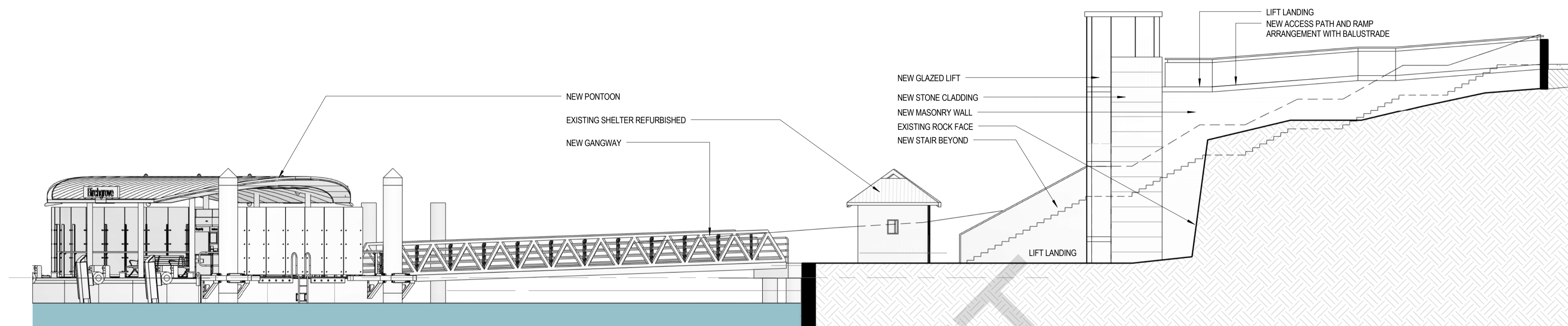
CLIENT  
Roads & Maritime Services

DRAWING  
Proposed Site plan

PRELIMINARY



1 Site Plan - Proposed  
1 : 200



1 Site Section  
 12-2100 1 : 100

DRAFT

PRELIMINARY

PROJECT  
 Ferry Wharves Upgrade  
 Program 2 - Birchgrove  
 Wharf

CLIENT  
 Roads & Maritime  
 Services

DRAWING  
 Site Section



NOT FOR CONSTRUCTION

Issue	Description	Date	By
A	CDR ISSUE	11/11/15	LC

- Dimension in millimetres.  
 - Confirm all dimensions and levels on site prior to commencing work.  
 - Use figured dimensions only.  
 - Do not scale.  
 - Comply with relevant authorities requirements, the Building Code of Australia and all relevant Australian Standards when executing works described in this drawing.

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LANDSCAPE ARCHITECT

**jane irwin landscape architecture**

**jila**

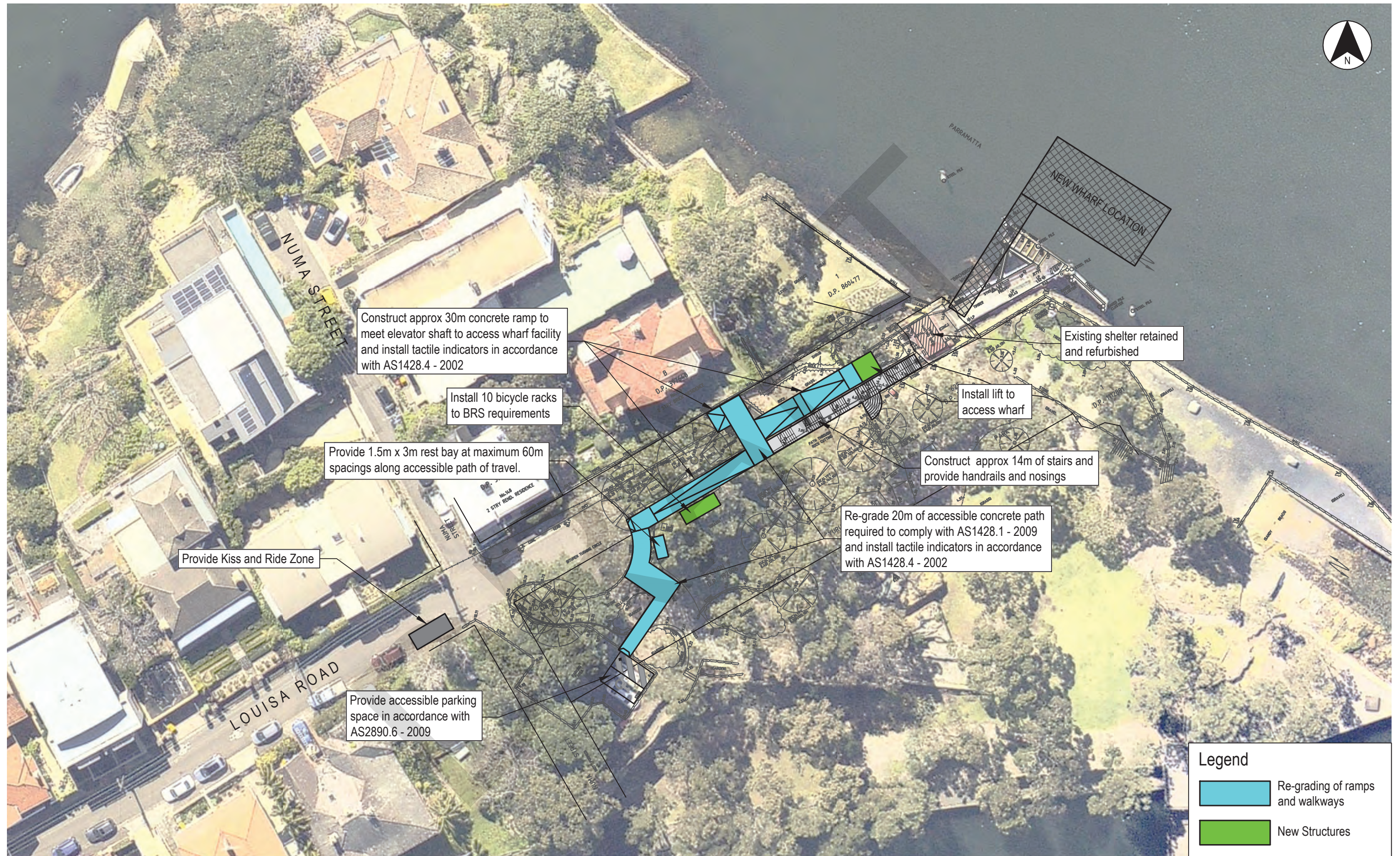
1/Level 1  
 86-75 Kingsworth Ave  
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 www.jila.net.au

CLIENT  
Hansen Yuncken

PROJECT TITLE  
Birchgrove Wharf

Lousia Road, Birchgrove

DRAWING TITLE Landscape Concept Plan	
Scale @ A1 1:250	
Job No 090801	Drawing Status CD
Drawing No Layout1	Issue A



**Legend**

- Re-grading of ramps and walkways
- New Structures

Date: 18-11-15 Time: 3:18pm Plotted By: bar72303 Filename: \\auslead01\projects\sydney\Projects\342846\04\_working\CAD\Civil\Autocad\Drawings\P2\C-12-DW-A1400-DWG.dwg

PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DRAWN	DESCRIPTION	CHECKED	APPROVED
P1	18.11.15	HB	ISSUED FOR INFORMATION	DPT	DP
A3 ORIGINAL			THIS PLAN MAY BE PREPARED USING COLOUR AND MAY BE INCOMPLETE IF COPIED TO BLACK AND WHITE.		



PREPARED BY:



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**ROADS AND MARITIME SERVICES**

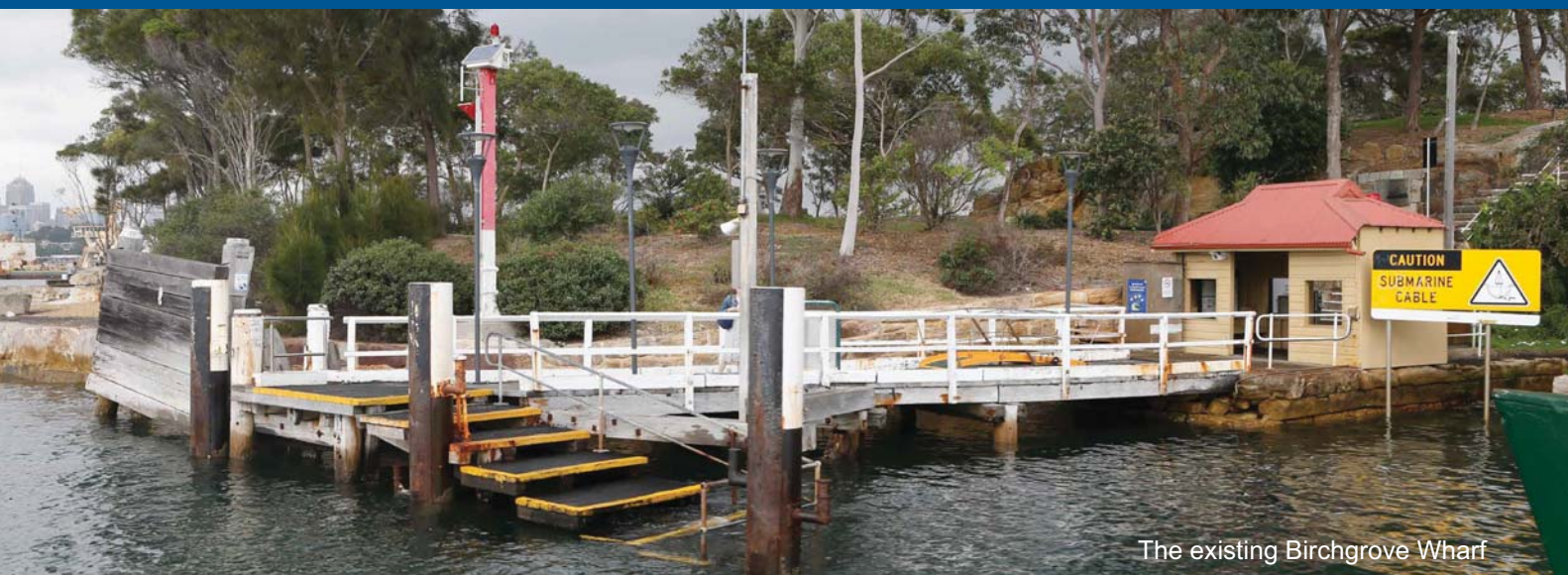
SYDNEY FERRY WHARVES  
 WHARF UPGRADE LANDSIDE WORKS

CONCEPT DESIGN  
 BIRCHGROVE WHARF - LOUISA ROAD OPTION 5

FILE No.	MM DRAWING NUMBER C-12-DW-A1400-DWG	REV P1	SHEET No. <b>007</b>
REGISTRATION NUMBER		No. of SHEETS <b>000</b>	

# Birchgrove Wharf upgrade

Community Information Session No. 1 – Thursday 7 May, 2015



The existing Birchgrove Wharf

**Transport for NSW is proposing to upgrade Birchgrove Wharf and interchange as part of the Transport Access Program - an initiative to deliver modern, safe and accessible transport infrastructure.**

You are invited to have your say at a community information drop in session. We would like to know more about how you travel to the ferry, when you use the service, your views about the current facilities and priorities for improvement.

**Where:** St Johns Church Hall, Corner of Thomas and Spring Street, Birchgrove.

**When:** Thursday 7 May, 2015 between 5pm and 7pm.

You are welcome to drop in any time between these hours.

Transport for NSW is improving Sydney's ferry services for customers. The upgraded wharf will provide:

- Improved customer amenity such as better protection from the wind, rain and sun, seating and waiting areas
- Improved safety for customers

- Improved access for mobility impaired customers and customers with prams
- Quicker and more efficient boarding and disembarking
- Increased wharf capacity for future growth of ferry services
- More efficient interchanges with other modes of transport, both public and private, and better way finding signage.

Visit our website (details below) to find out more about the Wharf Upgrade Program and complete our online survey. The closing date for this initial round of general feedback is Friday 15 May, 2015. Further consultation will be held on the preferred design for the wharf and interchange upgrade later in the year.

If you would like more information about the Birchgrove Wharf and interchange upgrade you can:

**Phone:** 1800 770 973

**Email:** [WharfUpgradeProgam@rms.nsw.gov.au](mailto:WharfUpgradeProgam@rms.nsw.gov.au)

**Visit:** [rms.nsw.gov.au/wharfupgrades](http://rms.nsw.gov.au/wharfupgrades)



# Birchgrove Feedback Session

## Thursday 7 May, 2015

### Participation:

18 people attended the community information session at St John's Church Hall in Birchgrove and signed the register indicating they would like to be kept informed. Four surveys were completed during the session; the remaining participants took them away with reply-paid envelopes.

### Overview:

The majority of people who attended the session were nearby residents of Louisa Road. Some residents of surrounding streets including Grove Street also attended. Attendees were largely occasional users of the ferry, rather than daily commuters, although some do commute for work purposes on occasion.

The preservation of heritage, the existing view, local ambiance and need to maintain a Birchgrove ferry service were major concerns.

The consultation process itself was emphasised as being very important. Participants were pleased with the opportunity to give early input and very keen to continue with consultation as part of the option consideration process.

There was a common view that various options, including relocating the wharf, are feasible. Some residents believe the wharf should be moved to where it can be both more easily accessible and have greater interconnectivity with other modes of transport eg Grove Street mentioned several times. Others were adamant that it should stay at the end of Louisa Road. Participants are particularly concerned not to lose a service to Birchgrove altogether.

Accessibility of and at current location was the major issue and all considered major improvements eg footpaths/ramps are required.

### Comments received:

#### Wharf

- The last remaining "historic" wharf shelter left in the area Birchgrove Wharf should be left alone.
- Heritage shed should be kept.
- Some said we love the wharf where it is.
- We should have double length wharves where two ferries can berth at the same time, just as Brisbane is doing.
- The wharf and ferry service is part of the ambiance of the area, to take it away would detract significantly from our lifestyle and property value.

Respondent's argument for moving the wharf to Grove Street:

- Why would you spend money on the current Birchgrove Wharf? It is remotely located, its steep slope makes disabled/aged access difficult (or very costly to

achieve) and the nearest bus is a long distance away? Stairs very difficult to negotiate.

- Establishing a wharf at the end of Grove Street would be centrally located, has level access, directly hooks up to the bus service and even gets the ferry docking away from other water traffic (sailing boats racing etc.)
- Let's improve the service (and the use of public transport in Birchgrove) and return on investment by moving the wharf to a more sensible/central/accessible location!

### **Landside**

- The only thing that should be added is an access path for wheelchairs and the elderly as the steps are very steep and dangerous.
- We need better wheelchair and child trolley access.
- It would be good to include bicycle storage as part of the upgraded wharf in a highly visible, secure location. A couple of the attendees ride a bike and catch ferry.
- More lighting and signage required and better weather protection.

### **Ferry Services**

- More services from Balmain to Milson's Point between 9am – 10am and between 6.30pm and 7.30pm.
- I love the ferry service, it's brilliant. The staff are lovely.



Transport  
for NSW

# Transport Access Program: Accessibility Challenges

Adrian Garnero – March 2017



# Understanding Requirements

- ◆ **Disability Discrimination Act 1992 (Cth)** – the Act prohibits both direct and indirect discrimination on the grounds of disability, both to the person with a disability as well as family members, carers and friends.
- ◆ **Transport Access Program** – The revised objectives for the Program are primarily focused on compliance with the Act and Disability Standards for Accessible Public Transport

## Newtown Station Upgrade

- ◆ Construction: 24 months; carried out above 6 live railway tracks and a working inner city station platform.
- ◆ Total pedestrian movements through construction zone = 8,668,000.
- ◆ Total train movements through construction zone over 24 months = 151,296 x 8 car sets.

# Ferry Wharf Upgrade Program

- ◆ The NSW Government is progressively upgrading ferry wharves across Sydney to improve ferry services for customers.
- ◆ Aims: improved access for mobility impaired, improved customer amenity; increased wharf capacity; and more efficient interchanges and other modes of transport.
- ◆ Upgrades completed: at McMahons Point, Cremorne Point, Meadowbank Wharf, Pyrmont Bay, Balmain East, Sydney Olympic Park, Cremorne Point, Mosman Bay, Drummoyne, Huntley's Point, Balmain (Thames St), Rose Bay, Neutral Bay, and Milsons Point.



# Project Challenges



## Sydney Olympic Park Wharf

- ◆ No significant impact on environment – no property acquisition – 4 months completion.
- ◆ Closure of Wharf – use of Armory Wharf.
- ◆ Better Connection to transport modes (526#).

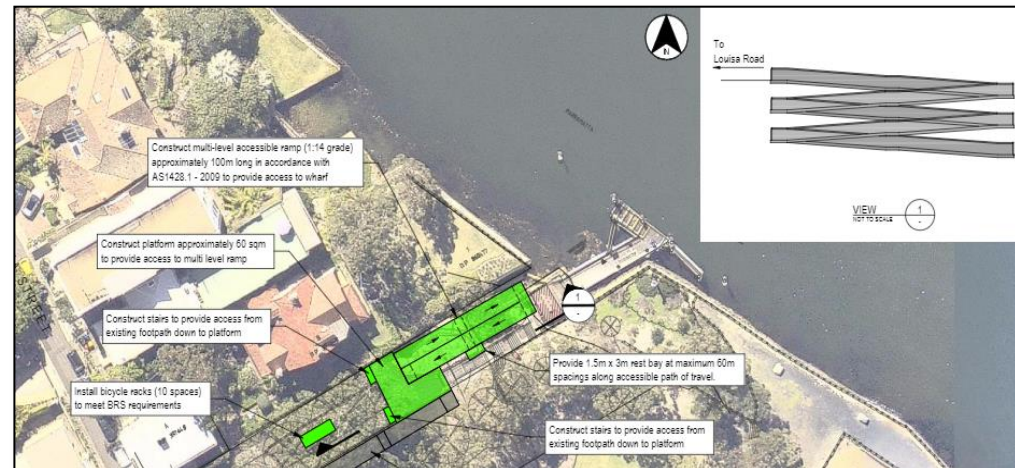


## Huntley's Point Wharf

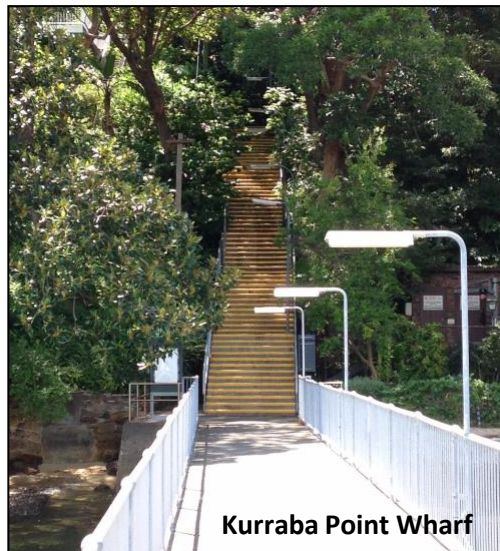
- ◆ Wharf and Interchange component. 10 months to complete (Sep.15 – June 16).
- ◆ Provision of new lift, an accessible pathway, canopies, accessible parking, and landscaping work (including material and finishes).

# Birchgrove Ferry Wharf

- ◆ Steep access to existing wharf – no DDA compliant path of access to the wharf - cost.
- ◆ Topography of existing wharf site will require lift or ramp system to achieve compliance
- ◆ Minimal existing interchange facilities – no bus route servicing the wharf – no accessible parking, formal kiss and ride, or taxi zone. Limited patronage (weekend use).
- ◆ High value residential housing in close proximity – visual impact.



# Sydney Harbour - Challenges





## Project Considerations

- ◆ Network Location
- ◆ Existing Services
- ◆ Heritage
- ◆ Land Use and Zoning
- ◆ Transport Statistics
- ◆ Costs (incl. Land)

- ◆ **Section 55** of the **Disability Discrimination Act 1992 (Cth)** gives the Australian Human Rights Commission the power to grant temporary exemptions from certain provisions of the Act.
- ◆ Temporary exemptions may be granted for **up to five years** at a time. **The Act does not set out in any detail the criteria or procedures that the Commission should use in considering applications for temporary exemption.**
- ◆ **Need for further consultation** – including with respective Councils and ATAC.

NOTE: These minutes are extracted from the full ATAC meeting minutes - other presentation minutes have been removed for relevance.

<b>2.8</b>	<b>Ferry Wharf Exemptions</b> <ul style="list-style-type: none"><li>• Adrian Garnero, TAP Program Director – TfNSW</li></ul> <p><b>Speaker Reported:</b></p> <ul style="list-style-type: none"><li>• Provided time-lapse video presentation of the Newtown Station upgrade.</li><li>• Looked at ferry wharf modernisation – some will be difficult to upgrade but TAP does work on the difficult locations.</li><li>• Sydney Olympic Park wharf was an easy project, done in four months and upgraded to modern standards. Huntley’s Point wharf was difficult due to landside lift and retaining wall which took time and cost \$30m. Whilst it had heritage implications, it was connected to buses and other points of interest.</li><li>• Birchgrove is a difficult one. Topography and access is not DDA compliant, combined with its limited usage and no landside transport connections.</li><li>• Darling Point has heritage issues, Kirribilli Wharf has private property issues, Kurraba Point has no connections and is steep and Cremorne is difficult as well.</li><li>• Desire to get exemptions – TAP feel that money can be better spent on other locations that are more frequently used or could provide better outcomes.</li></ul> <p><b>ATAC Feedback:</b></p> <p><u>Ferries</u></p> <ul style="list-style-type: none"><li>• Members examined whether nearby community resources were factored in the decision-making process. Speakers answered yes – Kirribilli is not near a Hospital and Schools but Huntley’s has an aged care facility – that was why it was justified over other wharves. Members asked if there were alternative solutions for people to use public transport. Speakers replied yes, Kirribilli has bus options.</li><li>• Members commentated that ferries are the most accessible form of transport. Bus travel can be difficult so ferry travel is an alternative and may dictate where people live.</li><li>• Members raised if there was a risk of wharves closing. Speakers responded no, not going to close wharves even if it is not practicable to make the site accessible. Terms such as low patronage, inaccessibility of site and monetary expenditure may be justifications against work. TAP exemptions could be changed.</li><li>• Innovations keep changing so trains don’t necessarily trump ferries as disabled users use ferries at a very high rate for recreational purposes (such as Cockatoo Island).</li></ul> <p><u>Other</u></p> <ul style="list-style-type: none"><li>• Members asked the question of whether the upgrading of facilities has been delayed. Speakers answered overall no, some issues keep holding specific things back – zoning, existing services, alternatives nearby, transport connections, heritage, costs. Increasing path of investment and building.</li><li>• Members understood the ‘catch 22’ nature of the work and that upgrades have to be done but difficulties will occur.</li><li>• Members discussed the strategy for upgrading hubs. Speakers responded that this is figured out on a cycle every four years to determine targeted locations. Redfern station is a separate project with other issues. Watson’s Bay will be upgraded in the future.</li></ul>
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- TAP exemptions may need an out-of-session meeting or communication to respond to this work and the timing with consultation period with ATAC. The exemption process is an itemising issue and there is no defined policy. Working with the ARA and figuring out the lowest common denominator or possibly joining a national common standard. Exemptions haven't been sought for infrastructure that is believed to be impractical to fix.
- Very small service areas have funding however directing is better aligned towards more used locations.

**Action:**

- No actions arising.

<b>Name of meeting:</b>	Birchgrove Wharf Upgrade – Inner West Council Catchup	
<b>Location of meeting:</b>	Leichardt Administration Centre, 7-15 Wetherill St, Leichardt	
<b>Meeting facilitator:</b>	Inner West Council	
<b>Date</b>	08/03/17	<b>Time:</b> 11.30 – 12.30
<b>Attendees:</b>	Rick Jarvis – Inner West Council Ken Welsh - Inner West Council Petra Fowler – Elton Consulting Sam Wu - RMS Rosie Majer - RMS	
<b>Apologies</b>	-	
<b>Subject:</b>	Birchgrove Wharf Upgrade – Inner West Council Catchup	

## MEETING MINUTES

Action	Owner	Date
<p><u>Background:</u> Following a previous information session held to announce the upgrade of Birchgrove Wharf, a meeting has been arranged to discuss the proposed concept design for the upgrade, prior to a second community information session to be held 14/03/17. A copy of the concept drawings was issued to Inner West Council for comment prior to this meeting.</p>	Note	
<p>The concept drawings show the removal of the existing wharf and installation of a new 18m gangway leading from the existing shelter to a 18m x 9m pontoon which will contain a covered waiting area with customer information and seating.</p> <p>The existing shelter would be repaired, with the roof and life-expired timber panels replaced with matching materials and the concrete floor relaid.</p> <p>Works to the landside elements would include installing bicycle racks close to the wharf entrance and installing a kiss-and-ride zone on Louisa Road to improve access to the wharf.</p>	Note Note Note	
<p>RM noted previously the project had looked at different ways to create an accessible access path from Louisa Road to the wharf, with a lift, inclinometer and accessible path through Council-owned Yurulbin Park considered due to the change in levels. None of these options have been included within the current scope of works due to the existing constraints involved, and impact of these proposed works on the existing park land. RJ confirmed Council would not support a lift installation in this area, and queried whether an inclinometer would provide an effective solution.</p> <p>RM confirmed previous investigation had shown an inclinometer would require greater land take than a lift, with adverse visual impact. The reliability of an inclinometer was also not seen as sufficient for an unmanned wharf.</p>	Note Note Note	
<p>The condition of the existing Council-owned access path from Louisa Road to the wharf was discussed; RJ confirmed no works to upgrade/repair the path were planned, with minimal feedback on condition received by Council.</p> <p>RMS to keep Council updated with any feedback received about the path following the Community Information Session and end of the feedback period.</p>	Note RM/PF	30/03/17
<p>Council confirmed the kiss-and-ride zone would not be preferred by Council due to the impact on existing street parking. Council noted the existing carpark was used as a kiss-and-ride in peak periods, and due to the restricted access along Louisa Road that the preferred method of accessing the wharf was on foot rather than by car.</p> <p>RM to feed Council feedback back to TfNSW and advise whether scope will be amended as a result, it was noted that RMS would not propose to install anything which Council did</p>	Note RM	30/03/17

not support.		
Timescales for the works were discussed and although no dates would be announced for construction until the planning process was complete RMS confirmed the target for construction to start would be the last quarter of 2017, with construction works on site for approximately 6 months. This 6 month duration would be likely to decrease due to the simple scope of works for installation compared with other wharves.	Note	
During the upgrade of the wharf and shelter the existing wharf would be closed, with customers advised to use existing bus services from the nearby Grove Street to access the city and other wharves and destinations. Council questioned whether it would be possible to install a temporary wharf during this period and RMS confirmed this would not be the preferred option due to the costs and time involved and low patronage data for Birchgrove Wharf. KW requested a copy of the patronage data for Birchgrove Wharf, RM to issue available data for this.	Note  <b>RM</b>	  <b>10/03/17</b>
Council noted the existing seawall to the west of the wharf is in poor condition and has recently collapsed. This is believed to be owned by RMS (Maritime) and therefore RMS may receive feedback about this during the Community Information Session.	Note	
Other features of the design were discussed, RM confirmed the new wharf will provide a space for recreational berthing on the inside face, increasing the potential for recreational boating in the area.	Note	
PF questioned whether fishing was seen as an issue currently, Council confirmed no issues with fishing from the existing wharf had been reported, although other locations are used in Yurulbin Park this was not seen to cause issues. It was noted the new wharf may increase the potential for fishing in the area, this would be managed by RMS following the upgrade.	Note  Note	
RMS confirmed the next steps following the Community Information Session would be to develop the existing design further and process the planning for the project, taking Council and community feedback into consideration. Council would be kept updated throughout this period.	Note	

# Birchgrove Wharf upgrade



An artist's impression of the proposed new Birchgrove Wharf viewed from the water

## COMMUNITY UPDATE

FEBRUARY 2017

The NSW Government is upgrading Birchgrove Wharf as part of the Transport Access Program. Planning for the new wharf is currently underway and as part of the planning process we would like to hear your feedback on the proposed concept design.

### BACKGROUND

Transport for NSW is improving Sydney's ferry services for customers. New and upgraded wharves are being delivered as part of the NSW Government's Transport Access Program. This program has most recently delivered upgraded facilities at Cremorne Point, Mosman Bay, Balmain East, Pyrmont, Meadowbank and McMahons Point, and work to upgrade Chiswick Wharf began in February.

### THE NEW BIRCHGROVE WHARF

The upgraded wharf is designed to provide customers with an improved public transport experience.

The new wharf would incorporate a new floating pontoon connected to the existing timber waiting shed by an aluminium gangway and fixed bridge. The pontoon would have a curved roof, new seating and glass weather protection panels. The gangway would be uncovered. Some maintenance work would be carried out on the existing waiting shed. Minor landside work to install bicycle racks and a Kiss and Ride area is also proposed.

The upgrade would provide:

- ▶ Better protection from the wind, rain and sun
- ▶ Improved seating and waiting areas
- ▶ Improved safety for customers
- ▶ Quicker and more efficient ferry boarding and disembarking
- ▶ Effective wayfinding signage and lighting.

Consultation to hear community and stakeholder feedback about the wharf upgrade was carried out in April and May 2015. The concept design for the wharf have been developed taking in consideration feedback and the local operational and environmental conditions.

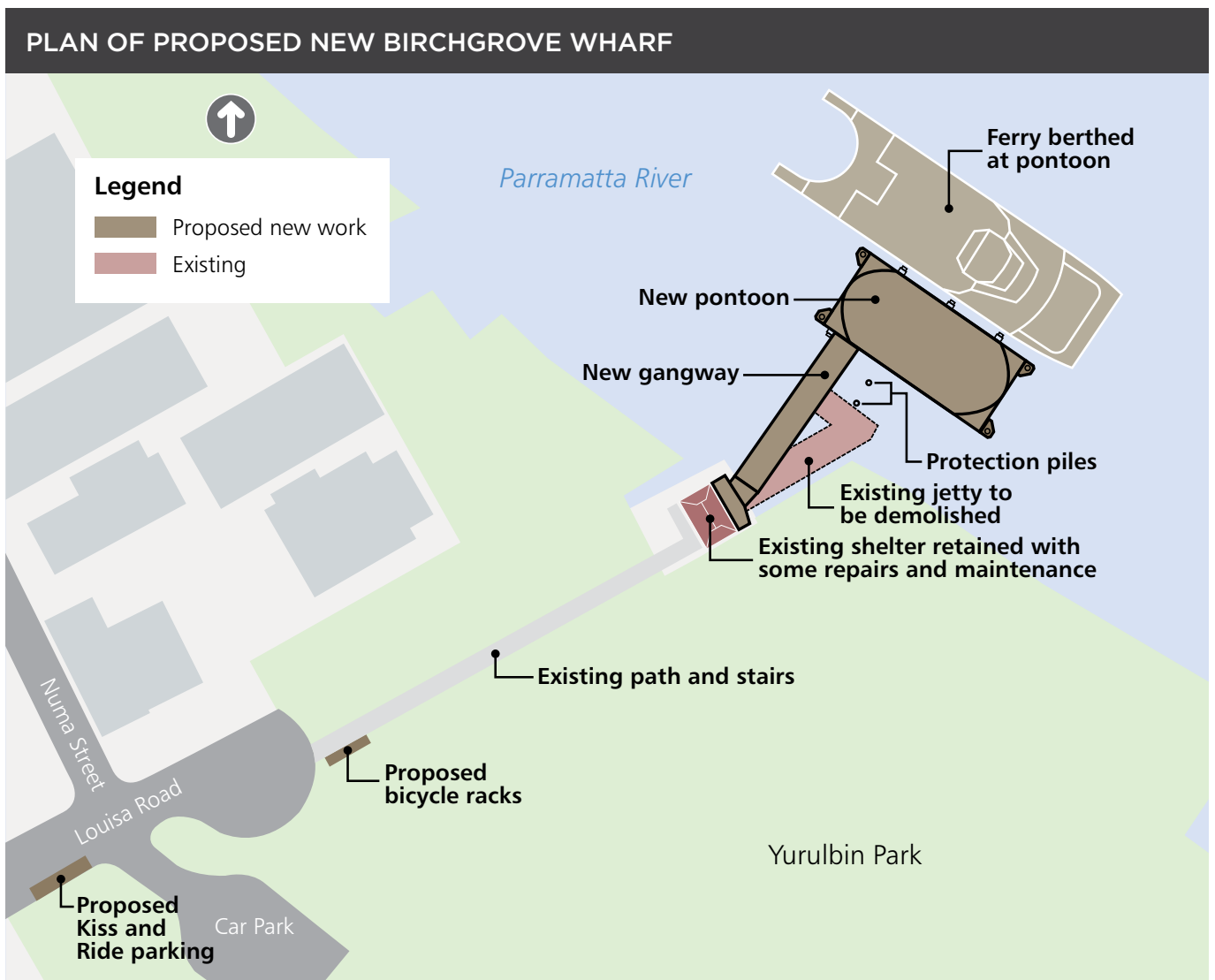
We look forward to hearing your feedback on the proposed concept designs by Tuesday 28 March.

## WHAT TO EXPECT DURING THE UPGRADE

The timing for work to upgrade the wharf will be advised when the planning process and design development is complete. Construction would take about five months, weather and maritime conditions permitting.

As planning progresses construction details for the proposed upgrade would be considered in the Review of Environmental Factors, which would be put on public display for comment before start of work. It is expected that:

- ▶ Birchgrove Wharf would be closed during the upgrade
- ▶ Some night work would be required when the water is at its calmest
- ▶ A temporary construction compound would be established on land
- ▶ Construction workers and equipment would usually be transported to and from the site by water.



## ALTERNATIVE TRANSPORT DURING CONSTRUCTION

Birchgrove Wharf would be closed during the wharf upgrade. Customers would be able to catch the 441 bus service, operating between Grove Street Birchgrove and the QVB Market Street, direct to the city or to connect with other bus services on Victoria Road.

The temporary closure of Birchgrove Wharf would not affect the timetable for ferry services to other wharves.

Customers are encouraged to allow extra time for their journeys and to plan their trip by visiting **www.transportnswinfo** or by calling **131 500**.

## NEXT STEPS

Feedback from consultation on the proposed concept design will be included in the Review of Environmental Factors. This document will be publicly displayed for comment before start of work is finalised. Construction timing will be confirmed as the project progresses.

Concept design developed taking into consideration, future ferry services, improved accessibility and local operational and environmental conditions

Consultation on the proposed concept design

We are here

Feedback received during consultation is considered in the preparation of final design and the Review of Environmental Factors, which considers and assesses the potential environmental impacts associated with the wharf upgrade

The Review of Environmental Factors is put on public display for comment

Any submissions received are considered and included in a submissions report

On determination of the Review of Environmental Factors Submissions Report planning for construction will start

Timing for the start of work will be advised when the planning process is complete and the Review of Environment Factors is finalised



The existing wharf viewed from the water



## COMMUNITY INFORMATION SESSION

We invite you to come along to a community information and feedback session at the Balmain Town Hall Meeting Room, 370 Darling Street, Balmain on Tuesday 14 March 2017. Members of the project team will be available to provide information about the project. You are welcome to drop in any time between 5pm and 7pm at:

Venue: **Balmain Town Hall Meeting Room**  
**370 Darling Street**  
**Balmain**

Date: **Tuesday 14 March 2017**

## CONTACT THE TEAM

If you would like further information about the Birchgrove Wharf upgrade you can

Phone: **1800 770 973**

Email: **wharfupgradeprogram**  
**@rms.nsw.gov.au**

Visit the Roads and Maritime Services website:  
**rms.nsw.gov.au/wharfupgrades**



The existing Birchgrove wharf



## Translating and Interpreting Service

If you need an interpreter, please call the Translating and Interpreting Service (TIS National) on **131 450** and ask them to telephone Roads and Maritime Services on 1800 770 973.

### Arabic

إذا كنتم بحاجة إلى مترجم، الرجاء الاتصال بخدمة الترجمة الخطية والشفهية (TIS National) على الرقم **131 450** والطلب منهم الاتصال بوكالتكم على الرقم 1800 770 973.

### Cantonese

若你需要口譯員，請致電 **131 450** 聯絡翻譯和口譯服務署 (TIS National)，要求他們致電 1800 770 973 聯絡 Roads and Maritime Services。

### Mandarin

如果你需要口译员，请致电 **131 450** 联系翻译和口译服务署 (TIS National)，要求他们致电 1800 770 973 联系 Roads and Maritime Services。

### Greek

Αν χρειάζεστε διερμηνέα, παρακαλείστε να τηλεφωνήσετε στην Υπηρεσία Μετάφρασης και Διερμηνείας (Εθνική Υπηρεσία TIS) στο **131 450** και ζητήστε να τηλεφωνήσουν Roads and Maritime Services στο 1800 770 973.

### Italian

Se desiderate l'assistenza di un interprete, prego telefonare al Servizio Interpreti e Traduttori (TIS National) al **131 450** chiedendo di contattare Roads and Maritime Services al 1800 770 973.

### Korean

통역사가 필요하시면 번역통역서비스 (TIS National)에 **131 450** 으로 연락하여 이들에게 1800 770 973 번으로 Roads and Maritime Services 에 전화하도록 요청하십시오.

### Vietnamese

Nếu cần thông ngôn viên, xin quý vị gọi cho Dịch Vụ Thông Phiên Dịch (TIS Toàn Quốc) qua số **131 450** và nhờ họ gọi cho Roads and Maritime Services qua số 1800 770 973.



CERTIFICATION CARBON NEUTRAL FOREST MANAGEMENT BLEACHING PROCESS AUSTRALIAN MADE RECYCLED CONTENT

## Birchgrove wharf upgrade

### Consultation key issues – as at 150317

#### Landside

##### » **Accessibility**

- > Acknowledge it would be difficult to meet DDA requirements however would like to see the access 'improved'
- > Condition of existing stairs - uneven heights and in poor condition, railings difficult to use, poor lighting
- > Would like an option to access the wharf without using stairs but not to DDA standards eg. pathway through the reserve and bridge linking from the reserve to the start of the gangway
- > Requested RMS follow up with Council on previous community feedback asking for the provision of ramp/pathway from Louisa Road to Birchgrove Oval and the foreshore to connect to the existing bus service on Grove Street
- > Why provide a new wharf if it is very difficult to access both for able bodied customers and mobility impaired

##### » **Kiss and Ride**

- > Not necessary in this location as people use the turning circle to drop off and pick up
- > Kiss and ride would take up a valuable parking spot – limited local parking available
- > Council don't support

##### » **Bike racks**

- > Not considered necessary as people who come on bikes take them on to the ferry
- > Minimal demand, wouldn't be used

#### Design

- » One resident felt the existing wharf was suitable and didn't support modern design, all other comments have been positive with regard to design
- » Recreational /commercial charters – request for placement of posts as close as possible to the end of the pontoon to minimise the possibility of hull damage from the corners of the pontoon and four rather than three posts would seem logical.
- » Position in the river – asked if recreational rowers etc had been considered as there is a rowing route near the existing wharf

#### Transport

- » Existing Matilda Service contracted for school runs to connect to Lane Cove
  - > Parents believe Birchgrove isn't a suitable stop for this service and Balmain East or Balmain (Thames Street) would be more suitable as there is better access for drop off, bus connections and safe walking

#### Construction

- » No concerns raised about construction



# INNER WEST COUNCIL

Contact: Richard Jarvis  
Phone: [REDACTED]

13 April 2017

Roads and Maritime Services  
wharfupgradeprogram@rms.nsw.gov.au

## RE: Birchgrove Wharf Upgrade Submission

Council is supportive of the provision of an accessible pontoon wharf in replacement of the existing jetty at Yurulbin Point. The following points have previously been made by Council officers in discussions on this project, and are now formally submitted.

Council considers that whilst the existing access stair to Louisa Road may currently be adequate, it will need to be renewed in future years, and the planned wharf closure period provides the best opportunity for upgrading the access stair without requiring further access/service disruption. Renewal of the stair should be included in the project scope.

Council is pleased the accessible pontoon is part of the project. However, it seems pointless to upgrade to an accessible pontoon wharf and still have no way to get to and from it for those people that would benefit most from the improvement and the connectivity into the transport network, which is the purpose of the Transport Access Program.

Undertaking an incomplete accessibility solution may be considered by people with a disability as offensive when what has been proposed as an accessibility project discounts their actual needs. In this instance a primary accessible pathway from the vessel to the approach pathway (Louisa Road) is fundamental to achieving a fit for purpose facility. Council recommends that RMS further consider alternative appropriate solutions that address access and compliment the surrounding park and heritage. A practical, viable and acceptable solution should be part of the proposal rather than a deferment of the accessibility requirement.

Failure to provide an accessible approach creates a credibility gap that undermines any of the authorities involved. If only half the required outcome is a priority and the rest is to be decided sometime in the years ahead, then that does nothing to improve the system for people excluded from it and is unlikely to achieve the 2022 target (100%) of the Disability Standards for Accessible Public Transport (DSAPT).

### Customer Service Centres

**Petersham** | P (02) 9335 2222 | E council@marrickville.nsw.gov.au | 2-14 Fisher Street, Petersham NSW 2049

**Leichhardt** | P (02) 9367 9222 | E leichhardt@lmc.nsw.gov.au | 7-15 Wetherill Street Leichhardt NSW 2040

**Ashfield** | P (02) 9716 1800 | E info@ashfield.nsw.gov.au | 260 Liverpool Road Ashfield NSW 2131

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It is acknowledged that there is no land transport interchange at the site and the wharf has low usage rates. If there is reason to keep the wharf operating and it is a priority project for funding, then it needs to address everyone's needs not just those it has to date.

Does RMS remain responsible for completing the project, and when?

Council has suggested that a modern inclinorator may provide an appropriate accessibility solution. This format of solution should continue to be pursued in order deliver a fully accessible wharf at this site, and at similar sites around the harbour foreshore (eg Kurraba, Kirribilli, Greenwich, Old Cremorne).

Should discussion of the matter submitted or further information be required from Council, please contact the undersigned.

A handwritten signature in black ink, appearing to read 'R. Jarvis', with a large, stylized initial 'R'.

Richard Jarvis  
**MANAGER PARKS AND ASSETS, LEICHHARDT**  
document2



Transport  
for NSW

# Birchgrove Ferry Wharf Upgrade

## Innerwest Council Meeting



# Purpose

- To discuss Council's formal submission to the Birchgrove Wharf Upgrade
- To discuss proposed DSAPT compliance constraints and potential exemption
- To discuss potential landside improvements (stairs)

# Meeting Agenda

1. Project Background
2. DSAPT Compliance
3. Council Submission
4. DSAPT Exemption
5. Project Milestones

# Project Background

- Announced as part of Transport Access Program Tranche 2
- Initial Community Consultation undertaken in 2015
- Council objected to the lift and upgrade of pathway through
- Detailed design is underway and nearing completion
- Recent Council submission (dated 13 Apr 2017) requested consideration of a modern inclinator to achieve DSAPT compliance

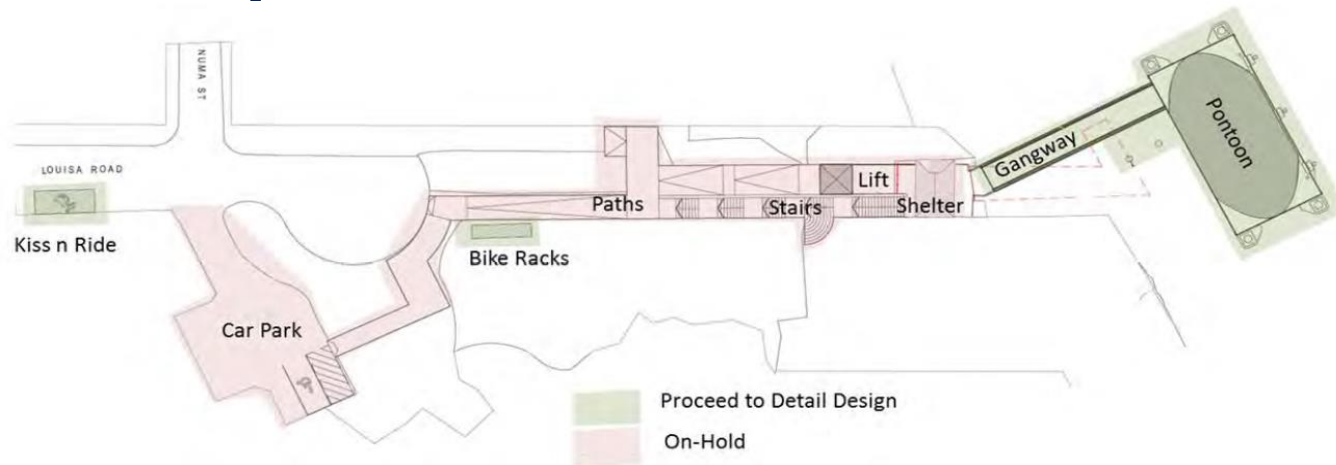
## Current Scope

Current scope:

- New floating pontoon
- Aluminium gangway
- New seating and weather protection
- Maintenance work on existing waiting shed
- Bicycle racks (potential removal)
- Kiss and Ride area (potential removal)



# DSAPT Compliance



- Accessibility is difficult due to the natural topography and steep gradient of the land to access the wharf
- RMS investigated options to achieve accessibility during the concept design phase for installing a lift and modifying the pathway through Yurulbin Park. Both options were not supported by Council
- **Key Accessibility Feedback:**
  - Even if DDA compliance cannot be achieved, would like to see improvements to accessibility
  - Condition of existing stairs - uneven heights and in poor condition, railings difficult to use, poor lighting
  - Would like an option to access wharf without using stairs but not necessarily DDA compliant



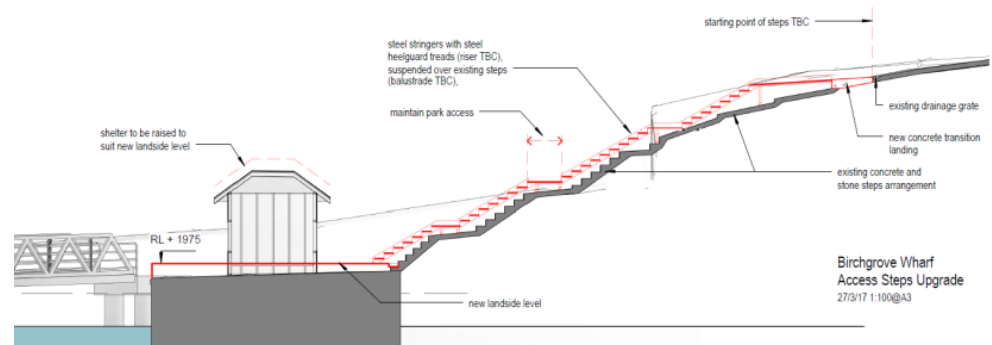
# Inclinator

- Investigated as an option where existing topography is steep and accessibility compliance is difficult
- **Benefits** – DDA compliant; less visual impact due to following similar profile of the vertical terrain
- **Disadvantages** – Vandalism risks; Costly to manufacture and install (no local suppliers); large O&M costs; no current RMS installation experience on public land; poor reliability
- RMS have undertaken recent consultation



# Accessibility Improvements

RMS are investigating accessibility improvements including providing a lightweight, BCA compliant suspended stair solution



## DSAPT Exemption

- Present and obtain feedback from Council's accessibility committee
- Exemption based on 2 elements of the standards:
  - Clause 2.1 – unhindered passage requiring barrier free access paths of at least 1200mm with a gradient of at least 1 in 14 over 6 metres.
  - Clause 2.2 – continuous accessible path of travel connecting to all facilities (the wharf boarding point)
- Justification:
  1. Proximity of accessible Balmain Wharf at Thames Street
  2. No land transport interchange and low patronage

## Project Milestones (Not announced)

- Detailed design nearing completion
- Review of Environmental Factors (REF) - targeting Q3 2017
- Construction target start date – Q4 2017



26 July 2017

Rick Jarvis  
Manager Parks and Assets  
Inner West Council  
7-15 Wetherill Street,  
Leichardt 2040

Dear Rick

### **Consultation regarding proposed Birchgrove Ferry Wharf Upgrade**

As you are aware from previous correspondence, Roads and Maritime Services (RMS) are proposing to refurbish and upgrade the existing ferry wharf interchange at Birchgrove. The wharf is located at the end of Louisa Road next to Yurulbin Park.

The proposal is to improve access to the wharf, refurbish and upgrade the existing gangway, and build a floating pontoon to allow for more efficient passenger embarking/disembarking. The proposal includes:

- removal of the existing timber wharf
- refurbishment of the existing waiting/shelter area, including the installation of a new concrete slab and balustrade and structural repair work to the timber building
- an 18 metres long pile-founded uncovered metal gangway extending north east from landfall
- an 18 metres long by nine metre wide pile-founded floating metal covered and glazed pontoon, held in position by four piles
- two new piled pivot poles to help with berthing.

Under the State Environmental Planning Policy (Infrastructure) 2007, RMS is required to consult with Inner West Council under Clause 13 and Clause 14 of the above Policy due to the proposal:

- temporarily generating traffic that would place additional demand on the road network - whilst there is the intention to deliver the majority of materials to site via barge, RMS may need to transport various equipment along Louisa Road as an alternative, say for instance in bad weather. This may cause some short-term localised issues due to the limited road widths and their capacity
- may involve temporary footpath closures along Louisa Road
- potential impact on heritage item within the proposal area.

### **Response to previous IWC Correspondence (dated 13th April 2017)**

RMS refer to previous correspondence received from Inner West Council (IWC), dated 13 April 2017 and relating to Birchgrove Wharf, which requests alternative appropriate solutions are considered as part of the upgrade which address accessibility to the wharf and compliment the surrounding park and heritage.

The position of Birchgrove Wharf in relation to Louisa Road creates a challenge in providing an access route which complies with Disability Discrimination Act regulations, with a sharp level change of approximately nine metres from road to water level.

The existing timber Birchgrove Wharf structure provides access for ferries via timber steps which are in poor condition and also do not comply with DDA regulations.

**Roads and Maritime Services**

The upgrade of Birchgrove Wharf was therefore announced by the TfNSW Transport Access Program (TAP), which aims to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure in accordance with the Disability Standards for Accessible Public Transport (DSAPT).

During design development the existing and future needs of Birchgrove Wharf and its surrounding area were considered, with the extents of the existing transport interchange clarified. For Birchgrove Wharf, which is accessed via pedestrians walking along Louisa Road, there are no other forms of transport considered within the wharf “interchange”, and the extent of the interchange can therefore be confirmed as the wharf structure itself.

As the primary access route to Birchgrove Wharf is via either Louisa Road or Yurulbin Park, RMS previously approached IWC with options to provide a DDA compliant pathway to the wharf interchange, consisting of a ramp, leading from Louisa Road to a lift, and a series of switchback ramps within Yurulbin Park. IWC objected to these options, stating *‘an inclinator can achieve the same outcome by following the landform by the stair, and hence without the visual and physical scale impacts on the site’*.

IWC note the existing design fails “to provide an accessible approach”, however accessibility will be provided throughout the Birchgrove Wharf Interchange. External to the Birchgrove Interchange, pedestrians access the wharf via paths along Louisa Road, and Yurulbin Park which are both owned and maintained by IWC. RMS note that these existing paths do not comply with DDA regulations.

RMS note IWC’s preference to provide a solution incorporating an inclinator, however an inclinator is not currently recognised within DSAPT, and RMS have been unable to source a provider who can produce a solution which complies with AS1735.12-1999. TfNSW are therefore proposing to apply for a DSAPT exemption for those landside components which will not comply. The application, if endorsed, will provide an exemption for a five (5) year period, during which time further investigation can take place and RMS can work closely with IWC to implement an accessible landside solution within the five year period.

## **Conclusion**

Attachment A includes an outline of the current proposal along with a montage showing the expected final design of the wharf interchange once it is upgraded. It also summarises the expected heritage impact on the above values.

It would be appreciated if you could provide any comments about this proposal 23 days from date of this letter.

We would be pleased to provide further information if required. Please feel free to contact me on [REDACTED] or by email at [REDACTED].



Rosie Majer  
Project Manager: Ferry Wharf Upgrade Program  
RMS: Greater Sydney Program Office

**Enclosed: Attachment A: proposal description and montage**

## Attachment A: proposal description

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### Pontoon wharf

The wharf would be built about 20 metres from shore. It would comprise an 18 metre wide and nine metre long steel floating pontoon and canopy shelter, which would include a waiting area, seating and information kiosk. The wharf would have one berthing face on the northern (harbour) side for ferries.

A curved zinc canopy roof would be built over the pontoon that would be supported on steel columns. The pontoon would be surrounded by a mixture of glass and stainless steel balustrades.

The floating pontoon would be attached to, and held in place by, four steel piles that would be drilled into the underlying sandstone bedrock. The pontoon height would vary relative to the landfall depending on the state of the tide. The floating pontoon would be built from pre-fabricated units delivered in sections to site.

### Gangway

The wharf pontoon would be accessed by an 18 metre long uncovered three metre wide lightweight aluminium gangway that would connect into the existing shelter and landfall point (wharf abutment) via a new shore bridge. The gangway would be built to be 90 degrees to the foreshore. The gangway would also be held in place by a shore bridge that would be attached to steel piles founded in the bedrock, connecting the gangway to land. The gangway gradient would vary relative to the landfall depending on the state of the tide. It would allow for disabled and low mobility for most of the time except during extreme high and low tides. The gangway would be built from pre-fabricated units delivered in sections to site.

### Shelter

The existing timber shelter would be retained, with works to refurbish the structure including:

- Repairing elements of the existing timber structure
- Relocating existing customer information equipment to the new pontoon.
- Replacing the existing concrete slab (floor) using a precast unit (or units) that would be lifted in sections onto foundation piles.

The existing concrete floor level would be raised to reduce the risk of it flooding during high tides.

### Supporting infrastructure

While the specifics of the supporting infrastructure, lighting, signage, and furniture would be confirmed during the detailed design they would be consistent with the provisions included on the other wharf on the network. It would therefore include:

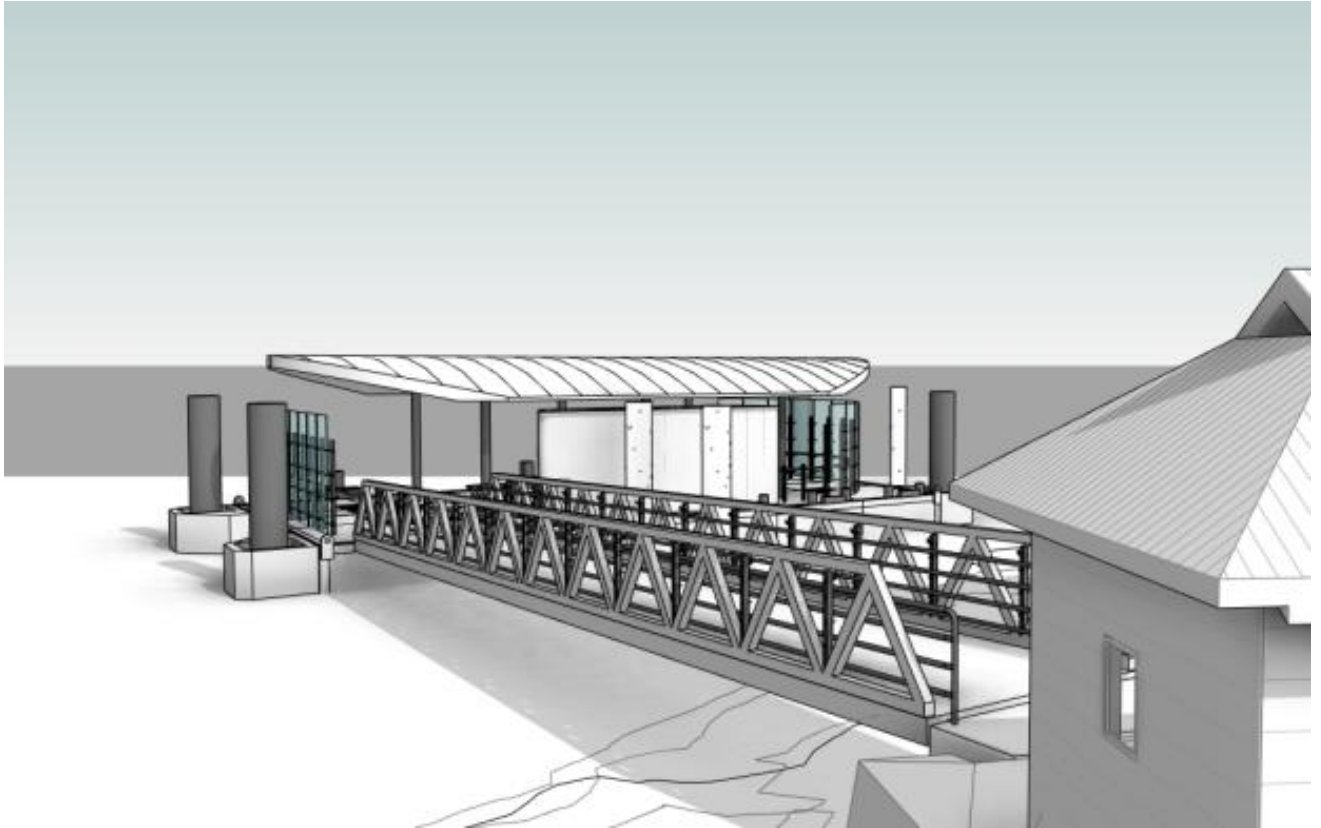
- Safety and security lighting on the approaches, in the shelter and on the pontoon wharf
- Passenger information boards, notices, and (electronic and display board) timetables
- Safety ladders around the walkway and wharf pontoon
- Strung cabling and ducting to provide power and communications
- Closed circuit television (CCTV)
- Tactile flooring
- New signage to assist with information and navigation (wayfinding)

### Construction

The proposal would be built over about four to five months starting in spring 2017. Construction would not be continuous as it would rely on materials delivery and the

manufacture of the prefabricated component. The construction program would also be affected by the need to coordinate with Sydney Ports Authority, Inner West Council, residents, and other key stakeholders.

The following Figure shows a representation of the wharf.



*Source: Hansen Yuncken*

Figure A1: 3D representation

## MINUTES

### Birchgrove Wharf – DSAPT exemption

<b>Date</b>	27 June 2017		
<b>Time</b>	1:30-3:00pm		
<b>Venue</b>	Inner West Council Office		
<b>Invitees</b>	Glenn Redmayne Rick Jarvis Gabrielle Higgins Julia Phillips Ken Welsh/John Stephens Sam Wu Rosie Majer Craig Thompson Deepti Patel	GR RJ GH JP KW/JS SW RM CT DP	Inner West Council Inner West Council Inner West Council Inner West Council Inner West Council TfNSW TfNSW TfNSW TfNSW

<b>1.</b>	<b>Discussion on Birchgrove Wharf</b>
1.1	<p><b>TfNSW – current design and history</b></p> <ul style="list-style-type: none"> <li>• Discussion on the current proposed design that has previously been presented to members of Inner West Council (IWC).</li> <li>• Waterside components – compliance can be achieved.</li> <li>• Landside components – difficult to achieve compliance due to topography of area. Proposed works is minimal.</li> <li>• Aiming for Review of Environmental Factors (REF) in August and commencing construction in late 2017.</li> <li>• TfNSW seek to consult with reference groups in the IWC to apply for an exemption from the DSAPT with the AHRC. In order to do so need localised engagement from residents with a disability.</li> </ul>
1.2	<p><b>Lift discussion</b></p> <ul style="list-style-type: none"> <li>• Earlier design versions had a lift structure installation. Due to the visual impact this was previously rejected by IWC .</li> <li>• There were also concerns on lift reliability near a marine environment.</li> </ul>
1.3	<p><b>Inclinor discussion</b></p> <ul style="list-style-type: none"> <li>• TfNSW undertook initial research into the potential use of an inclinor.</li> <li>• This option was rejected due to: <ul style="list-style-type: none"> <li>○ Operational and Maintenance costs of having this infrastructure in a very isolated location</li> <li>○ Reliability of the inclinor in a marine environment</li> <li>○ Need to have an “operator” present</li> </ul> </li> <li>• IWC noted that a key reason behind not having an inclinor in this region would be due to the safety risks in having the inclinor in a remote location – misuse and</li> </ul>



	<p>danger from playing/antisocial behaviour.</p> <ul style="list-style-type: none"> <li>• IWC discussed the potential to use MLAK – TfNSW advised that this would not be suitable as there are users that don't necessarily have an MLAK that would need to use the service eg parents with prams.</li> <li>• IWC suggested that potentially there may be other inclinator technology available worldwide and that this should be investigated further.</li> </ul>
1.4	<p><b>IWC Strategic Reference Groups</b></p> <ul style="list-style-type: none"> <li>• IWC have 2 groups that would be suitable for this consultation: <ul style="list-style-type: none"> <li>○ Transport reference group</li> <li>○ Social inclusion reference group</li> </ul> </li> <li>• Meetings with groups occur at set intervals.</li> <li>• The consultation for the exemption would be the 2<sup>nd</sup> meeting with these groups. The 1<sup>st</sup> meeting related to the IWC Disability Inclusion Action Plan.</li> <li>• IWC were reluctant to meet with the groups for the purpose of the exemption as it may be perceived as being politically difficult given that this first meeting is proposed for an exemption after the DIAP.</li> <li>• Potential to create an interested parties one-off reference group</li> </ul>
1.5	<p><b>Design options discussion</b></p> <ul style="list-style-type: none"> <li>• Possibility to provide access through park – the park is Heritage and undergoing some planting works in the near future with hard landscaping in future FY. This option was also previously rejected by IWC.</li> <li>• Providing access through the park may not necessarily be compliant but offers some level of accessibility.</li> <li>• Ramp/switchback discussions - if access through the park is achieved with switchbacks – will this be considered as “equitable distances”.</li> <li>• Any proposal and improvements through park will need to be supported by Council.</li> </ul>
2.	<p><b>Exemption – way forward</b></p>
2.1	<ul style="list-style-type: none"> <li>• IWC suggest that meeting with the reference groups for the purpose of applying for an exemption may not receive positive feedback. <ul style="list-style-type: none"> <li>○ Reference groups might be more accepting if there were other benefits or projects in the IWC area that will provide accessibility wins during the exemption period. Considered as a “small part of a bigger picture”.</li> <li>○ IWC suggested that it should be packaged in a way that provides in the first instance a better level of access (even though it may not be compliant) through Yurulbin Park which would still require an application for an exemption.</li> <li>○ Communication to the reference groups should be in a manner that suggests the exemption offers time to find a solution given the constraints currently around lift and inclinator technology and reliability.</li> </ul> </li> <li>• TfNSW and RMS will need to have further internal discussions.</li> </ul>
3.	<p><b>Next Meeting</b></p>
3.1	TBA



Birchgrove Wharf

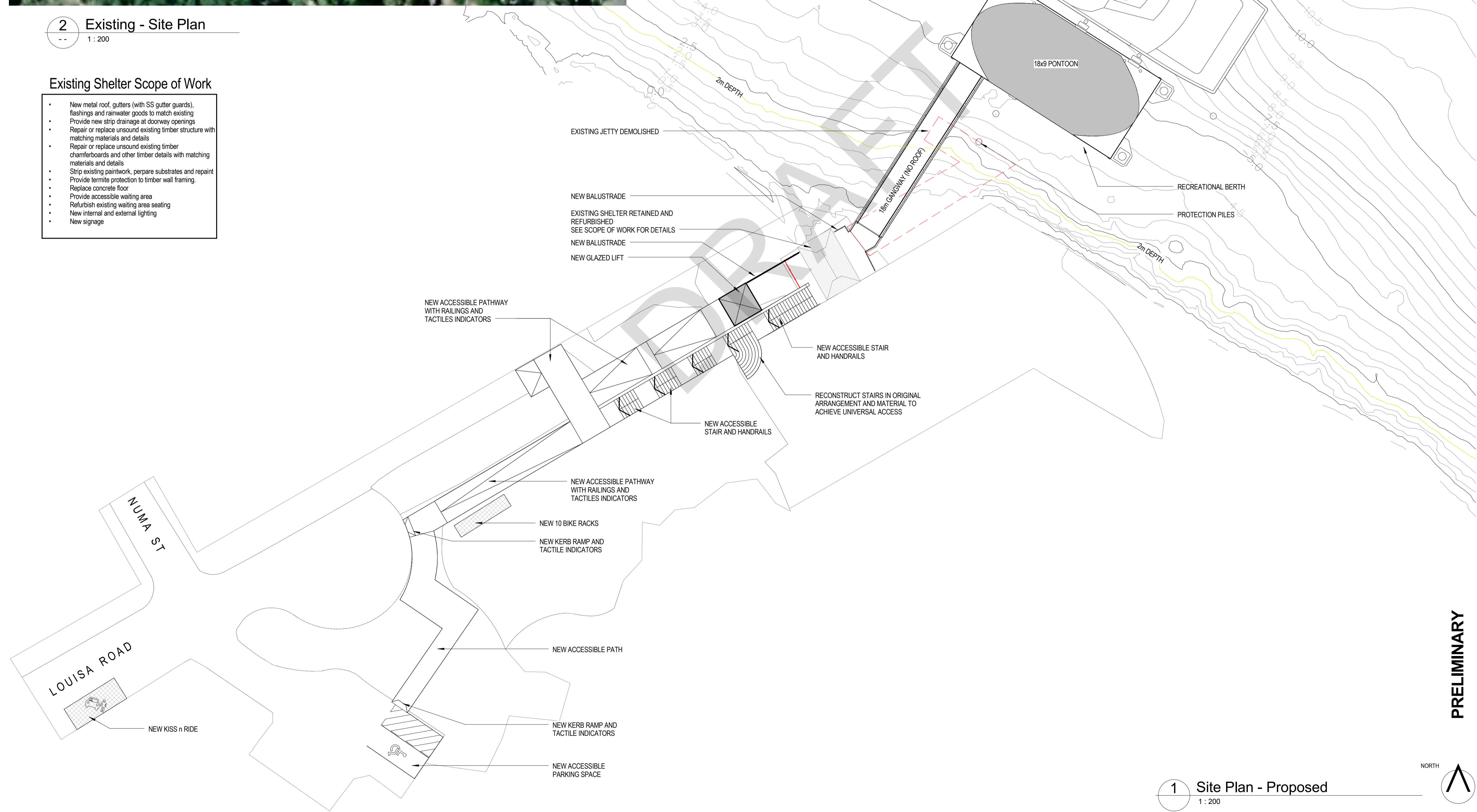
**2 Existing - Site Plan**  
1 : 200

**Existing Shelter Scope of Work**

- New metal roof, gutters (with SS gutter guards), flashings and rainwater goods to match existing
- Provide new strip drainage at doorway openings
- Repair or replace unsound existing timber structure with matching materials and details
- Repair or replace unsound existing timber chamferboards and other timber details with matching materials and details
- Strip existing paintwork, prepare substrates and repaint
- Provide termite protection to timber wall framing.
- Replace concrete floor
- Provide accessible waiting area
- Refurbish existing waiting area seating
- New internal and external lighting
- New signage

SCALE CHECK

PROJECT	CONRAD GARGETT ANCHER MORTLOCK WOOLLEY		
mail@conradgargett.com.au	ABN 49 325 121 350		
DO NOT SCALE DRAWING & VERIFY ALL DIMENSIONS AND LEVELS ON SITE			
REV	DESCRIPTION	DATE	APPD
1	DRM Issue	17.08.15	
2	Post DRM Issue	20.10.15	
3	Site Plan Revised	21.10.15	



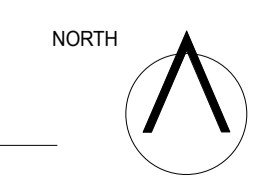
**CONRAD GARGETT** | ANCHER MORTLOCK WOOLLEY

PROJECT  
**Ferry Wharves Upgrade Program 2 - Birchgrove Wharf**

CLIENT  
**Roads & Maritime Services**

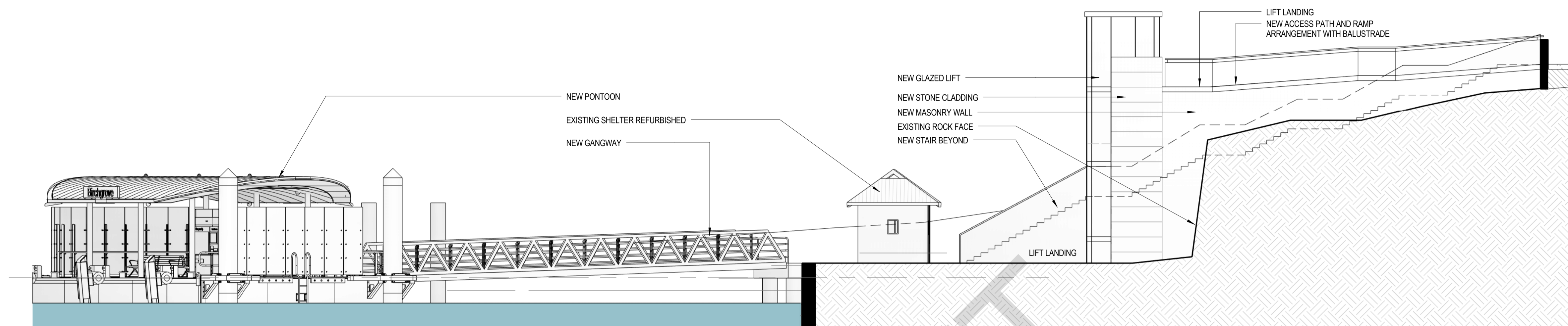
DRAWING  
**Proposed Site plan**

**PRELIMINARY**



**1 Site Plan - Proposed**  
1 : 200

PROJECT No:	DRAWING No:	REV:	A1 SCALE
14214	A1000	3	1 : 200



1 Site Section  
 12-2100 1 : 100

DRAFT

PRELIMINARY

PROJECT  
 Ferry Wharves Upgrade  
 Program 2 - Birchgrove  
 Wharf

CLIENT  
 Roads & Maritime  
 Services

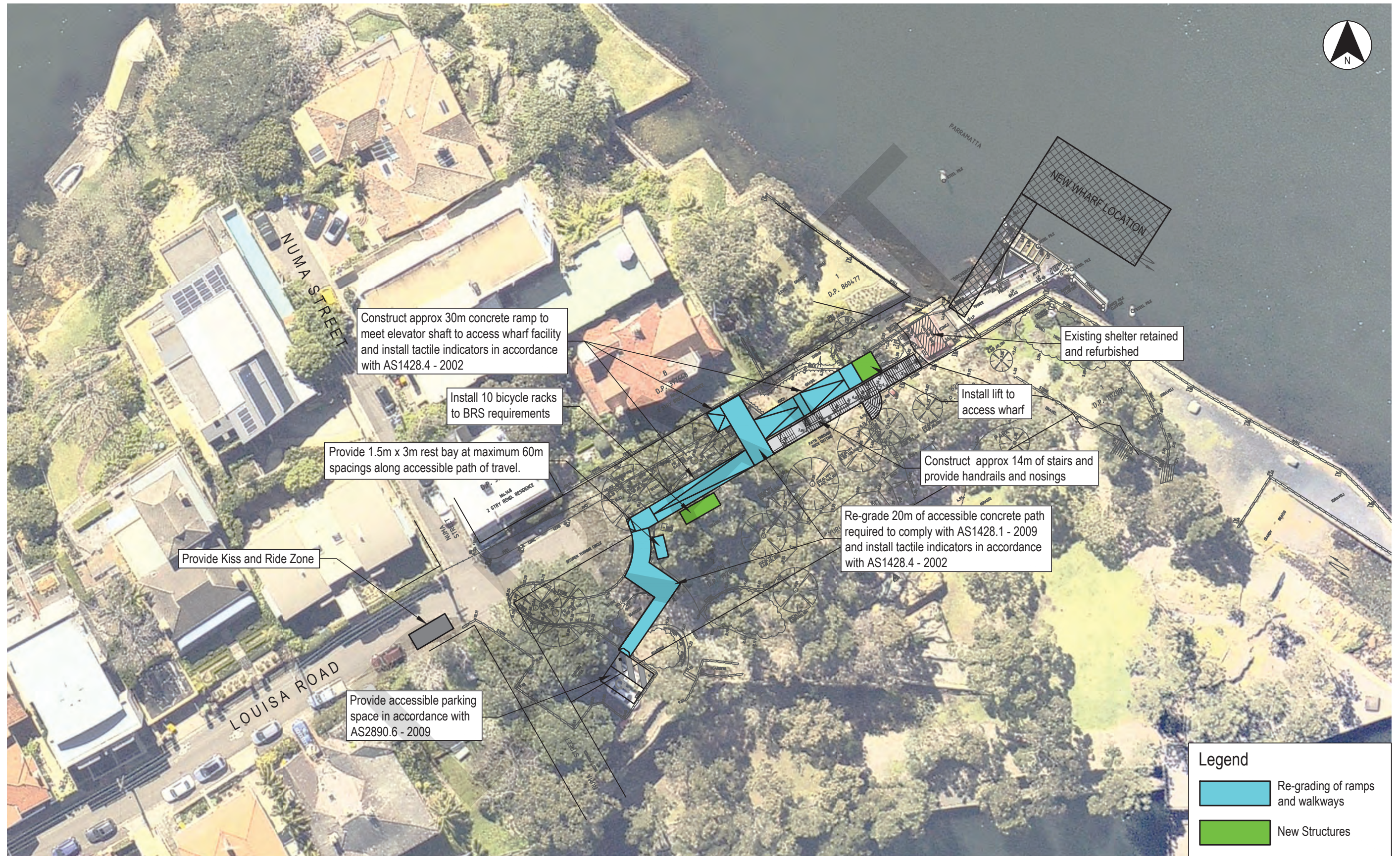
DRAWING  
 Site Section

PROJECT No: 14 214 STATUS: DD A1 SCALE: 1 : 100  
 DRAWING No: AR-12-3550 REV:



NOT FOR CONSTRUCTION

<p>Dimension in millimetres.          - Confirm all dimensions and levels on site prior to commencing work.          - Use figured dimensions only.          - Do not scale.          - Comply with relevant authorities requirements, the Building Code of Australia and all relevant Australian Standards when executing works described in this drawing.</p>		<p>LANDSCAPE ARCHITECT</p> <p><b>jane irwin landscape architecture</b></p> <p><b>jila</b></p>		<p>CLIENT</p> <p>Hansen Yuncken</p>		<p>PROJECT TITLE</p> <p>Birchgrove Wharf</p> <p>Louisa Road, Birchgrove</p>		<p>DRAWING TITLE</p> <p>Landscape Concept Plan</p> <p>Scale @ A1 1:250</p>	
<p>Copyright in all documents and drawings prepared by JILA and in any work executed from those documents and drawings shall remain the property of JILA or on creation vest in JILA.</p>		<p>Job No 090801</p> <p>Drawing No Layout1</p>		<p>Drawing Status CD</p> <p>Issue A</p>		<p>Issue A</p>		<p>Issue A</p>	



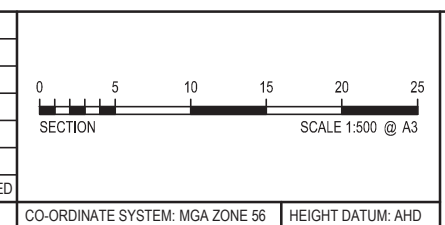
**Legend**

- Re-grading of ramps and walkways
- New Structures

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PRELIMINARY - NOT FOR CONSTRUCTION

REV	DATE	DRAWN	DESCRIPTION	CHECKED	APPROVED
P1	18.11.15	HB	ISSUED FOR INFORMATION	DPT	DP
A3 ORIGINAL			THIS PLAN MAY BE PREPARED USING COLOUR AND MAY BE INCOMPLETE IF COPIED TO BLACK AND WHITE.		



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**ROADS AND MARITIME SERVICES**

SYDNEY FERRY WHARVES  
 WHARF UPGRADE LANDSIDE WORKS

CONCEPT DESIGN  
 BIRCHGROVE WHARF - LOUISA ROAD OPTION 5

FILE No.	MM DRAWING NUMBER C-12-DW-A1400-DWG	REV P1	SHEET No. <b>007</b>
REGISTRATION NUMBER		No. of SHEETS <b>000</b>	



# Birchgrove Wharf Upgrade Submissions report

September 2017



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**Roads and Maritime Services**

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# **Birchgrove Wharf Upgrade Submissions report**

**September 2017**

Prepared by Roads and Maritime Services

RMS 17.477 ISBN: 978-1-925659-89-4	Birchgrove Wharf upgrade submissions report, September 2017
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## Document controls

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### Approval and authorisation

<b>Title</b>	Birchgrove Wharf Upgrade – Submissions Report
<b>Accepted on behalf of Roads and Maritime NSW by</b>	Bob Rimalac – Senior Project Manager
<b>Signed</b>	
<b>Dated</b>	

### Document status

<b>Document status</b>	<b>Date</b>	<b>Prepared by</b>	<b>Reviewed by</b>
Draft	15/09/17	Sam Wu	Christopher Williams
Final	22/09/17	Sam Wu	Christopher Williams

## Executive summary

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This submissions report relates to the Review of Environmental Factors (REF) prepared for the Birchgrove Wharf Upgrade, and should be read in conjunction with that document.

The Birchgrove Wharf Upgrade is one of the projects within the Ferry Wharf Upgrade Program, being delivered as part of the Transport for New South Wales (TfNSW) Transport Access Program. The key features of the proposal include the removal of the existing timber wharf, construction of a new wharf and the refurbishment of the existing timber waiting shelter.

As part of the planning process Roads and Maritime Services (Roads and Maritime) placed the REF on public display for 21 days between 21<sup>st</sup> August 2016 and 11<sup>th</sup> September 2017.

A total of seven submissions were received in response to the display of the REF, received by Roads and Maritime via a dedicated wharf upgrade email.

The issues raised in the submissions can be categorised into four main areas:

1. The need for the proposal is based on objectives of the Transport Access Program (TAP). One of the main objectives of TAP is to make infrastructure more accessible for disabled or low-mobility passengers and parents. If accessibility on the landside is not currently in the scope, the submission recommends diverting funds to other wharves.

*Response:* The need for the upgrade of Birchgrove Wharf is due to its poor condition, reduced level of access for less mobile passengers and reduced ability to allow ferries to berth safely in the long-term future. The "Do Nothing" option for the upgrade was considered, however, this option was not preferred due to the deteriorating condition of the structure and fact that this would not meet the objectives of the proposal or wider Transport Access Program, leading to increased maintenance costs and the eventual closure of the wharf and associated impacts.

2. The design of the proposal which does not address access from Louisa Road to Birchgrove Wharf

*Response:* Scoping was carried out to identify options to address accessibility on the Council owned area between Birchgrove Wharf and Louisa Road and Roads and Maritime previously proposed installing an accessible pathway through Yurulbin Park or a lift adjacent to the existing stairs to provide a Disability Discrimination Act (DDA) compliant solution.

The installation of a DDA compliant access path via either a lift or series of switchback ramps was not supported by Inner West Council due to the visual impact of these proposals on Yurulbin Park. In order to allow the wharf upgrade assessment to progress, the upgrade of landside access has been removed from this proposal. Discussion between Inner West Council and Transport for New South Wales are continuing to determine future landside works.

3. The timing and duration of construction

*Response:* The proposal is currently planned to be built over a five month period starting in late 2017. Although the Christmas/New Year period is a busy period for the overall Harbour it is a quieter period for ferry commuters travelling to and from Birchgrove Wharf. If construction were delayed until January as suggested, this would impact on regular commuter journeys for a longer period of time, therefore the wharf closure period proposed will minimise the impact on regular ferry users.

4. Impact of the proposal on existing sailing routes during operation. The submission suggests that the proposal will impact on sailing courses used by a local water user group as it extends further into the river than the existing structure.

*Response:* The Birchgrove pontoon needs to be placed in depths of no less than 2m to provide a stable platform capable of moving up and down with the tides, and provide sufficient depth at extreme low tides for vessels to safely berth. An 18m gangway will link the pontoon to the existing landside entry. The length of the gangway has been proposed as this provides a gradient which will vary relative to landfall but will provide compliant access for disabled and low-mobility passengers, except in extreme low tidal conditions.

Although the impact of this structure on recreational vessels was not noted in the original REF document, impact on water user groups is assessed as being minimal, due to the width of the river in this area, and the location of the wharf in relation to these user groups.

The design for the proposal has been developed in accordance with Roads and Maritime's Maritime Safety Division, Harbour City Ferries and through consultation with the Sydney Port Authority.

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# 1 Introduction and background

## 1.1 The proposal

The Birchgrove Wharf Upgrade is one of the projects within the Ferry Wharf Upgrade Program, being delivered as part of the Transport for New South Wales (TfNSW) Transport Access Program. The key features of the proposal include the removal of the existing timber wharf, construction of a new wharf and the refurbishment of the existing timber waiting shelter.

The main elements of the proposal for the Birchgrove Wharf Upgrade include:

- Removal of the existing timber wharf
- Refurbishment of the existing waiting shelter, including the installation of a new concrete slab and balustrade and structural repair work to the timber building
- Minor repairs to the sea wall
- An 18-metre long uncovered metal gangway extending north east from a connecting shore bridge, supported by two piles
- An 18-metre long by nine-metre wide pile-founded floating metal covered and glazed pontoon, held in position by four new piles
- Two new piled pivot poles to help with berthing.

The wharf is located at the northern end of Louisa Road next to Yurulbin Park in the Inner West Council local government area. It forms part of the F3 Ferry Service that operates between Circular Quay and Parramatta. Figure 1 shows the proposal location in relation to Sydney Harbour.

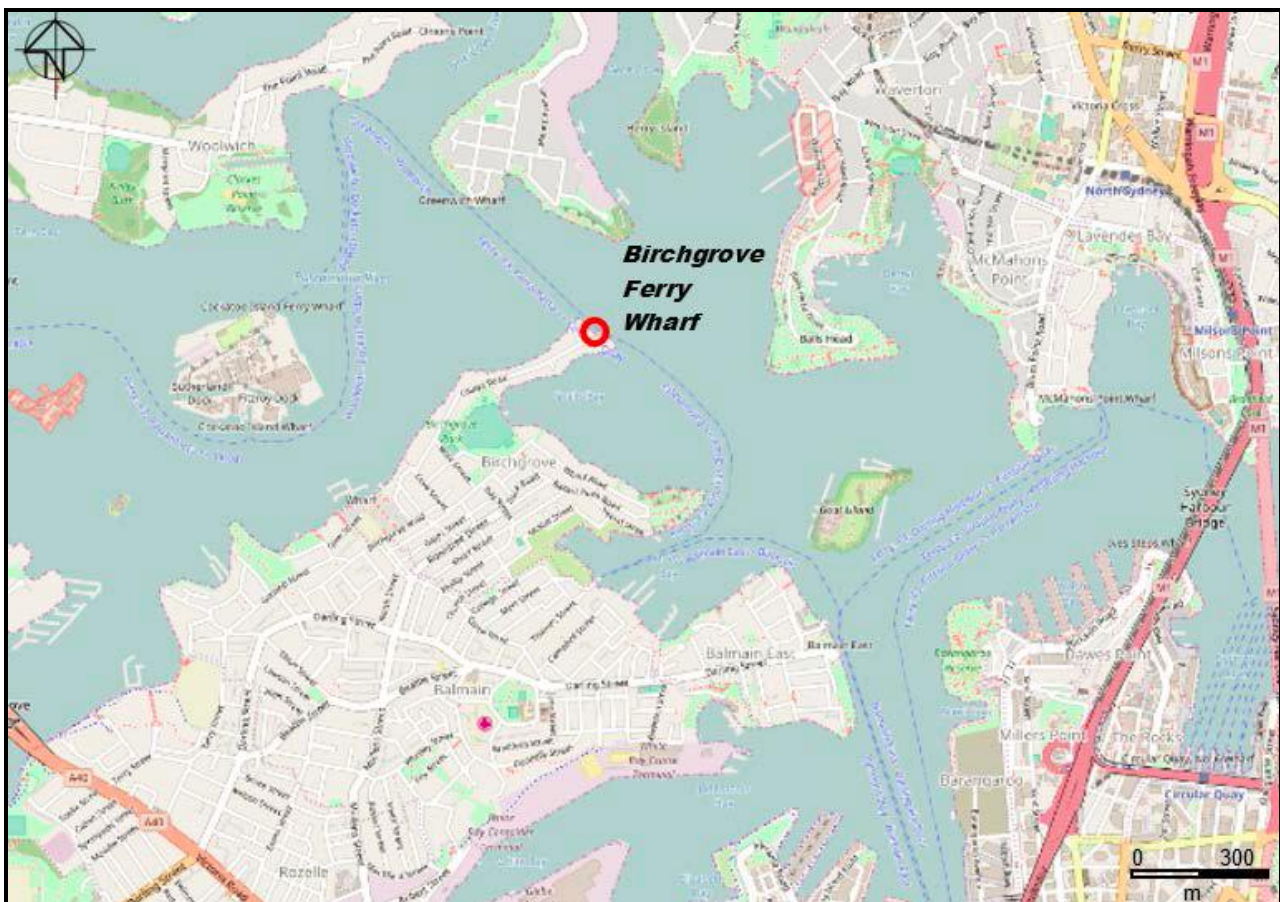


Figure 1 Proposal Location (taken from REF)

A more detailed description of the Birchgrove Wharf Upgrade is found in the Birchgrove Wharf Upgrade Review of Environmental Factors (REF) prepared by Roads and Maritime in August 2017.

## 1.2 REF display

Roads and Maritime prepared a review of environmental factors to assess the environmental impacts of the proposed works. The review of environmental factors was publically displayed for 21 days between 21<sup>st</sup> August 2016 and 11<sup>th</sup> September 2017 at two locations, as detailed in Table 1.1. The review of environmental factors was placed on the Roads and Maritime project website and made available for download. The display locations and website link were advertised in the Inner West Courier on 23<sup>rd</sup> August and 30<sup>th</sup> August 2017.

In addition to the above public display, an invitation to comment and copy of the review of environmental factors was issued to about 1,530 stakeholders through a Community Update letter drop undertaken 21<sup>st</sup> August 2017. Posters providing details of the proposal and REF display were displayed at Birchgrove Wharf and locations throughout the ferry network. Details of the proposal and REF display were also emailed to about 50 key stakeholder groups.

Table 1.1: Display locations

Location	Address
Roads and Maritime Office	20-44 Ennis Road, Milsons Point
Inner West Council	7-15 Wetherill Street, Leichhardt

## 1.3 Purpose of the report

This submissions report relates to the review of environmental factors (REF) prepared for the Birchgrove Wharf Upgrade, and should be read in conjunction with that document.

The REF was placed on public display and submissions relating to the proposal and the REF were received by Roads and Maritime. This submissions report summarises the issues raised and provides responses to each issue (Chapter 2). It details changes to the proposal (Chapter 3), and describes and assesses the environmental impact of changes to the proposal (Chapter 4).

## 2 Response to issues

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Roads and Maritime Services received seven submissions, accepted up until the 11 September 2017. Table 2.1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in Chapter 3 of this report.

Table 2.1: Respondents

Respondent	Submission No.	Section number where issues are addressed
Individual 1	1	Section 2.4.1
Individual 2	2	Section 2.3.1
Individual 3	3	Section 2.3.2
Individual 4	4	Section 2.2.1, Section 2.2.2, Section 2.3.1
Individual 5	5	Section 2.2.1, Section 2.3.1
Council	6	Section 2.3.1
Individual 6	7	Section 2.3.3, Section 2.5.1

### 2.1 Overview of issues raised

A total of seven submissions were received in response to the display of the review of environmental factors. One of these submissions was received from Inner West Council. Six submissions were from individuals.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted and collated, and corresponding responses to the issues have been provided. Where similar issues have been raised in different submissions, only one response has been provided. The issues raised and Roads and Maritime response to these issues forms the basis of this chapter.

Of the seven submissions, one of the submissions provides a general position for the proposal, while the other submissions raised issues about specific aspects relating to the wharf upgrade.

The issues raised in the submissions can be categorised into four main areas:

1. The need for the proposal if the upgrade does not also improve accessible access between Louisa Road and Birchgrove Wharf
2. The design of the proposal – why the upgrade does not address access from Louisa Road to Birchgrove Wharf
3. The timing and duration of construction
4. The impact of the proposal on existing sailing routes during operation.

## 2.2 Need for the Proposal

### 2.2.1 Need for the proposal if the wharf upgrade does not also improve accessible access between Louisa Road and Birchgrove Wharf

#### Submission numbers

4, 5

#### Issue Description

- Submissions queried the need for the wharf upgrade if the scope does not also include improving access between Louisa Road and Birchgrove Wharf, as access to the wharf is seen as more important than upgrading the actual wharf facilities
- Priority of funds should be directed at more important wharves such as Watson Bay since Birchgrove is low patronage and currently lacks landside disability access.

#### Response

As detailed in Chapter 2.1 of the REF, the need for the upgrade of Birchgrove Wharf is due to its poor condition, reduced level of access for less mobile passengers and reduced ability to allow ferries to berth safely in the long-term future.

The "Do Nothing" option for the upgrade was considered, with detail provided in Chapter 2.4.1 of the REF. However, this option was not preferred due to the deteriorating condition of the structure and fact that this would not meet the objectives of the proposal or wider Transport Access Program, leading to increased maintenance costs and the eventual closure of the wharf and associated impacts.

Further detail on why upgrading the access between Louisa Road and Birchgrove Wharf has not been considered as part of the Birchgrove Wharf Upgrade is provided in Section 2.3.1, and 2.3.2 of this report.

### 2.2.2 Dual Berthing Wharf

#### Submission number

4

#### Issue description

- Believes response in REF to dual berthing should be updated to include additional reasons relating to the wider ferry network.

#### Response

Transport for New South Wales have undertaken an assessment of the future ferry network and current and future demand and have confirmed that additional ferry services can be accommodated without providing a second berthing face at Birchgrove Wharf.



## 2.3 Design

### 2.3.1 Disabled Access to the Wharf

#### Submission numbers

2, 4, 5, 6

#### Issue description

- Concern that improving access between Louisa Road and Birchgrove Wharf to provide an accessible pathway has not been included in project scope

#### Response

As detailed in Chapter 2.6.1 of the REF, due to the natural topography of the land adjacent to the proposal, there is a steep gradient change between Louisa Road and Birchgrove Wharf which provides a challenge for accessibility. Scoping was carried out to identify options to address accessibility on the Council owned area between Birchgrove Wharf and Louisa Road and Roads and Maritime previously proposed installing an accessible pathway through Yurulbin Park or a lift adjacent to the existing stairs to provide a Disability Discrimination Act (DDA) compliant solution.

The installation of a DDA compliant access path via either a lift or series of switchback ramps was not supported by Inner West Council due to the visual impact of these proposals on Yurulbin Park. Due to the constraints and issues faced, the preferred option was refined to remove any aspects of landside upgrade from the project scope, and upgrade the areas on Roads and Maritime owned land only.

Discussions between Inner West Council and Transport for NSW are continuing to determine future landside works, with Chapter 5.6 of the REF providing details of these discussions during the preparation of the REF.

### 2.3.2 Existing Access to the Wharf

#### Submission number

3

#### Issue description

- Concern that access to wharf is unsafe. Request council give consideration to upgrading the stairs while wharf is under construction.

#### Response

As detailed in Chapter 2.1 of the REF the need for the upgrade of Birchgrove Wharf is due to its poor condition, reduced level of access for less mobile passengers and reduced ability to allow ferries to berth safely in the long-term future.

Upgrading the stairs owned by Inner West Council was originally considered as part of the wharf upgrade proposal however, as confirmed in Chapter 2.6 of the REF, due to the constraints and issues faced with providing a DDA compliant access path from Louisa Road to the wharf this proposal was refined to remove any aspects of landside access from upgrade scope at this stage.

Discussions are ongoing between Inner West Council and Transport for NSW to determine future landside works and further details of discussions to date can be found in Chapter 5.6 of the REF. Further information regarding access to Birchgrove Wharf is included in Section 2.3.1 of this report.

### 2.3.3 Gangway Configuration

#### Submission number

7

#### Issue description

- Queries why the gangway runs out from the seawall rather than parallel as this would enable the pontoon to be placed closer to shore, lessening the perceived impact on sailing courses

#### Response

The preferred design for the Birchgrove Upgrade has been chosen as it best meets the design criteria outlined in Chapter 3.2.1 of the REF. In order to comply with the Disability Discrimination Act (DDA), and Disability Standards for Accessible Public Transport (DSAPT), a floating pontoon is proposed.

This pontoon needs to be placed in depths of no less than 2m to provide a stable platform capable of moving up and down with the tides, and provide sufficient depth at extreme low tides for vessels to safely berth. An 18m gangway will link the pontoon to the existing landside entry. The length of the gangway has been proposed as this provides a gradient which will vary relative to landfall but will provide compliant access for disabled and low-mobility passengers, except in extreme low tidal conditions.

The new wharf will sit about 12 metres further north into the river than the existing, with the position reducing existing risks associated with ferries berthing close to the seawall. Further information on the impact of the position of the new wharf on existing maritime transport is detailed in Section 2.5.1.

## 2.4 Construction

### 2.4.1 Construction Program

#### Submission number

1

#### Issue description

- Wharf closure (due to the Birchgrove Wharf Upgrade) will coincide with a busy patronage period and will inconvenience regular patrons.
- Construction over the holiday period will extend the duration of the wharf closure.
- Suggested moving start of construction until late January.

#### Response

The proposal is currently planned to be built over a five month period starting in late 2017.

Although the Christmas/New Year period is a busy period for the overall Harbour it is a quieter period for ferry commuters travelling to and from Birchgrove Wharf. If construction were delayed until January as suggested, this would impact on regular commuter journeys for a longer period of time, therefore the wharf closure period proposed will minimise the impact on regular ferry users.

The impact of the wharf closure on ferry users - commuters and leisure users - is considered in Chapter 6.5.3 of the REF which assesses the socio-economic impact of construction, and the closure of the wharf. Further detail is also provided in Section 2.4.2 of this report.

Chapter 3.3.2 of the REF provides further detail of activities during this construction period, noting that construction "would not be continuous as it would rely on material delivery and the manufacture of pre-fabricated components".

## 2.5 Operational Impact

### 2.5.1 Impact on Sailing Courses

#### Submission number

7

#### Issue description

- The proposal will impact on sailing courses used by a local water user group as it extends further into the river than the existing structure.

#### Response

The reasons for this design configuration of the new wharf structure are detailed in section 2.3.3 of this report, which confirms the new wharf structure will extend about 12 metres further into the river than the existing structure, and will match the angle of the existing berthing face.

Although the impact of this structure on recreational vessels was not noted in the original REF document, impact on water user groups is assessed as being minimal, due to the width of the river in this area, and the location of the wharf in relation to these user groups.

The design for the proposal has been developed in accordance with Roads and Maritime's Maritime Safety Division, Harbour City Ferries and through consultation with the Sydney Port Authority.

## 3 Changes to the proposal

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### 3.1 Additional Safeguards

#### 3.1.1 Description

Following a review of heritage issues, an additional safeguard has been included for the installation of conduits, pipes and/or other equipment as part of the wharf upgrade on property associated with the project such as buildings and seawalls, in order to address any potential negative heritage impacts from the installation of utilities. Roads and Maritime will consult the relevant property owner and confirm that they do not have any issues with the work on their property and/or assets.

#### 3.1.2 Revised management and mitigation measures

Impact	Environmental safeguard	Responsibility	Timing
Socio Economic	A hold point to be included for the installation of conduits, pipes and/or other equipment on property associated with the project such as buildings and seawalls. Managing Contractor to confirm with Roads and Maritime that the work will not result in a negative Heritage and/or visual impact.	Managing Contractor	Construction

## 4 Environmental management

---

The REF for the Birchgrove Wharf Upgrade identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (Section 7.2 of the review of environmental factors).

After consideration of the issues raised in the public submissions and changes to the proposal, the safeguard and management measures have been revised in the following way:

- An additional safeguard has been included for the installation of conduits, pipes and/or other equipment on property associated with the project such as buildings and seawalls. Managing Contractor to confirm with Roads and Maritime that the work will not result in a negative Heritage and/or visual impact.

Should the proposal proceed, environmental management will be guided by the framework and measures outlined below.

### 4.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed, these management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

A Construction Environmental Management Plan (CEMP) will be prepared to describe safeguards and management measures identified. The CEMP will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The CEMP will be prepared prior to construction of the proposal and must be reviewed and certified by Roads and Maritime, prior to the commencement of any on-site works. The CEMP will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements.

### 4.2 Summary of safeguards and management measures

The review of environmental factors for the Birchgrove Wharf Upgrade identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

After consideration of the issues raised in the public submissions, the environmental management measures for the project (refer to Chapter 7.2 of the REF) have been revised. Should the project proceed, the environmental management measures in Table 4.1 will guide the subsequent phases of the Birchgrove Wharf Upgrade development. Additional and/or modified environmental safeguards and management measures to those presented in the REF have been underlined and deleted measures, or parts of measures, have been struck out.

Table 4.1: Summary of environmental safeguards and management measures

No	Impact	Environmental safeguards	Responsibility	Timing
GEN1	General - minimise environmental impacts during construction	<p>A CEMP will be prepared and submitted for review and endorsement of the Roads and Maritime Environment Manager prior to commencement of the activity.</p> <p>As a minimum, the CEMP will address the following:</p> <ul style="list-style-type: none"> <li>• any requirements associated with statutory approvals</li> <li>• details of how the project will implement the identified safeguards outlined in the REF</li> <li>• issue-specific environmental management plans</li> <li>• roles and responsibilities</li> <li>• communication requirements</li> <li>• induction and training requirements</li> <li>• procedures for monitoring and evaluating environmental performance, and for corrective action</li> <li>• reporting requirements and record-keeping</li> <li>• procedures for emergency and incident management</li> <li>• procedures for audit and review.</li> </ul> <p>The endorsed CEMP will be implemented during the undertaking of the activity.</p>	Contractor / Roads and Maritime	Pre-construction / detailed design
GEN2	General - notification	All businesses, residential properties and other key stakeholders (e.g. schools, local councils) affected by the activity will be notified at least five days prior to commencement of the activity.	Contractor / Roads and Maritime	Pre-construction

No	Impact	Environmental safeguards	Responsibility	Timing
GEN3	General - environmental awareness	<p>All personnel working on site will receive training to ensure awareness of environment protection requirements to be implemented during the project. This will include up-front site induction and regular "toolbox" style briefings. Site-specific training will be provided to personnel engaged in activities or areas of higher risk. These include the following are examples only:</p> <ul style="list-style-type: none"> <li>• areas of Aboriginal heritage sensitivity</li> <li>• threatened species habitat</li> <li>• adjoining residential areas requiring particular noise management measures.</li> </ul>	Contractor / Roads and Maritime	Pre-construction / detailed design
4	Soil and water	A Soil and Water Management Plan (SWMP) would be prepared and implemented as part of the CEMP. The SWMP would identify all reasonably foreseeable risks relating to soil erosion and water pollution and describe how these risks would be addressed during construction.	Contractor	Detailed design / pre-construction
5	Soil and water	A site-specific Erosion and Sediment Control Plan/s would be prepared and implemented as part of the Soil and Water Management Plan	Contractor	Detailed design / pre-construction
6	Soil and water	Sediment sampling and testing would be carried out in conjunction with the detailed geotechnical investigation to allow for management of sediments, should off-site disposal of spoil be required during construction.	Contractor	Detailed design / pre-construction
7	Soil and water	Weather forecasts would be regularly checked during construction. Where severe weather is forecast, all equipment and materials would be removed from the construction area, or secured.	Contractor	Construction

No	Impact	Environmental safeguards	Responsibility	Timing
8	Water quality	A Spill Management Plan would be developed and communicated to all staff working on site. Any marine spill (whether spill occurs on water on land and subsequently enters the water) is to be immediately reported to Roads and Maritime and Sydney Ports VTS and VHF Channel 13. Marine spill kits would be kept onsite during construction, and the construction staff would be trained in their correct use.	Contractor	Construction
9	Water quality	All machinery and equipment would be maintained in good working order and regularly visually inspected for leaks.	Contractor	Construction
10	Water quality	Any chemicals or fuels stored at the site or equipment barges would be stored in a bunded area to prevent chemical leaks or spills entering the water.	Contractor	Construction
11	Water quality	A silt boom and curtain would be installed around the work area. The silt boom and curtain would extend from a minimum of 100 millimetres (mm) above the water line to a minimum of 2.5 metres below the water line before starting work.	Contractor	Construction
12	Water quality	A silt boom and curtain would be used to control the movement of floating debris from the immediate work area, before being collected using a scoop. Debris below the surface would be retrieved via trained divers. Any debris would be removed from the water immediately.	Contractor	Construction
13	Erosion and scour	The number of jack-ups/anchor points would be minimised where possible. The locations would be selected to avoid areas of sensitive habitat, as discussed further in section 6.2.	Contractor	Construction
14	Erosion and scour	Work positioning barges, drilling and pile driving should occur during calm conditions to prevent excessive scouring and other impacts.	Contractor	Construction



No	Impact	Environmental safeguards	Responsibility	Timing
15	Water quality	<p>The silt curtain or boom device would be inspected every day after ebbing tides, with an additional inspection to be carried out after storm events.</p> <p>If excessive turbidity of the water is observed during removal of the piles, a second, moveable silt curtain would be installed around the piles being removed during each day of operation.</p> <p>Results of the observations of the integrity of the silt curtain are required to be recorded in a site notebook maintained specifically for the purpose.</p> <p>The notebook is required to be kept on the site and to be available for inspection by persons authorised by Roads and Maritime.</p>	Contractor	Construction
16	Biodiversity	<p>A Marine Ecology Management Plan would be prepared as part of the CEMP. This would include, but not be limited to, measures relating to the following activities to minimise the risk for pollution:</p> <ul style="list-style-type: none"> <li>• Sediment and rock debris control</li> <li>• Spills from concrete pour</li> <li>• Oil/fuel/chemical storage and spill management</li> <li>• Machinery and engine maintenance schedule to reduce oil/fuel leakage</li> <li>• Low impact barge positioning to prevent propeller scouring and thrust wash onto sensitive habitats</li> <li>• Minimise footprint and establish no-go zones in sensitive habitats</li> <li>• Accidental waste/material overboard response (e.g. construction materials dropped into the harbour)</li> <li>• Biological hygiene (e.g. prevent spread of noxious species on and off the site)</li> <li>• Aquatic fauna management.</li> </ul>	Contractor	Pre-construction

No	Impact	Environmental safeguards	Responsibility	Timing
17	Biodiversity	Establish no-go zones to avoid damage to nearby habitats. No-go zones should be marked on a map and displayed inside the construction barge and office. All staff responsible for manoeuvring the barge should check the map before selecting a new position. For most of the construction period, the no-go zone generally includes the base of the stone seawall in the intertidal zone and nearshore rocky macroalgae habitat. This habitat should be avoided as much as practical but may temporarily exclude those areas for one off drilling or piling when no alternative barge position is feasible	Contractor	Pre-construction
18	Biodiversity	No anchors or mooring blocks/lines should be placed on the shallow rocky macroalgae habitat. All lines should be suspended off the seafloor to minimise drag across benthic communities	Contractor	Pre-construction
19	Biodiversity	Minor work at the top of the stone seawall should be carried out without debris falling into the harbour.	Contractor	Pre-construction
20	Biodiversity	If previously unidentified threatened species are observed in the construction area, work would cease and Roads and Maritime will be contacted	Contractor	Construction
21	Biodiversity	The silt boom and curtain should be wrapped from shore to shore around the construction area and regularly inspected for entrainment and impingement of marine wildlife.	Contractor	Construction
22	Biodiversity	Vessel speeds would be minimised within the construction area to minimise wash and risk of injury to marine fauna. All staff working on the site would be advised of the location of habitats within the construction footprint. Care should be taken in the placement of jack-ups and/or anchors to avoid areas of marine habitat.	Contractor	Construction

No	Impact	Environmental safeguards	Responsibility	Timing
23	Biodiversity	Work positioning barges, drilling and pile driving should occur during calm conditions to prevent excessive scouring and other impacts.	Contractor	Construction
24	Biodiversity	Gentle start-up of piling hammering will be completed to allow undetected aquatic fauna to leave the area.	Contractor	Construction
25	Biodiversity	Relocating syngnathids or other fishes and their habitat requires a pre-clearing survey, relocation plan and Scientific Collection Permit under s37 FM Act. Piles should be inspected before their removal prior to pulling and animals can be relocated by a licenced marine/aquatic ecologist to similar nearby macroalgae habitat	Contractor	Construction
26	Biodiversity	Construction activities will avoid impact to trees within Yurulbin Park, including the use of tree guards where required.	Contractor	Construction
27	Pest species	Regular inspections of all equipment, machinery and materials would be completed to prevent the importation of pests and weeds to the area, including the noxious marine alga <i>Caulerpa taxifolia</i> . Good housekeeping of the marine construction area will be maintained.	Contractor	Construction
28	Biodiversity	Work would stop if large fauna are observed nearby.	Contractor	Construction

No	Impact	Environmental safeguards	Responsibility	Timing
29	Noise and vibration	<p>A Noise and Vibration Management Plan (NVMP) would be prepared and implemented as part of the CEMP. The NVMP would generally follow the approach in the <i>Interim Construction Noise Guideline</i> (ICNG) (DECC, 2009) and identify:</p> <ul style="list-style-type: none"> <li>• All potential significant noise and vibration generating activities associated with the activity</li> <li>• Feasible and reasonable mitigation measures to be implemented</li> <li>• A monitoring program to assess performance against relevant noise and vibration criteria.</li> </ul> <p>Arrangements for consultation with affected neighbours and sensitive receivers, including notification and complaint handling procedures contingency measures to be implemented in the event of non-compliance with noise and vibration criteria.</p>	Contactator	Pre-construction
30	Noise and vibration	<p>All sensitive receivers (e.g. schools, residents) likely to be affected would be notified at least five days before starting any work with an associated activity that may have an adverse noise or vibration impact. The notification will provide details of:</p> <ul style="list-style-type: none"> <li>• The proposal</li> <li>• The construction period and construction hours</li> <li>• Contact information for project management staff</li> <li>• Details of complaint and incident reporting</li> <li>• How to obtain further information.</li> </ul> <p>Receivers where noise management levels may be exceeded would receive letter notification. Highly noise affected receivers would receive direct notification through a door knock.</p>	Roads and Maritime.	Pre-construction

No	Impact	Environmental safeguards	Responsibility	Timing
31	Noise and vibration	<p>The following work schedule would be adopted:</p> <p>Drilling of piles</p> <ul style="list-style-type: none"> <li>• Setup: 11pm to 12am</li> <li>• Drilling: 12am to 6am</li> <li>• Pack up: generally, 6am to 7am.</li> </ul> <p>Hammering of piles:</p> <ul style="list-style-type: none"> <li>• Setup: 4am to 5am</li> <li>• Hammering: 5am to 7am.</li> </ul> <p>Large prefabricated equipment would be installed by barge between 11pm and 7am and concrete pouring would be carried out over the night period.</p>	Contactactor	Pre-construction
32	Noise and vibration	Other than piling, concrete pouring, and the installation of equipment that needs to take place during periods of calm water, all work would be carried out during standard construction hours identified in the Interim Construction Noise Guideline (DECC, 2009) unless Roads and Maritime approval has been granted.	Contactactor	Pre-construction
33	Noise and vibration	All construction personnel would be notified of the location of sensitive receivers, and the need to minimise noise and vibration from the work, during the site induction.	Contactactor	Pre-construction
34	Noise and vibration	Plant and equipment would be in good working order to prevent excess noise generation.	Contactactor	Pre-construction

No	Impact	Environmental safeguards	Responsibility	Timing
35	Noise and vibration	Verification measures would be carried out to confirm background noise level already captured as part of the Noise and Vibration Impact Assessment report, and actual construction noise levels monitored using hand-held devices during periods associated with high noise impacts.	Contactors	Pre-construction/ construction
36	Noise and vibration	All potentially affected receivers would be notified at least five days before starting the nominated activities.	Contract/Roads and Maritime	Pre-construction/ construction
37	Noise and vibration	Where possible, high noise generating works shall be completed before 11pm, however due to the location of Birchgrove Wharf, and the requirement for calm environmental conditions (calm water and minimal wind), some activities are required to be carried out between 11pm and 7am, when the waterway is at its calmest. Respite periods would be provided for all night-time construction activities, with each activity limited to two consecutive nights in a row.	Contactors	Pre-construction/ construction
38	Noise and vibration	In addition to NV10, respite offers would also be needed when undertaking the hammering piling. These would prevent continuous blocks of noise from exceeding three hours, with a minimum respite period of one hour between each block.	Contactors	Pre-construction/ construction
39	Noise and vibration	Any change in methodology would require the process for Out of Hours Work to be followed.	Contractors	Construction

No	Impact	Environmental safeguards	Responsibility	Timing
40	Landscape and visual impact	<p>Urban design principles would be integrated throughout the detailed design and construction of the proposal, including:</p> <ul style="list-style-type: none"> <li>• Material selection location of services, and a standardised family of elements.</li> <li>• Gangway is not covered to allow clear views to the shoreline</li> <li>• Covered pontoon and protection screens include transparent elements</li> <li>• Existing landscape elements are retained</li> <li>• Colour of paint and materials are e consistent with other recently wharves along Sydney Harbour.</li> </ul>	Roads and Maritime	Detailed design and pre-construction
41	Light spill impacts	Lighting would be directionally controlled to limit impacts from light spill, including any reflective impacts from the harbour.	Contractor	Construction
42	Visual impacts	Shade cloth would be used around the construction compound where possible, to reduce visibility.	Contractor	Construction
43	Landscape and Visual impacts	The construction area would be kept clean and clear of rubbish.	Contractor	Construction
44	General socio-economic impacts	<p>A Communication Plan (CP) would be prepared and implemented as part of the CEMP to help provide timely and accurate information to stakeholders during construction. The CP would include (as a minimum):</p> <ul style="list-style-type: none"> <li>• Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions</li> <li>• Contact name and number for complaints.</li> </ul> <p>The CP would be prepared in accordance with the <i>Community Involvement and Communications Resource Manual</i> (RTA, 2008).</p>	Contractor	Pre-construction

No	Impact	Environmental safeguards	Responsibility	Timing
45	General socio-economic impacts	An internet site and free-call number would be established for enquiries regarding the proposal for the entirety of construction. Contact details would be clearly displayed at the entrance to the site. All enquiries and complaints would be tracked through a tracking system, and acknowledged within 24 hours of being received.	Roads and Maritime	Pre-construction
46	Social impacts	The construction area would be secured at all times. Lighting would be positioned to minimise light spill into neighbouring residences.	Contractor	Construction
47	Unexpected heritage finds	The Standard Management Procedure – Unexpected Heritage Items (Roads and Maritime, 2015) would be followed in the event that (an) unknown or potential Aboriginal object(s), including skeletal remains, is/are found during construction. This applies where Roads and Maritime does not have approval to disturb the object(s) or where a specific safeguard for managing the disturbance (apart from the procedure) is not in place. Work would only restart once the requirements of that procedure have been satisfied.	Contractor	Construction
48	Aboriginal Heritage	The construction area, including the construction compound, will avoid areas of known Aboriginal heritage areas, without undertaking further assessment.	Contractor	Construction
49	Aboriginal Heritage	Areas of Aboriginal heritage would be included CEMP and communicated to site personnel as no-go zones.	Contractor	Construction
50	Non-Aboriginal heritage	The <i>Standard Management Procedure - Unexpected Heritage Items</i> (Roads and Maritime, 2011) would be followed in the event that any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered. Work would only re-start once the requirements of that Procedure have been satisfied.	Contractor	Detailed design / pre-construction



No	Impact	Environmental safeguards	Responsibility	Timing
51	Non-Aboriginal heritage	In accordance with section 170A of the <i>Heritage Act 1977</i> , the Heritage Council would be given written notice of the proposal no less than 14 days prior to modification of the existing waiting shelter.	Roads and Maritime	Pre-Construction
52	Waiting Shelter	The heritage value of the waiting shelter will be preserved through: <ul style="list-style-type: none"> <li>• Photographic archival recording will be undertaken of the waiting shelter</li> <li>• Retention of existing chamferboards where they are in good condition</li> <li>• The structure should be appropriately braced and supported prior to lifting.</li> </ul>	Contractor / Roads and Maritime	Construction
53	Seawall	Any damage to the seawall will be repaired using materials sympathetic to its appearance.	Contractor	Construction
54	Waiting Shelter	A display through signage, or other form, would be incorporated into the refurbished waiting shelter to show the historical development of the wharf and mitigate the loss of character of the existing wharf.	Roads and Maritime	Construction / Post-construction
55	Non-Aboriginal heritage	In the event of unexpected finds relating to non-Aboriginal heritage, including historic shipwrecks, work would immediately stop in the area. Work in the area would only re-start when the relevant permits have been obtained and an appropriate management strategy instigated.	Contractor / Roads and Maritime	Construction

No	Impact	Environmental safeguards	Responsibility	Timing
56	Land transport and parking.	A traffic control plan would be prepared and implemented in accordance with the 'Traffic control at work sites manual' (RTA, 2010a) and Australian Standard 1742.3 (Manual of uniform traffic control devices) and would include such things as appropriate wayfinding signage to be installed advising of alternative transport options where necessary.	Contractor	Pre-construction/ construction
57	Land transport and parking.	A traffic management plan and parking plan would be developed in consultation with Inner West Council.	Contractor	Pre-construction/ construction
58	Land transport and parking	Methods to minimise parking required at the proposal location will be investigated and implemented.	Contractor	Pre-construction/ construction
59	Land and water transport	Transport of equipment and materials to site via boat and barge would be used over land transport to limit impacts to the local road network.	Contractor	construction
60	Water transport	A Marine Traffic Management Plan would be prepared and implemented during water based construction work, in consultation with NSW Maritime and approved by the Harbourmaster	Contractor/ Roads and Maritime	Pre-construction
61	Water transport	All services which use the wharf would be notified prior to the closure of the wharf.	Roads and Maritime	Pre-construction
62	Water transport	A maritime navigation exclusion zone would be established during construction to prevent unauthorised vessels entering the area.	Contractor	Pre-construction/ construction

No	Impact	Environmental safeguards	Responsibility	Timing
63	Water transport	<p>A Marine Traffic Management Plan would be prepared and implemented during the water based construction work. The Marine Traffic Management Plan would be prepared consultation with NSW Maritime and approved by the Harbourmaster.</p> <p>In addition, the proposal would:</p> <ul style="list-style-type: none"> <li>• Not interfere with any vessel movements</li> <li>• Not lace buoys in or adjacent to shipping channels</li> <li>• Fit all buoys with lights</li> <li>• Prepare Response Plans for emergencies and spills for all construction vessels</li> <li>• Fit at least one vessel with an Automatic Identification System (AIS)</li> <li>• Retrieve any material associated with the construction of the development that enters the water to prevent the obstruction of vessel movements</li> <li>• Prepare a Communications Plan for implementation during the work which must include 24/7 contact details, protocols for enquiries, complaints and emergencies</li> <li>• Any variation to the above would be agreed in advance with the Harbourmaster.</li> </ul>	Contractor	Pre-construction/ construction
64	Waste	Waste management, littering and general tidiness would be monitored during routine site inspections.	Contractor	Construction
65	Waste	Measures to avoid and minimise waste associated with the project	Contractor	Construction
66	Waste	Waste would be classified before being disposed offset to an appropriately licenced facility in accordance with Waste Classification Guidelines: Part 1 Classifying Waste (DECCW 2014). Where necessary, this would include sampling and analysis.	Contractor	Construction

No	Impact	Environmental safeguards	Responsibility	Timing
67	Resource minimisation	Recycled, durable, and low embodied energy products would be considered to reduce primary resource demand in instances where the materials are cost and performance competitive and comparable in environmental performance (e.g. where quality control specifications allow).	Contractor	Design
68	Hazards and Risks	Marine spill kits will be kept within the construction area.	Contacto	Construction
69	Hazards and Risks	Appropriate emergency equipment such as flotation devices and first aid kits would be kept within the construction area.	Contacto	Construction
70	Hazards and Risks	All utilities next to the proposal location would be located prior to the start of the works.	Contacto	Construction
71	Air quality	Air quality during construction will be considered and addressed within the CEMP and would include methods to manage work during strong winds or other adverse weather conditions as required	Contractor	Detailed design/ pre-construction
72	Cumulative construction impacts	<ul style="list-style-type: none"> <li>• Consultation will include notification prior to the start of the works.</li> <li>• Notification will include directions to alternative public transport to be used during the construction period.</li> </ul> Updates on any delays or changes to the construction period will also be communicated.	Roads and Maritime.	Pre-construction / construction
73	<b>Socio Economic</b>	<b>A hold point to be included for the installation of conduits, pipes and/or other equipment on property associated with the project such as buildings and seawalls. Managing Contractor to confirm with Roads and Maritime that the work will not result in a negative Heritage and/or visual impact.</b>	<b>Managing Contractor</b>	<b>Construction</b>

### 4.3 Licensing and approvals

Table 4.2: Summary of licensing and approval required

Instrument	Requirement	Timing
<i>Approval from the Deputy Harbour Master</i>	Approval from the Deputy Harbour Master for any work that disturb the seafloor.	Prior to the commencement of any works that disturbs the seafloor.
<i>Road occupancy permit</i>	Approval from Inner West Council required prior to any works impacting Louisa Road.	Prior to the commencement of any works impacting Louisa Road.

## 5 References

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NSW Government 2013, *Sydney's Ferry Future Modernising Sydney's Ferries*

WSP Australia Pty Ltd 2017, *Birchgrove Wharf Upgrade Review of Environmental Factors*, Sydney.

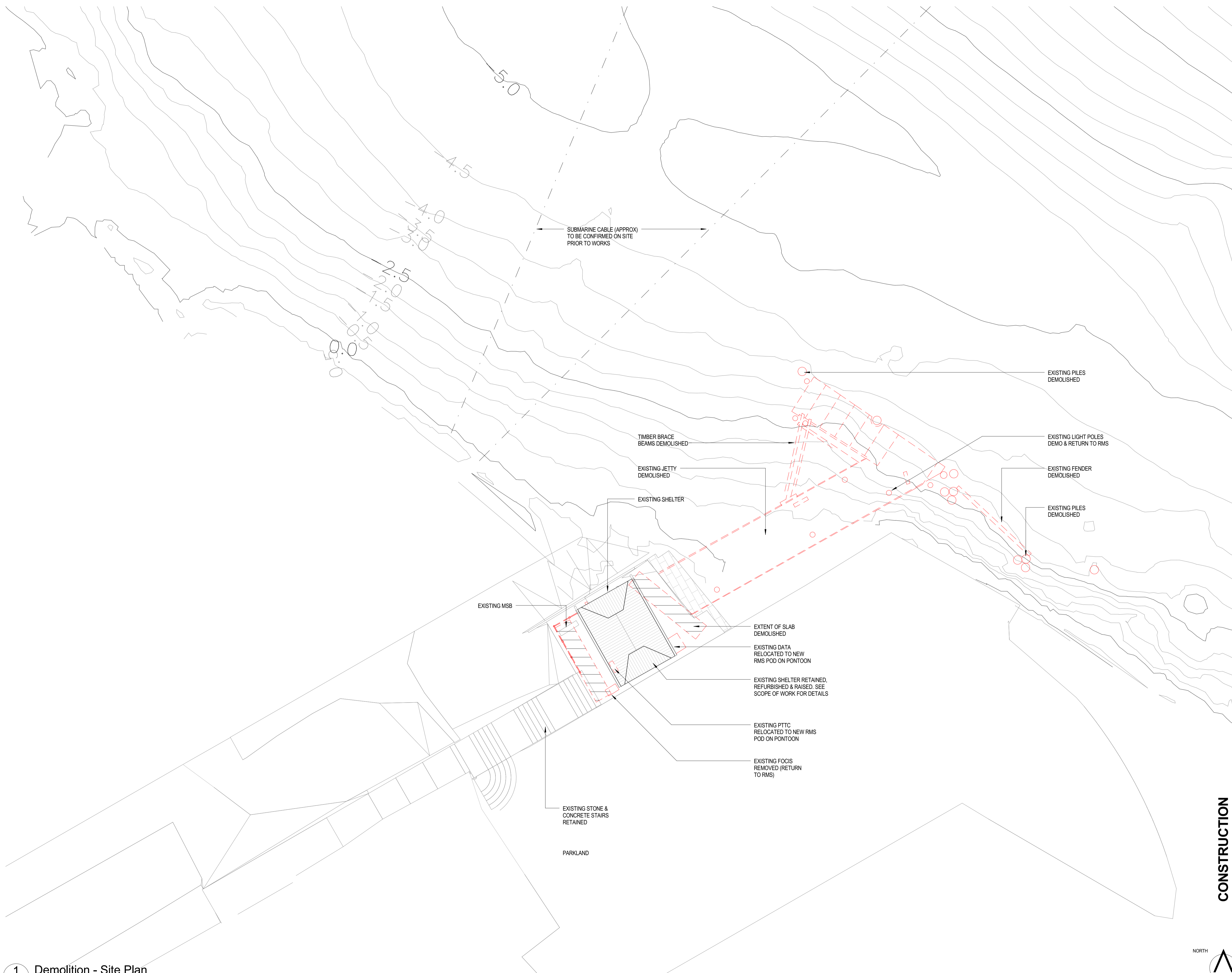
Disability Discrimination Act (DDA) 1992

Disability Standards for Accessible Public Transport (DSAPT)

# **Appendix A**

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Proposal Drawings



SCALE 1:1 @ A1  
 © CONRAD GARGETT ANCHER MORTLOCK WOOLLEY  
 mail@conradgargett.com.au ABN 49 325 121 350  
 DO NOT SCALE DRAWING & VERIFY ALL DIMENSIONS AND LEVELS ON SITE  
 REV. DESCRIPTION DATE APPD  
 1 25% Coordination Issue 05.04.17  
 2 75% Coordination Issue 19.04.17  
 A Issue for Construction 28.04.17  
 B Update - RMS Comments 05.05.17  
 C Landscape Update 08.08.17

**CONRAD GARGETT** ANCHER MORTLOCK WOOLLEY

TRANSPORT AUTHORITY  
 **Transport**  
 Roads & Maritime Services

CLIENT  


PROJECT  
**Ferry Wharves Upgrade  
 Program 2 - Birchgrove Wharf**

DRAWING  
**Demolition Site Plan**

PROJECT No: 14 214 STATUS: CD A1 SCALE: 1 : 100  
 DRAWING No: AR-12-1010 REV: C

**1** Demolition - Site Plan  
 12-3000 1 : 100

**CONSTRUCTION**



SCALE 1:1 @ A1 mm

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 mail@conradgargett.com.au ABN 49 325 121 350  
 DO NOT SCALE DRAWING & VERIFY ALL DIMENSIONS AND LEVELS ON SITE

REV	DESCRIPTION	DATE	APPD
1	DRM Issue	17.08.15	
2	Post DRM Issue	20.10.15	
3	Pontoon Relocated	21.10.15	
4	25% Coordination Issue	05.04.17	
5	75% Coordination Issue	19.04.17	
A	Issue for Construction	28.04.17	
B	Update - RMS Comments	05.05.17	
C	Landside Update	08.08.17	

**CONRAD GARGETT** ANCHER MORTLOCK WOOLLEY

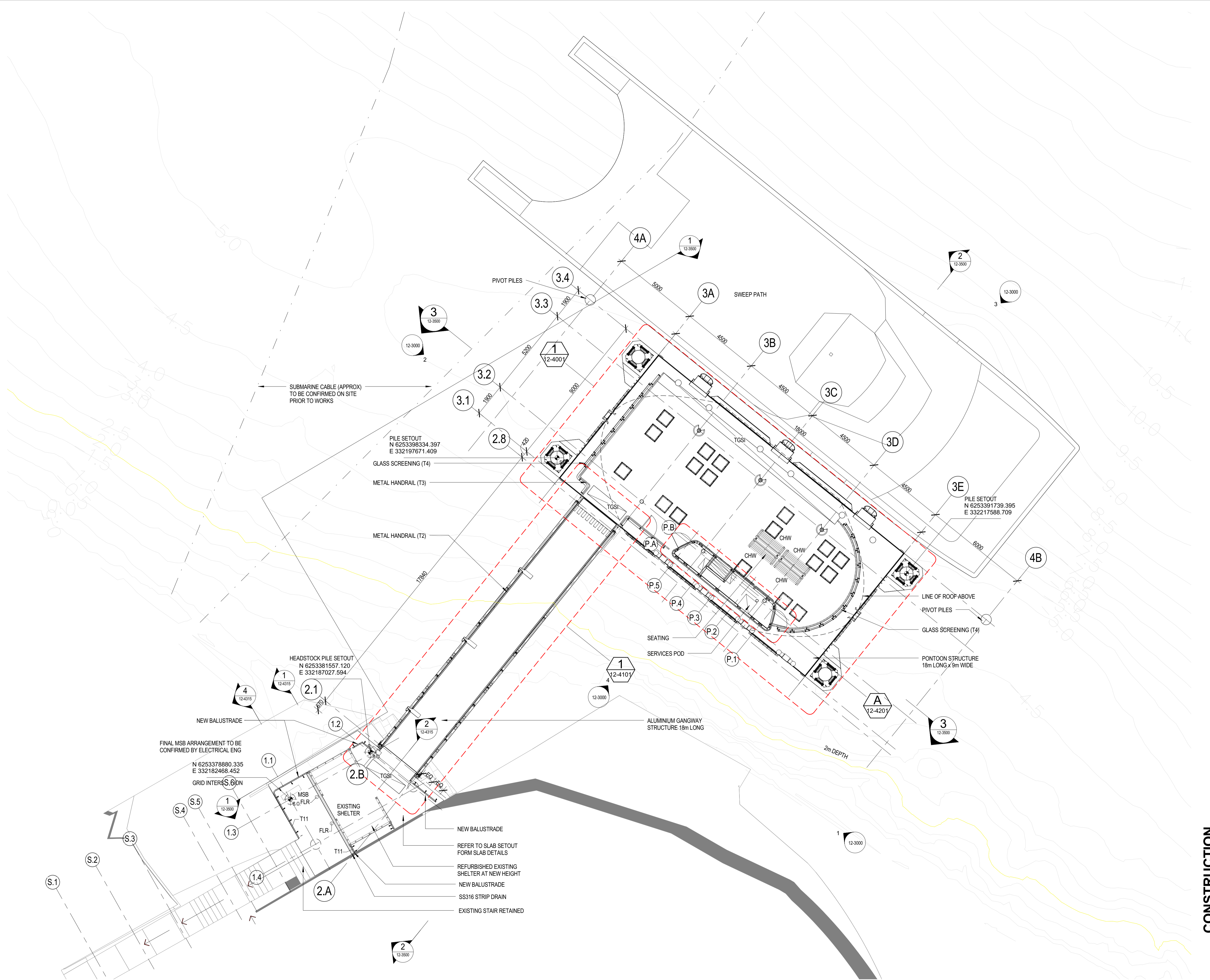
TRANSPORT AUTHORITY  
 **Transport**  
 Roads & Maritime Services

CLIENT  


PROJECT  
**Ferry Wharves Upgrade Program 2 - Birchgrove Wharf**

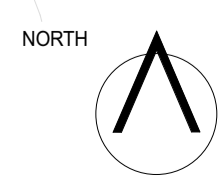
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**Proposed Wharf Setout Plan**

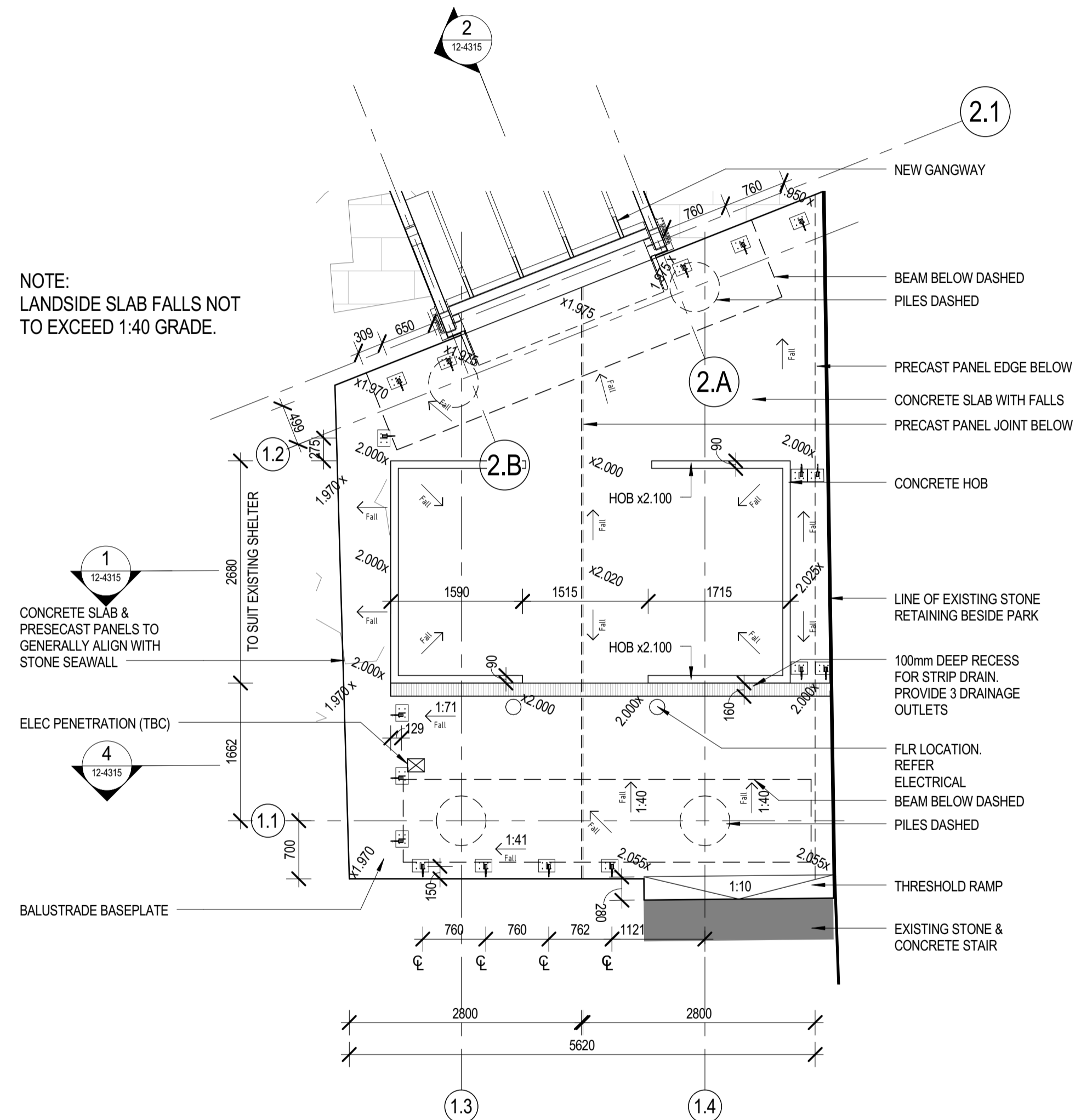
PROJECT No: 14 214 STATUS: CD A1 SCALE: 1 : 100  
 DRAWING No: AR-12-2100 REV: C



**CONSTRUCTION**

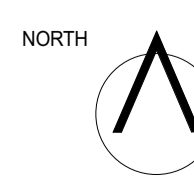
**1** Birchgrove (Louisa Rd) - Pontoon Plan  
 12-3000 1 : 100



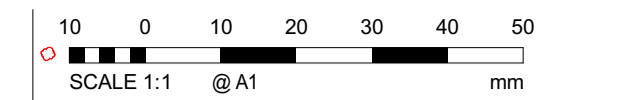


1 Landside Slab Plan  
 1 : 50

**CONSTRUCTION**



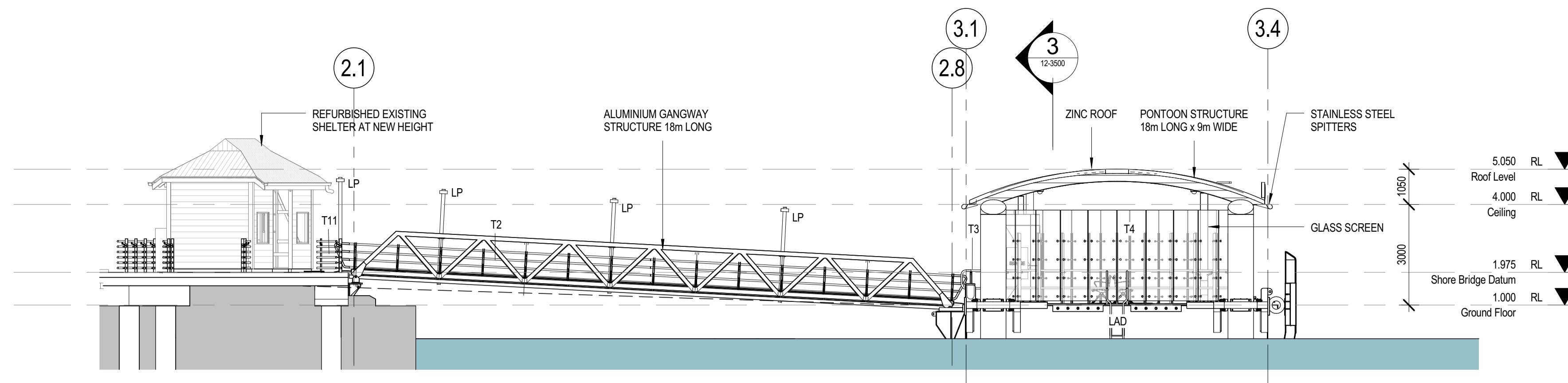
NOTE: SIGNAGE INDICATIVE.  
TO BE CONFIRMED BY  
WAYFINDING CONSULTANT



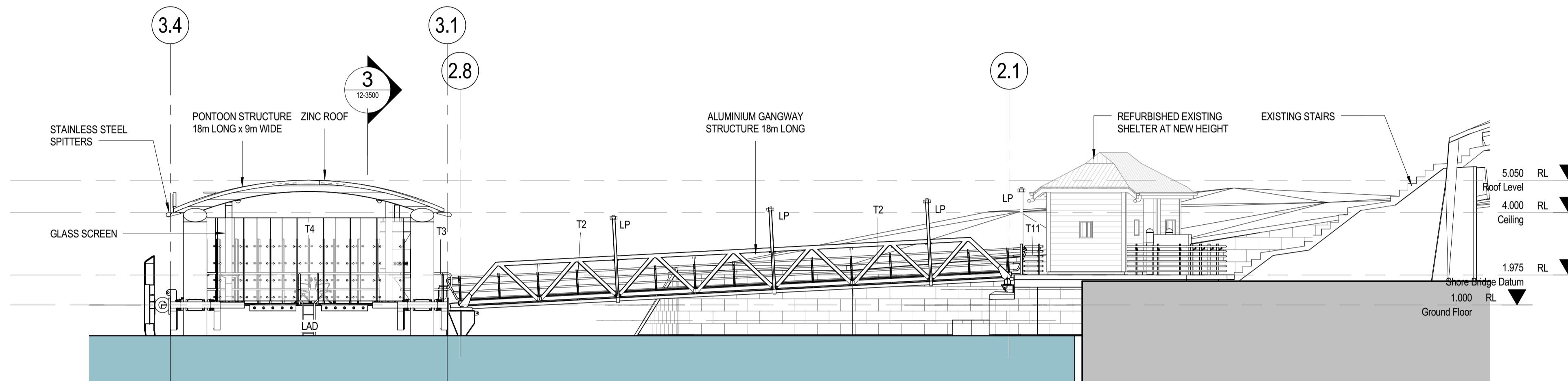
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mail@conradgargett.com.au ABN 49 325 121 350  
DO NOT SCALE DRAWING & VERIFY ALL DIMENSIONS AND LEVELS ON SITE

REV	DESCRIPTION	DATE	APPD
1	DRM Issue	17.08.15	
2	Post DRM Issue	20.10.15	
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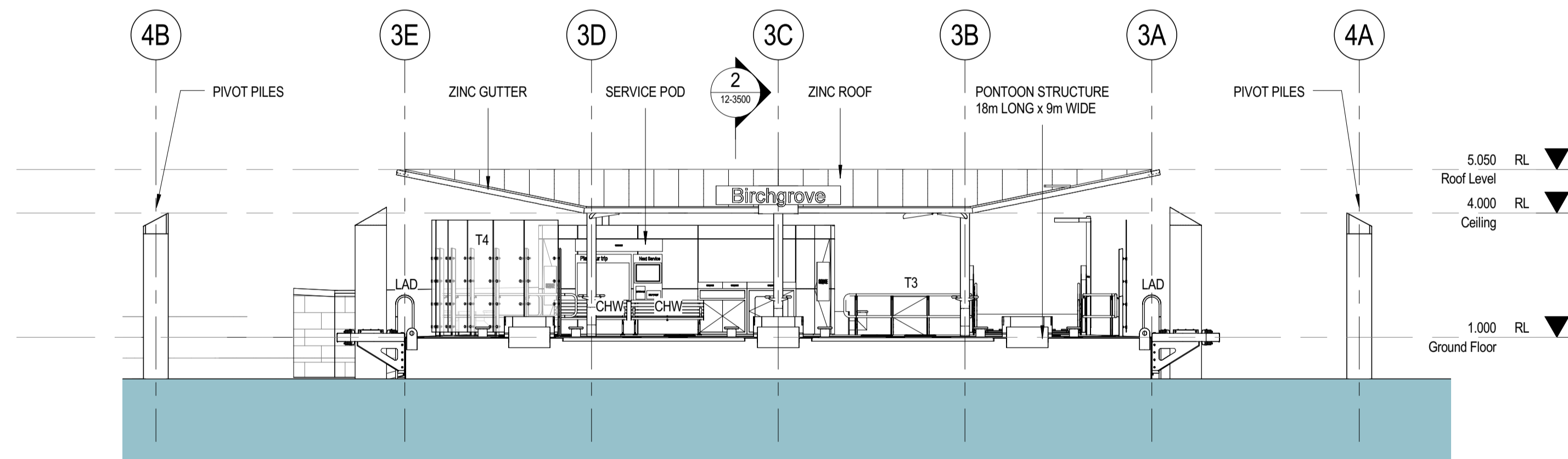
CODE	DESCRIPTION
CHW	CHAIR, WAITING - REFER SCHEDULE
LAD	LADDER
LP	LIGHT POST - REFER STRUCTURAL & ELECTRICAL DWGS
T2	BALUSTRADE TYPE 2 - REFER DETAILS
T3	BALUSTRADE TYPE 3 - REFER DETAILS
T4	BALUSTRADE TYPE 4 - REFER DETAILS
T11	BALUSTRADE TYPE 11 - REFER DETAILS



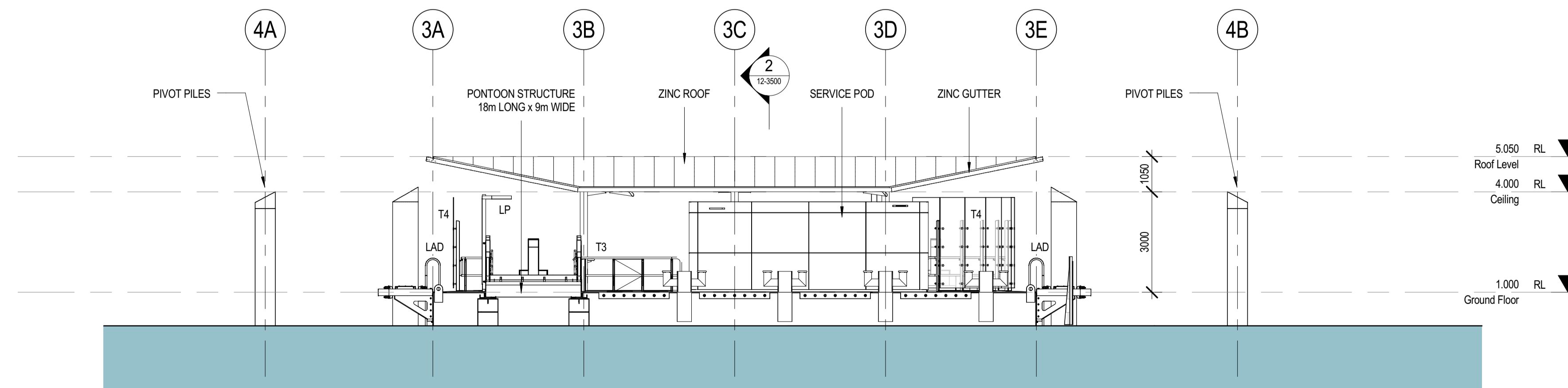
1 East Elevation  
12-2100 1: 100



2 West Elevation  
12-2100 1: 100



3 North Elevation  
12-2100 1: 100



4 South Elevation  
12-2100 1: 100

CONRAD GARGETT ANCHER MORTLOCK WOOLLEY

TRANSPORT AUTHORITY  
**NSW** Government  
**Transport** Roads & Maritime Services

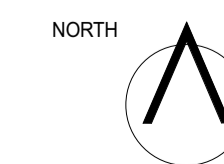
CLIENT  
**hansen yuncken**

PROJECT  
**Ferry Wharves Upgrade Program 2 - Birchgrove Wharf**

DRAWING  
**Elevations**

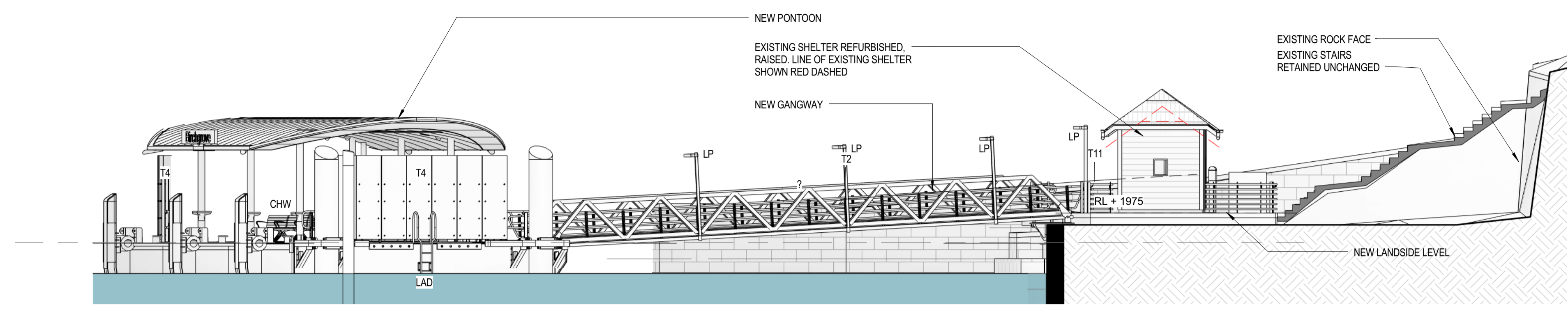
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CONSTRUCTION

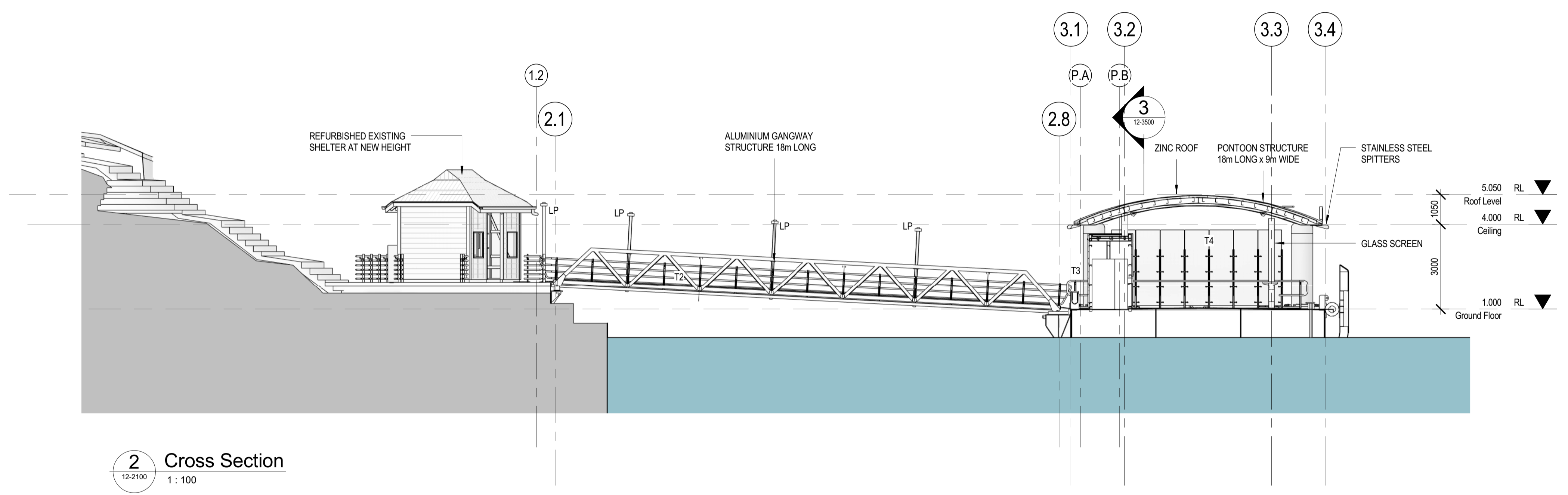


NOTE: SIGNAGE INDICATIVE.  
 TO BE CONFIRMED BY  
 WAYFINDING CONSULTANT

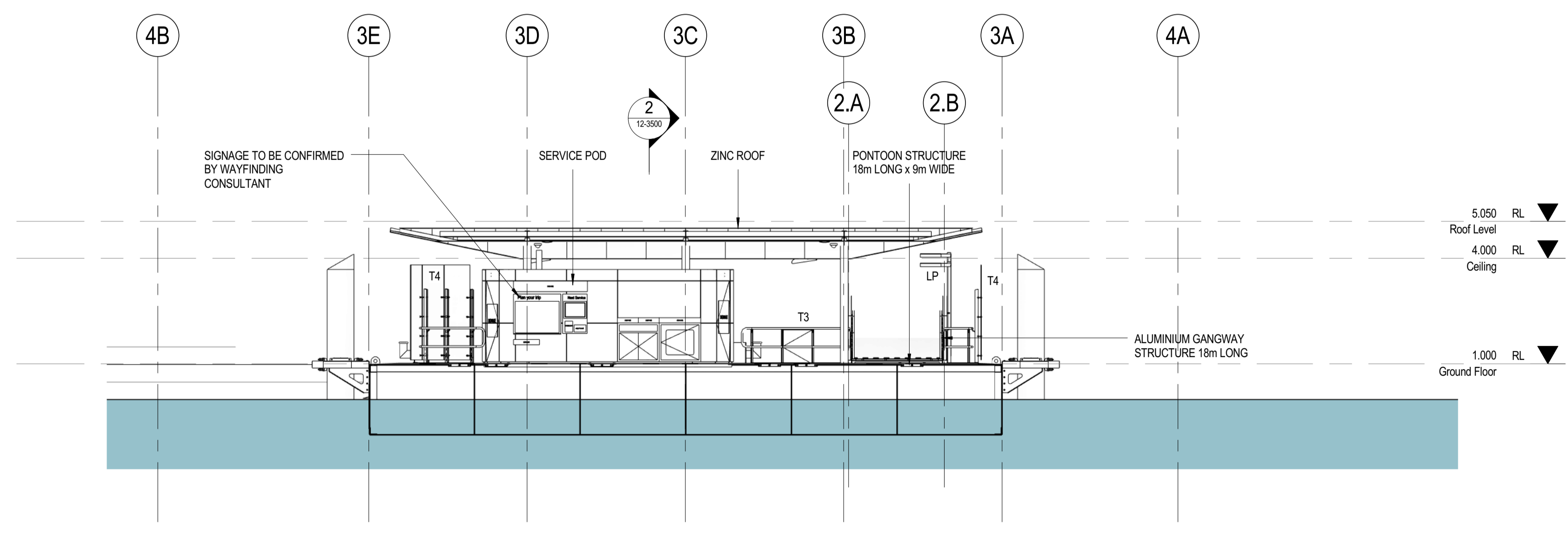
CODE	DESCRIPTION
CHW	CHAIR, WAITING - REFER SCHEDULE
LAD	LADDER
LP	LIGHT POST - REFER STRUCTURAL & ELECTRICAL DWGS
T2	BALUSTRADE TYPE 2 - REFER DETAILS
T3	BALUSTRADE TYPE 3 - REFER DETAILS
T4	BALUSTRADE TYPE 4 - REFER DETAILS
T11	BALUSTRADE TYPE 11 - REFER DETAILS



1 Site Section  
 12-2100 1:100

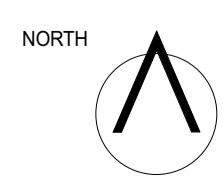


2 Cross Section  
 12-2100 1:100



3 Long Section  
 12-2100 1:100

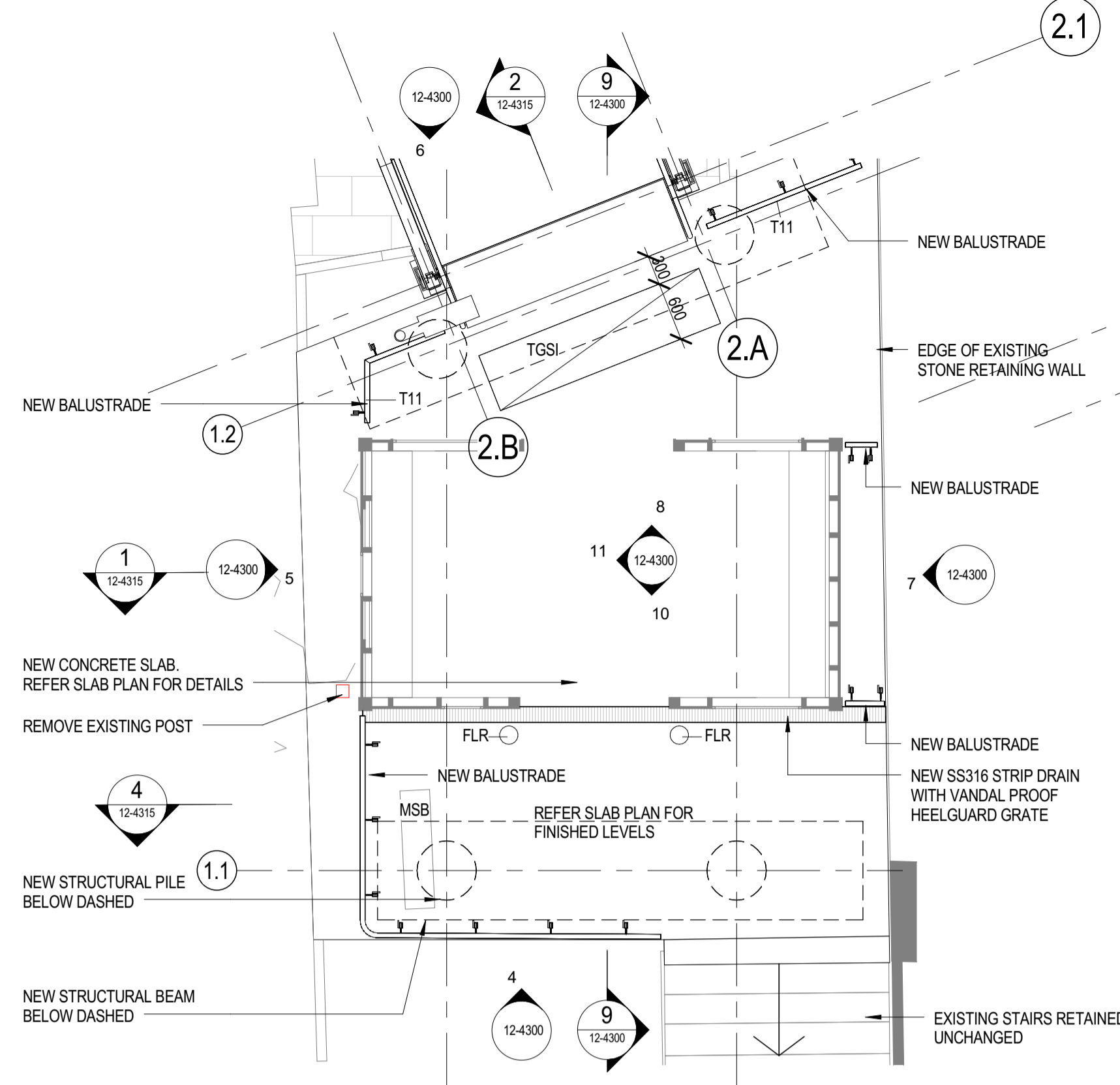
CONSTRUCTION



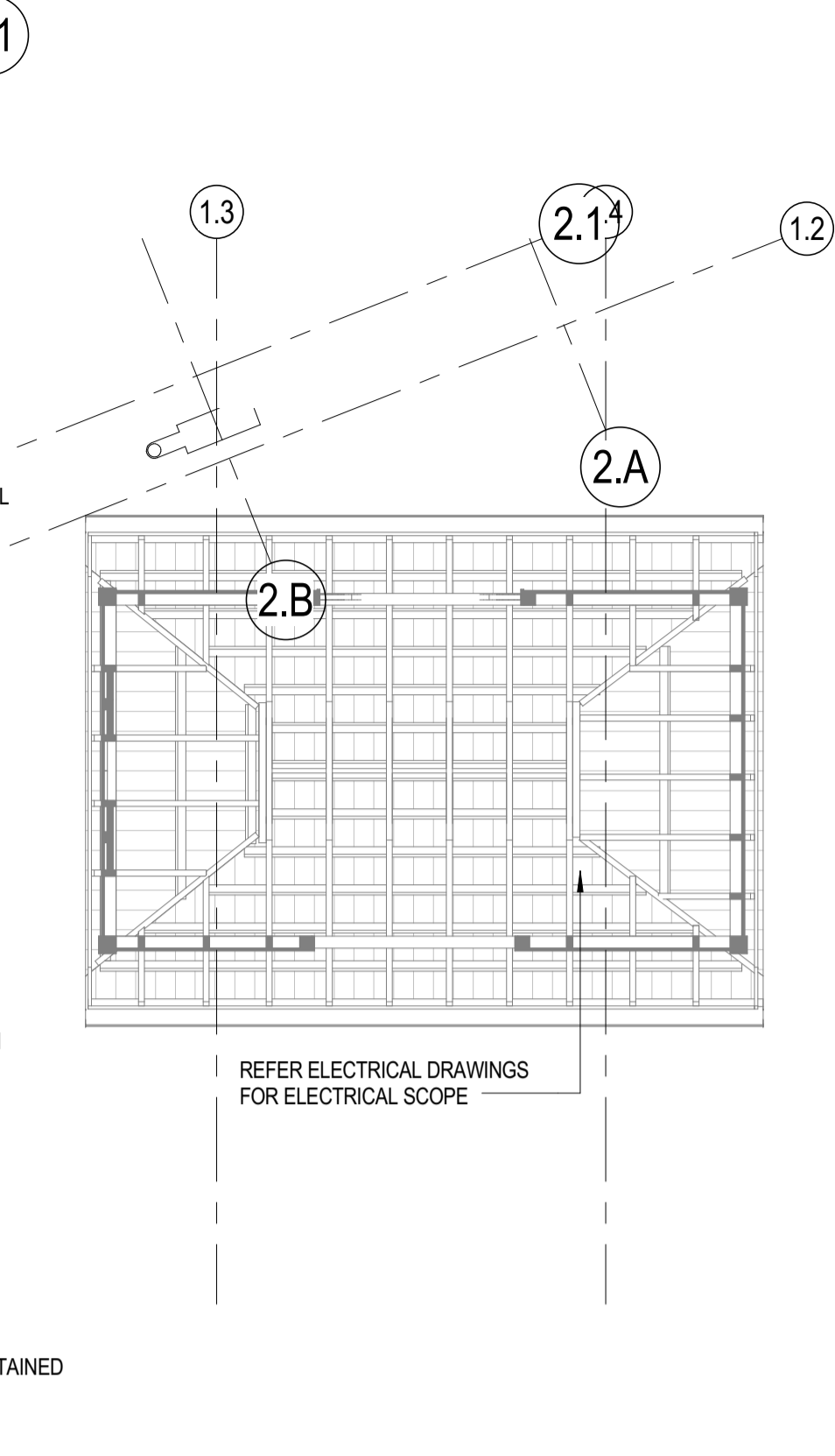
**Existing Shelter Scope of Work**

- Prepare and protect shelter during temporary relocation process
- Prepare shelter for raising process
- New colorbond steel gutters & spitters (with SS gutter guards)
- Repair or replace unsound existing timber structure with matching materials - refer structural & architectural details
- Replace existing timber chamferboards and other timber details with hardwood timber in matching profile
- Prepare substrates and repaint all new and existing elements
- Refurbish existing waiting area seating
- New internal lighting - refer electrical details
- New signage - refer wayfinding details
- Remove all redundant electrical, security, comms, lighting, fittings, conduits, & fixtures

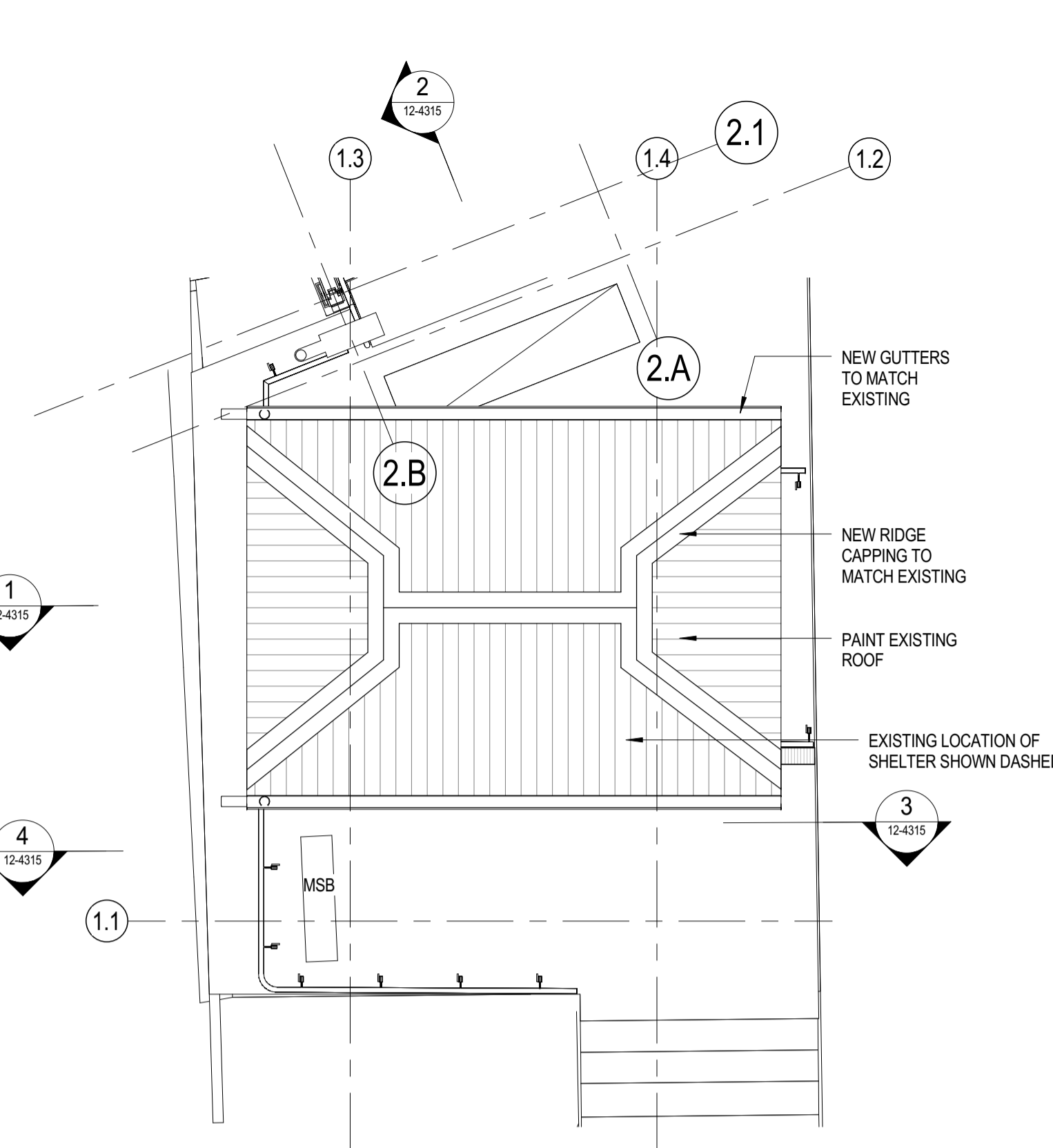
Legend - Keynote	
FLR	FIXED LOCATION READER (OPAL)
MSB	MAIN SWITCH BOARD
T11	BALUSTRADE TYPE 11 - REFER DETAILS
TGSI	TACTILE GROUND SURFACE INDICATOR - REFER SCHEDULE



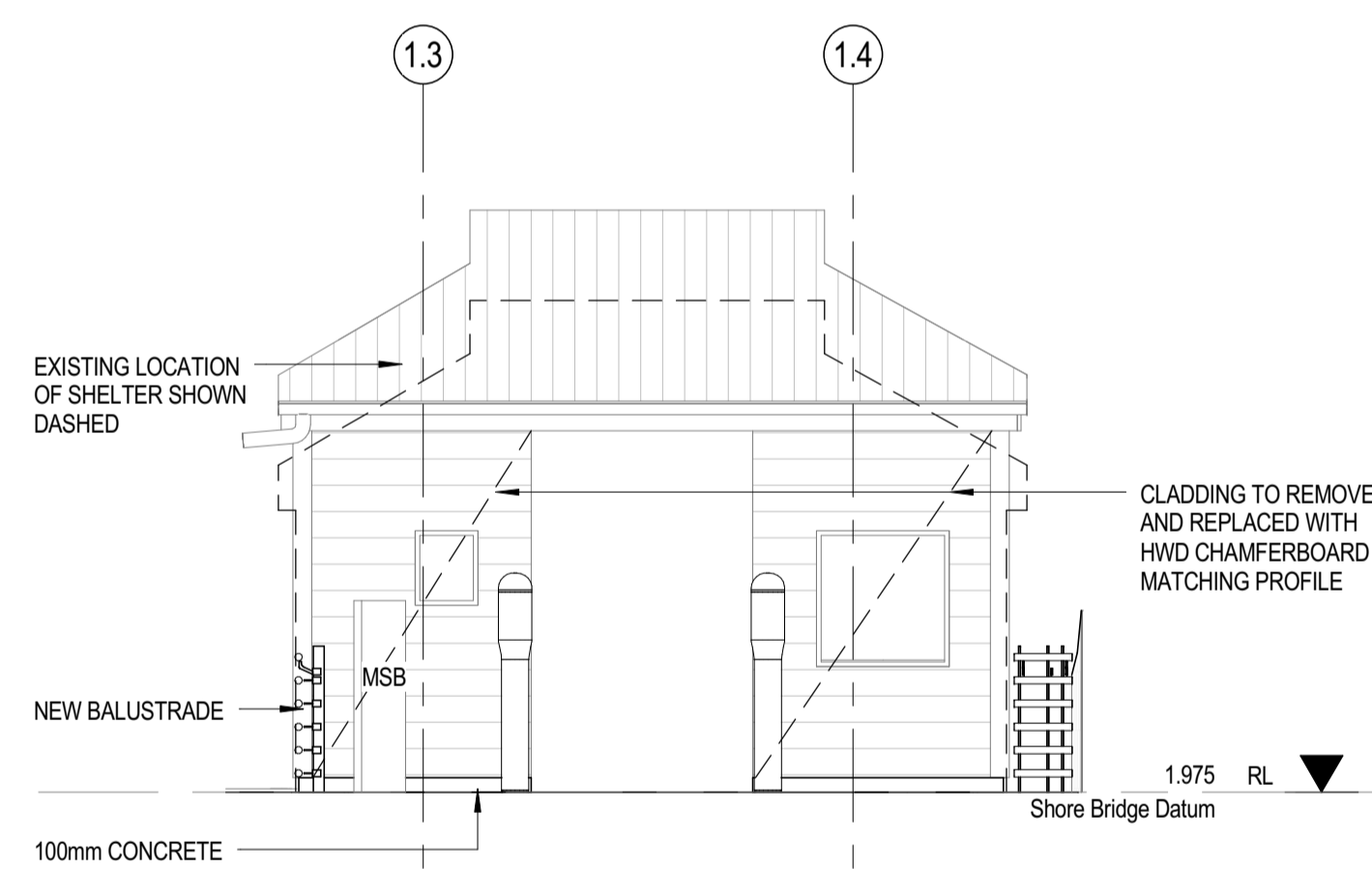
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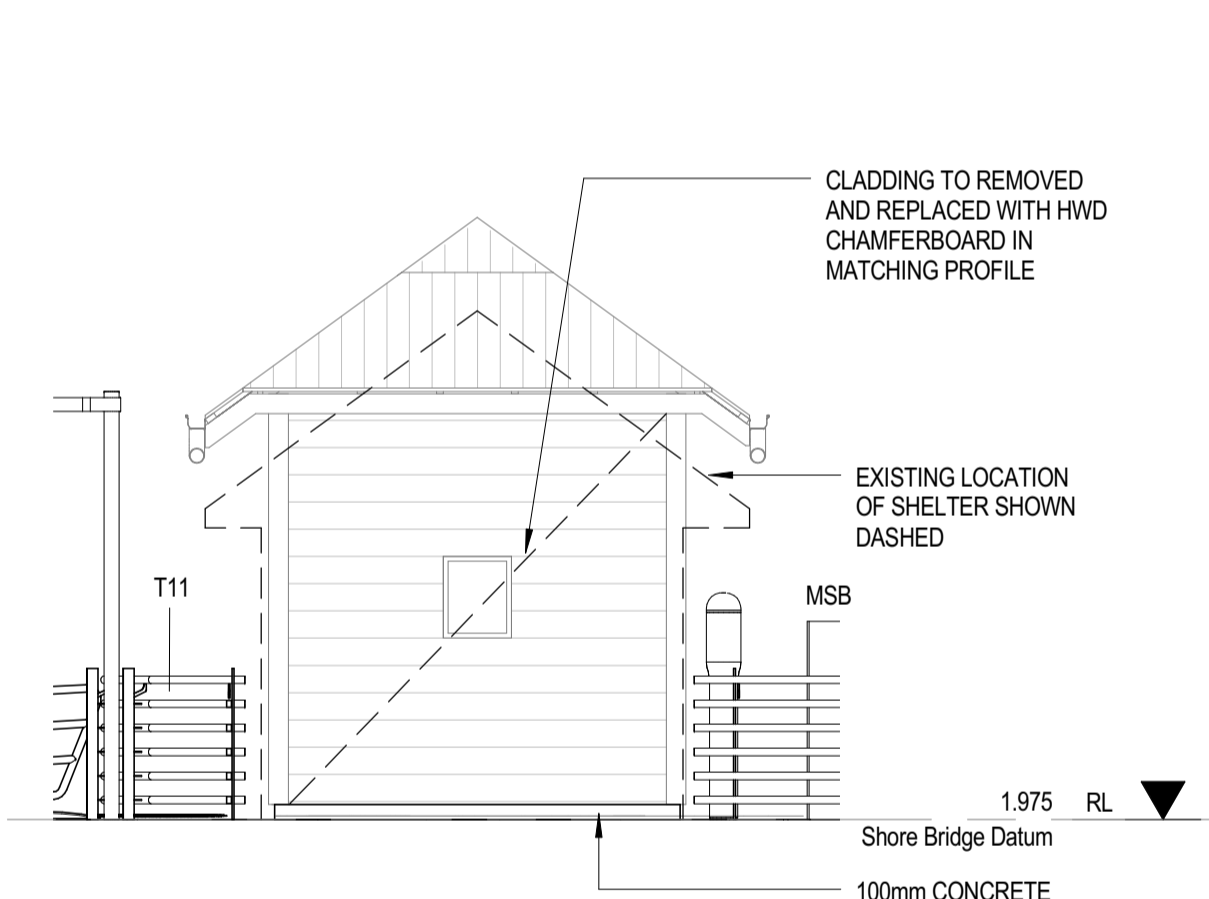
**2 Shelter Reflected Ceiling Plan**  
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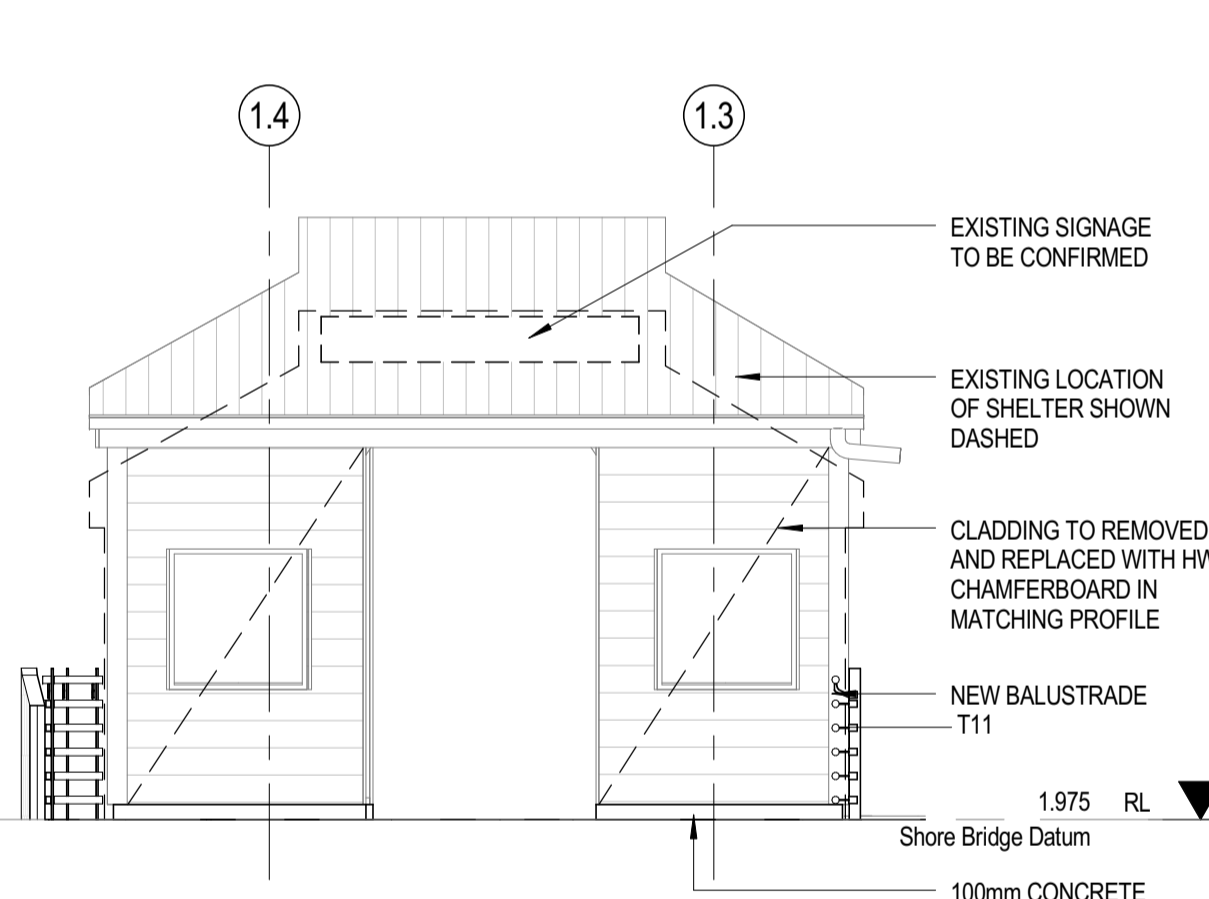
**3 Existing Shelter Roof Plan**  
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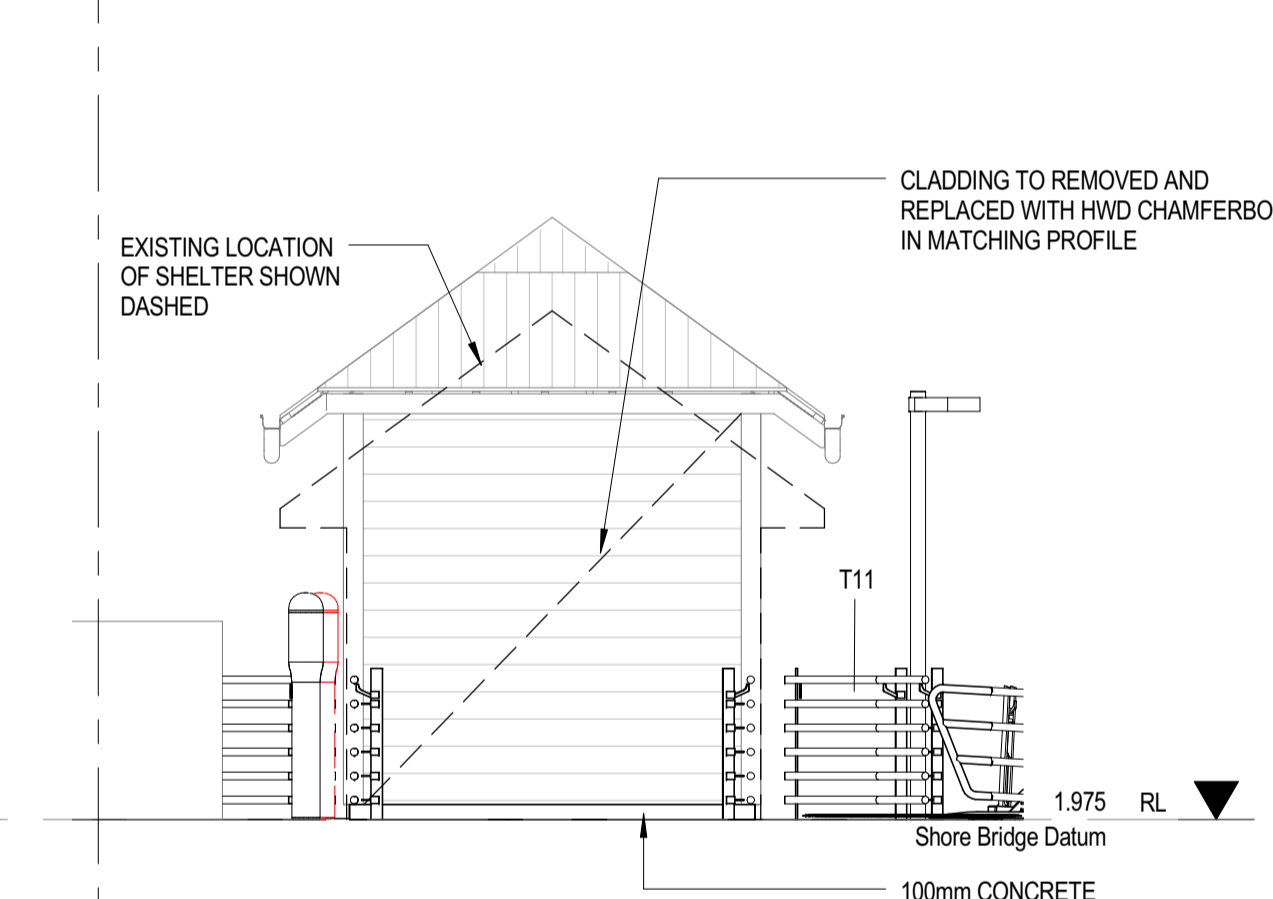
**4 Existing Shelter - South Elevation**  
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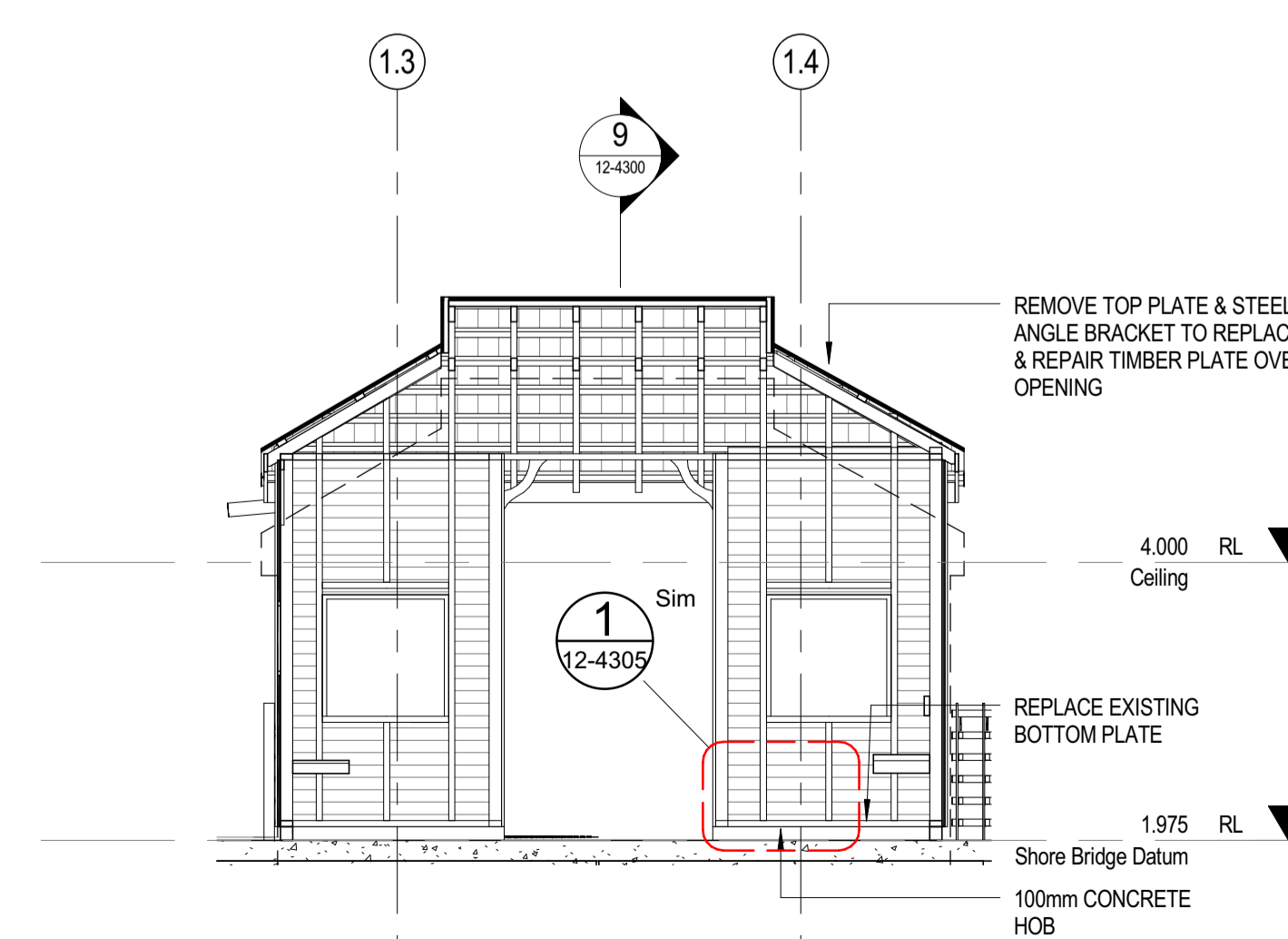
**5 Existing Shelter - West Elevation**  
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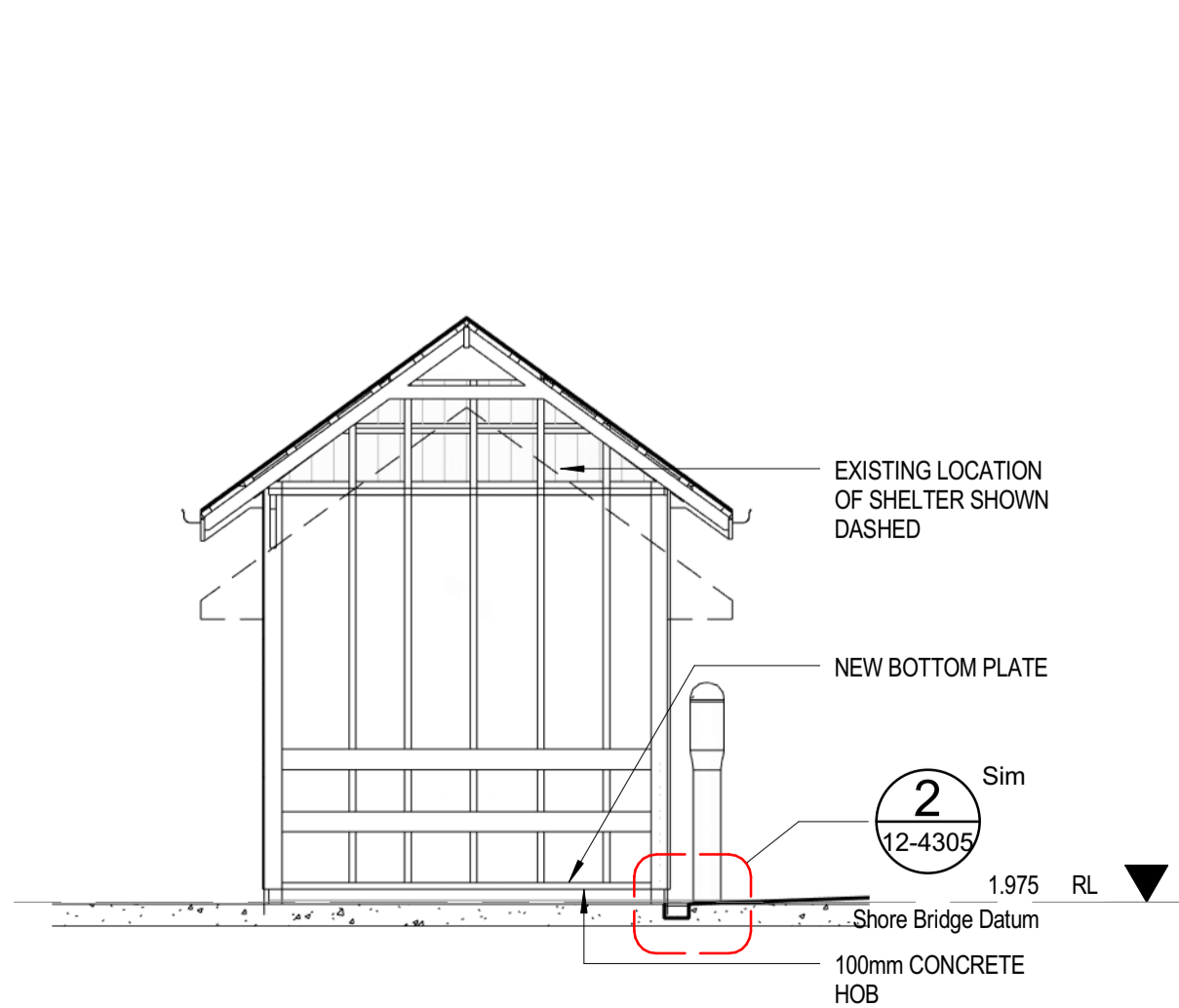
**6 Existing Shelter - North Elevation**  
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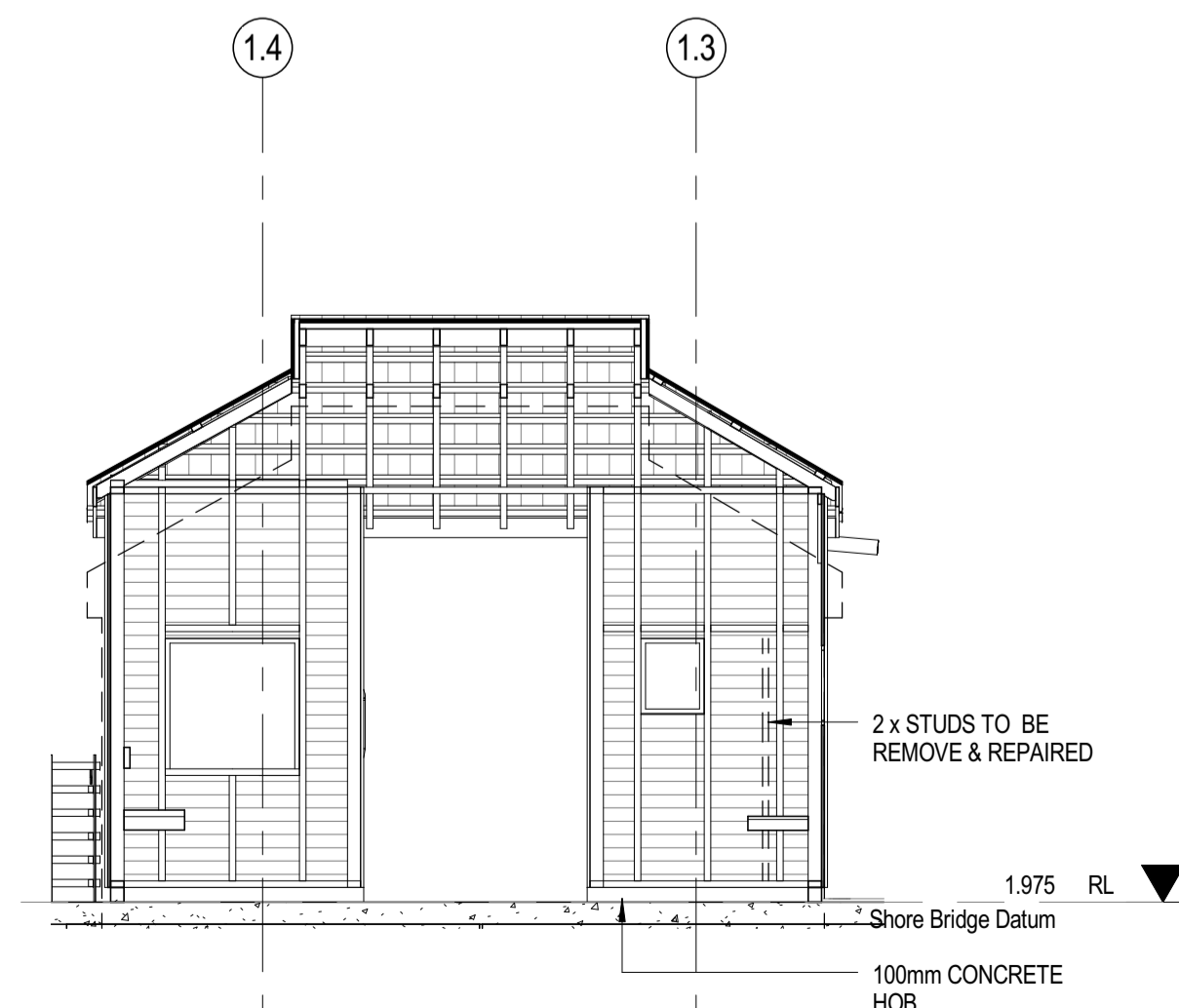
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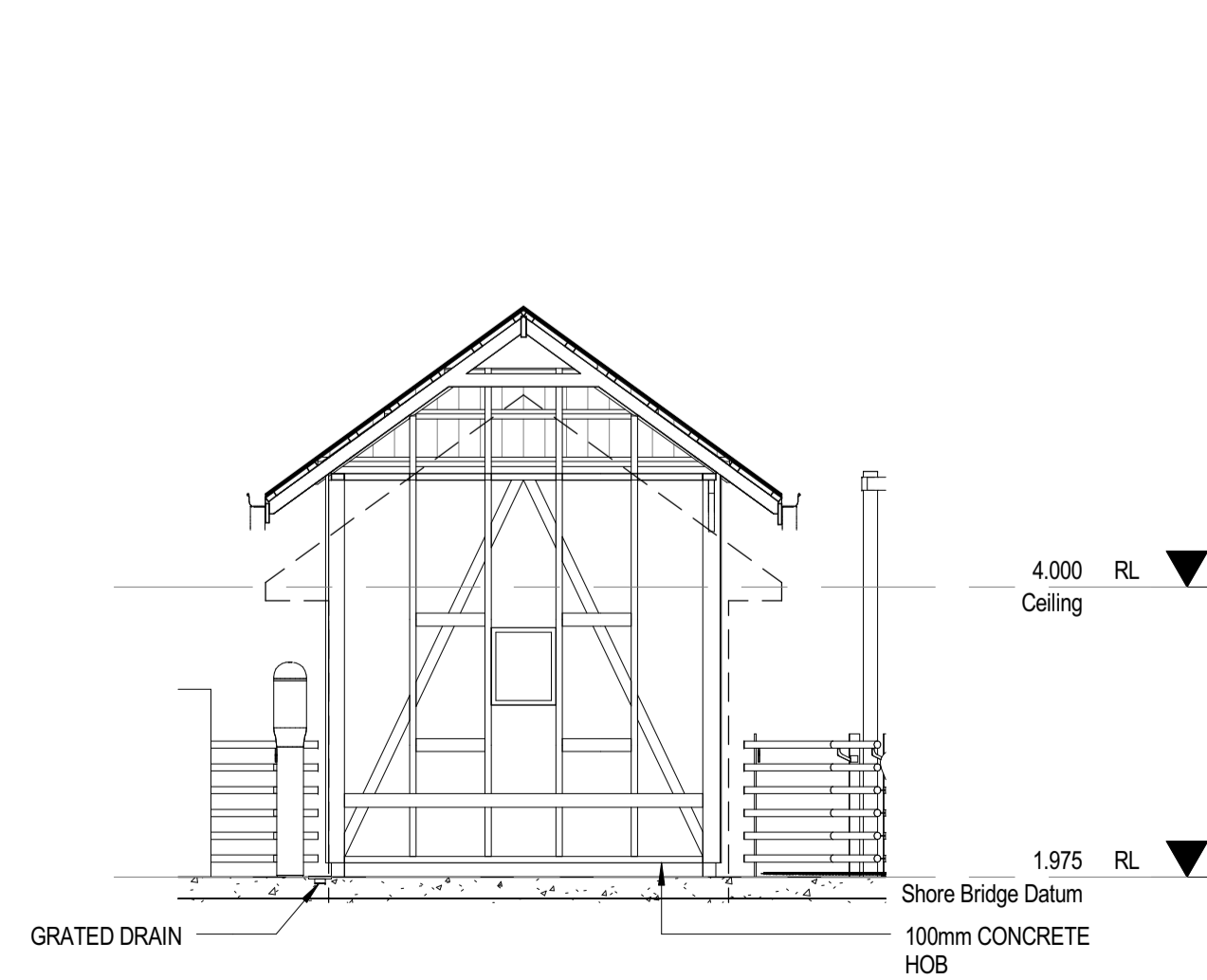
**8 Shelter - Internal Elevation B**  
1:50



**9 Existing Shelter - Section**  
1:50



**10 Shelter - Internal Elevation C**  
1:50



**11 Shelter - Internal Elevation A**  
1:50

SCALE 1:1 @ A1  
mm

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REV	DESCRIPTION	DATE	APPD
1	DRM Issue	17.08.15	
2	Post DRM Issue	20.10.15	
3	25% Coordination Issue	05.04.17	
4	75% Coordination Issue	19.04.17	
A	Issue for Construction	28.04.17	
B	Update - RMS Comments	05.05.17	
C	Landscape Update	08.08.17	

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TRANSPORT AUTHORITY  
**NSW** GOVERNMENT  
**Transport** Roads & Maritime Services

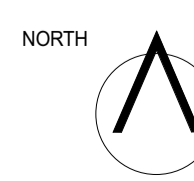
CLIENT  
**hansen yuncken**

PROJECT  
**Ferry Wharves Upgrade Program 2 - Birchgrove Wharf**

DRAWING  
**Existing Wharf Shelter**

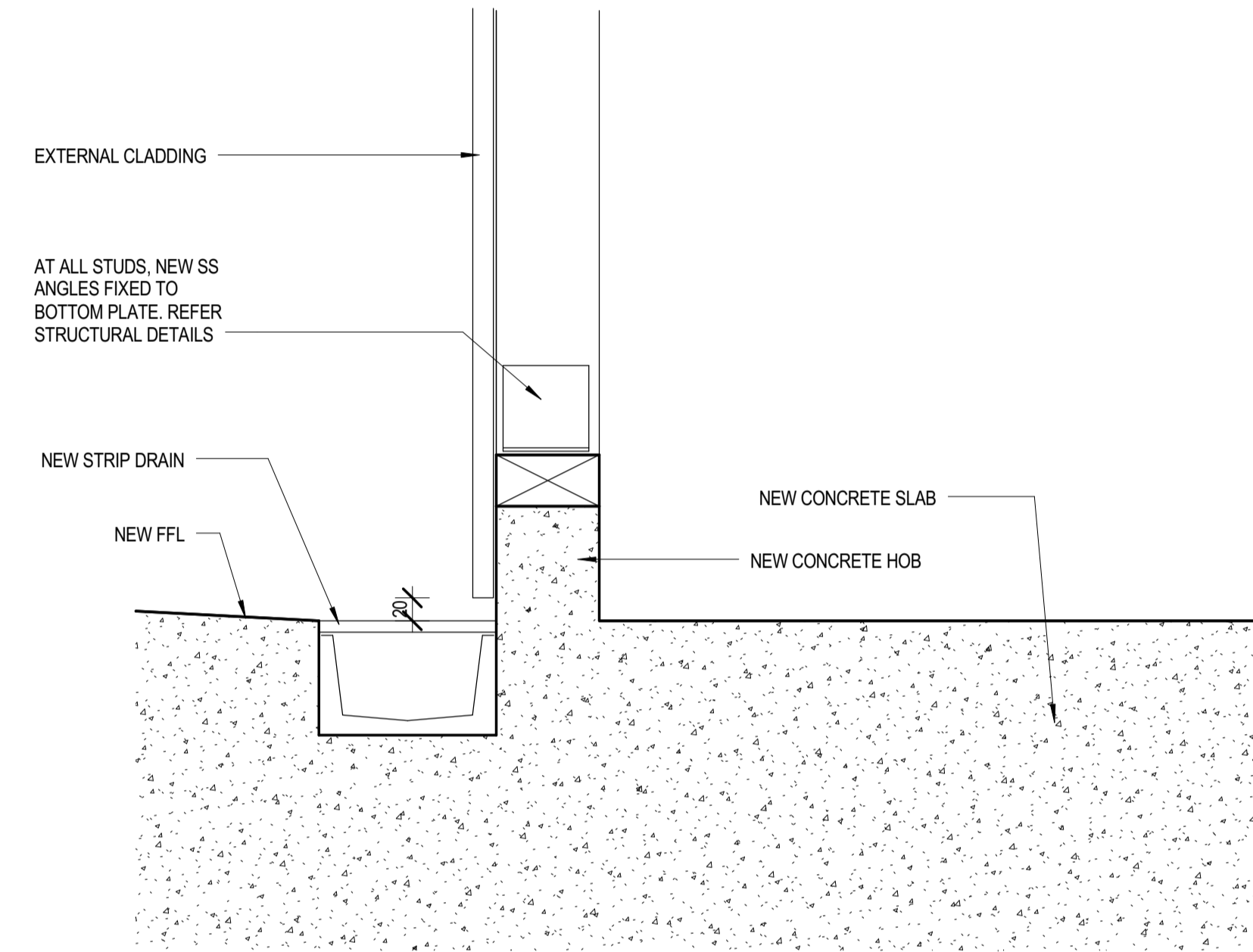
PROJECT No: 14 214 STATUS: CD A1 SCALE: As indicated  
DRAWING No: AR-12-4300 REV: C

**CONSTRUCTION**

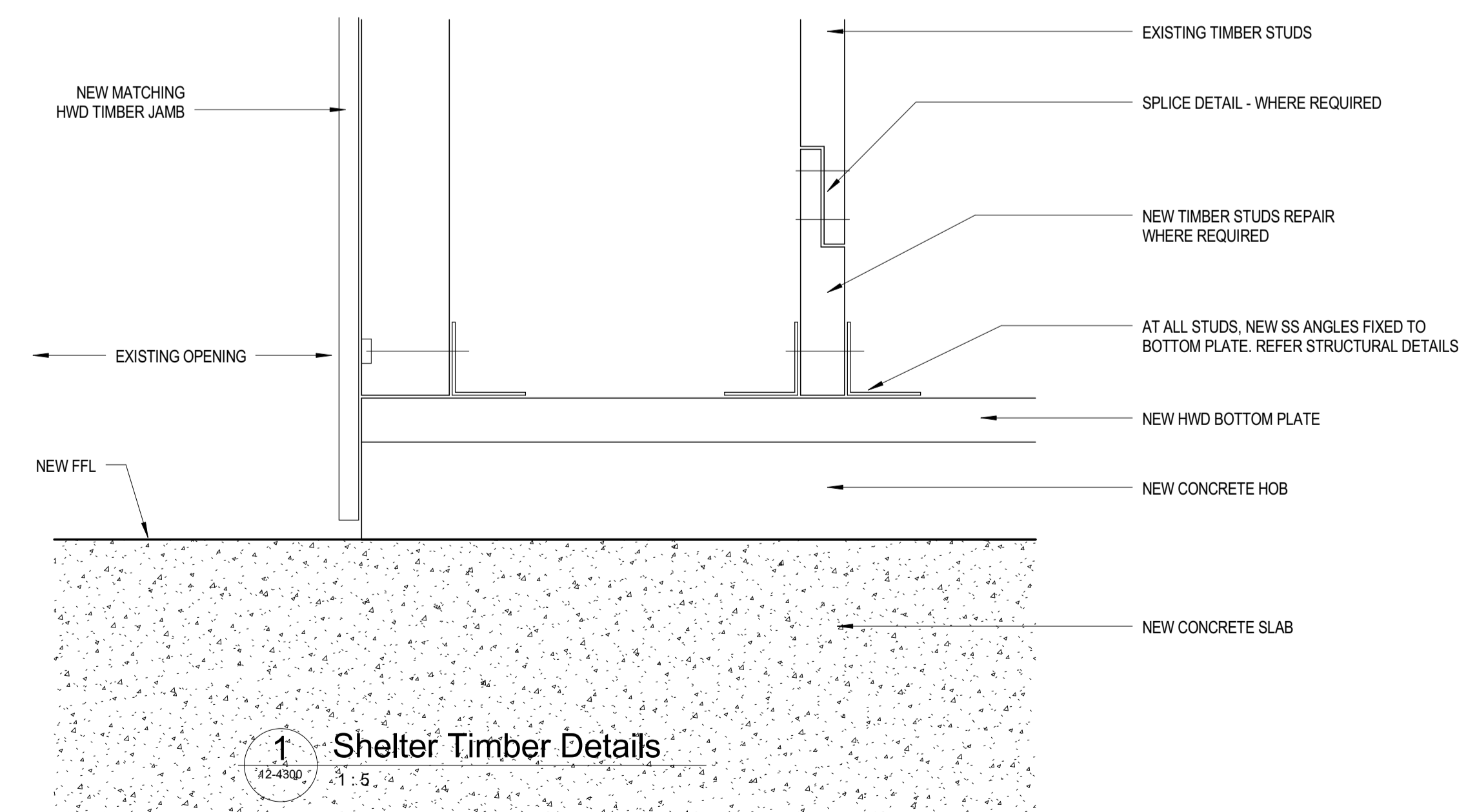




INTERNAL PHOTOS OF EXISTING SHELTER



2 Shelter Timber Details & Strip Drain  
12-4300 1:5



1 Shelter Timber Details  
12-4300 1:5

SCALE 1:1 @ A1  
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REV DESCRIPTION DATE APPD  
A Issue for Construction 28.04.17  
B Update - RMS Comments 05.05.17  
C Landside Update 08.08.17

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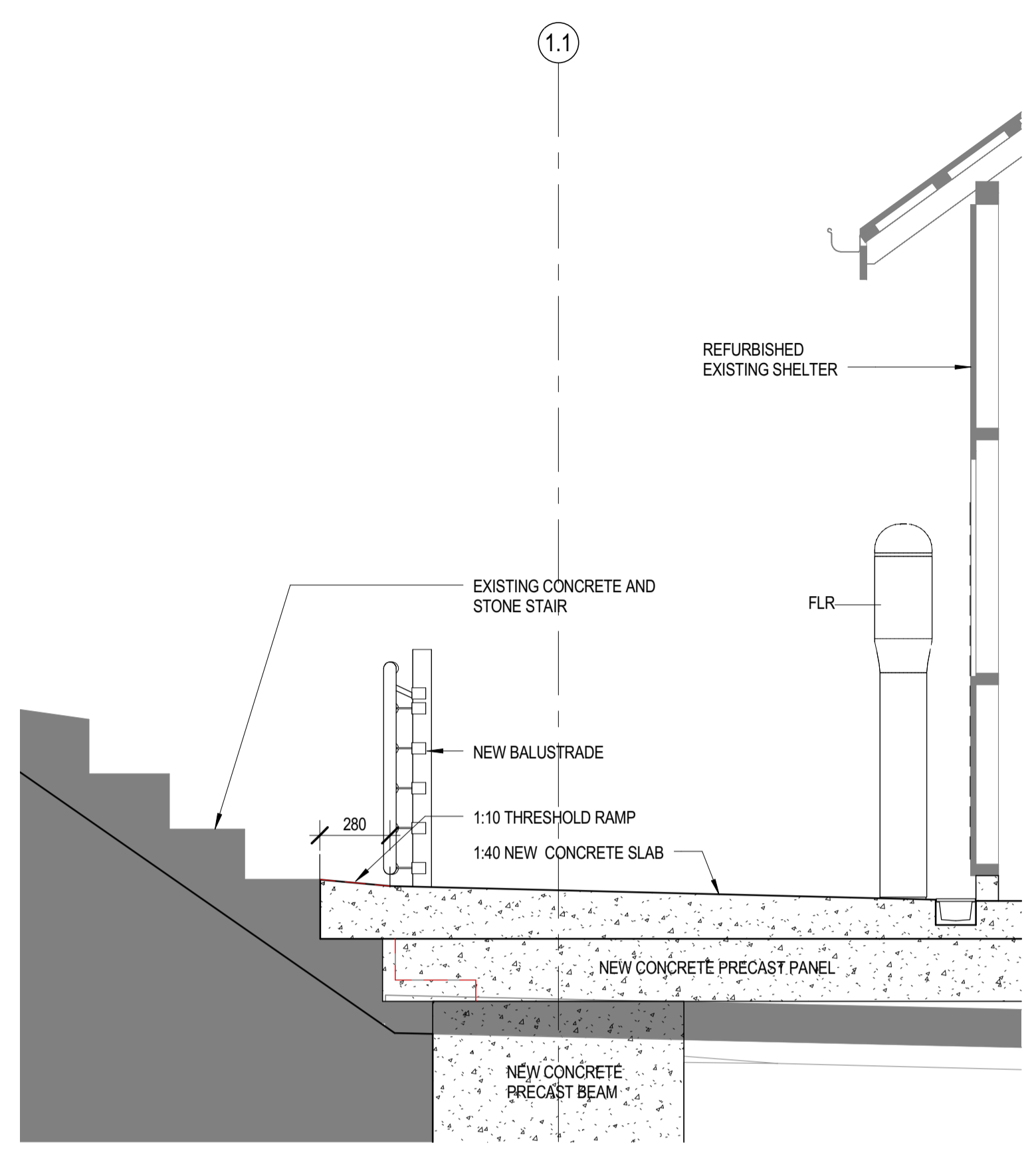
CLIENT  
hansen yuncken

PROJECT  
Ferry Wharves Upgrade Program 2 - Birchgrove Wharf

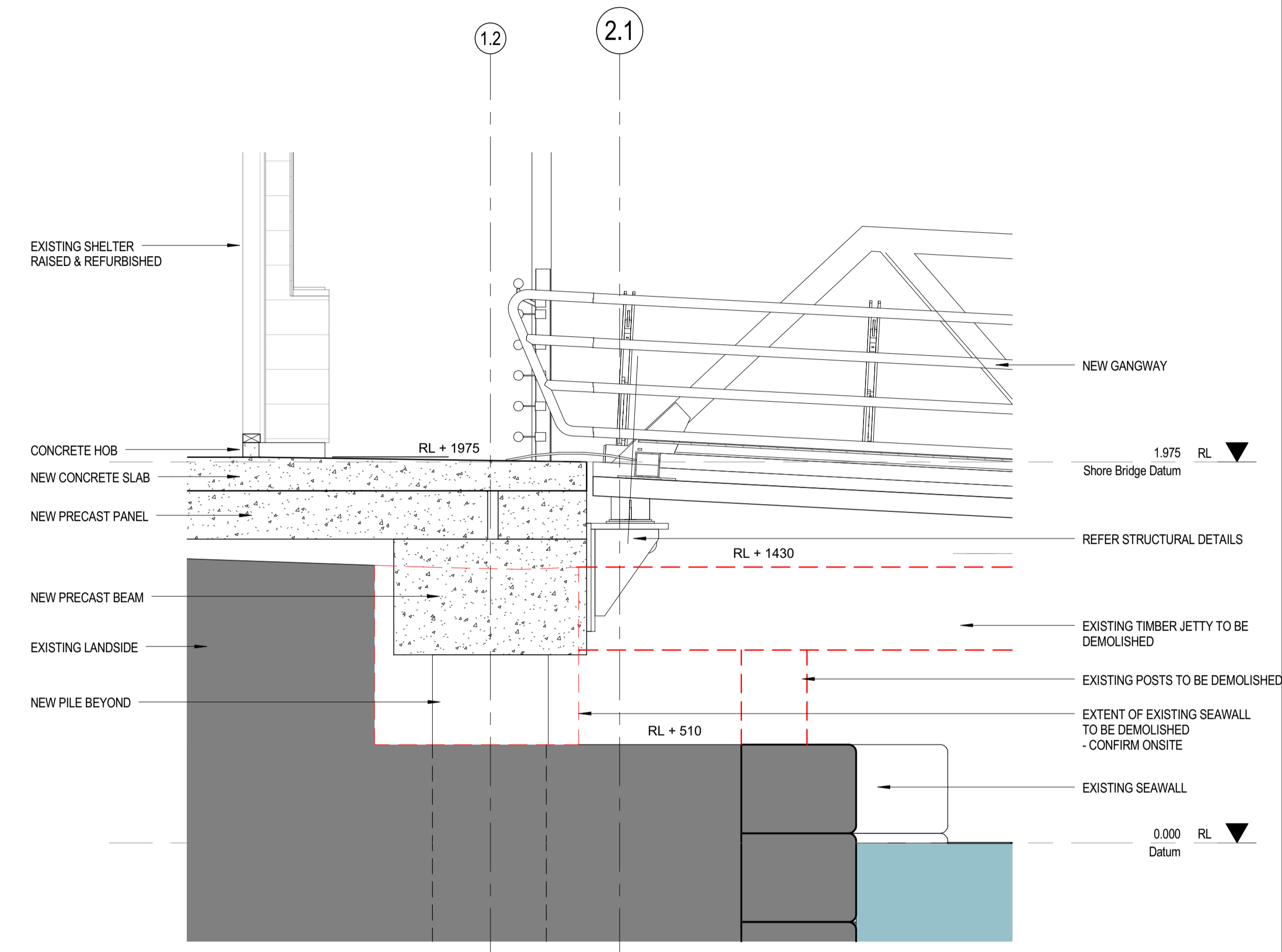
DRAWING  
Shelter Details

PROJECT No: 14 214 STATUS: CD A1 SCALE: 1:5  
DRAWING No: AR-12-4305 REV: C

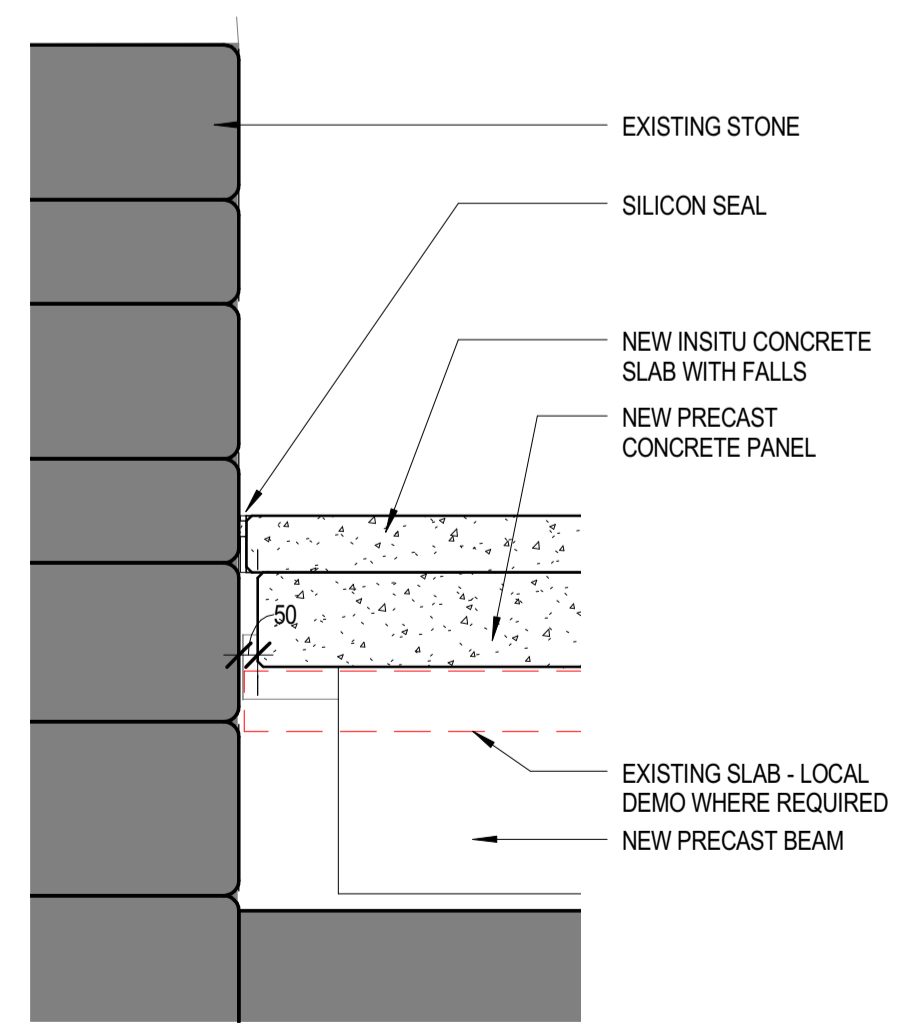
CONSTRUCTION



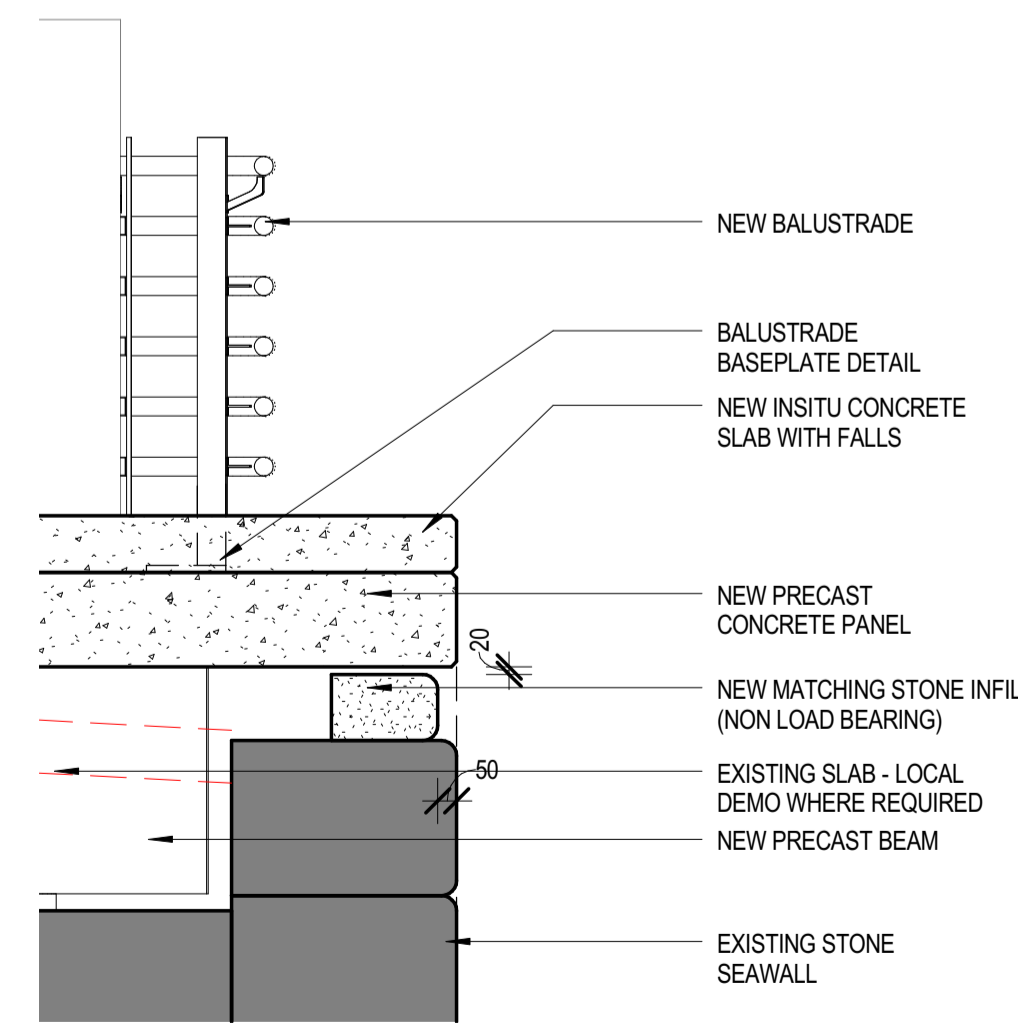
**5** Existing Stair Section  
 12-1010 1:20



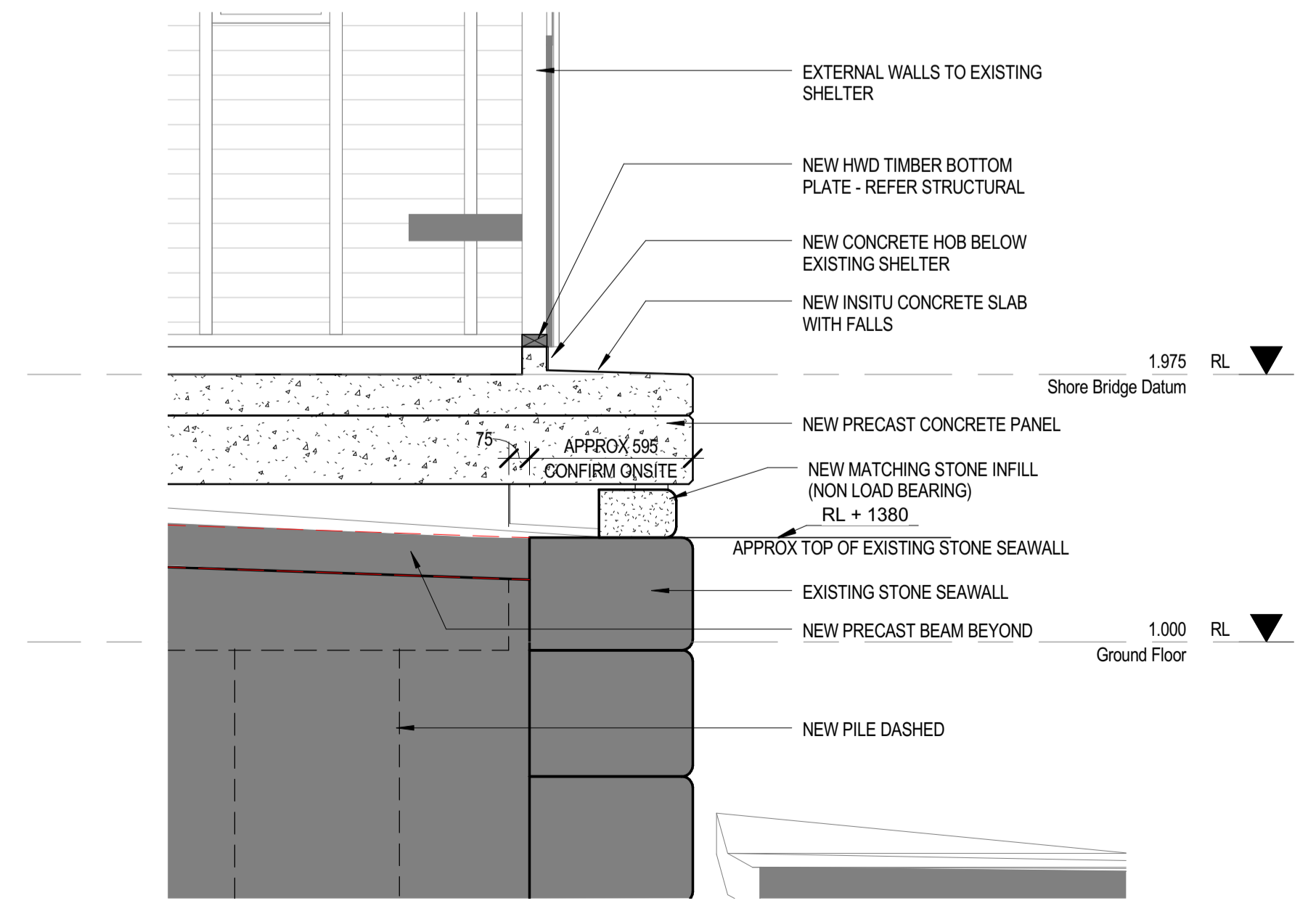
**2** Headstock Section - Detail A  
 12-2100 1:20



**3** Landside - Detail C  
 12-4300 1:20



**4** Landside - Detail D  
 12-2100 1:20



**1** Landside Seawall Detail B  
 12-2100 1:20

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PROJECT  
 Ferry Wharves Upgrade Program 2 - Birchgrove Wharf

DRAWING  
 Landside Details

PROJECT No: 14 214 STATUS: CD A1 SCALE: 1:20  
 DRAWING No: AR-12-4315 REV: D

CONSTRUCTION

