

Swan and Canning Rivers Management Act 2006

PART 5

DETERMINATION OF DEVELOPMENT APPLICATION

FILE NUMBER

2022/0919

APPLICANT

: The University of Western Australia

LANDOWNER

: Swan River Trust (Lot 14555) and Management order to the

Conservation Commission of Western Australia (Lot 300)

LAND DESCRIPTION

UWA Boatshed – 9 Hackett Drive Crawley being Lot 14555

on Plan 32409 (Reserve 17375) and Lot 300 on Plan 47450

(River Reserve 48325)

DEVELOPMENT

Refurbishment of the launching deck at UWA Rowing Club

boat shed

VALID FORM 1 RECEIVED

13 April 2022

DETERMINATION

APPROVAL WITH CONDITIONS

The application to commence development in accordance with the information received on 18 April 2022 is APPROVED subject to the following conditions:

- 1. Approval to implement this decision is valid for two (2) years from the date of this approval. If substantial on-site works have not commenced within this period, a new approval will be required before commencing or completing the development.
- 2. The applicant shall notify the Department of Biodiversity, Conservation and Attractions in writing not less than seven (7) days prior to the commencement of works (Advice Note 1).
- 3. All works are to be undertaken in accordance with a Construction Environmental Management Plan approved by the Department of Biodiversity, Conservation and Attractions (Advice Notes 1 and 2).
- 4. The applicant is to ensure that the Fibre Reinforced Plastic panels are specified for marine environments and are UV treated to the requirements and specifications of the Department of Biodiversity, Conservation and Attractions (Advice Note 1 and 3).
- 5. Monitoring and maintenance of the approved structure shall be undertaken in accordance with a maintenance and inspection plan which is to be submitted to and approved by the Department of Biodiversity, Conservation and Attractions prior to commencement of use (Advice Notes 1 and 4).
- 6. The Fibre Reinforced Plastic shall be removed at the time that it shows signs of degrading and/or releasing plastic fibres / particles into the River.

ADVICE NOTES

1. Notifications can be emailed to rivers.planning@dbca.wa.gov.au.

- 2. The Construction Environmental Management Plan (CEMP) required under **Condition 2** shall describe how the proposed works will be managed to minimise potential environmental impacts and shall address, but not be limited to:
 - a. contact details of essential site personnel, construction period and operating hours:
 - b. scope of works, including timeframes for works, deconstruction and construction methodology;
 - c. detail of machinery and vehicles proposed to operate on site;
 - d. site access and management, including any temporary fencing requirements;
 - e. management of machinery and equipment;
 - f. details of measures to protect the river from contamination including:
 - i. all plastic products should be treated to ensure microplastics will not be emitted and mobilised into the environment;
 - ii. cutting or drilling of Fibre Reinforced Plastic should be completed off-site where possible;
 - iii. dust/shavings/off-cuts should be captured at the point of modification and responsibly disposed of offsite;
 - iv. any painting or application of surface treatments shall be carried out either by hand brush or roller method; and
 - v. refueling protocols noting that refueling should take place outside of the Swan Canning Development Control Area if possible, or within an appropriate impervious bund.
 - g. detailed site map showing the location of any:
 - i. signage, including the contact details of essential site personnel;
 - ii. perimeter fencing and hoarding;
 - iii. the laydown area and vehicle entry/exit points;
 - iv. protected vegetation;
 - v. areas of excavation and stockpiling of soil;
 - vi. on-site storage and bunding of materials and equipment; and
 - vii. traffic access and parking.
 - h. incident response measures and procedures including:
 - i. mechanisms for complaints and incidents.
 - ii. provision of a spill kit at all times on the project site suitable for containing and clean up any spills.
 - iii. measures to document and respond to incidents of damage, sediment plumes, pollution or spills within the Swan Canning Development Control Area noting also that incidents are to be reported immediately to the Department of Biodiversity, Conservation and Attractions Duty Officer (Riverpark) on 9278 0981 (24 hrs) or Pollution Response Officer (Marine) on 9480 9924 (24 hrs);
 - iv. proposed contingency actions if environmental controls are inadequate;
 and
 - v. procedures to ensure that in the event of an incident, the Department of Biodiversity, Conservation and Attractions, Rivers and Estuaries Branch is notified within 48 hours and all damage is made good.

In addition to the above, the applicant shall ensure that all contractors and personnel involved in the works, activities, operations and/or development approved by the

- Department of Biodiversity, Conservation and Attractions are familiar with the conditions and requirements of this approval at all times.
- 3. Regarding **Condition 4**, fibre reinforced plastic products should include UV treatments, either UV stable resins or if they are painted, a UV stable paint. This should be in the material specification to ensure material longevity and reduce the risk of plastic deterioration over time.
- 4. Regarding Conditions 5 and 6, a Maintenance and Inspection plan shall:
 - a. commit to corrective action when the product needs repair and replacement;
 - b. commit to examination of any product used for trafficable surfaces including fibre reinforced plastic surfaces; and
 - c. be undertaken annually.
- 5. The Department of Transport (DoT) requires the applicant to:
 - a. ensure all on water operations and activities are conducted in accordance with the relevant marine legislative provisions (i.e. display of the international code flag "A" whilst diving operations are underway);
 - b. The applicant or works contractor is to provide notification of the works to DoT a minimum of 21 days prior to the works commencing by email to: navigational.safety@transport.wa.gov.au. Upon review of methodology, the works area and navigational marking it will be determined whether a Temporary Notice to Mariners is required.
- 6. In case of damage or pollution events, the Department of Biodiversity, Conservation and Attractions can be contacted on 9278 0981 (Riverpark Duty Officer) or 9480 9924 (Marine Pollution Response).
- 7. The applicant is advised that the Department of Biodiversity, Conservation and Attractions is in early scoping phase of formulating a scientific study to examine the length of time before Fibre Reinforced Plastic products start to break down release particles into the environment. The department reserves the right to monitor, as part of a scientific study, any Fibre Reinforced Plastic products within the River reserve.

Hon Reece Whitby MLA

MINISTER FOR ENVIRONMENT

Date: 12/9/2077

FILE: 2022/0919

DEPARTMENT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS REPORT

PROPOSAL	Refurbishment of the launching deck at UWA Rowing Club boat shed			
LOCATION	UWA Boatshed – 9 Hackett Drive, Crawley being Lot 14555 on Plan 32409 (Reserve 17375) and Lot 300 on Plan 47450 (River Reserve 48325)			
COST	\$165,000			
APPLICANT	The University of Western Australia			
LANDOWNER	Lot 300 on Plan 47450 – Management order to the Conservation Commission of Western Australia; and			
	Lot 14555 on Plan 32409 – Swan River Trust			
LOCAL GOVERNMENT	City of Perth			
MRS CLASSIFICATION	Parks and Recreation Reserve and Waterways			
DECISION TYPE	Part 5, Swan and Canning Rivers Management Act 2006, Ministerial Determination			
ATTACHMENTS	1. Location map			
	2. External referral responses:			
	a. City of Perth			
	b. Department of Transport			
	Application, site photos, plans and maintenance and inspection Plan			
RECOMMENDATION	APPROVAL WITH CONDITIONS			

1. INTRODUCTION

- 1.1 The Department of Biodiversity, Conservation and Attractions (DBCA) has received an application from The University of Western Australia (UWA), proposing refurbishment and upgrade to the launching ramp and decking at the UWA Rowing Club boat shed at Matilda Bay Reserve, Hackett Drive, Crawley (Attachment 1). The location of the boat ramp is within the lower Swan-Canning River Estuary. The proposal includes recoating some sections of steel, repairing some of the pile caps and removing the lower section of wooden decking and replacing it with Fibre Reinforced Plastic (FRP) mini mesh panels (https://naturetread.com/).
- 1.2 The Rowing Club boat shed is within an area of open space reserved as Parks and Recreation under the Metropolitan Region Scheme (Matilda Bay Reserve No.17375). Matilda Bay Reserve is vested via a management order to the Conservation Commission of Western Australia. The boat ramp that is proposed to be

refurbished/upgraded is within the Swan Canning River reserve (River Reserve 48325).

- 1.3 The proposed development is to occur on land entirely within the Swan Canning Development Control Area and therefore requires an approval from the Minister for Environment in accordance with Part 5 of the Swan and Canning Rivers Management Act 2006 (SCRM Act).
- 1.4 The Director General of DBCA has prepared this report in accordance with section 75 of the SCRM Act.

2. CONSULTATION

The proposal was referred to the City of Perth (the City) and Department of Transport (DoT) for comment.

City of Perth

- 2.1 The City advised that it has no objections to the proposed refurbishment works and supports this proposal without recommended conditions.
- 2.2 Comments from the City are provided in **Attachment 2A**.

The Department of Transport

- 2.3 DoT advised that it has no objections to the proposal subject to general compliance with marine legislation and standard notification to DoT prior to the commencement of work. These requirements have been included as an advice note to the applicant.
- 2.4 Comments from DoT are provided in Attachment 2B.

3. PUBLIC CONSULTATION - SUBMISSIONS ON DRAFT REPORT

- 3.1 In accordance with the requirements of Part 5 of the SCRM Act, a copy of the draft report and proposed recommendation was provided to the applicant and the relevant stakeholders being DoT and the City of Perth. A copy was also published on the DBCA website for a period of 14 days between 5 August 2022 and 18 August 2022 with an invitation for public submissions.
- 3.2 No submissions were received.

4. RELEVANT POLICIES AND PLANS

- State Planning Policy 2.10 Swan-Canning River System (SPP 2.10)
- Corporate Policy Statement No. 42 Planning for Land Use, Development and Permitting Affecting the Swan Canning Development Control Area (Policy 42)
- Corporate Policy Statement No. 43 Planning for Marinas, Yacht Clubs and Aquatic
 Clubs in the Swan Canning Development Control Area (Policy 43)
- Corporate Policy Statement No. 44 Planning for Jetties in the Swan Canning Development Control Area (Policy 44)
- Corporate Policy Statement No. 45 Planning for Miscellaneous Structures and Facilities in the Swan Canning Development Control Area (Policy 45)

5. ENVIRONMENTAL AND PLANNING CONSIDERATIONS

- Environmental protection/ecological health
- Amenity and public access

6. BACKGROUND

- 6.1 In October 2007, the UWA Rowing Club received approval under the SCRM Act for an application to replace an earlier launching ramp with a steel frame timber decked launching ramp.
- 6.2 In 2020, the UWA Rowing Club obtained a permit under the SCRM Regulations to renourish the sand embankment to the south of the boat shed at the rear of the Watersports Complex.

7. DISCUSSION

Environmental protection

- 7.1 Policy 42 aims to ensure that land use and development on and adjacent to the river system maintains and enhances the quality and amenity of the river environment. The proposed development should be carefully undertaken to prevent detrimental impacts.
- 7.2 Policy 44 states that applications for jetties need to demonstrate they are minimising and managing effects on the ecological health of the Swan Canning River system.
- 7.3 DBCA has recently begun to consider the potential long-term environmental impact of FRP products on the ecological health of the River. It is assumed that FRP products deteriorate over time and release plastic fibres into the environment. Currently, DBCA does not have any evidence relating to the life of FRP products, what environmental conditions (if any) hasten the breakdown of the product, and what is the optimal maintenance guideline or life of the product before it starts to release plastics into the River.
- 7.4 Currently, the UWA Rowing Club is using plastic netting pinned/nailed to the decking boards to provide a non-slip surface. This existing product will also release plastics into the environment as it starts to deteriorate but is easily replaced as it begins to show signs of deterioration.
- 7.5 FRP products have been used in other locations in the Riverpark and may potentially become the product that applicants (such as yacht clubs and rowing clubs) prefer to use in their jetties and boat ramps.
- 7.6 More information about FRP products and any potential impact to the ecosystem is needed, and DBCA's Rivers and Estuaries Science program is in the early stages of formulating a scientific study to examine the potential environmental effects.
- 7.7 Potential issues associated with use of plastic products within the Riverpark are:
 - Release of microplastics into the environment when they decompose due to wear or exposure to ultraviolet (UV) light.
 - Plastic material created as waste during construction, including swathe from cutting and drilling. This needs to be contained and managed during construction.

- Microplastics do not breakdown in the environment over time.
- Post-use recycling and reuse of these materials is limited, while some might be recycled, they are in effect single use products.
- General function of materials compared to traditional materials is different.
- 7.8 The applicant has provided an annual maintenance and inspection plan (Attachment 3) that includes:
 - Low pressure wash
 - Visual inspection of the condition of the FRP grating to monitor any breakdown of the material
 - For lightly damaged areas, recoat the FRP material with regular FRP resin and seal any loose fibres
 - For more extensive damage/deterioration, replace with new FRP panels
 - Inspect the clips securing the decking to the stringers and repair or replace any loose clips
 - Inspect timber rubbing strips (edge trims) and repair or replace loose timber
- 7.9 To reduce the risk of release of microplastics into the river system and to manage the degradation of the materials, conditions are recommended that require specific UV treatments of the FRP and regular maintenance and monitoring of the product, with replacement of the product when it shows signs of serious deterioration.

Amenity and public access

- 7.10 Policy 45 and SPP2.10 requires the proposed development to enhance the public's access to, and enjoyment of, the river.
- 7.11 Policy 44 applies to applications including wharves, piers, platforms, slipways, launching ramps, boat houses, and boatsheds over water. The policy requires applications to demonstrate they are providing a public benefit and contributing to the long-term community use and enjoyment of the river system.
- 7.12 The UWA boat shed is an important community facility providing a rowing and kayak launch facility to the River. Boat houses and launch ramps in this location have a historic context and contribute to the overall amenity and enjoyment of the River.
- 7.13 The proposal does not change the size, profile, or appearance of the launch ramp. The works are needed to ensure the structural integrity and safety of the ramp.
- 7.14 The proposal includes repairs to the pile caps but does not include the replacement of piles. There will be no disturbance to the riverbed, therefore there is little risk to the heritage significance of the River.

8. SWAN RIVER TRUST

8.1 In accordance with section 75(3A) of the SCRM Act, the Swan River Trust (the Trust) considered DBCA's draft report at its meeting of 21 June 2022. The Trust discussed the use of FRP and agreed with DBCA regarding the need for further research and appropriate conditions to manage potential environmental impacts associated with its use. The Trust resolved to advise the Director General of DBCA that it supports the report and recommendation as outlined in the draft report.

9. CONCLUSION

- 9.1 Subject to inclusion of appropriate conditions, the proposal which includes recoating sections of steel, repairing some of the pile caps and removing the lower section of wooden decking and replacing it with FRP mini mesh panels will not have any adverse impacts on the River. Any potential effects can be mitigated by conditions of the approval that ensure regular maintenance and monitoring of the product for degradation.
- 9.2 The proposal is recommended for approval, subject to conditions and advice.

10. RECOMMENDATION - APPROVAL WITH CONDITIONS

That the Director General of DBCA advises the Minister for Environment that the proposal for upgrade and maintenance of the UWA boat ramp at 9 Hackett Drive Crawley being Lot 14555 on Plan 32409 (Reserve 17375) and Lot 300 on Plan 47450 (River Reserve 48325), as described in the application received on 13 April 2022, be approved, subject to the following conditions:

CONDITIONS

- 1. Approval to implement this decision is valid for two (2) years from the date of this approval. If substantial on-site works have not commenced within this period, a new approval will be required before commencing or completing the development.
- 2. The applicant shall notify the Department of Biodiversity, Conservation and Attractions in writing not less than seven (7) days prior to the commencement of works (Advice Note 1).
- 3. All works are to be undertaken in accordance with a Construction Environmental Management Plan approved by the Department of Biodiversity, Conservation and Attractions (Advice Notes 1 and 2).
- 4. The applicant is to ensure that the Fibre Reinforced Plastic panels are specified for marine environments and are UV treated to the requirements and specifications of the Department of Biodiversity, Conservation and Attractions (Advice Note 1 and 3).
- 5. Monitoring and maintenance of the approved structure shall be undertaken in accordance with a Maintenance and Inspection Plan which is to be submitted to and approved by the Department of Biodiversity, Conservation and Attractions prior to commencement of use (Advice Notes 1 and 4).
- 6. The Fibre Reinforced Plastic shall be removed at the time that it shows signs of degrading and/or releasing plastic fibres/particles into the River.

ADVICE NOTES

- 1. Notifications can be emailed to rivers.planning@dbca.wa.gov.au.
- 2. The Construction Environmental Management Plan (CEMP) required under Condition 2 shall describe how the proposed works will be managed to minimise potential environmental impacts and shall address, but not be limited to:
 - a. contact details of essential site personnel, construction period and operating hours;
 - b. scope of works, including timeframes for works, deconstruction and construction methodology;
 - c. detail of machinery and vehicles proposed to operate on site;
 - d. site access and management, including any temporary fencing requirements;

- e. management of machinery and equipment;
- f. details of measures to protect the river from contamination including:
 - i. all plastic products should be treated to ensure microplastics will not be emitted and mobilised into the environment;
 - ii. cutting or drilling of Fibre Reinforced Plastic should be completed off-site where
 - iii. dust/shavings/off-cuts should be captured at the point of modification and responsibly disposed of offsite;
 - iv. any painting or application of surface treatments shall be carried out either by hand brush or roller method; and
 - v. refueling protocols noting that refueling should take place outside of the Swan Canning Development Control Area if possible, or within an appropriate impervious bund.
- g. a detailed site map showing the location of any:
 - i. signage, including the contact details of essential site personnel;
 - ii. perimeter fencing and hoarding;
 - iii. the laydown area and vehicle entry/exit points;
 - iv. protected vegetation;
 - v. areas of excavation and stockpiling of soil;
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- h. incident response measures and procedures including:
 - i. mechanisms for complaints and incidents.
 - ii. provision of a spill kit at all times on the project site suitable for containing and clean up any spills.
 - iii. measures to document and respond to incidents of damage, sediment plumes, pollution or spills within the Swan Canning Development Control Area noting also that incidents are to be reported immediately to the Department of Biodiversity, Conservation and Attractions' Duty Officer (Riverpark) on 9278 0981 (24 hrs) or Pollution Response Officer (Marine) on 9480 9924 (24 hrs);
 - iv. proposed contingency actions if environmental controls are inadequate; and
 - v. procedures to ensure that in the event of an incident, the Department of Biodiversity, Conservation and Attractions, Rivers and Estuaries Branch is notified within 48 hours and all damage is made good.

In addition to the above, the applicant shall ensure that all contractors and personnel involved in the works, activities, operations and/or development approved by the Department of Biodiversity, Conservation and Attractions are familiar with the conditions and requirements of this approval at all times.

- 3. Regarding **Condition 4**, fibre reinforced plastic products should include UV treatments, either UV stable resins or if they are painted, a UV stable paint. This should be in the material specification to ensure material longevity and reduce the risk of plastic deterioration over time.
- 4. Regarding Conditions 5 and 6, a maintenance and inspection plan shall:
 - a. commit to corrective action when the product needs repair and replacement;
 - b. commit to examination of any product used for trafficable surfaces including fibre reinforced plastic surfaces; and
 - c. be undertaken annually.
- 5. The Department of Transport (DoT) requires the applicant to:

- ensure all on water operations and activities are conducted in accordance with the relevant marine legislative provisions (i.e. display of the international code flag "A" whilst diving operations are underway);
- b. The applicant or works contractor is to provide notification of the works to DoT a minimum of 21 days prior to the works commencing by email to: navigational.safety@transport.wa.gov.au. Upon review of methodology, the works area and navigational marking it will be determined whether a Temporary Notice to Mariners is required.
- 6. In case of damage or pollution events, the Department of Biodiversity, Conservation and Attractions can be contacted on 9278 0981 (Riverpark Duty Officer) or 9480 9924 (Marine Pollution Response).
- 7. The applicant is advised that the Department of Biodiversity, Conservation and Attractions is in early scoping phase of formulating a scientific study to examine the length of time before Fibre Reinforced Plastic products start to break down release particles into the environment. The department reserves the right to monitor, as part of a scientific study, any Fibre Reinforced Plastic products within the River reserve.

FINAL	REP	ORT	END	ORSED
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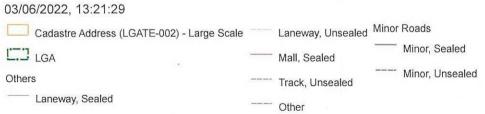
Signed:

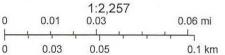
Mark Webb

Director General

Locate WA







Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, LANDGATE/SLIP, SLIP/LANDGATE, SLIP/Landgate,



Your ref: 2022/0919

Mandy Sherring – Planning Officer
Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
17 Dick Perry Avenue
KENSINGTON WA 6983

Dear Mandy

9 (LOT 14555) HACKETT DRIVE, CRAWLEY - REFURBISHMENT OF BOAT SHED LAUNCHING DECK

Thank you for your letter dated 3 May 2022 referring an application for refurbishment of boat shed launching deck at the subject site to the City for comment.

It is advised that the City has no objections to the proposed refurbishment works and supports this proposal unconditionally. Please note that a building permit will not be required for the proposed works.

Ashlee Buck of the City's Development Approvals Unit is available on 08 9461 3340 to assist you with any further queries you may have relating to this matter.

Yours sincerely

JULIA KINGSBURY

ALLIANCE MANAGER DEVELOPMENT APPROVALS

24 May 2022

Mandy Sherring

From:

Navigational Safety < Navigational. Safety@transport.wa.gov.au >

Sent:

Wednesday, 11 May 2022 9:43 AM

To:

Rivers Planning

Cc: Subject: Navigational Safety
FW: Referral for Comment - Part 5 - 2022/0919 - Refurbishment of boat shed launching

deck - Lot 14555, 9 Hackett Drive, Crawley - The University of Western Australia

Categories:

Filing

[External Email] This email was sent from outside the department – be cautious, particularly with links and attachments. Good morning

Re: Referral for Comment - Part 5 - 2022/0919 - Refurbishment of boat shed launching deck - Lot 14555, 9 Hackett Drive, Crawley - The University of Western Australia

Thank you for your email below dated 2 May 2022 requesting comment from the Department of Transport (DoT) in relation to the above mentioned proposal.

DoT Navigational Safety has considered this proposal as outlined in the attached permit application from a navigational perspective and has no objection provided that:

- All on water operations and activities must be conducted in accordance with the relevant marine legislative provisions, including display of the international code flag "A" whilst diving operations are underway.
- As the works may be affected by residual wake from the adjacent channel, the works methodology must ensure that no debris are caused to become adrift
- The applicant or works contractor is to provide notification of the works to DoT a minimum of 21 days prior to the works commencing by email to: navigational.safety@transport.wa.gov.au. Upon review of methodology, the works area and navigational marking it will be determined whether a Temporary Notice to Mariners is required.

Please don't hesitate to contact me on the number below if you have any questions

Kind Regards

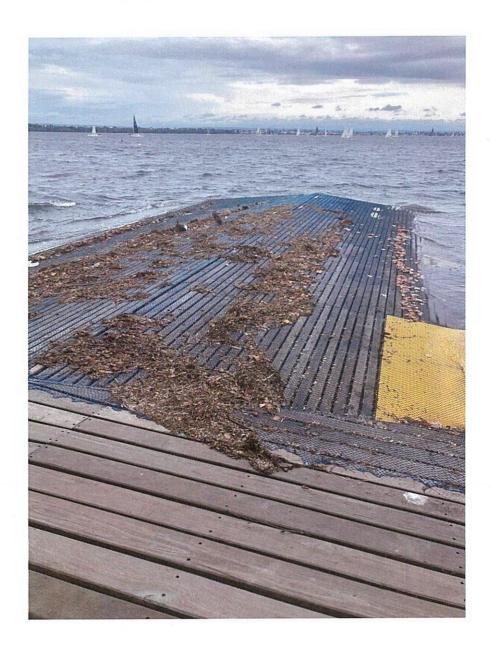
Sam Carrello
Project Officer | Maritime | Department of Transport

Level 4, 5 Newman Court, Fremantle WA 6160 Tel: (08) 0448353339 | Mob: 0448353339

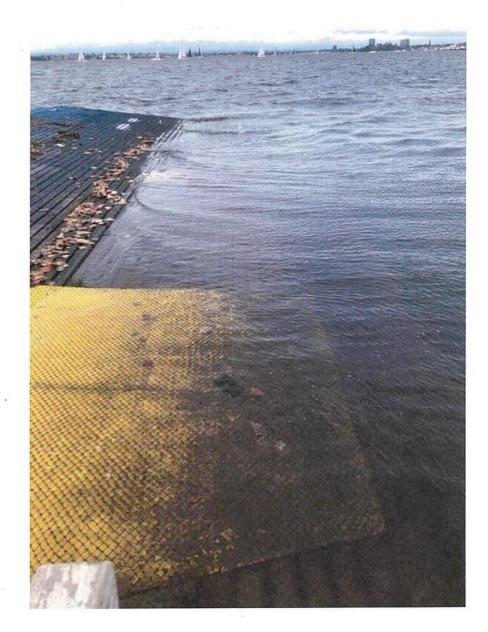
Email: Sam.Carrello@transport.wa.gov.au | Web: www.transport.wa.gov.au

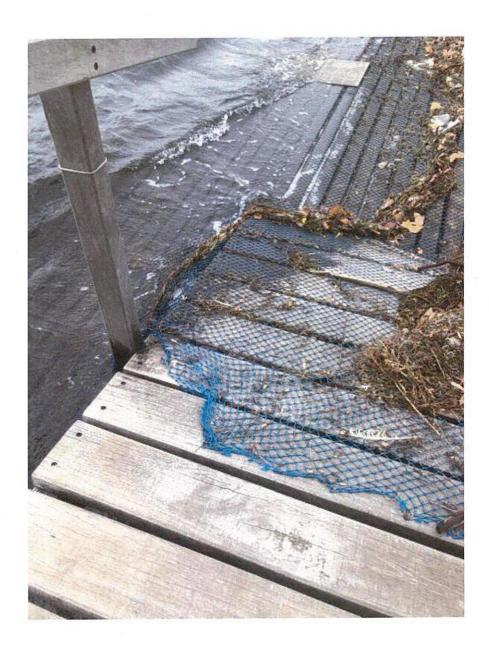


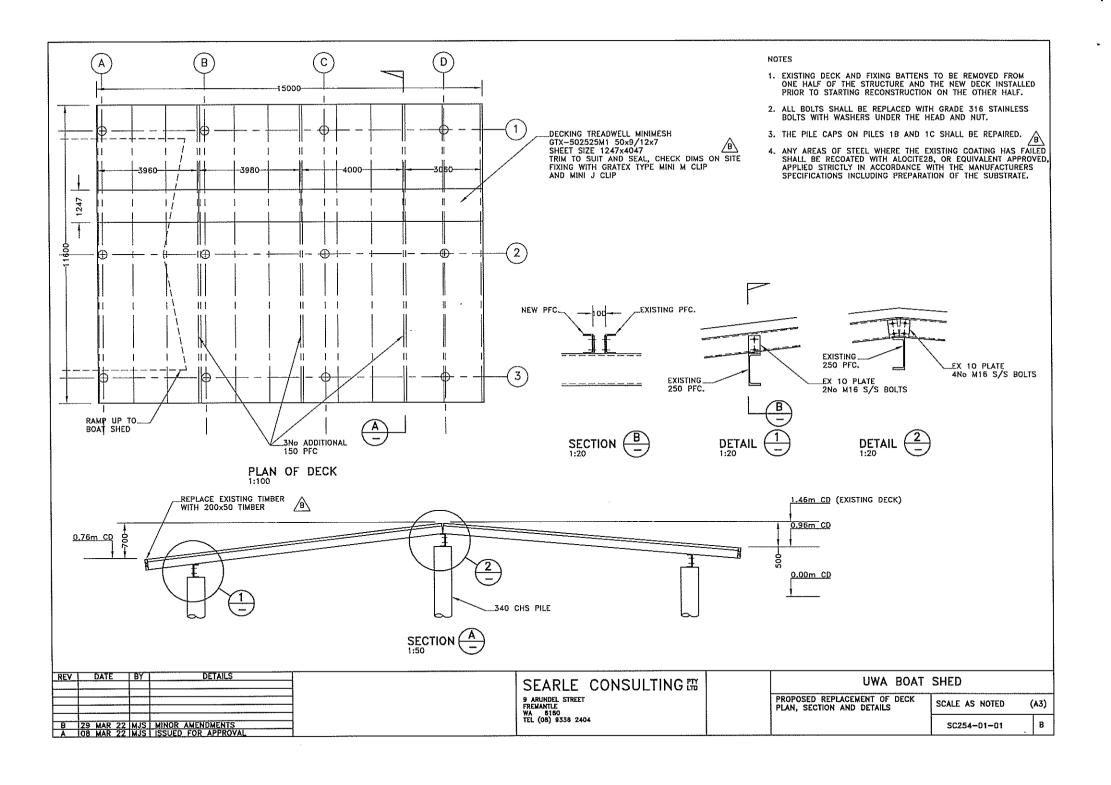
UWA B607 BOAT SHED DECK - Photos 30 March 2022













UWA BOAT SHED B607

LAUNCHING RAMP - MAINTENANCE AND INSPECTION PLAN

Daily Usage Awareness

• As part of Boat Club operating procedures, users report any physical damage including loose clips, to Campus Management (jobs-cm@uwa.edu.au) for inspection and actioning.

Annual

- Low pressure wash.
- Visual inspection of the condition of the FRP grating to check there is no breakdown of the material.
- For lightly damaged areas, recoat the FRP material with regular FRP resin and seal any loose fibres
- For more extensive damage/deterioration replace with new FRP panels.
- Inspect the clips securing the decking to the stringers and repair/replace any loose clips.
- Inspect timber rubbing strips (edge trims) and repair/replace loose timber.
- All works to be done at low tide.
- SWMS to be submitted for approval by the contractor addressing environmental risks.

Every 3 - 4 years

• Inspection of the steel structure and piles, including the cathodic protection, by a suitably qualified underwater dive contractor.

Andrew Thompson

Associate Director, Maintenance and Operations

Campus Management



UWA BOAT SHED B607

LAUNCHING RAMP – Methodology Considerations

Material Selection

The launching ramp deck is under water 50% of the time due to tidal movement. Timber is not suitable due to the build up of marine growth creating a very slippery surface. To provide grip underfoot, a plastic netting rope has been stretched across the deck however this frequently comes loose and is a trip hazard. Refer attached photos.

FRP grating

It is proposed to replace the timber decking with Fibreglass Reinforced Plastic grating. This will provide a long lasting, safer working surface and there will be no need for plastic netting. Quality non slip FRP grating supplied by Treadwell Group has been specified. Treadwell FRP products are UV stabilized and have a design life of 55 years.

Methodology and Environment Management Planning Considerations

Site set up and Supervision

- 2 car bays in the adjacent carpark will be roped off for contractor use to provide space for a skip bin and work zone;
- Any trimming required will be done in the designated area in the car park;
- Any cut surfaces of the grating will be fully sealed before installation;
- At the end of each day the work zone will be swept with loose filings placed in the bin, hosing down will not be permitted;
- Superintendent inspections throughout the works to ensure specified materials are being used and that the site is clean and tidy.