



Swan and Canning Rivers Management Act 2006

PART 5

DETERMINATION OF DEVELOPMENT APPLICATION

FILE NUMBER	:	2021/2116 – KM2023-0194
APPLICANT	:	South of Perth Yacht Club
LANDOWNER	:	Swan River Trust (River reserve)
LAND DESCRIPTION	:	Lot 310 on Plan 47439 (Reserve 48327), adjacent to 2 Canning Beach Road, Applecross - South of Perth Yacht Club
DEVELOPMENT	:	Construction of a new jetty and relocation of swing moorings – South of Perth Yacht Club
VALID FORM 1 RECEIVED	:	19 August 2021
DETERMINATION	:	APPROVAL WITH CONDITIONS

The application to commence development in accordance with the information received on 19 August 2021 and as subsequently amended is 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 (see **Advice Note 1**).
3. All works are to be undertaken in accordance with a Construction Environmental Management Plan as approved by the Department of Biodiversity, Conservation and Attractions (see **Advice Notes 2 and 3**).
4. Prior to the commencement of works the applicant shall submit and obtain approval for detailed plans (including detailed engineering drawings, a schedule of colours, materials and finishes) that show the jetty, relocated moorings and all infrastructure to be within the existing River reserve lease, and the proposed western pen set on Jetty 8 is restricted to vessel size limits of up to 12 metres (see **Advice Notes 4 and 5**).
5. Monitoring and maintenance of the decking 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 (see **Advice Note 5, 6 and 7**).
6. Lighting is to be installed in accordance with a Lighting Plan which is to be submitted to and approved by the Department of Biodiversity, Conservation and Attractions prior to commencement of works (see **Advice Note 8**).
7. Within six months of the completion of works, as-constructed drawings, with the location of the River reserve lease area shown and all new infrastructure correctly determined by

feature survey, for the jetty extension and upgrades shall be submitted to the satisfaction of the Department of Biodiversity, Conservation and Attractions.

ADVICE NOTES

1. Notifications can be emailed to rivers.planning@dbca.wa.gov.au.
2. The Construction and Environmental Management Plan required under **Condition 3** 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, piling and construction methodology
 - c. detail of machinery, vessels and vehicles proposed to operate on site
 - d. management of machinery and equipment
 - e. site access and management, including any temporary fencing requirements
 - f. traffic and parking issues and road closures for all phases of construction
 - g. any proposed redirection of pedestrian traffic, including signage and safety measures
 - h. sedimentation and turbidity control methods including the use and installation of silt curtains, ensuring that appropriate measures are taken to contain turbidity to the immediate works area and prevent, where practicable, sediment plumes from moving outside the immediate area of the works. At a minimum, double silt curtains are to be used and if sediment plumes are visible beyond the works area, all works shall cease until the issue has been resolved to the satisfaction of the Department of Biodiversity, Conservation and Attractions. In addition, silt curtains are to be checked regularly to ensure they are correctly attached and performing as intended
 - i. details of proposed pile driving methodology and machinery, noting that it is preferred that a vibration pile driver with a soft start-up, rather than a drop hammer, be used to install the piles to minimise underwater noise
 - j. details of measures to protect the river from contamination including:
 - i. any plastic or composite materials should be treated to ensure microplastics will not be emitted and mobilised into the environment
 - ii. cutting or drilling of plastic or composite material 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
 - 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
 - vi. identification of contaminated riverbed sediment, through undertaking baseline sediment quality sampling prior to the commencement of construction works to inform any contingency actions that may be required during construction.
 - k. measures to ensure that works will not prevent public access along the foreshore pathway unless closure is necessary for safety purposes and an alternative route is provided and agreed to by the Department of Biodiversity, Conservation and Attractions;
 - l. 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. silt curtains
 - vi. on-site storage and bunding of materials and equipment
 - vii. signage and safety measures to ensure public safety
 - viii. traffic access and parking.
- m. 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 the Department of Transport Pollution Response Officer (Marine) on 9480 9924 (24 hrs)
 - iv. proposed contingency actions if environmental controls are inadequate
 - 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.
- n. measures to ensure that no soil, runoff, construction material or any other deleterious matter is allowed to enter the river
- o. measures to minimise risk to aquatic fauna. In particular:
- i. to minimise underwater noise, a vibration pile driver with a soft start-up, rather than a drop hammer, be used to install the piles. This will reduce noise impacts, including that to dolphins
 - ii. to ensure the safety of dolphins during construction, no pile driving shall start if dolphins are within 200 metres of the site and piling activity shall cease if a dolphin comes within 50 metres of the site and shall not recommence until any dolphin has moved away more than 200 metres or has not been observed for 20 minutes
 - iii. a contractor will be employed to observe and monitor marine fauna during piling works.
3. Regarding **Condition 3**, the Construction Environmental Management Plan shall include commitments that:
- a. 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
 - b. on completion of the works, all waste materials, equipment and machinery shall be removed, and the site cleaned up to the satisfaction of the Department of Biodiversity, Conservation and Attractions.
4. With regard to Condition 4, the final design drawings for jetty structures must be certified by a qualified and practicing marine engineer to demonstrate that the structures comply with Australian Standard 3962-2001 Guidelines for the Design of Marinas and Australian Standard 4997-2005 Guidelines for the design of maritime structures, AS 3962:2020 Marina Designs.
5. Regarding **Condition 4**, the use of plastic products in the Riverpark at this location is not generally supported and the Club should consider alternative products for construction. The Department of Biodiversity, Conservation and Attractions is in early scoping phase of

formulating a scientific study to examine the length of time before plastic products (including recycled plastic, fibre-reinforced polymer or other composite products) start to break down or release particles into the environment. The department reserves the right to monitor, as part of a scientific study, any products within the River reserve.

6. Where use of plastic products is approved by the Department of Biodiversity, Conservation and Attractions:
 - a. all plastic products (e.g. fibre-reinforced plastic) are to include:
 - i. a manufacturers' warranty of or exceeding 15 years
 - ii. specification for use within marine environments
 - iii. UV treatments, (either UV stable resins or if they are painted, a UV stable paint)
 - iv. a copy of the certifications and or material specifications to ensure material longevity and reduce the risk of plastic deterioration over time are to be provided to the Department of Biodiversity, Conservation and Attractions.
7. Regarding **Condition 5**, the Maintenance and Inspection plan shall:
 - a. commit to corrective action when the plastic product needs repair and replacement
 - b. provide a measure of the extent of deterioration of all materials (including the extent of loss of microplastics into the river)
 - c. commit to examination of any plastic product used for trafficable surfaces
 - d. be undertaken (at a minimum) annually.
8. With regard to **Condition 6**, the applicant is advised that lighting should be designed to minimise light spill so that fauna, community enjoyment and visual amenity are not unacceptably affected. Lighting should be designed to only illuminate the jetty to allow for safe pedestrian movement and not result in light spill to the river, vegetation or upward to the sky. It is recommended that a light spill diagram is prepared to support the lighting plan. Light spill to the river and vegetation should be no more than 0.01-0.03 lux (moonlight), where possible, to ensure no adverse ecological consequences.
9. To allow sufficient time for the Department of Biodiversity, Conservation and Attractions to consider and approve the plans and details required under **Conditions 3, 4, 5, 6 and 7**, the documents must be submitted to the Department of Biodiversity, Conservation and Attractions at least 42 days before the expected works commencement date.
10. The proposed works are located in an area mapped as having a high to moderate acid sulfate soil risk. The Acid Sulfate Soils Guideline Series for guidance on the identification, assessment and management of acid sulfate soils in Western Australia is available from the Department of Water and Environmental Regulation website at www.dwer.wa.gov.au. If any acid sulfate soils are exposed during the works, the Contaminated Sites Branch of the Department of Water and Environmental Regulation shall be contacted for further advice on 1300 762 982.
11. The Department of Planning, Lands and Heritage, Heritage Operations has advised the proposed works are situated within Aboriginal site ID 3536, being the Swan River. Therefore, based on the information held by Department of Planning, Lands and Heritage, approvals regarding Aboriginal Heritage are required.
12. The applicant is encouraged to contact the Department of Planning, Lands and Heritage, Heritage Operations regarding the necessary approvals and making contact with the relevant local knowledge holders.
13. All in-water operations and activities must be conducted in accordance with Western Australian Marine Safety Legislation.
14. All noise levels produced by the works are to comply with the provisions of the Environmental Protection (Noise) Regulations 1997 (as amended).

15. The proposal has the potential to be affected by sea level rise. It is recommended that applicants understand the implications of potential sea level rise on the site. The onus rests with the applicant to undertake a risk assessment and exercise their judgment in determining the level of risk they are prepared to accept.



Hon Reece Whitby MLA
MINISTER FOR ENVIRONMENT

Date: 15/5/24

DEPARTMENT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS REPORT

PROPOSAL	Construction of a new jetty and relocation of swing moorings – South of Perth Yacht Club
LOCATION	Lot 310 on Plan 47439 (Reserve 48327), adjacent to 2 Canning Beach Road, Applecross - South of Perth Yacht Club
COST	\$2 million
APPLICANT	South of Perth Yacht Club
LANDOWNER	Swan River Trust (River reserve)
LOCAL GOVERNMENT	City of Melville
MRS CLASSIFICATION	Waterways Reserve
DECISION TYPE	Part 5, <i>Swan and Canning Rivers Management Act 2006</i> - Ministerial Determination
ATTACHMENTS	<ol style="list-style-type: none"> 1. Existing River reserve lease (one page) 2. External referral responses: <ol style="list-style-type: none"> a) City of Melville (one page) b) Department of Transport (four pages) c) Department of Planning, Lands and Heritage (five pages) d) Department of Water and Environmental Regulation (three pages) 3. Submissions <ol style="list-style-type: none"> a) Department of Planning, Lands and Heritage – Aboriginal Heritage Conservation (one page) b) Department of Planning, Lands and Heritage – Historic Heritage Conservation (one page) c) Department of Water and Environmental Regulation (two pages) 4. Proposal documentation 5. Amended jetty layout
RECOMMENDATION	APPROVAL WITH CONDITIONS

1. INTRODUCTION

- 1.1 The Department of Biodiversity, Conservation and Attractions (DBCA) has received an application from the South of Perth Yacht Club (the Club), for the construction of a new jetty within the River reserve adjacent to the Club which is located at 2 Canning Beach Road, Applecross.
- 1.2 The existing facility is shown below in **Figures 1 and 2**, with an overlay of the proposed jetty shown in **Figure 1**.



Figure 1: Existing marina with proposed finger jetty 8 (River reserve lease area shown in red)

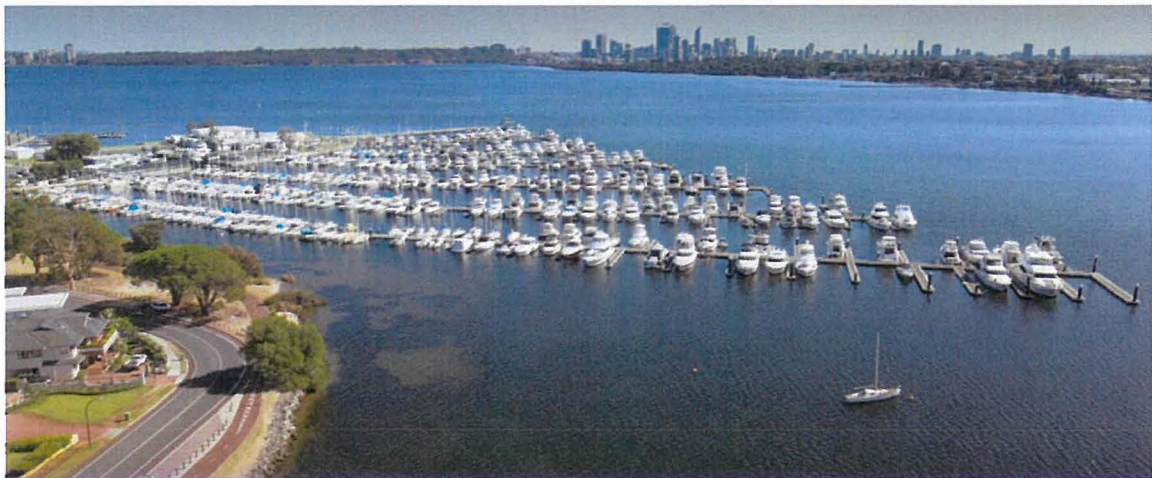


Figure 2: Existing jetty structures

Attachment A: Final Report

1.3 The land-based facilities at the Club include:

- senior clubhouse with food and beverage facilities
- junior clubhouse with canteen
- one permanent and one temporary marquee
- dinghy shed and associated works sheds
- car parking
- hardstand bays (162 dry berths)
- hardstand boat maintenance area including work shed and store, slipway, boat lifting cranes and vessel lifter
- fuel storage and dispensing facilities
- black-water pump facilities
- playground equipment.

The water-based facilities are located within an existing River reserve lease area (refer **Attachment 1** and the red border shown in **Figure 1**) and includes;

- seven jetties with 472 wet berths
- wave attenuation on Jetty 1
- breakwater and finger jetties
- swing moorings in the southern portion of the lease area
- boat launching ramp.

1.4 The proposed new jetty (Jetty 8) is to be located within the Club's River reserve lease area and would attach to the southernmost existing jetty (Jetty 7). The application is contained in **Attachment 4** and the amended layout for Jetty 8 is in **Attachment 5**.

1.5 The development will impact on a number of the existing swing moorings located within the lease area, and will necessitate their relocation or removal. These works are included as part of this development application.

1.6 The proposed development is 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).

1.7 DBCA has prepared this draft report in accordance with section 75(2) of the SCRM Act.

2. CONSULTATION

City of Melville

2.1 The City of Melville advised that it supports the proposal, and has recommended a condition requiring the preparation of a Construction Management Plan prior to commencement of works.

2.2 To address traffic and parking issues and road closures, the City has requested that the Construction Management Plan includes a Traffic Management Plan covering all phases of the construction.

2.3 The City's comments are provided in **Attachment 2a**.

Department of Transport: Maritime Planning and Navigational Safety

- 2.4 To enable the review of the proposal, the Department of Transport (DoT) requested that the applicant provide further information on the water depth of the river in the vicinity of the proposed works. Further, as the river is very shallow in this area, DoT expressed concerns regarding navigational safety should the jetty be constructed in the proposed location.
- 2.5 Following the provision of additional hydrographic information, DoT suggested modifications to the design and location of the jetty to ensure safe vessel movement. In addition, DoT requested that the Club limit the size of vessels utilising the western pens, that is the pens closest to the foreshore where the water is shallowest.
- 2.6 In response to DoT advice, the Club amended the design and location of the jetty and pens / berths to enable safe vessel movement. The Club also agreed to limit vessel size to 12 metres for the western pen set on Jetty 8. The requirement for the vessel limit restriction is contained with recommended conditions of approval.
- 2.7 The amended jetty design combined with the vessel size limit adequately addresses the navigational safety issues raised by DoT.
- 2.8 Based on the amended plans and vessel limit restriction, DoT has therefore advised that it supports the proposal. The DoT referral response is provided in **Attachment 2b**.

Department of Planning, Lands and Heritage

- 2.9 The Department of Planning, Lands and Heritage (DPLH) advised that the proposed works intersect with registered Aboriginal Heritage place ID 3536 (Swan River). It was considered that the piling works for installation of the proposed jetty will result in significant impacts to the riverbed and relevant approvals under the amended *Aboriginal Cultural Heritage Act 1972* will be required.
- 2.10 DPLH noted that although there was a previous Section 18 approval for the redevelopment of facilities at the Club (under the *Aboriginal Heritage Act 1972*), the current application is outside the scope of the existing approval. DPLH therefore recommended that the applicant should consult with the relevant local knowledge holders with a view towards a new approval to disturb this site.
- 2.11 In regard to built heritage, DPLH stated that the closest historic site (Heathcote Hospital Precinct) is a substantial distance away and will not be impacted by the proposed development.
- 2.12 DPLH also advised that the Heritage Council has identified the Swan and Canning Rivers as a place warranting assessment for possible entry in the State Register of Heritage Places, however, a full assessment has not yet been completed. No concerns were therefore raised regarding historic heritage conservation.
- 2.13 The DPLH comments are provided in **Attachment 2c** and subsequent comments are at **Attachments 3a** and **3b**.

Department of Water and Environmental Regulation

- 2.14 The Department of Water and Environmental Regulation (DWER) concurred with the approach of managing construction impacts through the requirement for a Construction Environmental Management Plan (CEMP). DWER also recommended that reference to

site contamination and disturbance of contaminated sediment should be included within the CEMP, and a minor amendment was made to the advice note regarding the management of acid sulfate soils.

- 2.15 On the basis of the inclusion of the comments made, DWER advises that it has no objections to the proposal (refer to comments provided in **Attachments 2d** and **3c**).

3. PUBLIC CONSULTATION

- 3.1 Pursuant to section 74(2) of the SCRM Act, the proposed development was considered a matter of significant public interest due to the scale, location, and potential visual impact on the area. The proposed development was initially advertised in the local media and letters were delivered to over 40 local residents advising of the opportunity to provide early comment on the proposal.
- 3.2 Eight submissions were received. The majority of submissions supported the application and considered that the proposed new jetty provided for the future needs of the growing boating population and was a more efficient use of the river than the existing swing moorings.
- 3.3 Two submissions objected to the proposal and cited adverse impacts on amenity and enjoyment of the river environment. Concerns were raised regarding noise impacts and the appropriateness of an expansion of the Club adjacent to the residential area.
- 3.4 Further, one submission suggested that the proposal was considered to be inconsistent with the objectives of State Planning Policy 2.10 – Swan-Canning river system in terms of impacts on amenity, and also with the SCRM Act which makes provision for the protection of the Swan and Canning rivers and associated land to ensure maintenance of ecological and community benefits and amenity. The submitter stated that the health, safety and well-being of fauna such as black swans and dolphins may be compromised by the development.

Submissions on the draft report

- 3.5 In accordance with the requirements of Part 5 of the SCRM Act, a copy of the draft report and proposed recommendations was provided to the applicant and the relevant stakeholders being the City of Melville, DPLH, DoT and DWER.
- 3.6 Copies were also provided to the members of the public that had previously provided a submission in response to the initial advertising due to the proposal being determined a matter of significant public interest.
- 3.7 A copy of the draft report was also published on the DBCA website between 13 December 2023 and 16 January 2024. The period was extended beyond the required 14 days to allow additional time for comment due to the Christmas and New Year holiday period.
- 3.8 No public submissions were received on the draft report. Two submissions were received from DPLH (Historic Heritage Conservation and Aboriginal Heritage Conservation) providing advice to the applicant regarding Aboriginal heritage approvals. A submission was also received from DWER in addition to advice initially provided. DWER recommended the inclusion of advice regarding contaminated sites and acid sulfate soils. These advice notes have been included in the final report.
- 3.9 All submissions received are provided at **Attachments 3a, 3b** and **3c**. The issues identified within the public submissions are addressed below.

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)

5. ENVIRONMENTAL AND PLANNING CONSIDERATIONS

- Environmental protection
- Visual amenity
- Navigational safety
- Use of plastics in the Riverpark
- Heritage
- Parking

6. BACKGROUND

- 6.1 The Club is located close to the junction between the Swan and Canning rivers in Applecross, within the City of Melville.
- 6.2 Due to an increase in boat ownership, there is considerable demand to increase membership and provide new berths at the Club. To meet the demand, the Club proposes to expand its facilities by constructing a new jetty (Jetty 8) to the south of the existing Jetty 7 into part of the Club's swing mooring area (refer to **Figure 1**).
- 6.3 The proposal would provide 50 new wet berths and would increase the total number of berths within the yacht club to 684 berths.
- 6.4 The Club proposes to utilise a Universal Marine Systems (UMS) floating jetty system for Jetty 8. This is a modular floating piled jetty and finger system, and is already used on jetties 3 to 7 at the Club. The Club proposes to include berths of several different sizes to accommodate expected demand at the Club, and also to allow safe navigation where the river is very shallow, as requested by DoT.
- 6.5 The new Jetty 8 structure will comprise aluminium frames, polyethylene floats, micromesh decking, and steel piles. The tubular steel piles will be fitted with HDPE sleeves that will extend a minimum of 1.0m below the riverbed.
- 6.6 No dredging or excavation of the riverbed is required as part of the works. However, the proposal will result in disturbance to the riverbed during the installation of support piers, and also during the removal and relocation of swing moorings.
- 6.7 The materials for the pontoons and associated structures will match the Club's existing materials, finishes and colour schemes. For example, the bird caps will be installed on the piling to match the existing piling for jetties 3 to 7. The applicant has confirmed that technical specifications and drawings will be provided prior to finalisation of the assessment process.

- 6.8 The proposed decking is described as micromesh and is similar to that used previously at the Club. Further details will be required regarding this product and its suitability for use over water.
- 6.9 Power, lighting and potable and fire water services will be provided to all pens, with electrics and water outlet modules serving each two adjacent pens. The Club has stated that all services will be installed according to the relevant standards and codes.
- 6.10 The construction of Jetty 8 will impact eight of the existing swing moorings. Five of these will be removed and three will be relocated within the Club's River reserve lease area.

7. DISCUSSION

- 7.1 The proposed development is an extension to, and intensification of, an existing facility within a River reserve lease area. The use for recreational boating is considered consistent with the Waterways reservation under the Metropolitan Region Scheme.
- 7.2 The Club holds a current River reserve lease (142,703m²) that contains the existing jetties and the Club's swing moorings to the south of the jetty structures (refer to **Attachment 1**). It is proposed that all structures (including berth vessels) be contained within the existing lease area.

Environmental protection

- 7.3 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 to the river or foreshore area.
- 7.4 Policy 42 states that natural vegetation should be promoted, maintained and restored, and existing native vegetation should be retained as a means of protecting linkages and natural vegetation corridors.
- 7.5 The foreshore adjacent to the proposed works is subject to erosive forces, leading to impacts on the riverbank and potential loss of fringing vegetation. The proposed jetty works are unlikely to result in the removal or fragmentation of native vegetation, but an increase in vessels and boat wake as a result of the installation of the jetty and increased usage of the river may cause further erosion of the riverbank and impacts on vegetation.
- 7.6 The Club states that within the River reserve lease area there are areas where sand migration has occurred. These areas may be as a result of boat wake, and are being monitored by the Club. Any proposals by the Club to undertake remedial dredging are not considered as part of this application and will require a separate application that will need to consider any potential impacts that dredging may have on nearby areas, including nearby revegetated foreshore areas.
- 7.7 It should be noted that DoT is embarking on an education campaign regarding the minimisation of boat wake. It is the responsibility also of the Club to educate its members to ensure boats are handled in a manner that minimises wake and the movement of sediment or the erosion of the riverbank.
- 7.8 Policy 44 requires applications for jetties to include a methodology and management plan that addresses how the construction work is to be undertaken to ensure the best possible protection of the ecological health, community benefit, and amenity of the DCA.

- 7.9 To ensure that all potential environmental risks and impacts are identified and managed appropriately, it is recommended that a CEMP be included as a condition of approval. The CEMP will be required to include details regarding construction methodology, piling method, technique for relocation of swing moorings, protection of water quality, machinery and equipment management (including refueling), site access and management, safety, waste management and spill response, foreshore protection, management actions to address potential turbidity / disturbance of contaminated sediment and minimisation of potential noise and displacement impacts to fauna. Contingencies will also be required in the event of protection measures not being adequate.

Visual amenity

- 7.10 Policy 42 states that proposals should enhance and protect the character and landscape setting of the Swan Canning River system. Typically, proposals should not dominate public areas and views.
- 7.11 Policy 45 and SPP2.10 – Swan-Canning River System require the proposed development to enhance the public's access to and enjoyment of the river.
- 7.12 Policy 44 requires that applications demonstrate that they are minimising and managing effects on the landscape character and amenity of the DCA. Details are required to ensure that the design and the selected construction materials and colour scheme, are sympathetic to and have an aesthetic that suits the natural riverine environment.
- 7.13 As noted in section 6 above, the new jetty infrastructure will comprise materials, colours and finishes to match and/or complement the Club's existing style and themes. While the extension to the jetty and the piers will be visually apparent, its comparatively low-profile structures (that will not exceed the height of the existing jetty structures even at high-tide) means its apparent bulk and scale will be minimised and is a comparatively minor extension to the existing facility.
- 7.14 A condition of approval will require the provision of final design drawings including colours and finishes prior to the commencement of works.
- 7.15 A feature survey and as-constructed plans will be required as a condition of approval.
- 7.16 The proposed jetty will include lighting components. Lighting should be fit-for-purpose and designed so as not to interfere with vessel navigation, adversely affect the amenity of the area, or unacceptably alter the natural patterns of light and dark. A lighting plan will be required as a condition of approval.

Navigational safety

- 7.17 Policy 44 requires jetty applications to address specific design criteria or requirements related to DoT's jetty design and navigation standards, including *AS 3962-2020 Marina design* and *AS 4997-2005 Guidelines for the design of maritime structures*, with plans to be certified by an appropriately experienced Chartered Professional Engineer as recognised by Engineers Australia.
- 7.18 Based on the supplied hydrographic survey information, the depth of the river was not considered adequate to accommodate the regular passage of vessels to the pens. Following negotiations with DBCA, on the advice of DoT, the Club agreed to a modified layout and the introduction of a maximum vessel size limit of 12 metres for the western pen set (on Jetty 8). This size restriction would ensure safe navigation within the

shallowest portion of the marina. This requirement is reinforced in a condition of approval.

- 7.19 To ensure navigational safety, no portion of any jetty infrastructure or berthed vessel should extend beyond the existing River reserve lease area.
- 7.20 As discussed above, a condition of approval will require the provision of final design drawings which provides for safe navigation including identifying berths where boat sizes are restricted and additionally that all proposed infrastructure will be located within the existing lease area.

Use of plastics in the Riverpark

- 7.21 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.
- 7.22 The application proposes the use of a recycled plastic material for the decking of the structure (refer to Figure 3). The proposed micromesh has been used across other projects within the Riverpark and often shows signs of deterioration after a number of years in a riverine environment.

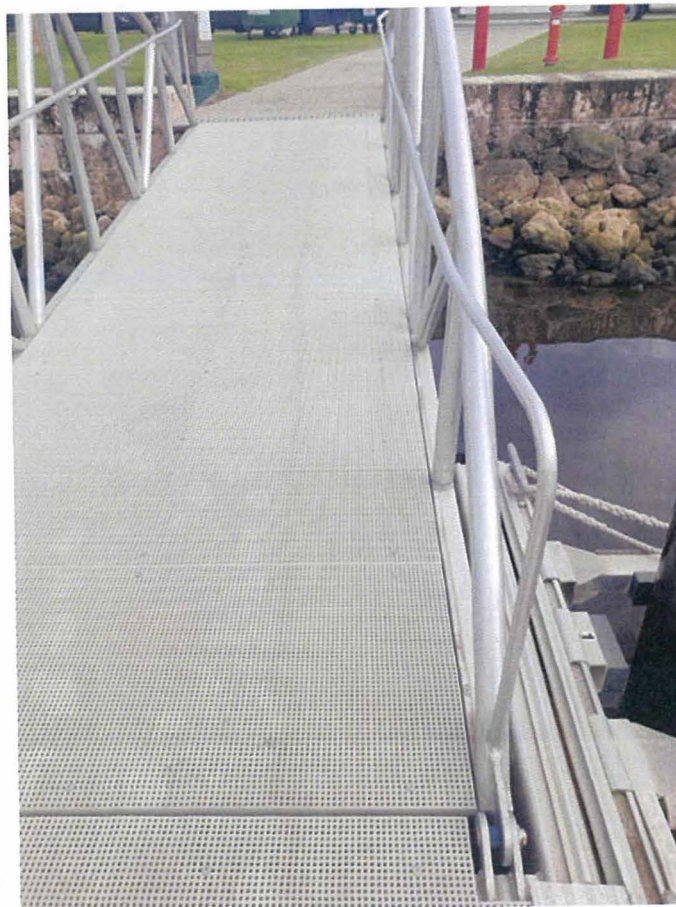


Figure 3: Decking similar to the micromesh proposed for use on Jetty 8

- 7.23 DBCA has recently begun to consider the potential long-term and cumulative environmental impacts of using plastic materials on the ecological health of the Riverpark. All plastic products are known to break down over time and can release microplastic particles into the environment.

7.24 Potential issues associated with the use of plastic products within the Riverpark area are listed below:

- Release of microplastics into the environment when they decompose, breakdown due to wear, use or exposure to ultraviolet (UV) light.
- Plastic or plastic related material created as waste during construction, including swathe from cutting and drilling. This needs to be contained and managed during construction.
- Microplastics do not further breakdown in the environment over time and may remain in the Riverpark or marine environment in perpetuity.
- Microplastics which are released into the estuary, collectively with other plastic, may be ingested by estuary biota and in doing so cause a range of impacts including but not limited to, enzyme over- or under-stimulation, oxidative stress, and starvation.
- Post-use recycling/reuse of these materials is limited.

7.25 DBCA has found that the available product information on plastic products generally does not adequately demonstrate that use of the product will not result in environmental harm. In particular, appropriate scientific investigations have not been undertaken to demonstrate that the products used will not release microplastics into the environment within their life span.

7.26 It has been identified that more information about recycled plastic and fibre-reinforced plastic/polymer products and any potential effects to the ecosystem is needed. DBCA's Rivers and Estuaries Science program is engaged in a scientific study to examine these potential environmental effects. The outcomes of the study will inform a review of relevant policy for the use of plastic infrastructure within the Riverpark.

7.27 DBCA currently recommends conditions of development that require applicants proposing to use any plastic materials (including recycled plastic, fibre-reinforced polymer or other plastic composite) to demonstrate that the material will not contribute particles to the river environment within the proposed lifespan of the structure. Further, the applicant will be required to remove the structure or material prior to it becoming a source of microplastics.

7.28 To reduce the risk of release of microplastics into the river system and manage the degradation of the materials, a condition is recommended that requires the applicant to regularly maintain and monitor the product for degradation and to ensure removal of the product as soon as it shows signs of deterioration.

7.29 The applicant will also be required to provide an annual maintenance and inspection plan that includes ongoing repair or replacement if and as required.

Heritage

7.30 It is noted that the proposed works intersect with registered Aboriginal Heritage place ID 3536 (Swan River) and approval will be required to disturb this site. As per advice from DPLH, it is anticipated that these works will require separate approval under the *Aboriginal Heritage Act 1972*. An advice note has been included to this effect.

Parking

7.31 Policy 44 requires applications to address specific design criteria or requirements related to car parking as per the local planning scheme or the relevant Australian Standard and DBCA's requirements.

- 7.32 Vehicular access to the site is through Canning Beach Road and leads directly to 301 on-site parking bays. With the proposed extension of the jetty, it is anticipated that there would be an increase in traffic generation and on-site parking demand.
- 7.33 The Transport Impact Statement analysed the on-site parking to determine if the anticipated increase in parking demand could be accommodated. In accordance with *AS 3962:2020 Marina Designs*, the parking provision required to accommodate both the current and proposed additional berths is 169 parking bays.
- 7.34 The Transport Impact Statement adequately demonstrates that the site can accommodate the anticipated increase in on-site parking demand.

8. SWAN RIVER TRUST

- 8.1 In accordance with section 75(3A) of the SCRM Act, the Swan River Trust considered DBCA's draft report at its meeting of 17 October 2023 and resolved to advise the Director General of DBCA that it recommends the application be approved subject to the conditions outlined in DBCA's draft report.

9. CONCLUSION

- 9.1 Policy 46 states that commercial facilities should be planned, designed, constructed and managed to enhance the community's use and enjoyment of the Swan Canning river system.
- 9.2 The proposal seeks to construct a new jetty within the Club's River reserve lease area within the Swan River. The increase in development footprint within the lease area is not expected to have a significant adverse impact on the amenity or viewsapes through the area.
- 9.3 Potential environmental impacts from the works are considered low and any short-term impacts during construction can be managed though conditions and implementation of an approved CEMP. Longer term impacts such as boat wake and sediment movement can be minimised through ongoing boat user education. Additional approvals will be required for any proposed dredging that occurs as a result of sediment build-up.
- 9.4 It is anticipated that the proposal will not have any adverse impact on the foreshore or river. The proposal is therefore considered acceptable subject to the below conditions and advice.

10. RECOMMENDATION – APPROVAL WITH CONDITIONS

That the Director General of DBCA advises the Minister for Environment that the proposal by the South of Perth Yacht Club, as described in the application received on 19 August 2021 and as subsequently amended, be 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 (see **Advice Note 1**).

3. All works are to be undertaken in accordance with a Construction Environmental Management Plan as approved by the Department of Biodiversity, Conservation and Attractions (see **Advice Notes 2 and 3**).
4. Prior to the commencement of works the applicant shall submit and obtain approval for detailed plans (including detailed engineering drawings, a schedule of colours, materials and finishes) that show the jetty, relocated moorings and all infrastructure to be within the existing River reserve lease, and the proposed western pen set on Jetty 8 is restricted to vessel size limits of up to 12 metres (see **Advice Notes 4 and 5**).
5. Monitoring and maintenance of the decking 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 (see **Advice Note 5, 6 and 7**).
6. Lighting is to be installed in accordance with a Lighting Plan which is to be submitted to and approved by the Department of Biodiversity, Conservation and Attractions prior to commencement of works (see **Advice Note 8**).
7. Within six months of the completion of works, as-constructed drawings, with the location of the River reserve lease area shown and all new infrastructure correctly determined by feature survey, for the jetty extension and upgrades shall be submitted to, and to the satisfaction of, the Department of Biodiversity, Conservation and Attractions.

ADVICE NOTES

1. Notifications can be emailed to rivers.planning@dbca.wa.gov.au.
2. The Construction and Environmental Management Plan required under **Condition 3** 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, piling and construction methodology
 - c. detail of machinery, vessels and vehicles proposed to operate on site
 - d. management of machinery and equipment
 - e. site access and management, including any temporary fencing requirements
 - f. traffic and parking issues and road closures for all phases of construction
 - g. any proposed redirection of pedestrian traffic, including signage and safety measures
 - h. sedimentation and turbidity control methods including the use and installation of silt curtains, ensuring that appropriate measures are taken to contain turbidity to the immediate works area and prevent, where practicable, sediment plumes from moving outside the immediate area of the works. At a minimum, double silt curtains are to be used and if sediment plumes are visible beyond the works area, all works shall cease until the issue has been resolved to the satisfaction of the Department of Biodiversity, Conservation and Attractions. In addition, silt curtains are to be checked regularly to ensure they are correctly attached and performing as intended
 - i. details of proposed pile driving methodology and machinery, noting that it is preferred that a vibration pile driver with a soft start-up, rather than a drop hammer, be used to install the piles to minimise underwater noise
 - j. details of measures to protect the river from contamination including:
 - i. any plastic or composite materials should be treated to ensure microplastics will not be emitted and mobilised into the environment

- ii. cutting or drilling of plastic or composite material 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
 - 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
 - vi. identification of contaminated riverbed sediment, through undertaking baseline sediment quality sampling prior to the commencement of construction works to inform any contingency actions that may be required during construction.
- k. measures to ensure that works will not prevent public access along the foreshore pathway unless closure is necessary for safety purposes and an alternative route is provided and agreed to by the Department of Biodiversity, Conservation and Attractions;
- l. 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. silt curtains
 - vi. on-site storage and bunding of materials and equipment
 - vii. signage and safety measures to ensure public safety
 - viii. traffic access and parking.
- m. 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 the Department of Transport Pollution Response Officer (Marine) on 9480 9924 (24 hrs)
 - iv. proposed contingency actions if environmental controls are inadequate
 - 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.
- n. measures to ensure that no soil, runoff, construction material or any other deleterious matter is allowed to enter the river
- o. measures to minimise risk to aquatic fauna. In particular:
- i. to minimise underwater noise, a vibration pile driver with a soft start-up, rather than a drop hammer, be used to install the piles. This will reduce noise impacts, including that to dolphins
 - ii. to ensure the safety of dolphins during construction, no pile driving shall start if dolphins are within 200 metres of the site and piling activity shall cease if a dolphin comes within 50 metres of the site and shall not recommence until any

- dolphin has moved away more than 200 metres or has not been observed for 20 minutes
- iii. a contractor will be employed to observe and monitor marine fauna during piling works.
3. Regarding **Condition 3**, the Construction Environmental Management Plan shall include commitments that:
 - a. 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
 - b. on completion of the works, all waste materials, equipment and machinery shall be removed, and the site cleaned up to the satisfaction of the Department of Biodiversity, Conservation and Attractions.
 4. With regard to **Condition 4**, the final design drawings for jetty structures must be certified by a qualified and practicing marine engineer to demonstrate that the structures comply with Australian Standard 3962-2001 *Guidelines for the Design of Marinas* and Australian Standard 4997-2005 *Guidelines for the design of maritime structures, AS 3962:2020 Marina Designs*.
 5. Regarding **Condition 4**, the use of plastic products in the Riverpark at this location is not generally supported and the Club should consider alternative products for construction. The Department of Biodiversity, Conservation and Attractions is in early scoping phase of formulating a scientific study to examine the length of time before plastic products (including recycled plastic, fibre-reinforced polymer or other composite products) start to break down or release particles into the environment. The department reserves the right to monitor, as part of a scientific study, any products within the River reserve.
 6. Where use of plastic products is approved by the Department of Biodiversity, Conservation and Attractions:
 - a. all plastic products (e.g. fibre-reinforced plastic) are to include:
 - i. a manufacturers' warranty of or exceeding 15 years
 - ii. specification for use within marine environments
 - iii. UV treatments, (either UV stable resins or if they are painted, a UV stable paint)
 - iv. a copy of the certifications and or material specifications to ensure material longevity and reduce the risk of plastic deterioration over time are to be provided to the Department of Biodiversity, Conservation and Attractions.
 7. Regarding **Condition 5**, the Maintenance and Inspection Plan shall:
 - a. commit to corrective action when the plastic product needs repair and replacement
 - b. provide a measure of the extent of deterioration of all materials (including the extent of loss of microplastics into the river)
 - c. commit to examination of any plastic product used for trafficable surfaces
 - d. be undertaken (at a minimum) annually.
 8. With regard to **Condition 6**, the applicant is advised that lighting should be designed to minimise light spill so that fauna, community enjoyment and visual amenity are not unacceptably affected. Lighting should be designed to only illuminate the jetty to allow for safe pedestrian movement and not result in light spill to the river, vegetation or upward to the sky. It is recommended that a light spill diagram is prepared to support the lighting plan. Light spill to the river and vegetation should be no more than 0.01-0.03 lux (moonlight), where possible, to ensure no adverse ecological consequences.

9. To allow sufficient time for the Department of Biodiversity, Conservation and Attractions to consider and approve the plans and details required under **Conditions 3, 4, 5, 6 and 7**, the documents must be submitted to the Department of Biodiversity, Conservation and Attractions at least 42 days before the expected works commencement date.
10. The proposed works are located in an area mapped as having a high to moderate acid sulfate soil risk. The Acid Sulfate Soils Guideline Series for guidance on the identification, assessment and management of acid sulfate soils in Western Australia is available from the Department of Water and Environmental Regulation website at www.dwer.wa.gov.au. If any acid sulfate soils are exposed during the works, the Contaminated Sites Branch of the Department of Water and Environmental Regulation shall be contacted for further advice on 1300 762 982.
11. The Department of Planning, Lands and Heritage, Heritage Operations has advised the proposed works are situated within Aboriginal site ID 3536, being the Swan River. Therefore, based on the information held by Department of Planning, Lands and Heritage, approvals regarding Aboriginal Heritage are required.
12. The applicant is encouraged to contact the Department of Planning, Lands and Heritage, Heritage Operations regarding the necessary approvals and making contact with the relevant local knowledge holders.
13. All in-water operations and activities must be conducted in accordance with Western Australian Marine Safety Legislation.
14. All noise levels produced by the works are to comply with the provisions of the Environmental Protection (Noise) Regulations 1997 (as amended).
15. The proposal has the potential to be affected by sea level rise. It is recommended that applicants understand the implications of potential sea level rise on the site. The onus rests with the applicant to undertake a risk assessment and exercise their judgment in determining the level of risk they are prepared to accept.

FINAL REPORT ENDORSED

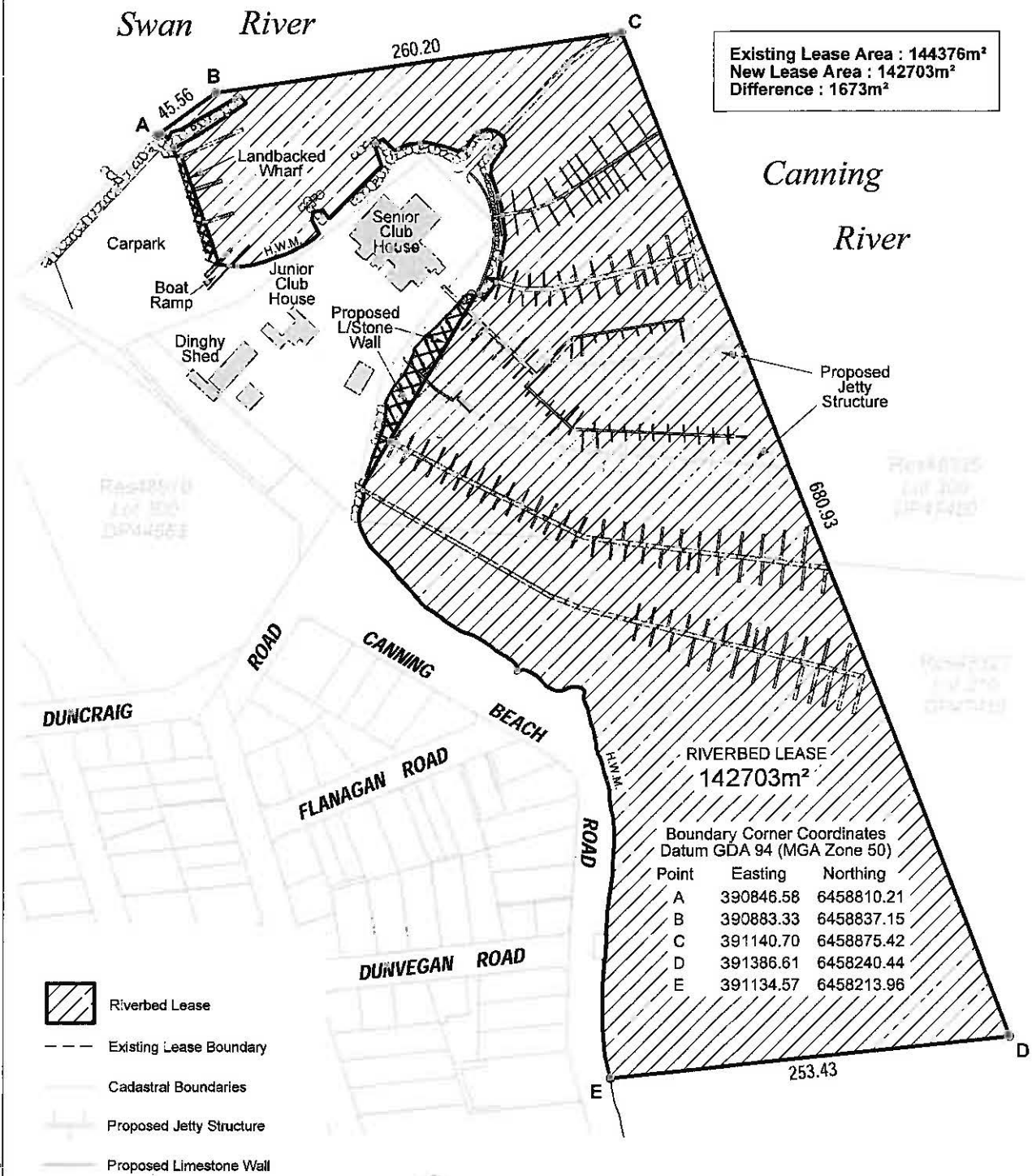
Signed: 

Date: 09/04/24

Stuart Smith
Director General

ANNEXURE "A" SWAN RIVER SOUTH OF PERTH YACHT CLUB RIVERBED LEASE PLAN

THAT PORTION OF RESERVE 48325 & 48327 ALSO KNOWN AS PL. LOTS 300 & 310 ON DP's 47450 & 47439 AND SHOWN HATCHED ON PLAN 889-03-01-G COMPRISING A TOTAL AREA OF 142703 SQUARE METRES



Existing Lease Area : 144376m²
New Lease Area : 142703m²
Difference : 1673m²

RIVERBED LEASE
142703m²

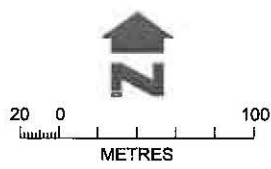
Boundary Corner Coordinates
Datum GDA 94 (MGA Zone 50)

Point	Easting	Northing
A	390846.58	6458810.21
B	390883.33	6458837.15
C	391140.70	6458875.42
D	391386.61	6458240.44
E	391134.57	6458213.96

- Riverbed Lease
- Existing Lease Boundary
- Cadastral Boundaries
- Proposed Jetty Structure
- Proposed Limestone Wall

SUBJECT TO SURVEY

PREPARED BY
CARTOGRAPHIC SERVICES
1 ESSEX STREET FREMANTLE



Drawn by: S Salgado
Date: 11 January 2017

Examined by Manager Cartography:
R. Talbot-Smith: *D. Daws*
Date: *11th January 2017*



L:\CSTEN\URS\Draw & Check\... 889-03-01-G.dwg

12 October 2021

Enquiries: Mr Gavin Davey– 08 9364 0205
Our Ref: DA-2021-1007

Department of Biodiversity, Conservation and Attractions
Rivers and Estuaries Branch
17 Dick Perry Avenue
KENSINGTON WA 6151

Dear Sir/Madam

**MRS Referral - Additional Berthing Facilities
2 Canning Beach Road, APPLECROSS WA 6153 (Parcel Lot 6854 P 166844)**

I refer to the abovementioned application received by the City of Melville on 9 September 2021.

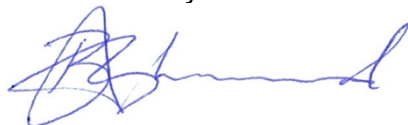
Zoning: MRS Reservation- Parks and Recreation

The City of Melville has considered the application lodged by the South of Perth Yacht Club for additional vessel berthing facilities, and has determined to support the application.

The City requests that the DBCA include a condition of development approval requiring the preparation and lodgement of a Construction Management Plan (CMP) to the DBCA prior to construction. Included in the CMP should be a Traffic Management Plan prepared by an accredited person/s for the various phases of the construction, including any proposed road closures. The CMP should be prepared based on advice from the DBCA and the City of Melville. Once approved, the development is to be constructed in accordance with the Construction Management Plan.

If you require any further information or clarification regarding this matter, please do not hesitate to contact Mr Gavin Davey, on 08 9364 0205 or by email gavin.davey@melville.wa.gov.au.

Yours sincerely



**Ben Ashwood
Senior Planning Officer**

Enc

Attachment 2b - External referral response: Department of Transport

From: [Appleby, Iain](#)
To: [Karen Sanders](#); [Navigational Safety](#)
Cc: [Stephens, Bridget](#); [Rivers Planning](#)
Subject: RE: Additional information from South of Perth Yacht Club - new jetty proposal 2021/2216
Date: Tuesday, 25 July 2023 11:39:07 AM
Attachments: [image002.jpg](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image001.png](#)
[image001.png](#)

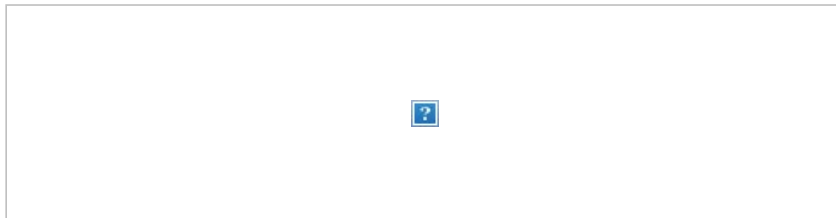
[External Email] This email was sent from outside the department – be cautious, particularly with links and attachments.

Hi Karen

Following a review of the modified/updated jetty drawings and the Yacht Clubs response to our/DoT comments, DoT has no objection to the proposal proceeding.

regards

Iain Appleby
Senior Planning Project Officer | Maritime | Department of Transport
5 Newman Court, Fremantle WA 6160
| Mob: 0457532306
Email: Iain.Appleby@transport.wa.gov.au | Web: www.transport.wa.gov.au



We acknowledge the Traditional Custodians of this land and pay respect to the Elders past, present and future.

From: Karen Sanders <karen.sanders@dbca.wa.gov.au>
Sent: Tuesday, 18 July 2023 9:57 AM
To: Appleby, Iain <Iain.Appleby@transport.wa.gov.au>; [Navigational Safety](mailto:Navigational.Safety@transport.wa.gov.au)
<Navigational.Safety@transport.wa.gov.au>
Cc: Stephens, Bridget <Bridget.Stephens@transport.wa.gov.au>; [Rivers Planning](mailto:rivers.planning@dbca.wa.gov.au) <rivers.planning@dbca.wa.gov.au>
Subject: Additional information from South of Perth Yacht Club - new jetty proposal 2021/2216

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Hi Iain

Please see attached additional advice from the South of Perth Yacht Club in response to the issues you raised.

We look forward to your response, but please do call should you wish to discuss.

Kind regards
Karen

Karen Sanders
Environmental Officer (Mon - Thur)
Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
T: 9278 0902

From: Appleby, Iain <Iain.Appleby@transport.wa.gov.au>
Sent: Monday, April 3, 2023 10:46 AM
To: Karen Sanders <karen.sanders@dbca.wa.gov.au>
Cc: [Rivers Planning](mailto:rivers.planning@dbca.wa.gov.au) <rivers.planning@dbca.wa.gov.au>; [Navigational Safety](mailto:Navigational.Safety@transport.wa.gov.au)

<Navigational.Safety@transport.wa.gov.au>; Stephens, Bridget <Bridget.Stephens@transport.wa.gov.au>

Subject: DoT comments - 2021/2216 - South of Perth Yacht Club - new jetty proposal - additional consultation

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Hi Karen

After reviewing the comments provided by the Club in response to DoT's concerns/issues we suggest the Club give consideration to moving the entire layout in a South East direction.

This would allow the Club to keep most of the original proposed pen berth sizes and would remove the concerns previously raised by DoT:

1. the impact of the new pen set affecting the navigation of the existing vessels on Jetty 7
introducing a max vessel size limit of 12 metres for the western pen set (on Jetty 8) would allow minimal impact on the existing pen holders, and
there would now be sufficient distance between the new pens and the sandbar
2. there is an 18 metre vessel/pen located on jetty 7 which would previously not have the minimum fairway distance to exit/access the waterway
this could now be relocated in one of the new pens
3. the proposed other/eastern side pen set resulting in one 25.4 metre berth exceeding the minimum fairway distance
this would not be an issue as the fairway distance has now increased

This would leave one remaining issue - the addition of a new finger jetty at the end of Jetty 7 which will still result in any vessel berthed here to be located outside the approved sea bed lease.

If the Club were willing to consider the above, DoT would have no objection to providing in principle support for the (relocated) proposal.

I have attached a plan showing the relocation of the pen layout "SouthPerthYC-P-Jetties_2021-09-09_DoT-Proposed-A3.pdf" as a reference.

regards

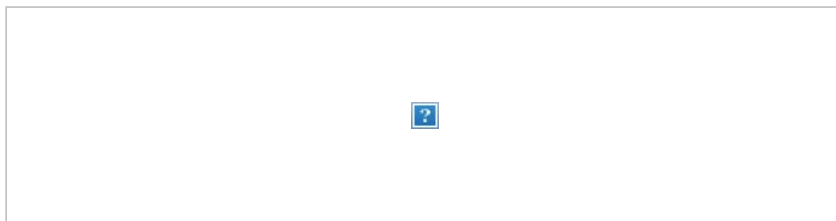
Iain Appleby

Senior Planning Project Officer | Maritime | Department of Transport

5 Newman Court, Fremantle WA 6160

Tel: (08) 94357532 | Mob: 0457532306

Email: Iain.Appleby@transport.wa.gov.au | Web: www.transport.wa.gov.au



We acknowledge the Traditional Custodians of this land and pay respect to the Elders past, present and future.

From: Karen Sanders <karen.sanders@dbca.wa.gov.au>

Sent: Monday, 20 March 2023 6:15 PM

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

Cc: Rivers Planning <rivers.planning@dbca.wa.gov.au>; Appleby, Iain <Iain.Appleby@transport.wa.gov.au>

Subject: 2021/2216 - South of Perth Yacht Club - new jetty proposal - additional consultation

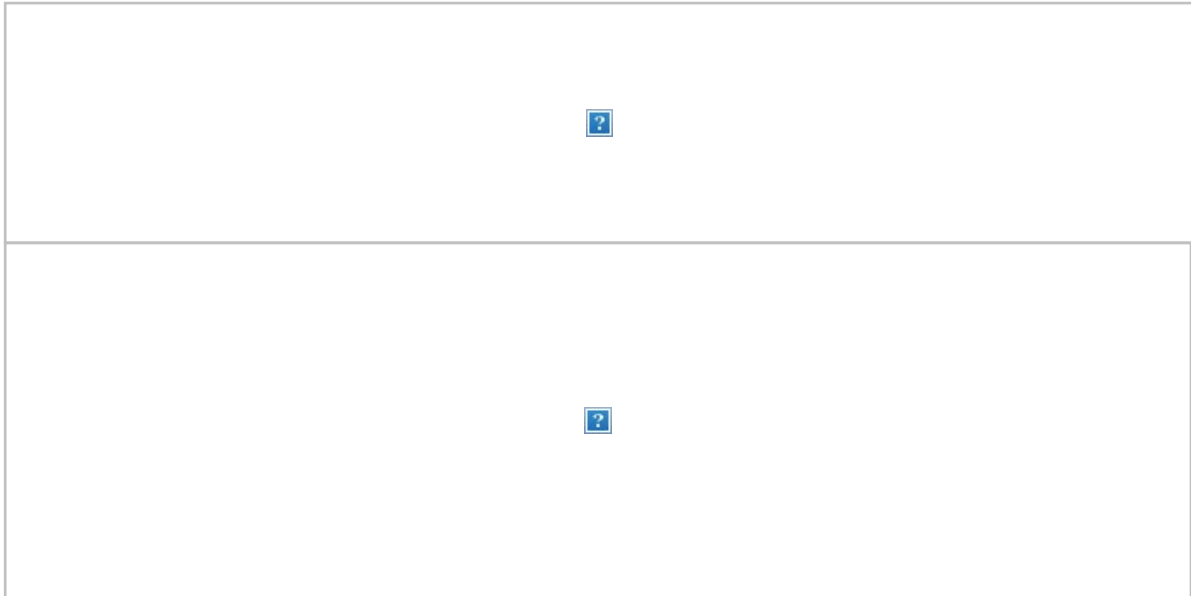
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PART 5 – 2 CANNING BEACH ROAD, APPLECROSS – CONSTRUCTION OF A NEW JETTY IN PART OF THE SWING MOORING AREA – SOUTH OF PERTH YACHT CLUB

Hello

DoT previously provided the advice in the email below regarding the part 5 application for a new jetty within the South of Perth Yacht Club's (SoPYC) river reserve lease.

Following the consultation period for the proposal, the SoPYC provided the following text in its letter of 12 July 2022 in response to comments raised, including those by DoT.



In addition the club has recently stated:

With respect to the 16 Jetty 8 berths to be limited to power yacht type vessels only, these are highlighted in salmon colour in the lower image in the Rev9 pdf. The omission by the Club in the DA was that a note to this effect or a colour delineation was not on the drawing. Rev 9 does include the Hydrographic -1.0m LWMF contour which satisfies the depth/laneway width requirements of the Marina Design Standard AS3962:2020 with the abovementioned limitation.

The relevant attachments that include the previously missing information are provided for your review, and your comment is requested once again.

Please email any comments regarding this proposal and specifically the navigational issues raised **by 4 April 2023**. If you are unable to provide comment by this time please let me know in advance. Should you need more information or wish to discuss the proposal please call me on 9278 0902.

Thank you and kind regards
Karen

Karen Sanders

Environmental Officer (Mon - Thur)
Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
T: 9278 0902

From: Appleby, Iain <Iain.Appleby@transport.wa.gov.au>

Sent: Monday, 31 January 2022 9:14 AM

To: Rivers Planning <rivers.planning@dbca.wa.gov.au>

Subject: ref: 2021/2216

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PART 5 – 2 CANNING BEACH ROAD, APPLECROSS – CONSTRUCTION OF A NEW JETTY IN PART OF THE SWING MOORING AREA – SOUTH OF PERTH YACHT CLUB

Following a review of the above application, DoT Maritime has the following comments:

We have overlaid the proposed pen system layout over the survey data to produce the attached plan: *SouthPerthYC-P-Jetties_2021-09-09-A3.pdf*.

Based on the new survey data provided and the vessel draft data information in the Australian Standard for Marinas (AS3962-2020), it appears the water levels are too low to allow for vessels to safely navigate past the new/proposed pens on the eastern side of the proposal.

due to navigational issues DoT does not support the proposed pens highlighted in the attached image (*Exclusion section.png*). Removing these pens would allow sufficient distance and water depth for safe vessel movement for the current pens/berths alongside the main walkway

DoT's recommendation is that we do not support the pens on the eastern side of the main walkway (i.e. facing the land) being built, however the rest of the proposed pen layout/structure could proceed.

regards

Iain Appleby
Senior Planning Project Officer | Maritime | Department of Transport
5 Newman Court, Fremantle WA 6160
Tel: (08) 94357532 | Mob: 0457532306
Email: Iain.Appleby@transport.wa.gov.au | Web: www.transport.wa.gov.au

Dept. of Transport



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Attachment 2c - External referral response: Department of Planning, Lands and Heritage

From: [Moss Wilson](#)
To: [Marshall Farrell](#)
Subject: RE: Response, South of Perth Yacht Club proposed jetty
Date: Wednesday, 20 October 2021 10:53:29 AM
Attachments: [image002.png](#)
[image001.jpg](#)
[Halpern Glick Maunsell Plans SPYC redevelopment 1995.pdf](#)
[Proposed Development SPYC Oct 2021.pdf](#)

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

Hi Marshall, thanks for getting back to me.

I've reviewed the documents from 1995, and here is my understanding of the situation:

- On 20 November 1995 the South of Perth Yacht Club (SPYC) submitted a section 18 application for the long-term redevelopment of their facilities. As part of this application, the SPYC submitted an ethnographic/archaeological report from McDonald, Hales and Associates as to the impacts of the proposed redevelopment on registered site of the Swan River (currently recorded as ID 3536 Swan River).
- The redevelopment plans by Halpern Glick Maunsell, provided to the report's authors and to the Traditional Owner representatives, (attached), proposed a number of new jetties into the Swan River.
- The ACMC considered this application at their meeting of 12 December 1995, at which the McDonald Hales report was reviewed. As a result, the ACMC resolved to recommend the Minister consent to the application (Resolution 136/95).
- The Minister granted his consent for SPYC to impact the registered site and proceed with the proposed redevelopment in January 1996.
- This redevelopment, as per the Halpern Glick Maunsell plans, was completed by 2017.
- The proposal sent through by yourself on 1 October involves a new set of developments that were not part of the original Halpern Glick Maunsell plans previously approved by the Minister (attached).

In these circumstances, I would like to reiterate my previous advice. As the sleeved piles would constitute a breach of the Act, it is strongly recommended that SPYC consult with the relevant local knowledge holders and Aboriginal corporation with a view towards a fresh section 18 application for ministerial consent to the disturb the site.

Please feel free to email me back if you have any questions.

Many thanks,

Moss Wilson | Senior Heritage Officer | Heritage Services
140 William Street, Perth WA 6000
6552 4056 | 0437 502 369
www.dplh.wa.gov.au



The Department acknowledges the Aboriginal peoples of Western Australia as the traditional custodians of this land and we pay our respects to their Elders, past and present.

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From: Marshall Farrell <marshall.farrell@dbca.wa.gov.au>
Sent: Monday, 18 October 2021 9:24 AM
To: Moss Wilson <Moss.Wilson@dplh.wa.gov.au>
Subject: FW: Response, South of Perth Yacht Club proposed jetty

Hi Moss,

I trust you are well.

The South of Perth Yacht Club has provided the following response regarding a section 18 application under the *Aboriginal Heritage Act 1972*:

"When SoPYC embarked on its marina redevelopment program back in the mid 1990's we proposed a long term Concept Plan to the WAPC for an overall approval so that development could then be progressed in stages.

Following a Consultant's Report on ethnographic and aboriginal heritage sites in the area, representatives of the Club met with the traditional land owners to progress the approval, and subsequently the Minister for Aboriginal Affairs of the day under his power in section 18(3) of the Aboriginal Heritage Act granted his consent for the purposes of redeveloping the yacht club facilities. The Club has over the past 22 years completed many of the stages of this original Concept Plan.

To our knowledge this consent has not been withdrawn or altered, and remains valid today."

I have attached the letter provided by the South of Perth Yacht Club.

Can you please advise as to whether the South of Perth Yacht Club would still require a section 18? I have asked for the subject Concept Plan to be provided and I can refer it to yourself once it is received.

Kind regards,

Marshall Farrell
Planning Officer | Statutory Assessments | Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
Locked Bag 104, Bentley Delivery Centre WA 6983
Phone: (08) 9278 0995
Email: marshall.farrell@dbca.wa.gov.au Web: www.dbca.wa.gov.au
Ngala kaaditj Noongar moort keyen kaadak nidja boodja.
We acknowledge the Noongar people as the original custodians of this land.



From: Marshall Farrell
Sent: Thursday, 7 October 2021 8:13 AM
To: Moss Wilson <Moss.Wilson@dplh.wa.gov.au>
Subject: RE: Response, South of Perth Yacht Club proposed jetty

Hi Moss,

Thank you for your referral response.

I will advise the applicant of the below advice.

Kind regards,

Marshall Farrell
Planning Officer | Statutory Assessments | Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
Locked Bag 104, Bentley Delivery Centre WA 6983
Phone: (08) 9278 0995
Email: marshall.farrell@dbca.wa.gov.au Web: www.dbca.wa.gov.au
Ngala kaaditj Noongar moort keyen kaadak nidja boodja.
We acknowledge the Noongar people as the original custodians of this land.



From: Moss Wilson <Moss.Wilson@dplh.wa.gov.au>
Sent: Tuesday, 5 October 2021 3:52 PM
To: Marshall Farrell <marshall.farrell@dbca.wa.gov.au>
Subject: Response, South of Perth Yacht Club proposed jetty

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

Hi Marshall, thanks for sending this through to us.

In regards to your request for comment on the proposed jetty at the South of Perth Yacht Club, a review of the Register of Places and Objects as well as the DPLH Aboriginal Heritage Database confirms that the proposed works do intersect with registered Aboriginal Heritage place ID 3536 (Swan River).

Given that the proposed jetty will result in significant physical impacts to the riverbed via the HDPE sleeved steel piles, it is recommended that the South of Perth Yacht Club consult with the relevant local knowledge holders and Aboriginal Corporation (South West Land and Sea Council) as a section 18 application under the *Aboriginal Heritage Act 1972* will be needed.

If the proponent requires any more information on the *Aboriginal Heritage Act 1972* and its processes, they may wish to consult DPLH's Aboriginal Heritage Due Diligence Guidelines, which have been developed to assist proponents to identify any risk. The document is available at:

https://www.wa.gov.au/sites/default/files/2021-05/AH-Due-diligence-guidelines_0.pdf

I hope this clarifies things, please don't be afraid to email me back or call me on 6552 4056 if you require any further information.

Sincerely,

Moss Wilson | Senior Heritage Officer | Heritage Services
140 William Street, Perth WA 6000
6552 4056 | 0437 502 369
www.dplh.wa.gov.au



The Department acknowledges the Aboriginal peoples of Western Australia as the traditional custodians of this land and we pay our respects to their Elders, past and present.

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From: [Karen Jackson](#)
To: [Rivers Planning](#)
Subject: RE: Referral for Comment - Part 5 - 2021/2116 - Construction of a new jetty in part of the swing mooring area - 2 Canning Beach Road Applecross - South of Perth Yacht Club
Date: Wednesday, 27 October 2021 11:29:49 AM
Attachments: [image003.png](#)
[image001.jpg](#)

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

Dear Carolyn,

Historic heritage services has reviewed the proposal for new jetty at the South of Perth yacht club and note that it is located a substantial distance from the registered place *Heathcote Hospital Precinct, Applecross* and will not impact that place.

As such we have no comment in relation to the proposal.

Apologies for the delay in responding.

Regards,

Karen Jackson | Principal Heritage Officer | Heritage Services
140 William Street, Perth WA 6000
6552 4150
www.dplh.wa.gov.au



The Department acknowledges the Aboriginal peoples of Western Australia as the traditional custodians of this land and we pay our respects to their Elders, past and present.

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From: Rivers Planning <rivers.planning@dbca.wa.gov.au>
Sent: Wednesday, 8 September 2021 11:49 AM
To: DPI Referrals <Referrals@dplh.wa.gov.au>
Cc: Marshall Farrell <marshall.farrell@dbca.wa.gov.au>
Subject: Referral for Comment - Part 5 - 2021/2116 - Construction of a new jetty in part of the swing mooring area - 2 Canning Beach Road Applecross - South of Perth Yacht Club

Good afternoon,

PART 5 – 2 CANNING BEACH ROAD, APPLECROSS – CONSTRUCTION OF A NEW JETTY IN PART OF THE SWING MOORING AREA – SOUTH OF PERTH YACHT CLUB

The Department of Biodiversity, Conservation and Attractions (DBCA) has received an application for the above mentioned development. Please refer to the attached documents for application details. Your department is invited to provide comments and recommendations considered relevant to this proposal.

Prior to the report being prepared, the application has been referred to relevant agencies for comments and advice. Accordingly, please provide a response to this office within **42 days** of receipt of this email. Should you not be able to respond within this time, please notify the department as soon as possible, outlining the reasons for the delay and a date when a response may be available.

In preparing your response, please be aware that it may be made available for viewing by the public, unless otherwise requested.

Please forward your response via email to rivers.planning@dbca.wa.gov.au. Should there be any queries regarding this matter, please contact Marshall Farrell, Planning Officer, on 9278 0900. In all correspondence please quote the reference number 2021/2216.

Yours sincerely

Carolyn Pearce
Administration Officer

Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
Phone: 08 9278 0921
17 Dick Perry Avenue, Kensington WA 6151
Email: carolyn.pearce@dbca.wa.gov.au Web: www.dbca.wa.gov.au

We acknowledge the Whadjuk people as the Traditional Owners of this land



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Attachment 2d - External referral response: Department of Water and Environmental Regulation

From: [Jim MacKintosh](#)
To: [Marshall Farrell](#)
Subject: RE: External Referral for Comment - Part 5 - 2021/2116 - Construction of a new jetty in part of the swing mooring area - 2 Canning Beach Road Applecross - South of Perth Yacht Club
Date: Monday, 4 October 2021 9:02:03 AM
Attachments: [image001.png](#)
[image002.png](#)

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

Hi Marshall,

The Department has no objections to the proposed approach.

Regards

Jim MacKintosh

Department of Water and Environmental Regulation

Program Manager

Swan Avon Region

Planning Advice Section

T 08 6250 8043 |

E jim.mackintosh@dwer.wa.gov.au

Visit our website www.dwer.wa.gov.au

From: Marshall Farrell <marshall.farrell@dbca.wa.gov.au>

Sent: Friday, 1 October 2021 2:52 PM

To: Jim MacKintosh <jim.mackintosh@dwer.wa.gov.au>

Subject: RE: External Referral for Comment - Part 5 - 2021/2116 - Construction of a new jetty in part of the swing mooring area - 2 Canning Beach Road Applecross - South of Perth Yacht Club

Hi Jim,

Further to the email below, the Department of Biodiversity, Conservation and Attractions (DBCA) has further reviewed the application and consulted with the applicant of the subject development application. After further review and consultation, DBCA believes issues relating to contamination and geotechnical information can be appropriately addressed through appropriate management plans and construction designs which would be required through appropriate conditions of approval, of which would be referred to the Department of Water and Environmental Regulation (DWER) for review and comments. Such conditions were placed on a similar development application at this location in 2014.

Can you please advise as to whether DWER would object to this approach?

Kind regards,

Marshall Farrell

Planning Officer | Statutory Assessments | Rivers and Estuaries Branch

Department of Biodiversity, Conservation and Attractions

Locked Bag 104, Bentley Delivery Centre WA 6983

Phone: (08) 9278 0995

Email: marshall.farrell@dbca.wa.gov.au Web: www.dbca.wa.gov.au

Ngala kaaditj Noongar moort keyen kaadak nidja boodja.

We acknowledge the Noongar people as the original custodians of this land.



From: Jim MacKintosh <jim.mackintosh@dwer.wa.gov.au>

Sent: Wednesday, 15 September 2021 1:08 PM

To: Rivers Planning <rivers.planning@dbca.wa.gov.au>

Cc: Marshall Farrell <marshall.farrell@dbca.wa.gov.au>

Subject: RE: External Referral for Comment - Part 5 - 2021/2116 - Construction of a new jetty in part of the swing mooring area - 2 Canning Beach Road Applecross - South of Perth Yacht Club

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

Dear DBCA,

Thank you for the above referral. The Department of Water and Environmental Regulation has considered the proposal and has no objections and no comments to provide. However, the Department notes that while pilings are proposed into the river bed no information has been provided on these and no impact assessment has been undertaken,. Should DBCA wish for the Department to comment on this aspect then detailed information would need to be provided, including the exact location of pilings, river bed geotechnical information and potential contamination issues. The Department can then provide advice on that matter.

Regards

Jim Mackintosh

Department of Water and Environmental Regulation

Program Manager

Swan Avon Region

Planning Advice Section

T 08 6250 8043 |

E jim.mackintosh@dwer.wa.gov.au

Visit our website www.dwer.wa.gov.au

From: Rivers Planning <rivers.planning@dbca.wa.gov.au>

Sent: Wednesday, 8 September 2021 11:49 AM

To: Swan Avon Land Use Planning <swanavon.landuse@dwer.wa.gov.au>

Cc: Marshall Farrell <marshall.farrell@dbca.wa.gov.au>

Subject: External Referral for Comment - Part 5 - 2021/2116 - Construction of a new jetty in part of the swing mooring area - 2 Canning Beach Road Applecross - South of Perth Yacht Club

Good afternoon,

Att: Contaminated Sites

PART 5 – 2 CANNING BEACH ROAD, APPLECROSS – CONSTRUCTION OF A NEW JETTY IN PART OF THE SWING MOORING AREA – SOUTH OF PERTH YACHT CLUB

The Department of Biodiversity, Conservation and Attractions (DBCA) has received an application

for the above mentioned development. Please refer to the attached documents for application details. Your department is invited to provide comments and recommendations considered relevant to this proposal.

Prior to the report being prepared, the application has been referred to relevant agencies for comments and advice. Accordingly, please provide a response to this office within **42 days** of receipt of this email. Should you not be able to respond within this time, please notify the department as soon as possible, outlining the reasons for the delay and a date when a response may be available.

In preparing your response, please be aware that it may be made available for viewing by the public, unless otherwise requested.

Please forward your response via email to rivers.planning@dbca.wa.gov.au. Should there be any queries regarding this matter, please contact Marshall Farrell, Planning Officer, on 9278 0900. In all correspondence please quote the reference number 2021/2216.

Yours sincerely

Carolyn Pearce

Administration Officer

Rivers and Estuaries Branch

Department of Biodiversity, Conservation and Attractions

Phone: 08 9278 0921

17 Dick Perry Avenue, Kensington WA 6151

Email: carolyn.pearce@dbca.wa.gov.au Web: www.dbca.wa.gov.au

We acknowledge the Whadjuk people as the Traditional Owners of this land



Carolyn Pearce

Administration Officer

Rivers and Estuaries Branch

Department of Biodiversity, Conservation and Attractions

Phone: 08 9278 0921

17 Dick Perry Avenue, Kensington WA 6151

Email: carolyn.pearce@dbca.wa.gov.au Web: www.dbca.wa.gov.au

We acknowledge the Whadjuk people as the Traditional Owners of this land





Our ref: ADV-10003219 / A00010-24
Enquiries: Moss Wilson Ph: (08) 6552 4056

Statutory Assessments
Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions

Via email: rivers.planning@dbca.wa.gov.au

To whom it may concern,

**ABORIGINAL CULTURAL HERITAGE – PROPOSED JETTY WORKS, SOUTH
OF PERTH YACHT CLUB**

Thank you for your enquiry dated 15 December 2023 regarding the South of Perth Yacht Club's proposed jetty works in the City of Melville.

A review of the Register of Places and Objects as well as the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Database confirms that the subject area intersects with Aboriginal Registered Site ID 3536 (Swan River).

In responding to your request, I would like to reiterate my previous advice of 20 October 2021, that a section 18 approval under the *Aboriginal Heritage Act 1972* (AHA) will be required for the proposed works. Please refer the South of Perth Yacht Club to the DPLH website at [Aboriginal Heritage Approvals \(www.wa.gov.au\)](http://www.wa.gov.au) for information on 'Land use under the Aboriginal Heritage Act 1972' for the types of approvals available under the AHA and how to apply.

If you have any further questions regarding the AHA, please send enquiries to the [ACHKnowledge Portal](#).

Should you have any queries in relation to the above, please contact me on (08) 6552 4056 or email moss.wilson@dplh.wa.gov.au.

Yours sincerely

Moss Wilson

A/ASSISTANT MANAGER
ABORIGINAL HERITAGE CONSERVATION

2 January 2024

OFFICIAL



**Department of Planning,
Lands and Heritage**

Your ref: 2021/2116 - KM2023-0194
Our ref: P18987-5101
Enquiries: Liza Mathews (08) 6551 9068

Statutory Assessments
Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
rivers.planning@dbca.wa.gov.au

Dear Sir/Madam

SWAN AND CANNING RIVERS

Thank you for your email of 3 January 2024 regarding the proposal for construction of a new jetty and relocation of swing moorings within South of Perth Yacht Club.

The Heritage Council previously identified Swan and Canning Rivers as a place warranting assessment for possible entry in the State Register of Heritage Places; however, a full assessment of its cultural heritage significance has not yet been undertaken.

We thank you for forwarding information on the proposal, which raises no concerns for the Heritage Council, Land Use Planning and Land Use Management from the Department of Planning Lands and Heritage.

Should you have any queries regarding this advice please contact Liza Mathews at liza.mathews@dplh.wa.gov.au or on 6551 9068.

Yours faithfully

Sheree Morrison

Historic Heritage Conservation

16 January 2024



Your ref: 2021/2116 - KM2023-0194
Our ref: DMO 6470, 2759
Enquiries: Patch Mitchell, Ph 6364 7199
Email: Patrick.mitchell@dwer.wa.gov.au

Karen Sanders
Environmental Officer
Statutory Assessments Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
17 Dick Perry Avenue, Kensington WA 6151

By email rivers.planning@dbca.wa.gov.au

Dear Karen Sanders

**DEVELOPMENT APPLICATION NUMBER 2021/2116 - KM2023-0194 –
LOT 310 ON PLAN 47439 CROWN RESERVE 48327, ADJACENT TO
SOUTH PERTH YACHT CLUB**

I refer to your email dated 15 December 2023 to the Department of Water and Environmental Regulation (the department) regarding an application to the City of Melville, which was referred to the Department of Biodiversity, Conservation and Attractions (DBCA) for the proposed development of the above-mentioned lot.

As per the requirements under section 58(6)(b) of the *Contaminated Sites Act 2003* (CS Act), advice is required as to the suitability of the land for the proposed development. The department understands that the proposed development comprises the construction of a new floating jetty with associated piles for anchorage, and the removal and relocation of swing moorings.

Land at Lot 6854 on Plan 166844, a portion of land at Lot 310 on Plan 47439 (Crown Reserve 48327) (the site) and a portion of Lot 300 on Plan 47450 (Crown Reserve 48325), were classified under the CS Act as *possibly contaminated – investigation required* on 21 March 2011 and a memorial (reference number L654464) was placed on the certificate of title of Lot 6854.

The classifications were based on contamination assessments undertaken between 2006 and 2007. The investigations found anti-fouling agents (organotin compounds) and metals such as copper and zinc were present in sediments and surface water adjacent to the yacht club's slipway and associated vessel maintenance areas.

The department notes the proposed development works are located on land at Lot 310, adjacent to an area suspected to be contaminated as a result of current or historical vessel maintenance activities. Furthermore, the development works propose driving up to 30 piles one metre into the riverbed as anchorage for the new jetty and is likely to disturb the sediments and surface water.

Given the uncertainties associated with the current contamination status of Lot 310, the department cannot comment on the suitability of the site for the proposed development.

CONTAMINATION

Given the risks associated with the potential disturbance of organotin compounds and metals in sediments and surface water, the department supports the proposed condition which requires an appropriate Construction Environmental Management Plan to be prepared and submitted to DBCA for their approval, prior to works. The department recommends the following additional advice be applied to any approval granted by DBCA:

Advice

The Construction Environmental Management Plan should address environmental risks associated with disturbing potentially contaminated sediment. The department recommends that baseline sediment quality sampling is undertaken prior to the commencement of construction works, to inform any contingency actions that may be required during construction.

ACID SULFATE SOILS

Acid sulfate soil risk mapping indicates that Lot 310 lies within an area identified as having a high to moderate risk of acid sulfate soils occurring within three metres of the natural soil surface.

As the proposed development works have the potential to disturb acid sulfate soils within sediment, the department recommends that the following advice note be applied to any approval granted by DBCA:

Advice

Acid sulfate soils (ASS) risk mapping indicates that the project footprint is located within an area identified as representing a high to moderate risk of ASS occurring within 3 metres of the natural soil surface, noting that ASS is likely to be present within sediment in the river. Please refer to the Department of Climate Change, Energy, the Environment and Water's 'Guidelines for the dredging of acid sulfate soils and associated dredge spoil management' for information to assist with the management of sediment disturbing works. [Guidelines for the dredging of acid sulfate soil sediments and associated dredge spoil management \(waterquality.gov.au\)](https://www.waterquality.gov.au/guidelines-for-the-dredging-of-acid-sulfate-soil-sediments-and-associated-dredge-spoil-management)

If you have any queries in relation to the above, please contact Environmental Officer, Patch Mitchell, on 6364 7199.

Yours sincerely



Penny Woodberry
ACTING SENIOR MANAGER
CONTAMINATED SITES
Delegated Officer under section 91
of the *Contaminated Sites Act 2003*

30 January 2024

SOUTH of PERTH YACHT CLUB (inc)

WELCOMING | PEOPLE | SAILING | INSPIRATION



SCANNED



16th August 2021

Statutory Assessments
Rivers and Estuaries Branch
Department of Biodiversity, Conservation and Attractions
Locked Bag 104
BENTLEY DC WA 6983

Dear Sir/Madam

Please find attached documentation regarding a Development Application from the South of Perth Yacht Club (Inc.) pertaining to the construction of additional vessel berthing facilities within its existing Riverbed Lease area (South of Perth Yacht Club - Lot 300 on Plan 47450 - Swan River Lease; Canning Beach Road, Applecross).

The attached documents include:

1. Form 1 - Application for Approval of Development (Swan and Canning River Management Act 2005 – Part 5 – Section 72 (1))
2. South of Perth Yacht Club - Development Application - Jetty 8
3. Appendices Folder – including larger scale versions of drawings and images

The Club has forwarded a copy of parts 2 and 3 above together with the WAPC MRS Form 1 - Application for Planning Approval to the City of Melville. The shoreline perimeter of the Club's site includes Crown Reserve (Lot 301, Reserve 25599) held under Management Order 3135 659 by the Club, and our understanding is that we are required to advise the City of Melville of this even though the proposed development is not in this reserve.

Should DBCA require any further information, or require any clarification regarding the proposed development, or would like to meet with the Club to discuss any aspects of this proposal, please contact us.



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We look forward to progressing this matter.

Yours sincerely,

John Midolo
ACTING GENERAL MANAGER

Encls.



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Form 1 – Application for Approval of Development

Swan and Canning Rivers Management Act 2006 – Part 5 – section 72(1)

1. Applicant – the applicant is required to sign the form at item No. 8

The applicant is the person with whom the Chief Executive Officer will correspond, unless an authorised agent has been appointed to act on behalf of the applicant, in which case correspondence will be sent direct to the agent.

Name of Applicant	SOUTH OF PERTH YACHT CLUB		
Name of Company (if applicable)	AS ABOVE		
Contact person	JOHN MIDOLE - ACTING GENERAL MANAGER		
Postal address	2 CANNING BEACH ROAD		
Town/Suburb	APPLECROSS	Postcode	6153
Telephone	Work	93645844	Home
Facsimile			
Email	general.manager@sopyc.com.au		

2. Landowner(s) – landowners are required to sign the form at item No. 8

All owner(s) of the land must sign this application. Where land is owned by the Crown, or has a management order granted to a local government or other agency, this application must be signed by the relevant landowner as required under section 72(5)(a) of the Act. If there are more than 2 landowners, please provide the additional information on a separate page.

Details of 1st landowner

Full name	AS ABOVE		
Company/agency (if applicable)			
Position & ACN/ABN (if applicable)	Position	ACN/ABN No.	36417855329
Postal address			
Town/Suburb		State	Postcode

Details of 2nd landowner (if applicable)

Full name			
Company/agency (if applicable)			
Position & ACN/ABN (if applicable)	Position	ACN/ABN No.	
Postal address			
Town/Suburb		State	Postcode



Form 1 – Application for Approval of Development
Swan and Canning Rivers Management Act 2006 – Part 5 – section 72(1)

3. Appointment of an authorised agent – authorised agent is required to sign the form at item No. 8

Where the applicant has appointed an authorised agent to act on their behalf, the authorised agent must attach the written authority to this application.

Have you appointed an authorised agent to act on your behalf? YES NO

Details of authorised agent

Table with 6 rows and 5 columns for agent details: Full name, Company/agency, Position, ACN/ABN/Telephone, Postal address, Town/Suburb, State, Postcode.

4. Certificate(s) of title information

Table with 4 columns and 7 rows for title information: Certificate of title, Volume, Folio, Diagram/plan/deposit plan no., Lot No. and location of subject lot, Reserve No., Street No. and name, Town/Suburb, Nearest road intersection.

5. River reserve lease (Swan and Canning Rivers Management Act 2006 - section 29)

If you intend to apply for a lease in relation to this proposed development, you will need to complete a separate Form – Application for a River reserve lease – and lodge it concurrently with this application.

Does the development require a River reserve lease? EXISTING LEASE YES NO

If the development requires a River reserve lease, please tick the appropriate box below.

Table with 2 columns and 3 rows for lease options: New lease, Renewal of a lease, Modification of an existing lease (ie. change in area or purpose etc.).

PARTIAL CHANGE OF PURPOSE



Form 1 – Application for Approval of Development
Swan and Canning Rivers Management Act 2006 – Part 5 – section 72(1)

6. River reserve licence (Swan and Canning Rivers Management Act 2006 - section 32)

If you intend to apply for a licence in relation to this proposed development, you will need to complete a separate Form – Application for a River reserve licence – and lodge it concurrently with this application, e.g. charter vessel operation, kayak, canoe tours, etc. Refer to the Licence Application Guidelines on how to apply for a River reserve licence.

Does the proposed development involve an activity in the River reserve that will require a River reserve licence?

YES NO

If the development requires a River reserve licence, please tick the appropriate box below.

Table with 2 columns: Licence type (New licence, Renewal of a licence) and status (checkboxes)

NEW JETTY LICENSE

Modification of an existing licence (ie. change in area, purpose, etc.)

7. Details of proposed development

Please provide a written description of the proposed development (refer to the Development Application Guidelines for further details on what information to include in this section).

Form with three main sections: Estimated cost of development (\$ 1.25 million), Current use of land (Swing mooring area of yacht club), and Proposed development (Construction of new jetty in part of swing mooring area).



Form 1 – Application for Approval of Development
Swan and Canning Rivers Management Act 2006 – Part 5 – section 72(1)

8. Signatures

Signed by Applicant

Applicant signature		
Date	16-08-21	
Print name and position (if signing on behalf of a company or agency)	Name	JOHN MIDOLO
	Position	ACTING GENERAL MANAGER

Signed by Landowner/s (if the landowner is not the applicant)

I consent to this application being made.		
Landowner signature		
Landowner signature		
Date	24/8/2021	
Print name and position (if signing on behalf of a company or agency)	Name	Glen McLeod-Thorpe
	Position	Manager, Rivers and Estuaries Branch

on behalf of the Swan River Trust

Signed by Authorised Agent (if you are acting for the applicant)

I have attached a copy of the written authorisation for me to act on behalf of the applicant to this application.		
Authorised Agent signature		
Date		
Print name and position (if signing on behalf of a company or agency)	Name:	
	Position:	

South of Perth Yacht Club (Inc).

Development Application

Jetty 8

August 2021

SoPYC Jetty 8 Development Application

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INTRODUCTION

South of Perth Yacht Club (Inc) (SoPYC) was established in December 1945. Originally located at Olives Grove, Como, the planning for Perth's north south transport corridor resulted in the Club being relocated by the Western Australian Government to Applecross in 1960 on land reclaimed from the Swan and Canning Rivers. Since 1960 the Club has been developed using its members' resources and funds. SoPYC has two Crown Grants in Trust over the reclaimed land and a Reserve under Management Order, and has a Riverbed Lease (Jetty and Mooring licence) granted by the Western Australian Government.

The Club has over 60 years progressively developed jetties and pens to accommodate sailing yachts and power boats with strong focus on adult and junior sailing and training activities being offered to Western Australia's community who are members of the Club. The Club's Objects include to "Encourage the sport of yachting and recreation on the water to the community" and "To provide buildings, harbour, and other facilities for members and their vessels". The South of Perth Yacht Club is a registered Western Australian Institute of Sport Training Facility, and is a significant contributing member of the Yachting Association of WA, and of the national sporting body, Australian Sailing.

The Club embraces its responsibilities to the Swan and Canning river system, to best practice environmental management systems and protection, and to the community.

In 2017 the Club invested significantly in a sophisticated three stage MyClex filtration and treatment plant capable of capturing hydrocarbons as fine as 0.5 microns and heavy metals, and holding treated water onsite for reticulation and reusable wash-down water. This state of the art system makes SoPYC an environment leader among yacht clubs in Australia for which it won the 2019-20 Best Environmental Initiative Award from the Marina Industry Association of Australia.

FUTURE CONSIDERATIONS

DEMAND / REGIONAL GROWTH

The growth of the Perth metropolitan area and its population in recent years has seen a rise in demand for recreational boating facilities. Future growth of the Perth - Peel Region and the development of the Canning Bridge Precinct in the future, both residentially and commercially, will add to that demand. The order of magnitude of this expected demand increase is discussed in a number of forward looking publications and studies, and membership and enquiry rates have recently risen at SoPYC. The Club currently has a considerable waiting list of pen (berth) applications.

The Canning Bridge Precinct – Urban Growth Analysis commissioned by CoM, CoSP, WAPC and WA Government DoP, and published by GHD in October 2009, indicates the future prominence of this sub-region as reflected in the targets set in WA Planning Commission's (2009) Directions 2031 paper for an additional 29% growth in population to 910,000 – 205,000 new people; 121,000 new dwellings; 147,000 new jobs; and 127,000 people living in the area who contribute to the labour force.

This analysis, together with the Canning Bridge Precinct Vision publication released by the Minister for Planning in July 2011, to some extent quantify future growth expectations in the proximity to SoPYC.

The Perth Recreational Boating Facilities Study 2008, (PRBF Study) commissioned by the Department of Planning and Infrastructure and published as Technical Report Number 444 in February 2009, identifies in its Executive Summary that "*recreational boat numbers in Perth will continue to increase from 48,468 in 2007 to a projected 84,857 in 2025*", and suggests one of the short and medium term

privately funded initiatives to expand and/or re-organise the pen capacity of Yacht Clubs should be pursued.

In Section 7.2.2 it states *“The re-development of existing facilities, particularly at Yacht Clubs is the most likely option to increase facility capacity in Perth’s rivers and a number of Clubs have moved to re-design their facilities to improve capacity and modernise their facilities. In some cases this includes investigation into the installation of modern boat stacking systems. The Swan River Trust, as the planning agency for the river is unlikely to grant approval for boat stackers unless environmental and amenity issues are adequately addressed, with no increase in alienation of foreshore land.”* Reference is made to the Draft Boating Management Strategy for the Swan and Canning Rivers Jan 2008 Swan River Trust, Section 2.7

The PRBF Study 2008, in Appendix 2, further helps quantify future demand expectations. Under the Existing Facilities – Expansion Potential Pens for Existing River Sites it is suggested South of Perth Yacht Club expansion potential in the period to 2025 to meet near and medium term future demand is a further 100 pens.

The PRBF Study 2008 report recommends in its conclusions that;

“The development of existing facilities is carried out to their potential before new facilities are proposed in nearby locations,” and that *“The schedule of development options (detailed in this report) and comprising a mix of upgrades to existing facilities and delivery of new facilities (both by private enterprise and by government) be pursued to ensure that the facilities that are required to address Perth’s growing recreational boating demand from now to 2025 are planned and provided in a timely manner.”*

Boating Management Strategy for the Swan and Canning Rivers published in February 2009 by the Swan River Trust notes *“The implementation of recommendations of the Perth Recreational Boating Facilities Study prepared under the Perth Coastal Planning Strategy will have a major influence on the future of boating in the Swan Canning Riverpark.”*

In this publication the Trust recognises *“moorings are not an efficient way to accommodate boats in the Riverpark. The area taken up by one boat on a swing mooring could accommodate many more boats in a marina. The increased competition for space on the rivers means the Trust must consider efficient boat accommodation in its decision making to prevent further alienation of areas in the Riverpark. This raises the prospect of a reduction in mooring areas with an increased area for marinas but with less overall alienation of the river bed.”*

Recommendation 1.3 of this Strategy calls for the Trust to *“Investigate increasing the storage density of existing mooring areas through the installation of alternate systems, with careful consideration for protecting amenity and environmental values.”*

South of Perth Yacht Club is the only substantial yacht club upstream of East Fremantle on the southern shore of the Swan Canning River system. Its close proximity to the north south freeway and rail corridor, the developing Canning Bridge Precinct, the growing populations of the Cities of Melville and South Perth, and to Perth’s expanding southern and south eastern suburbs, is unique.

It is a Club located in a naturally well protected, low wash and low speed controlled part of the river system, with more than adequate and predominantly stable water depths. The Club is conscious that over the long term (20 years plus) there have been some small areas where sand migration has become evident. These are being monitored by the Club and infrequent small scale remedial dredging will be required in the future.

South of Perth Yacht Club is a river-based yacht club with an underutilised swing mooring area within its existing riverbed lease area. This Development Application seeks approval for South of Perth Yacht Club to construct a new Jetty (designated Jetty 8) in the underutilised area referred to above and which will add an additional (net) 53 marina pens to its current 472 usable pens.

SoPYC Jetty 8 Development Application

SOPYC RIVERBED LEASE

SoPYC has an existing Riverbed Lease of some 142,703 m² at the junction of the Swan and Caning Rivers. The Lease Area Annexure Diagram of this is included in Appendix C. The works proposed in this Development Application are within the Clubs existing Riverbed Lease area.

The Club is mindful that its current Riverbed Lease will be subject to renewal in mid 2027 on terms expected to be similar to those applicable to other river yacht clubs.

Once constructed, the Jetty 8 contribution to the ongoing lease cost, and to the ongoing high level maintenance program of the Clubs entire marina facilities, in addition to improved utilisation of the riverbed lease area, are important outcomes consistent with the studies previously mentioned.

This project will assist the Club in continuing to meet its objectives and commitments to the environment, to sporting and recreational boating, and to the broader community and its growth over the long term.

PROJECT BACKGROUND

In 2017 SoPYC completed the replacement programme for its Jetties 4 and 5 constructed using the Universal Marine Systems (UMS) floating jetty system to accommodate 141 vessels, a net increase of 30 pens on the old jetties 4 and 5, and with a more efficient layout. The additional capacity helped reduce the Club's pen waiting list at the time, and went part of the way to meeting growing demand at the time as predicted.

The layout of the SoPYC current marina is, in the Club's view, close to being as efficient as it can possibly be given the shape of its shoreline and riverbed lease area, with limited opportunity to increase berth density through further reorganisation of existing facilities.

The UMS System is a modularised floating piled jetty and finger system. It is the product style/type used on existing jetties - Jetties 3, 4, 5, 6, and 7. Upon the completion of the 2017 project, all SoPYC jetties are similar floating structures with the exception of Jetty 1 (the fuel berth which also serves as a sophisticated wave attenuator offering protection from winter north / north westerly storm weather to the entire marina), and Jetty 2. Both of these were installed in 1999 and are fixed concrete and steel pile structures.

PROJECT DESCRIPTION

Jetty 8

The new Jetty 8 structure is proposed to be constructed on a UMS style floating jetty comprising aluminium frames, polyethylene floats and decking, retained by HDPE sleeved steel piles. It will include berths of several different sizes to accommodate expected demand.

The jetty will be constructed in accordance with Australian Standard AS3962:2020 Marina Design.

Jetty 8 is proposed to branch off the Club's existing Jetty 7 some 255 metres from shore. Jetty 7 is in total nearly 344 metres in length. Jetty 8 will head in a southerly direction for some 80 metres before heading east south east for 140 metres, in total being some 220 metres in length.

Refer to Appendices B and C for details on design, layout, water depths and other information.

SoPYC Jetty 8 Development Application

Services

The new jetty will provide water and power serviced pens ranging in length from 8m to 25m. A total of 56 pens will be installed, increasing the overall marina capacity by a net 53 pens, and fitting within the existing Club water lease area.

Power, lighting, and potable and fire water services will be provided to all pens, with electrics and water outlet modules serving each 2 adjacent pens. The modules will be along both sides of the jetty main walkways so that electrical cables will not cross the decks avoiding a trip hazard. All services will be installed according to the relevant standards and codes.

Additional Fire Services capacity and offtakes, and upgraded power supply were included for all Club Jetties as part of the Jetty 4/5 project completed in 2017. Should the Jetty 8 project require activation of any additional capacity of the Jetty 7 Fire Services or Power to meet required standards, this will be undertaken.

Car Parking

South of Perth Yacht Club's carparking areas currently have 301 bays.

In accordance with the requirements of AS3962:2020 for car parking bays supporting marina wet berth and dry berth facilities and including the net additional wet berths of Jetty 8, the Club's current car bay numbers exceed the average ratio requirements of the Standard.

	No. <u>Berths</u>	AS3962 Ratio Range <u>Car Bays: Berths</u>	<u>Average</u>	<u>Required</u> <u>Car Bays</u>
Current Wet Berths	472	0.3 to 0.6	0.45	212
Wet Berths Jetty 8 (net change)	53	0.3 to 0.6	0.45	24
Dry Berths	145	0.2 to 0.4	0.30	43
<u>Contractors and Staff</u>				<u>20</u>
Total required using Ratio Averages				299
Total Currently Available				301

The Club's year round boating activities, and the daytime and evening usage by members and guests of the Club's shore based facilities (which fluctuates throughout the week, and across the four seasons) are adequately catered for by these 301 car bays.

At the present time the occasional peak periods where excess parking demand extends to street and off-street parking adjacent to the Club are both infrequent and supported by City of Melville provided parking facilities.

Project Cost Estimate

The indicative cost of the proposed Jetty 8 construction is \$1.25 million

SoPYC Jetty 8 Development Application

SoPYC Mooring Area Depth Survey

The attached mooring area depth survey was completed by the SoPYC in August 2021. The water depths and fairways widths (of appropriate depth) for Jetty 8 access are according to AS3962:2000.

Please refer Appendix C - SoPYC Mooring Area Depth Survey images.

CONSTRUCTION METHODOLOGIES

Installation of New Floating Jetties

Floating pontoons and piling will be delivered and floated from the Club's Boat Maintenance area to the Jetty 8 site progressively as required during the jetty construction. Tubular steel piles will be driven into position in order to retain the floating pontoons of the new jetty.

The piles will be fitted with HDPE sleeves that will extend a minimum of 1.0m below the river bed surface, and bird caps will be installed so that the new piling will match the existing piling for Jetties 3 to 7.

As per previous projects and as part of its environmental care, the Club will implement a Dolphin Watch system during construction and will cease piling work and its associated noise when dolphins are in the area.

Floating pontoons will be joined up into lengths before being attached to the retention piles, eventually forming the complete jetty. Electrical and water services and modules will then be installed.

POTENTIAL IMPACTS AND MITIGATING MEASURES

No construction or waste materials will be allowed to be discharged into the river at any time.

Jetty 8 - During Construction

Noise from pile driving is unfortunately unavoidable but the hours that this work can occur are restricted under building codes and practices.

If any turbidity is noted during piling, silt curtains will be erected around that work.

As mentioned above, the Club will implement a Dolphin Watch System during construction and will cease piling work and its associated noise when dolphins are in the area.

It is not expected that there will be any other noise or other environmental impacts from the installation of the new floating jetties.

It is expected that any conditions of approval will be subject to the preparation of, and the following of, typical management plans and standards, such as:

- Construction Management Plans
- Environmental Management Plans
- Electrical and Plumbing Standards
- Marina Design Standards

Jetty 8 - Ongoing

Changed Visual Aspects

A change in the visual aspect of the river will occur mainly for residences on Canning Beach Road between Flanagan Road and Dunvegan Road, some 6 properties. All are double story homes with upper level views through, over and above the Clubs existing marina and swing mooring area, and the proposed development area.

The aspect change will be from a current outlook vista divided between the Club's Jetty 7 and its swing mooring area with the Kwinana Freeway backdrop, to a future outlook which will include Jetty 7, Jetty 8, and the swing mooring area with the Kwinana Freeway backdrop. The outlook vista from these residences more directly toward the City of Perth already takes in the whole Club marina, and will remain unchanged.

For residences further south on Canning Beach Road towards the Raffles site the visual change described above gets progressively smaller quite quickly. This area in the future is proposed to include high rise developments, with views above this proposed SoPYC development.

A number of the residences (10 currently) on Canning Beach Road belong to Club members who are supportive of the Jetty 8 construction. Written submissions from these members can easily be obtained if so required.

Lighting

The lighting design will be based on being compatible with the existing lighting installation, and will comply with the following Australian standards for lighting:

AS 1158.3.1:2005 - Lighting for roads and public spaces, Pedestrian areas (Category P).

AS 4282-1997 - Control of obtrusive effects of outdoor lighting.

Consideration will be given in the design for any stray lighting affecting nearby residences as required by Australian Standard AS 4282. This standard is non-specific but requires designers to apply certain criteria to minimise the effect of obtrusive lighting. Measures to minimise obtrusive lighting will include the use of directional and hooded flood lighting aimed in a downward direction and away from external sensitive areas, and low level jetty walkway lighting installed in service module as is currently done on existing floating jetties.

APPENDICES

A. Technical Specifications for the Design and Installation of Floating Jetty

Indicative Pile Sizes

Assumes riverbed level RL – 3m CD, 50 year ARI Wind

		Pile Spec	No. Piles
15m	Finger Piles	339 x 12.5	1
16m	Finger Piles	406 x 12.5	7
20m	Finger Piles	406 x 16.0	3
24m	Finger Piles	508 x 12.5	6
Walkways	Walkway Piles	508 x 12.5	13
Total			30

Walkways (refer Walkway Drawings)

Design Statement

The UMS marina systems pontoon shown on this drawing is intended for sheltered waters in region 'A' in accordance with AS1170.2 with current flow of 1m/s and maximum wave height of 300mm in accordance with AS3962. Pontoon shown on this drawing is intended for use as a marina walkway. Piles or other anchorage support systems do not form part of this drawing and to be certified separately.

The pontoon on this drawing is intended for use with 1 tonne cleats positioned in close proximity to intercostal or end channel. Higher capacity cleats are detailed elsewhere.

The works will be structurally adequate for the anticipated usage.

The works to comply with all relevant Australian codes including the Queensland government EPA's operational policy 'building and engineering standards for tidal works' and AS3962 'guidelines for design of marinas'

The pontoon is designed for unrestricted access with:

- Minimum structural uniform distributed live loading capacity of 3kpa in accordance with the requirements of AS3962 clause 4.7.2 with equivalent 50mm reserve buoyancy clause 4.7.1
- Minimum live flotation loading capacity of 3kpa and minimum live load stability loading capacity of 2kpa in accordance with the requirements of AS3962 clause 4.7.3

Materials Sections	Grade
100x60 x 4 RHS	6082 T5
UMS No1 Extrusion	6082 T6
152.4 x 63.5 Channel	6082 T5
101.6 x 50.8 Channel	6082 T5
50 x 8 Flat Bar	6082 T5
160 x 12 Flat Bar	6082 T5
UMS No3 Extrusion Top Hat	6082 T6

Materials

Aluminium to conform to AS1664 Grade 6082/T5 & T6

Bolts Stainless Steel High Strength Grade A4-80 Class 80 to ISO 3506, NS 800Mpa

All Welds to be continuous 6 Fillet all rounding's in accordance with AS1665

4 No PE-23 Floats – XX x XX x XX Deep Freeboard = 546

SOPYC Jetty 8 Development Application

Fingers (refer Finger Drawings)

Design Statement

The UMS marina systems pontoon shown on this drawing is intended for sheltered waters in region 'A' in accordance with AS1170.2 with current flow of 1m/s and maximum wave height of 300mm in accordance with AS3962. Pontoon shown on this drawing is intended for use as a marina walkway. Piles or other anchorage support systems do not form part of this drawing and to be certified separately.

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101.6 x 50.8 Channel	6082 T5
50 x 8 Flat Bar	6082 T5
160 x 12 Flat Bar	6082 T5
UMS No3 Extrusion Top Hat	6082 T6

Materials

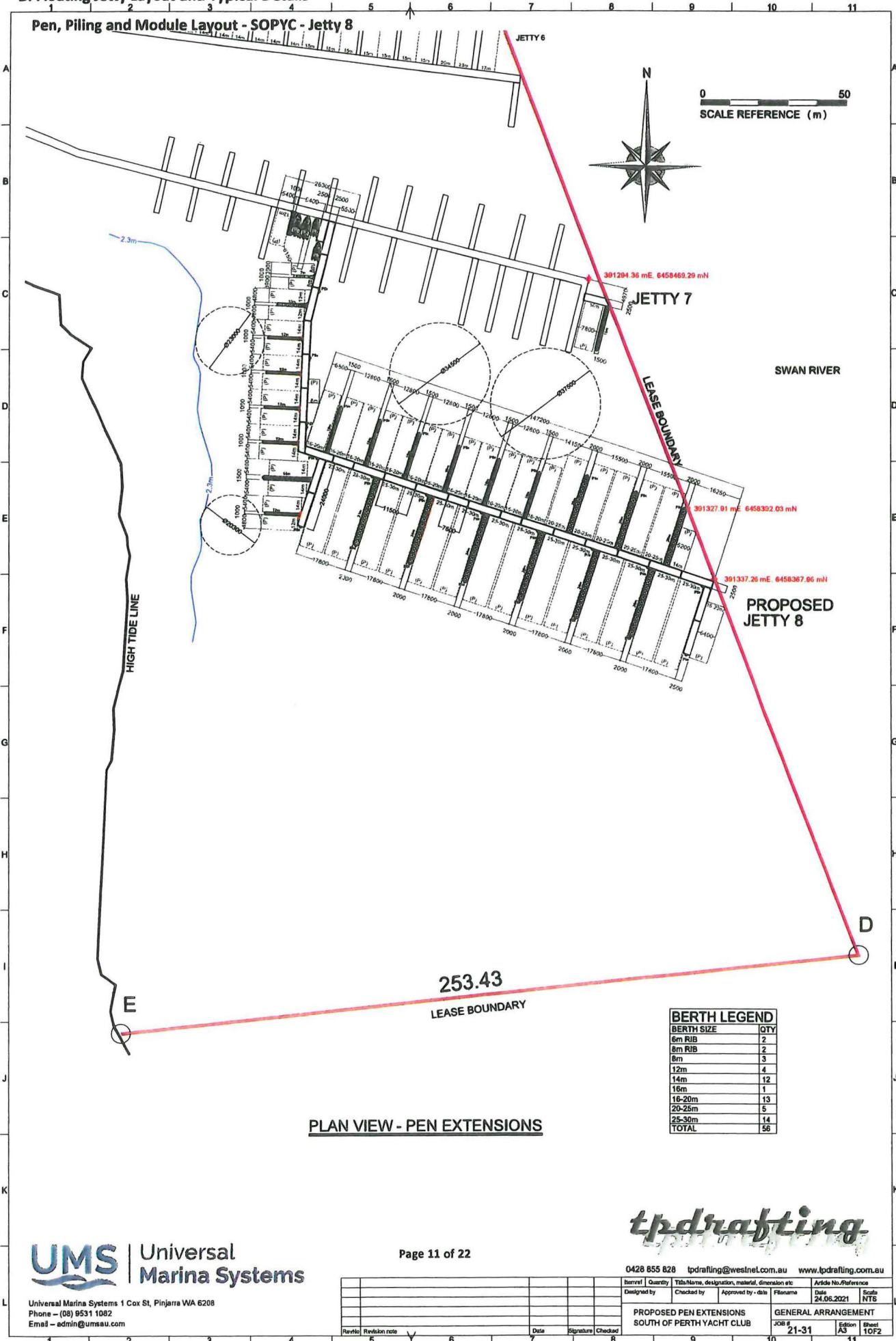
Aluminium to conform to AS1664 Grade 6082/T5 & T6

Bolts Stainless Steel High Strength Grade A4-80 Class 80 to ISO 3506, NS 800Mpa

All Welds to be continuous 6 Fillet all rounding's in accordance with AS1665

4 No PE-23 Floats – XX x XX x XX Deep Freeboard = 546

B. Floating Jetty Layout and Typical Details



Item#	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference
Designed by	Checked by	Approved by - date	Filename
			Date 24.06.2021
			Scale NTS
PROPOSED PEN EXTENSIONS SOUTH OF PERTH YACHT CLUB			GENERAL ARRANGEMENT
JOB # 21-31			Edson AS
			Sheet 10F2

General Arrangement Layout Image Overlay - SoPYC - Jetty 8



LOCALITY PLAN - SOPYC

UMS | Universal
Marina Systems

Universal Marina Systems 1 Cox St, Pinjarra WA 6208
Phone - (08) 9531 1082
Email - admin@umsau.com

tpdrafting
Engineering & Drafting

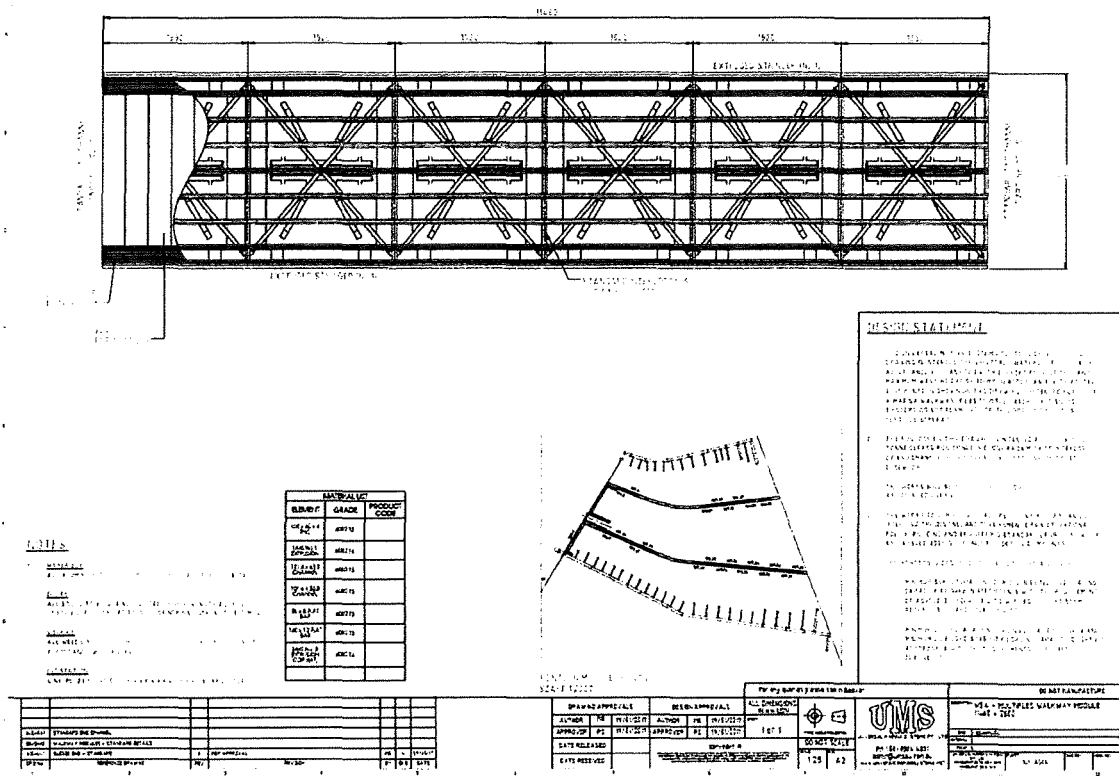
0428 855 828 tpdrafting@westnet.com.au www.tpdrafting.com.au

Item/No	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference
Designed by	Checked by	Approved by - date	Filename
Date	24.06.2021	Scale	NTE

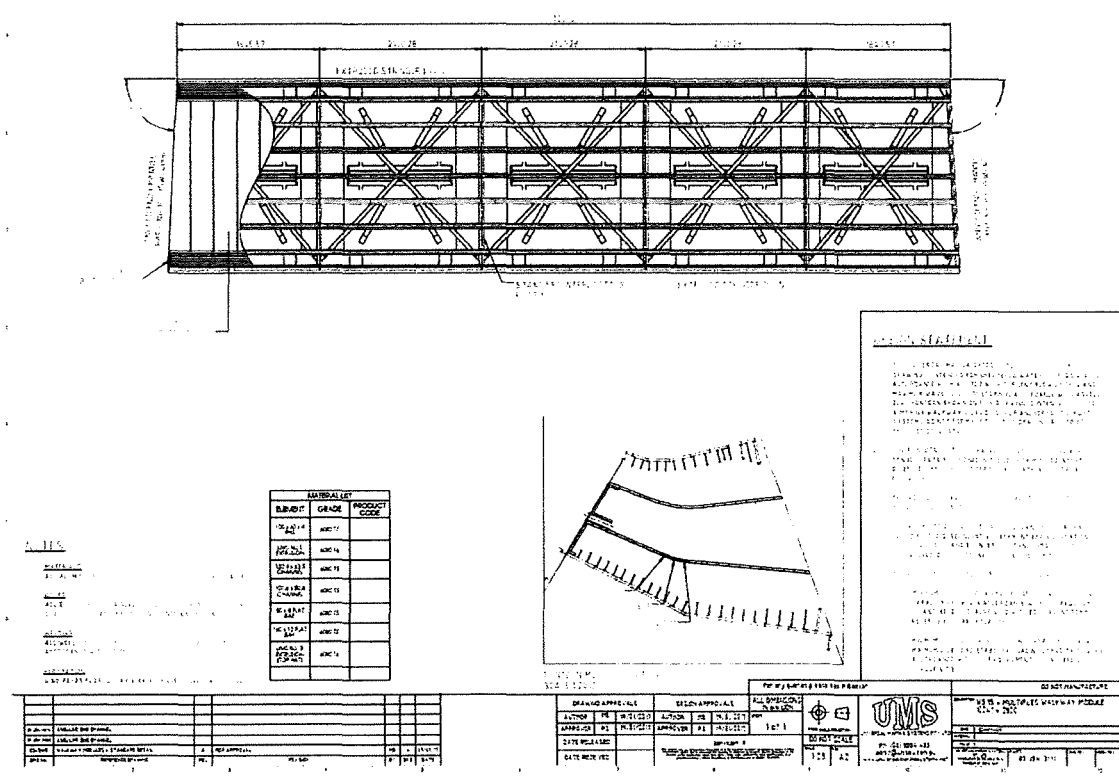
Rev/No	Revision note	Date	Signature	Checked																
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PROPOSED PEN EXTENSIONS		LOCALITY PLAN																		
SOUTH OF PERTH YACHT CLUB		JOB # 21-31																		
		Edition AS																		
		Sheet 10F2																		

SOPYC Jetty 8 Development Application

Typical Walkway Module 11.5m x 2.5m - Drawing 83-WM-04 (from 2017 Jetty 4/5 documentation)

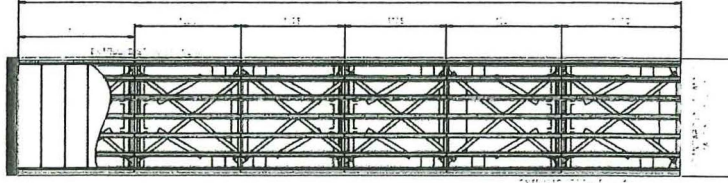


Typical Walkway Module 10.0m x 2.5m Angled - Drawing 83-WM-09 (from 2017 Jetty 4/5 documentation)



SoPYC Jetty 8 Development Application

Typical Parallel Finger Piled Part A & B – Drawing 83-FM-18 (from 2017 Jetty 4/5 documentation)

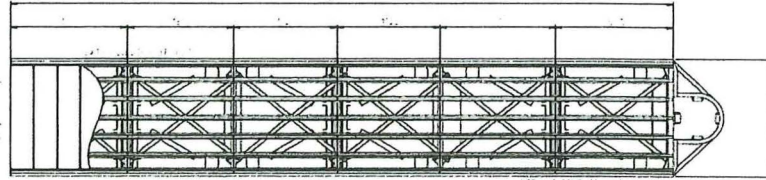
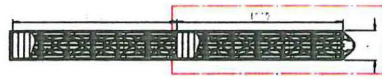


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PILE	ASPEC-2	
PILE	ASPEC-3	
PILE	ASPEC-4	
PILE	ASPEC-5	
PILE	ASPEC-6	
PILE	ASPEC-7	
PILE	ASPEC-8	
PILE	ASPEC-9	
PILE	ASPEC-10	
PILE	ASPEC-11	
PILE	ASPEC-12	
PILE	ASPEC-13	
PILE	ASPEC-14	
PILE	ASPEC-15	

REVISIONS

NO.	DATE	DESCRIPTION
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DATE APPROVED	DESIGNED	ALL DIMENSIONS IN METERS		1:10 FINGER MODULE 100:100
DATE REVISION				



ASSEMBLY LIST		
ELEMENT	GRADE	QUANTITY
PILE	ASPEC-1	
PILE	ASPEC-2	
PILE	ASPEC-3	
PILE	ASPEC-4	
PILE	ASPEC-5	
PILE	ASPEC-6	
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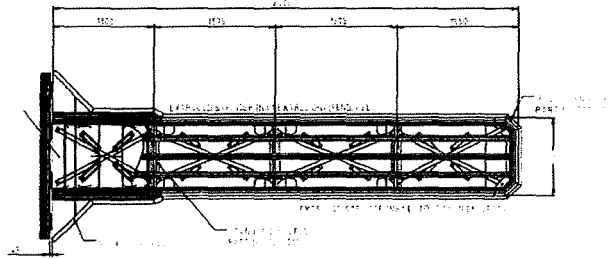
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NO.	DATE	DESCRIPTION
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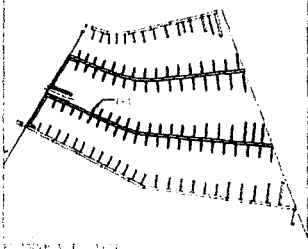
DATE APPROVED	DESIGNED	ALL DIMENSIONS IN METERS		1:10 FINGER MODULE 100:100
DATE REVISION				

SoPYC Jetty 8 Development Application

Typical Parallel Finger Unpiled – Drawing 83-FM-01 (from 2017 Jetty 4/5 documentation)



MATERIAL LIST		
MARKING	GRADE	PRODUCT CODE
100%	A36	
100%	A36	
100%	A36	
100%	A36	
100%	A36	
100%	A36	
100%	A36	
100%	A36	
100%	A36	



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NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES. DIMENSIONS IN PARENTHESES ARE GIVEN IN METERS.

2. REFER TO THE DRAWING FOR THE NEXT JETTY FOR THE LOCATION OF THE UNPILED PARALLEL FINGER UNPILED.

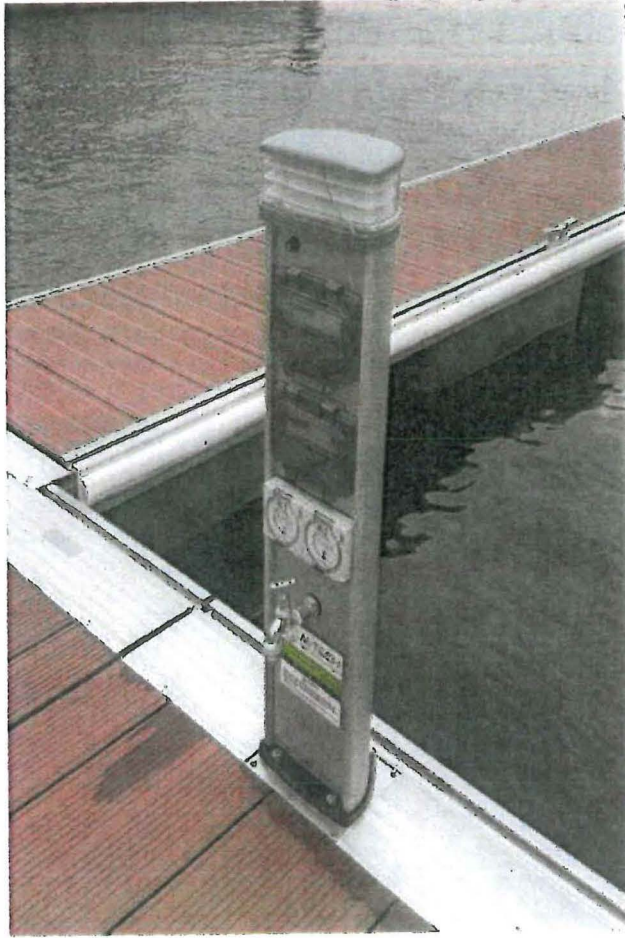
3. THE UNPILED PARALLEL FINGER UNPILED IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE U.S. NAVY STANDARD SPECIFICATION FOR STEEL STRUCTURES.

4. THE UNPILED PARALLEL FINGER UNPILED IS TO BE PAINTED WITH AN ANTI-RUST PAINT.

DATE	DESCRIPTION	BY	CHKD

DESIGN APPROVAL	DESIGN APPROVAL	ALL DIMENSIONS IN METERS			UNPILED PARALLEL FINGER UNPILED 83-FM-01
DATE RELEASED	DATE RELEASED	SCALE			
DATE PRCG-02	DATE PRCG-02				

Lighting and Services Modules Image



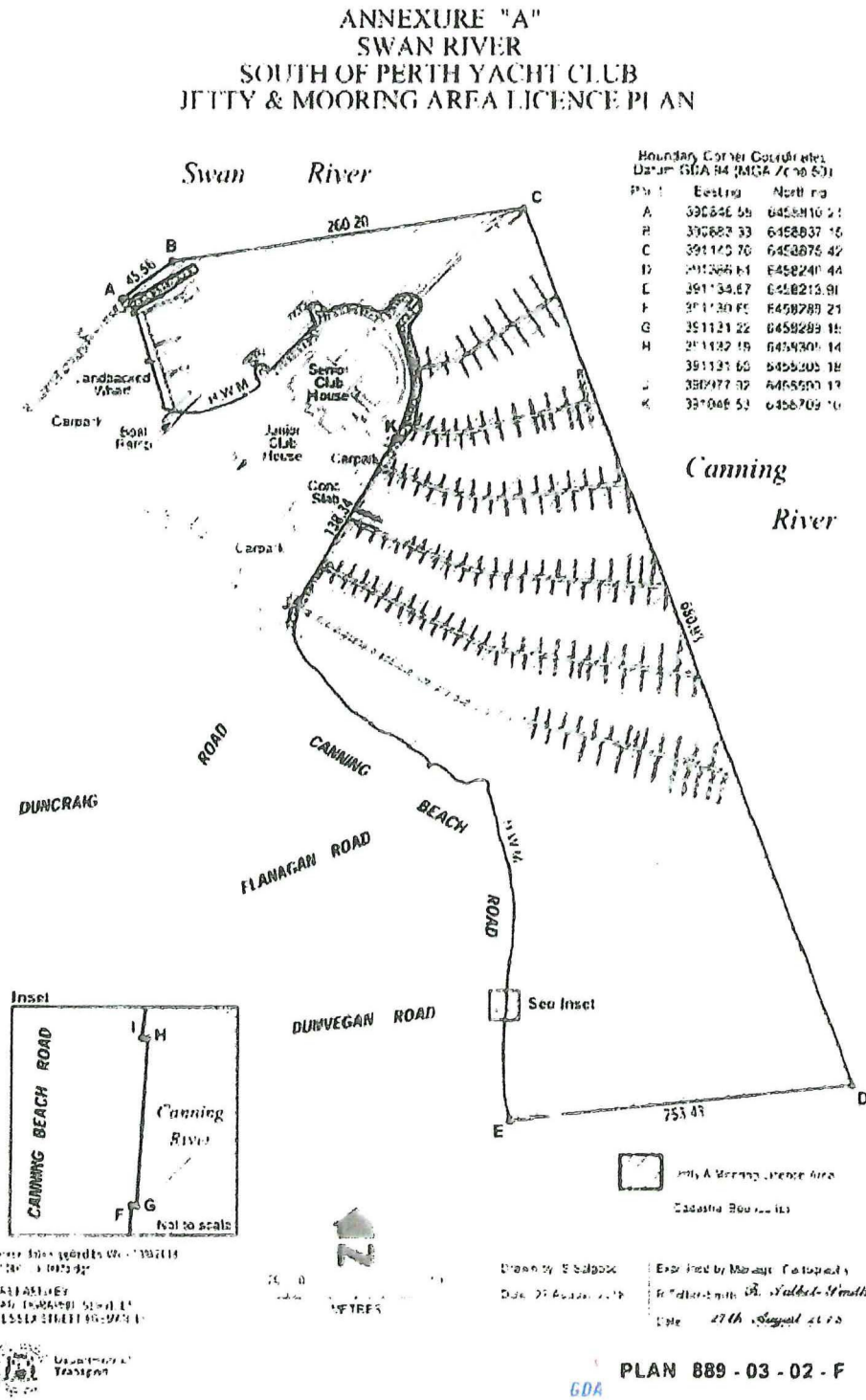
Micromesh Decking Image



SoPYC Jetty 8 Development Application

C. SoPYC General Drawings:

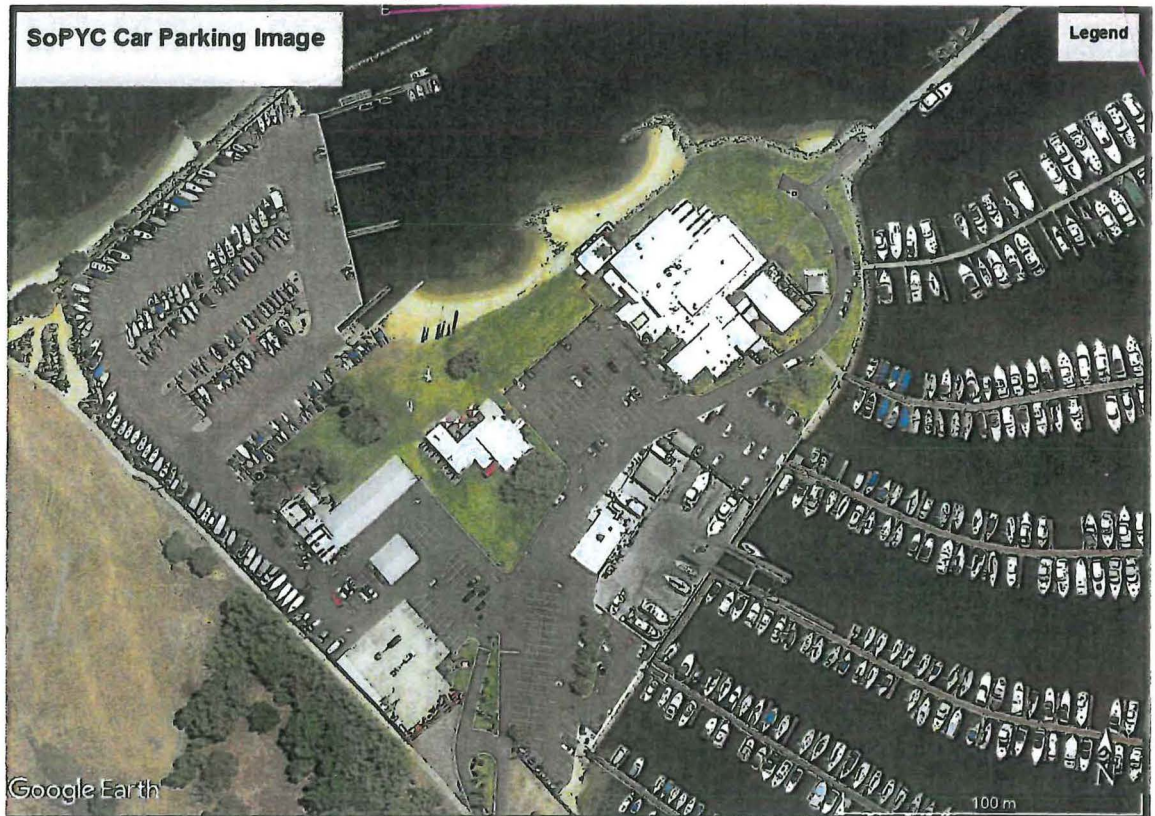
Riverbed Lease 2019 - Annexure A - Jetty and Mooring Area Licence Plan



SoPYC Overall Arrangement 2018 Image



SoPYC Carpark Layout Image



SoPYC Mooring Area Depth Survey 06-08-2021 Image (Depths in Metres, 1.1 m Tide Height)



Certificates of Title / Management Order / Plan



REGISTER NUMBER	
301/DP44663	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	N/A

RECORD OF QUALIFIED CERTIFICATE
OF
CROWN LAND TITLE
UNDER THE TRANSFER OF LAND ACT 1893
AND THE LAND ADMINISTRATION ACT 1997

VOLUME LR3135 FOLIO 659

NO DUPLICATE CREATED

The undermentioned land is Crown land in the name of the STATE of WESTERN AUSTRALIA, subject to the interests and Statute Orders shown in the first schedule which are in turn subject to the limitations, interests, encumbrances and notifications shown in the second schedule.

RG Roberts
REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 301 ON DEPOSITED PLAN 44663

STATUS ORDER AND PRIMARY INTEREST HOLDER:
(FIRST SCHEDULE)

STATUS ORDER/INTEREST: RESERVE UNDER MANAGEMENT ORDER

PRIMARY INTEREST HOLDER: SOUTH OF PERTH YACHT CLUB INC OF COFFEE POINT, APPLECROSS
(XII J256720) REGISTERED 20 APRIL 2005

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

- 1. F350730 MEMORIAL HERITAGE OF WESTERN AUSTRALIA ACT 1990. AS TO PORTION ONLY. LODGED 29.10.1993.
- 2. J256714 RESERVE 25599 FOR THE PURPOSE OF USE & REQUIREMENTS OF SOUTH OF PERTH YACHT CLUB & FREE PUBLIC PEDESTRIAN ACCESS REGISTERED 20.4.2005.
- J256718 CHANGE OF RESERVE PURPOSE. PURPOSE CHANGED TO YACHT CLUB AND PUBLIC ACCESS REGISTERED 20.4.2005.
- J256720 MANAGEMENT ORDER. CONTAINS CONDITIONS TO BE OBSERVED. REGISTERED 20.4.2005.

- Warning: (1) A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot of location.
- (2) The land and interests etc. shown hereon may be affected by interests etc. that can be, but are not, shown on the register.
- (3) The interests etc. shown hereon may have a different priority than shown.

-----END OF CERTIFICATE OF CROWN LAND TITLE-----

STATEMENTS:

The statements set out below are not intended to be and should they be relied on as substitutes for inspection of the Land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: DP44663.
PREVIOUS TITLE: LR3131-425, LR3131-424, LR3046-215.

END OF PAGE 1 - CONTINUED OVER

SoPYC Jetty 8 Development Application

FORM LAA-1023

SECTION 46

WESTERN AUSTRALIA
LAND ADMINISTRATION ACT 1997
TRANSFER OF LAND ACT 1893 AS AMENDED

MANAGEMENT ORDER (XE)

RESERVE DESCRIPTION (NOTE 1)

RESERVE DESCRIPTION (NOTE 1)	EXTENT	VOLUME	FOLIO
25599	Whole	0000 3/35	0000 659

MANAGEMENT BODY (NOTE 2)

South of Perth Yacht Club Inc of Coffee Point, Applecross WA 6153

CONDITIONS (NOTE 3)

To be utilised for the designated purpose of "Yacht Club and Public Access".

THE MINISTER FOR LANDS (IN THE NAME OF AND ON BEHALF OF THE STATE OF WESTERN AUSTRALIA) ORDERS THAT THE CARE, CONTROL AND MANAGEMENT OF THE ABOVE RESERVE BE PLACED WITH THE ABOVE DESCRIBED MANAGEMENT BODY FOR THE PURPOSE FOR WHICH THE LAND IS RESERVED UNDER SECTION 41 OF THE LAND ADMINISTRATION ACT 1997, AND FOR PURPOSES ANCILLARY OR BENEFICIAL TO THAT PURPOSE SUBJECT TO THE CONDITIONS STATED ABOVE

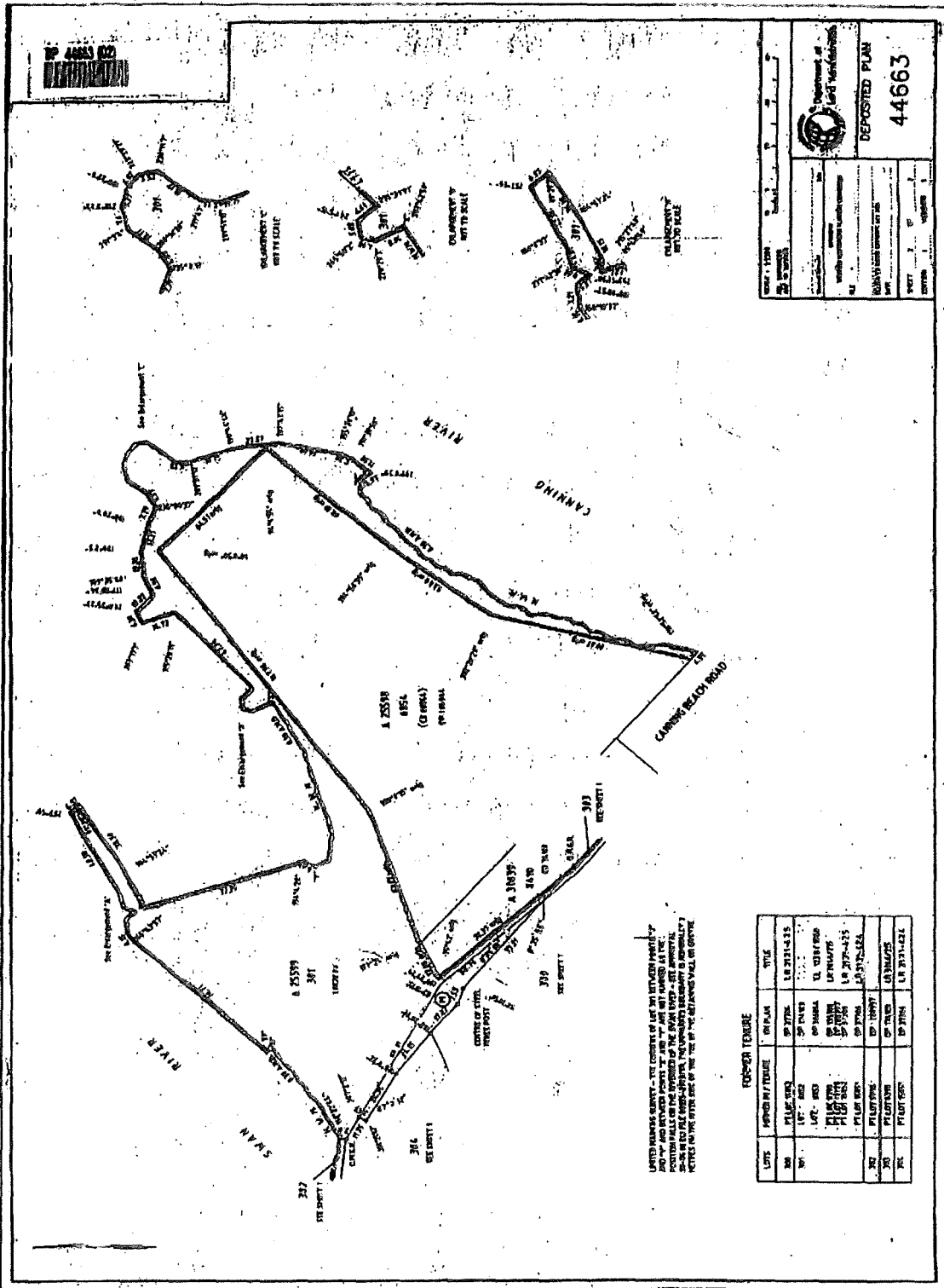
Dated this 20th day of April in the year 2005

ATTESTATION



PROJECT OFFICER
METROPOLITAN
LAND AND ASSET MANAGEMENT SERVICES

SOPYC Jetty 8 Development Application



LIMITED WARRANTY - THE LOCATOR OF USE ON BETWEEN PARCELS OF 300 M² AND BETWEEN PARCELS OF 200 M² ARE NOT MARKED AS THE LOCATIONS FALLS ON THE BOUNDARY OF THE SWAN RIVER - SEE APPROPRIATE SURVEY FOR FURTHER INFORMATION. THE SURVEY IS SUBJECT TO ANY SURVEY ACTED ON THE OTHER SIDE OF THE SWAN RIVER AND ALL ON OTHER.

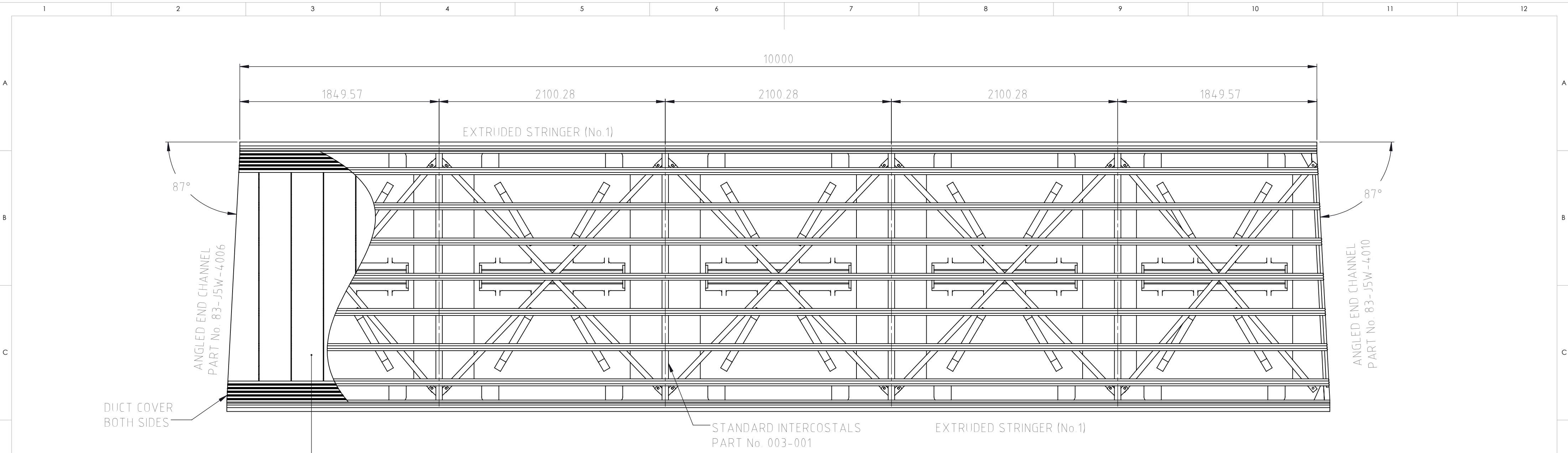
FOUR-FOUR TENURE

LOTS	SECTION / FEATURE	ON PLAN	TITLE
300	PLANT 4000	ON PLAN	L.R. 300-1-135
301	PLANT 4000	ON PLAN	L.R. 300-1-135
	PLANT 4000	ON PLAN	L.R. 300-1-135
	PLANT 4000	ON PLAN	L.R. 300-1-135
302	PLANT 4000	ON PLAN	L.R. 300-1-135
303	PLANT 4000	ON PLAN	L.R. 300-1-135
304	PLANT 4000	ON PLAN	L.R. 300-1-135



DEPOSITED PLAN
44663

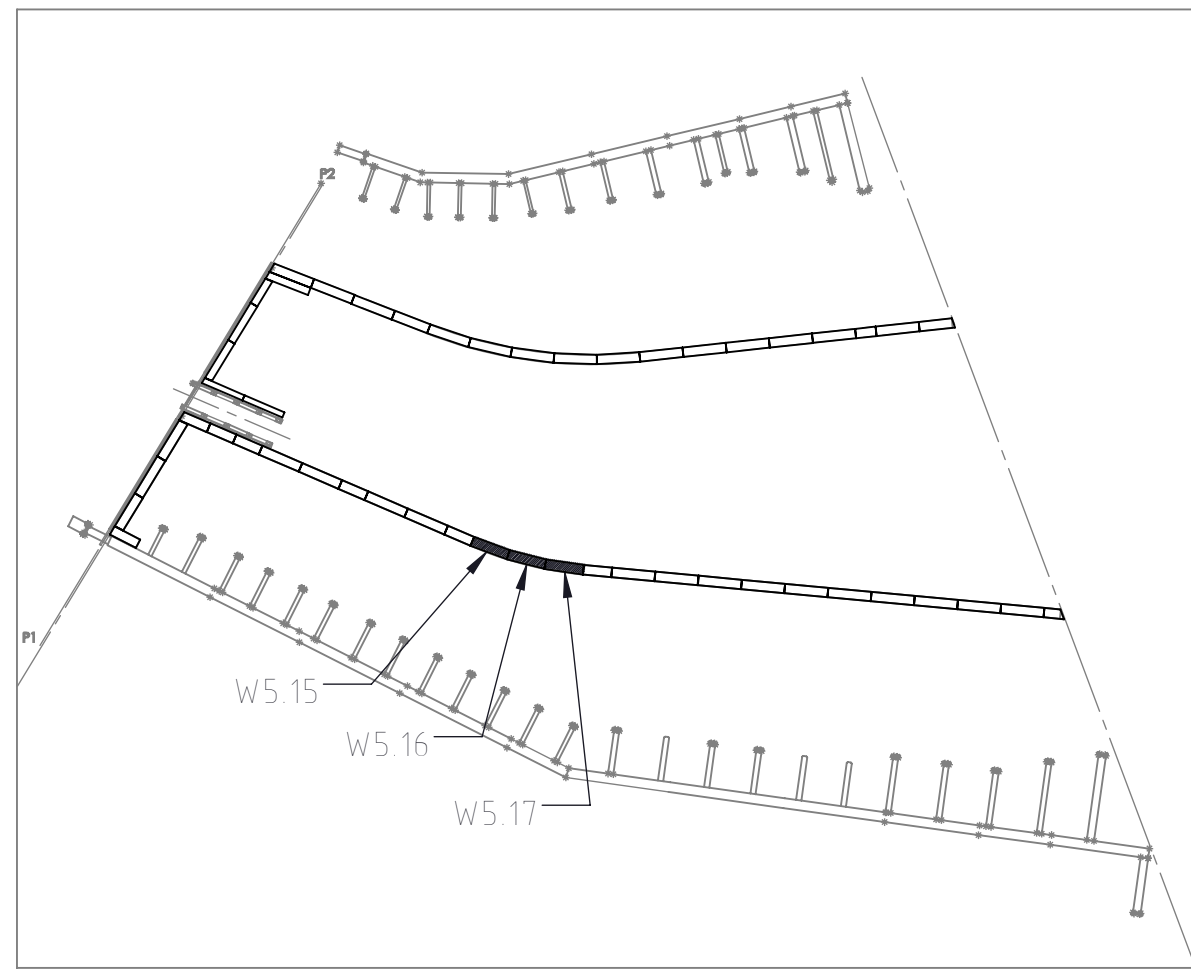
DATE	1/1/2008
BY	[Signature]
FOR	[Signature]
SCALE	1:1000
PROJECT	SOPYC JETTY 8
DATE	1/1/2008



NOTES:

- MATERIALS**
ALL ALUMINIUM TO CONFORM TO AS1664 GRADE 6082/T5 & T6
- BOLTS**
ALL BOLTS TO BE STAINLESS STEEL HIGH STRENGTH BOLTS, GRADE A4-80 CLASS 80 TO ISO 3506 NOMINAL STRENGTH 800 MPa
- WELDING**
ALL WELDS TO BE CONTINUOUS 6 FILLET WELD ALL ROUND UNO IN ACCORDANCE WITH AS 1665
- FLOATATION**
4 No. PE-23 FLOATS - XX x XX x XX DEEP FREEBOARD = 546

MATERIAL LIST		
ELEMENT	GRADE	PRODUCT CODE
100 x 60 x 4 RHS	6082 T5	
UMS No.1 EXTRUSION	6082 T6	
152.4 x 63.5 CHANNEL	6082 T5	
101.6 x 50.8 CHANNEL	6082 T5	
50 x 8 FLAT BAR	6082 T5	
160 x 12 FLAT BAR	6082 T5	
UMS No. 3 EXTRUSION (TOP HAT)	6082 T6	



PONTOON MODULE LOCATION
SCALE 1:2000

DESIGN STATEMENT:

- THE UNIVERSAL MARINA SYSTEMS PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR SHELTERED WATERS IN REGION 'A' IN ACCORDANCE WITH AS1170.2 WITH CURRENT FLOW OF 1m/s AND MAXIMUM WAVE HEIGHT OF 300mm IN ACCORDANCE WITH AS3962-2001 PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR USE AS A MARINA WALKWAY. PILES OR OTHER ANCHORAGE SUPPORT SYSTEMS DO NOT FORM PART OF THIS DRAWING AND TO BE CERTIFIED SEPERATELY.
- THE PONTOON ON THIS DRAWING IS INTENDED FOR USE WITH 1 TONNE CLEATS POSITIONED IN CLOSE PROXIMITY TO INTERCOSTAL OR END CHANNEL. HIGHER CAPACITY CLEATS ARE DETAILED ELSEWHERE
- THE WORKS WILL BE STRUCTURALLY ADAQUIATE FOR THE ANTICIPATED IUSEAGE.
- THE WORKS TO COMPLY WITH ALL RELEVANT AUSTRALIAN CODES INCLUDING THE QUEENSLAND GOVERNMENT EPA'S OPERATIONAL POLICY 'BUILDING AND ENGINEERING STANDARDS FOR TIDAL WORKS' AND AS3962-2001 'GUIDELINES FOR DESIGN OF MARINAS'
- THE PONTOON IS DESIGNED FOR UNRESTRICTED ACCESS WITH:

MINIMUM STRUCTURAL UNIFORM DISTRIBUTED LIVE LOADING CAPACITY OF 3kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.2 WITH EQUIVALENT 50mm RESERVE BUOYANCY CLAUSE 4.7.1

MINIMUM LIVE FLOATATION LOADING CAPACITY OF 3kPa AND MINIMUM LIVE LOAD STABILITY LOADING CAPACITY OF 2kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.3

DRG No.	REFERENCE DRAWING	REV	REVISION	BY	CKD	DATE
83-J5W-4010	ANGULAR END CHANNEL					
83-J5W-4006	ANGULAR END CHANNEL					
83-SWD	WALKWAY MODULES - STANDARD DETAIL	A	FOR APPROVAL	HB	-	09/01/17

DRAWING APPROVALS			DESIGN APPROVALS		
AUTHOR	HB	19/01/2017	AUTHOR	HB	19/01/2017
APPROVER	PS	19/01/2017	APPROVER	PS	19/01/2017
DATE RELEASED					
DATE RECEIVED					

For any queries please see H.Beevor

ALL DIMENSIONS IN mm UON

1 of 1

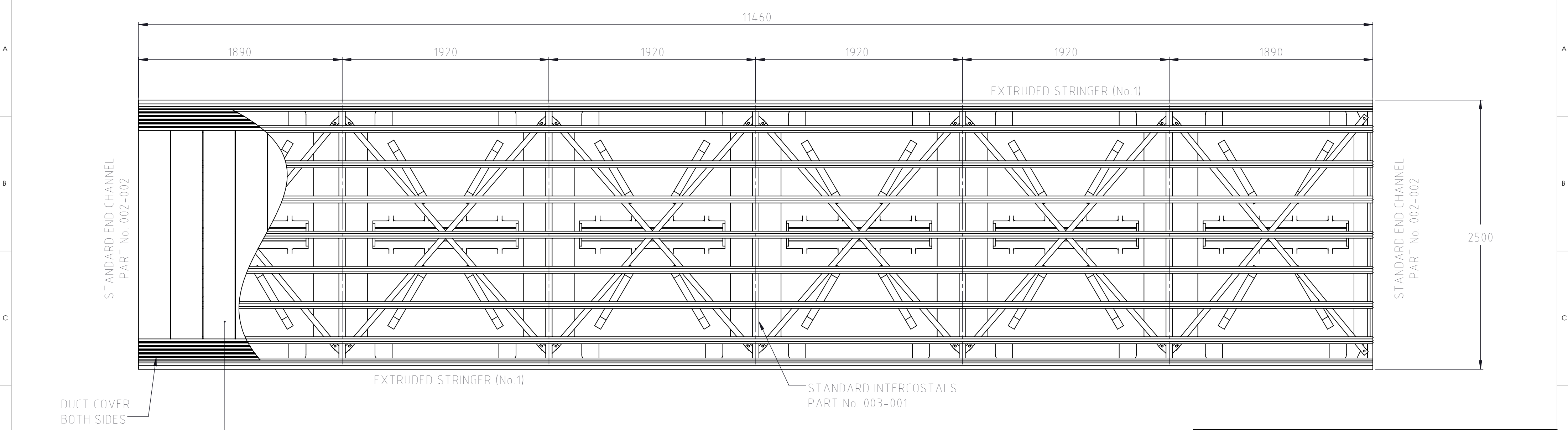
THIRD ANGLE PROJECTION

DO NOT SCALE

SCALE 1:25 SIZE A2



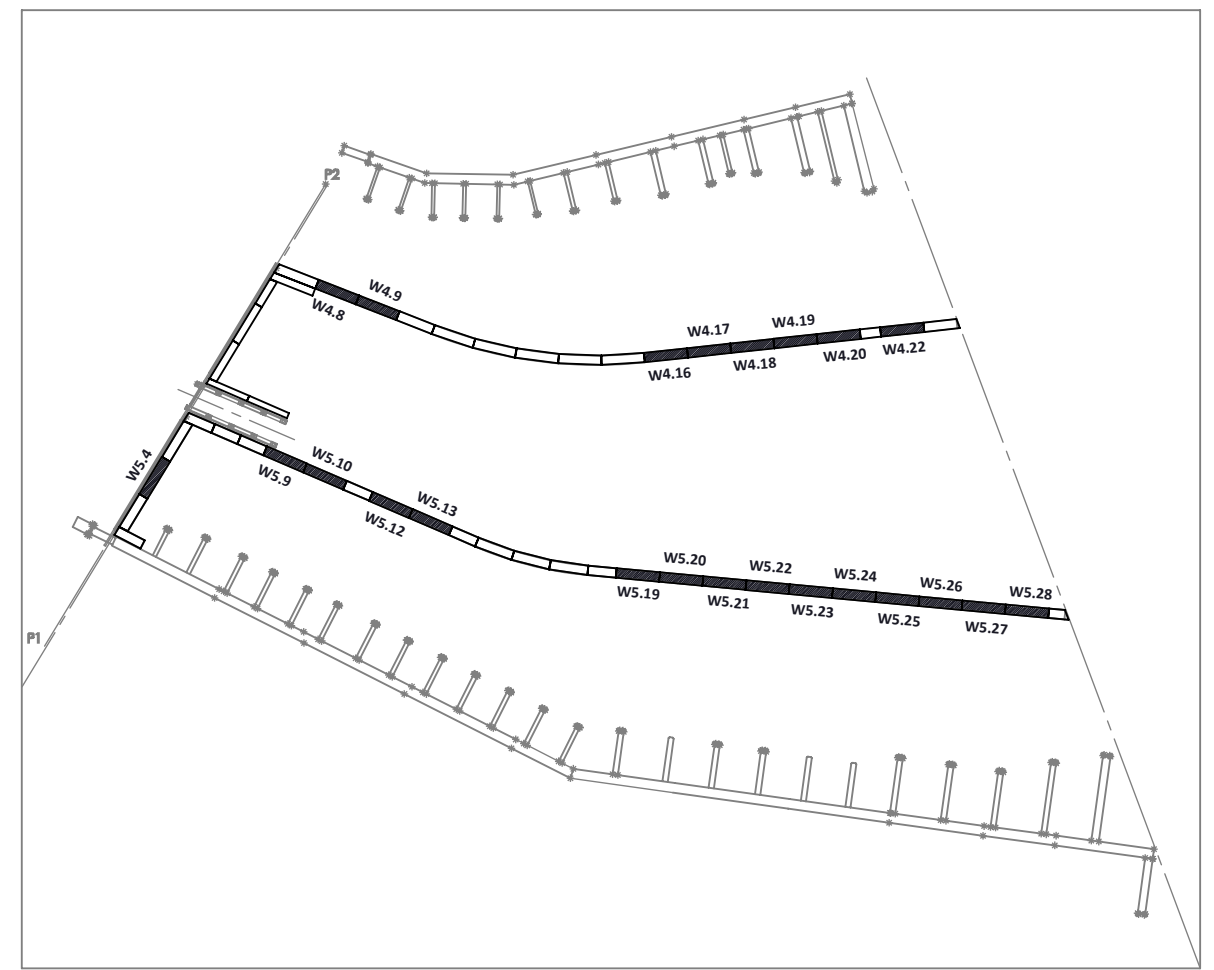
DO NOT MANUFACTURE			
DESCRIPTION	W5.15 + MULTIPLES WALKWAY MODULE 10241 x 2500		
DWG	83-WM-09		
MATERIAL			
FINISH			
UNIVERSAL MARINA SYSTEMS PTY LTD MANDURAH DC PO BOX 2010 MANDURAH, 6210, WA	PART:	83-J5W-2010	MODEL REV.



NOTES:

- MATERIALS**
ALL ALUMINIUM TO CONFORM TO AS1664 GRADE 6082/T5 & T6
- BOLTS**
ALL BOLTS TO BE STAINLESS STEEL HIGH STRENGTH BOLTS, GRADE A4-80 CLASS 80 TO ISO 3506 NOMINAL STRENGTH 800 MPa
- WELDING**
ALL WELDS TO BE CONTINUOUS 6 FILLET WELD ALL ROUND UNO IN ACCORDANCE WITH AS 1665
- FLOATATION**
4 No. PE-23 FLOATS - XX x XX x XX DEEP FREEBOARD = 546

MATERIAL LIST		
ELEMENT	GRADE	PRODUCT CODE
100 x 60 x 4 RHS	6082 T5	
UMS No.1 EXTRUSION	6082 T6	
152.4 x 63.5 CHANNEL	6082 T5	
101.6 x 50.8 CHANNEL	6082 T5	
50 x 8 FLAT BAR	6082 T5	
160 x 12 FLAT BAR	6082 T5	
UMS No. 3 EXTRUSION (TOP HAT)	6082 T6	



PONTON MODULE LOCATION
SCALE 1:2000

DESIGN STATEMENT:

- THE UNIVERSAL MARINA SYSTEMS PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR SHELTERED WATERS IN REGION 'A' IN ACCORDANCE WITH AS1170.2 WITH CURRENT FLOW OF 1m/s AND MAXIMUM WAVE HEIGHT OF 300mm IN ACCORDANCE WITH AS3962-2001. PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR USE AS A MARINA WALKWAY. PILES OR OTHER ANCHORAGE SUPPORT SYSTEMS DO NOT FORM PART OF THIS DRAWING AND TO BE CERTIFIED SEPERATELY.
- THE PONTOON ON THIS DRAWING IS INTENDED FOR USE WITH 1 TONNE CLEATS POSITIONED IN CLOSE PROXIMITY TO INTERCOSTAL OR END CHANNEL. HIGHER CAPACITY CLEATS ARE DETAILED ELSEWHERE.
- THE WORKS WILL BE STRUCTURALLY ADAQUIATE FOR THE ANTICIPATED USEAGE.
- THE WORKS TO COMPLY WITH ALL RELEVANT AUSTRALIAN CODES INCLUDING THE QUEENSLAND GOVERNMENT EPA'S OPERATIONAL POLICY 'BUILDING AND ENGINEERING STANDARDS FOR TIDAL WORKS' AND AS3962-2001 'GUIDELINES FOR DESIGN OF MARINAS'
- THE PONTOON IS DESIGNED FOR UNRESTRICTED ACCESS WITH:

MINIMUM STRUCTURAL UNIFORM DISTRIBUTED LIVE LOADING CAPACITY OF 3kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.2 WITH EQUIVALENT 50mm RESERVE BUOYANCY CLAUSE 4.7.1

MINIMUM LIVE FLOATATION LOADING CAPACITY OF 3kPa AND MINIMUM LIVE LOAD STABILITY LOADING CAPACITY OF 2kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.3

DRG No.	REFERENCE DRAWING	REV	REVISION	BY	CKD	DATE
002-001	STANDARD END CHANNEL					
83-SWD	WALKWAY MODULES - STANDARD DETAILS					
012-001	CLOSED END - STANDARD	A	FOR APPROVAL	HB	-	09/01/17

DRAWING APPROVALS		DESIGN APPROVALS	
AUTHOR	HB 19/01/2017	AUTHOR	HB 19/01/2017
APPROVER	PS 19/01/2017	APPROVER	PS 19/01/2017
DATE RELEASED		DATE RECEIVED	

For any queries please see HBeavor

ALL DIMENSIONS IN mm UON
1 of 1

THIRD ANGLE PROJECTION
DO NOT SCALE

SCALE: 1:25
SIZE: A2

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DO NOT MANUFACTURE

DESCRIPTION: W5.4 + MULTIPLES WALKWAY MODULE 11460 x 2500

DWG: 83-WM-04

MATERIAL:

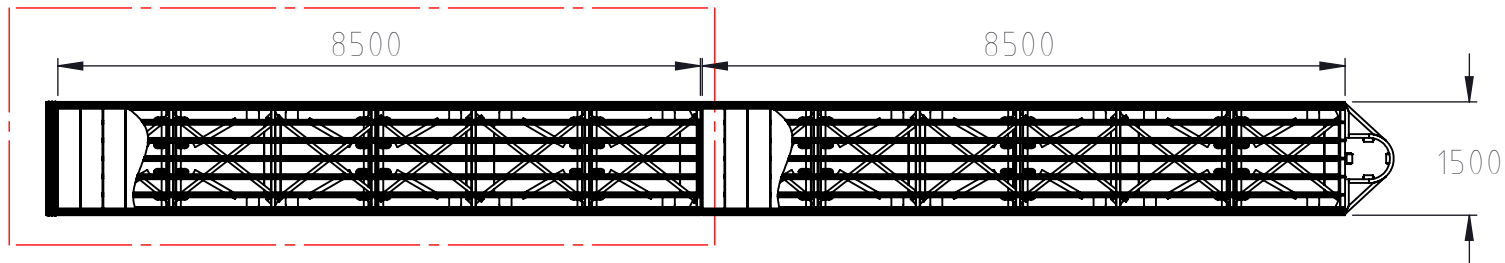
FINISH:

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admin@umsau.com.au
www.universalmarinasytems.net

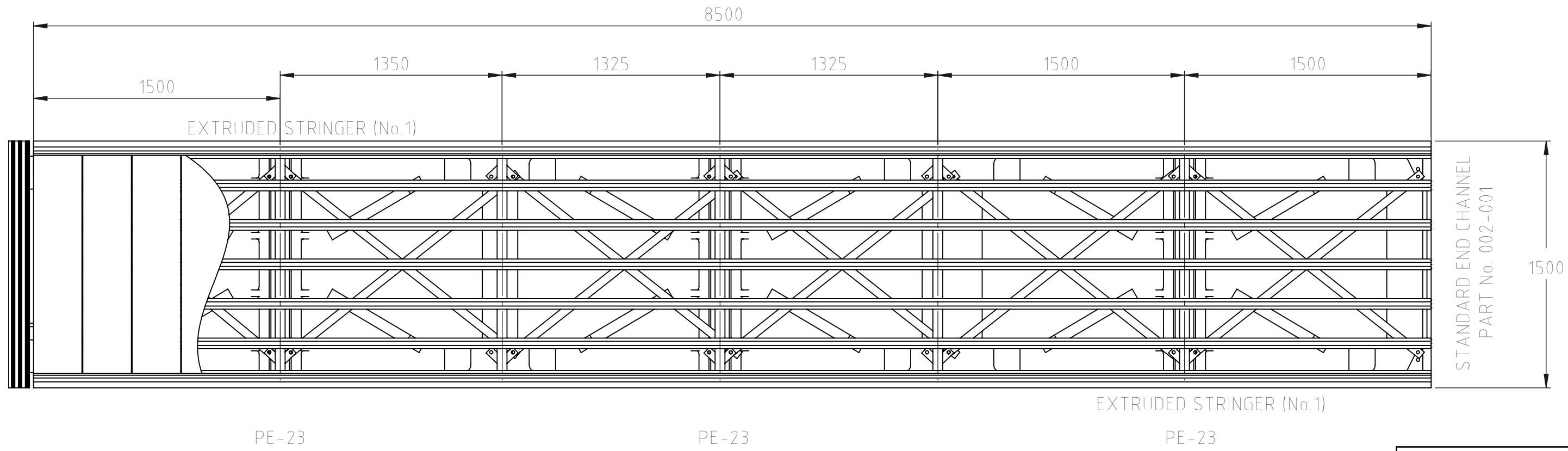
MANDURAH DC PO BOX 2010
MANDURAH, 6210, WA

PART: 101-A004

DWG REV: MODEL REV:



STANDARD END CHANNEL
PART No. 002-001
+ No 2 CONNECTION BRACKET
PART No. 005-001

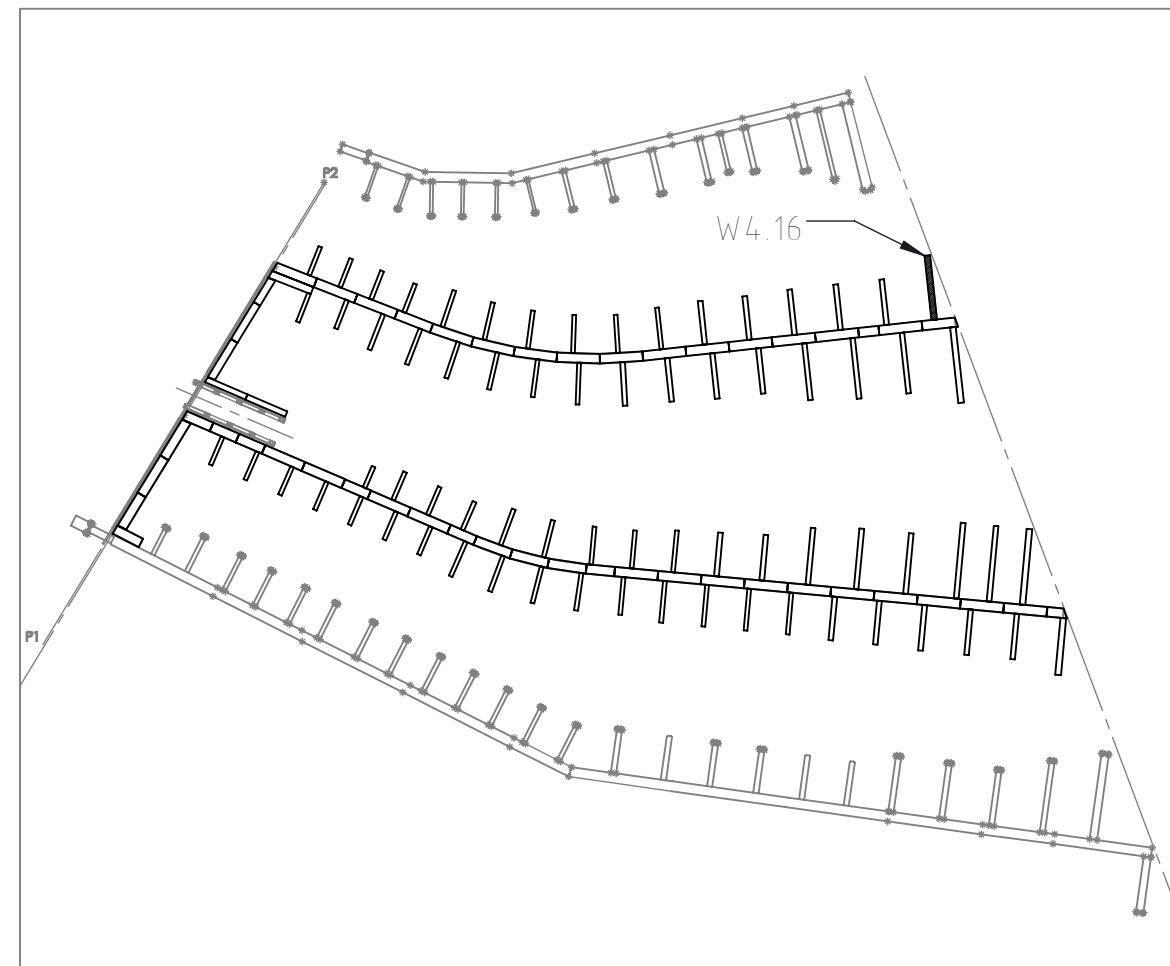


STANDARD END CHANNEL
PART No. 002-001

NOTES:

- MATERIALS**
ALL ALUMINIUM TO CONFORM TO AS1664 GRADE 6082/T5 & T6
- BOLTS**
ALL BOLTS TO BE STAINLESS STEEL HIGH STRENGTH BOLTS, GRADE A4-80 CLASS 80 TO ISO 3506 NOMINAL STRENGTH 800 MPa
- WELDING**
ALL WELDS TO BE CONTINUOUS 6 FILLET WELD ALL ROUND UNO IN ACCORDANCE WITH AS 1665
- FLOATATION**
4 No. PE-23 FLOATS - XX x XX x XX DEEP FREEBOARD = 546

MATERIAL LIST		
ELEMENT	GRADE	PRODUCT CODE
100 x 60 x 4 RHS	6082 T5	
UMS No.1 EXTRUSION	6082 T6	
152.4 x 63.5 CHANNEL	6082 T5	
101.6 x 50.8 CHANNEL	6082 T5	
50 x 8 FLAT BAR	6082 T5	
160 x 12 FLAT BAR	6082 T5	
UMS No. 3 EXTRUSION (TOP HAT)	6082 T6	



PONTOON MODULE LOCATION
SCALE 1:2000

DESIGN STATEMENT:

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MINIMUM STRUCTURAL UNIFORM DISTRIBUTED LIVE LOADING CAPACITY OF 3kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.2 WITH EQUIVALENT 50mm RESERVE BUOYANCY CLAUSE 4.7.1

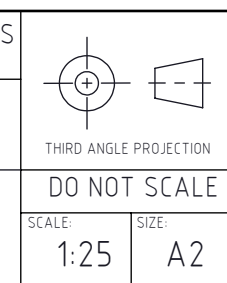
MINIMUM LIVE FLOATATION LOADING CAPACITY OF 3kPa AND MINIMUM LIVE LOAD STABILITY LOADING CAPACITY OF 2kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.3

For any queries please see H.beavor

DRG No.	REFERENCE DRAWING	REV	REVISION	BY	CKD	DATE
012-001	CLOSED END - STANDARD	A	FOR APPROVAL	HB	-	09/01/17

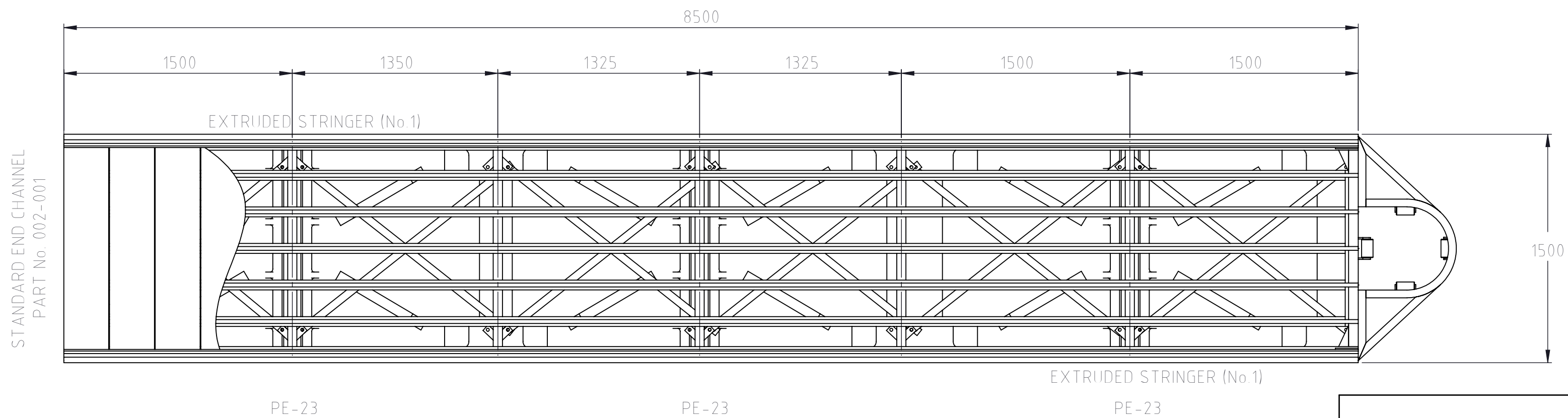
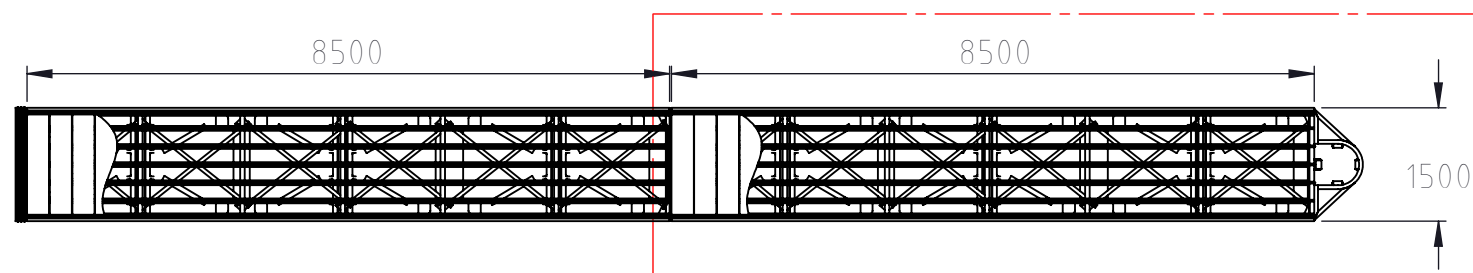
DRAWING APPROVALS			DESIGN APPROVALS		
AUTHOR	HB	19/01/2017	AUTHOR	HB	19/01/2017
APPROVER	PS	19/01/2017	APPROVER	PS	19/01/2017
DATE RELEASED					
DATE RECEIVED					

ALL DIMENSIONS IN mm UON	1 of 2
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UMS
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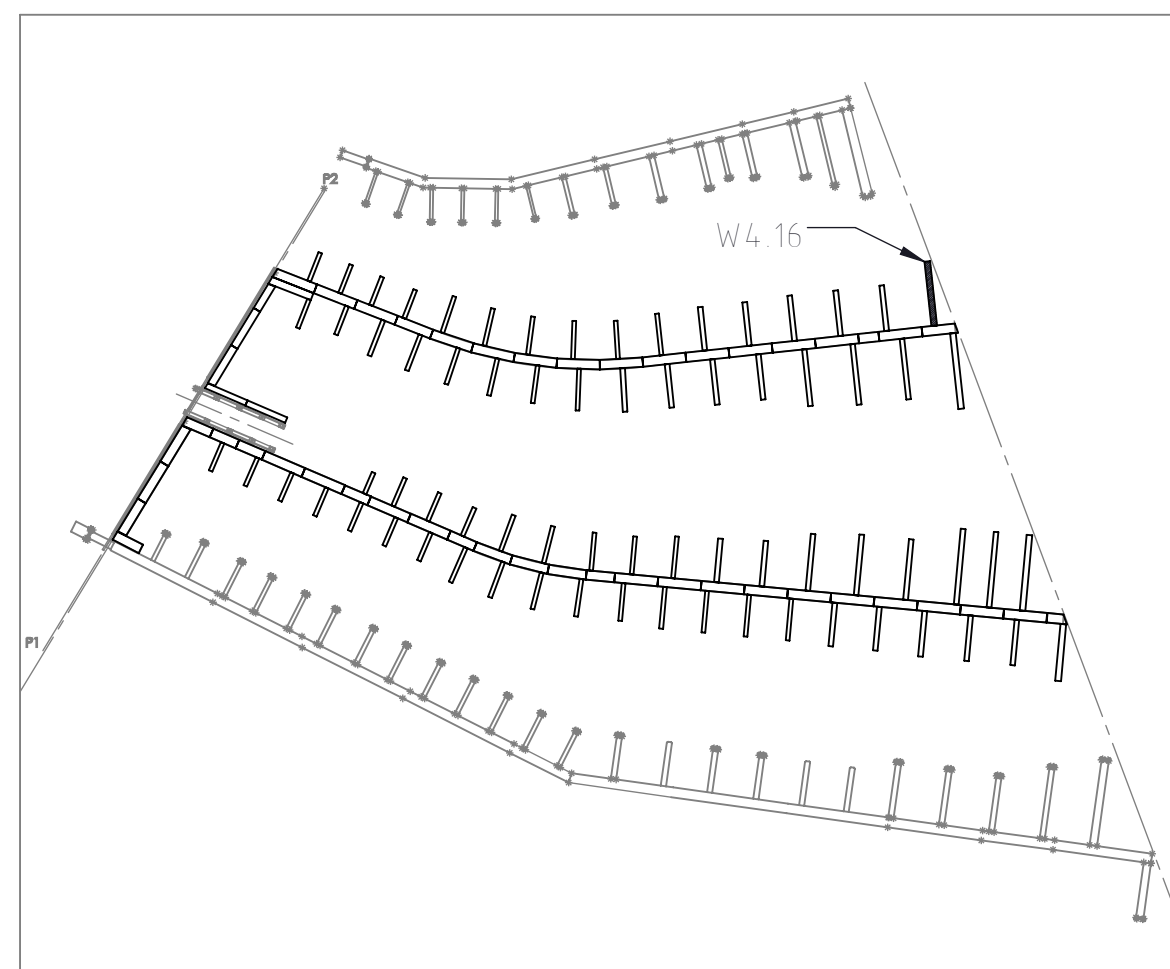
DESCRIPTION	J4.16A FINGER MODULE 8500 x 1500	
DWG	83-FM-18	
MATERIAL		
FINISH		
UNIVERSAL MARINA SYSTEMS PTY LTD MANDURAH DC PO BOX 2010 MANDURAH, 6210, WA	PART: 83-J4F-2002	DWG REV. MODEL REV.



NOTES:

- MATERIALS**
ALL ALUMINIUM TO CONFORM TO AS1664 GRADE 6082/T5 & T6
- BOLTS**
ALL BOLTS TO BE STAINLESS STEEL HIGH STRENGTH BOLTHS, GRADE A4-80 CLASS 80 TO ISO 3506 NOMINAL STRENGTH 800 MPa
- WELDING**
ALL WELDS TO BE CONTINUOUS 6 FILLET WELD ALL ROUND UNO IN ACCORDANCE WITH AS 1665
- FLOATATION**
4 No. PE-23 FLOATS - XX x XX x XX DEEP FREEBOARD = 546

MATERIAL LIST		
ELEMENT	GRADE	PRODUCT CODE
100 x 60 x 4 RHS	6082 T5	
UMS No.1 EXTRUSION	6082 T6	
152.4 x 63.5 CHANNEL	6082 T5	
101.6 x 50.8 CHANNEL	6082 T5	
50 x 8 FLAT BAR	6082 T5	
160 x 12 FLAT BAR	6082 T5	
UMS No. 3 EXTRUSION (TOP HAT)	6082 T6	



PONTOON MODULE LOCATION
SCALE 1:2000

DESIGN STATEMENT:

- THE UNIVERSAL MARINA SYSTEMS PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR SHELTERED WATERS IN REGION 'A' IN ACCORDANCE WITH AS1170,2 WITH CURRENT FLOW OF 1m/s AND MAXIMUM WAVE HEIGHT OF 300mm IN ACCORDANCE WITH AS3962-2001. PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR USE AS A MARINA WALKWAY. PILES OR OTHER ANCHORAGE SUPPORT SYSTEMS DO NOT FORM PART OF THIS DRAWING AND TO BE CERTIFIED SEPERATELY.
- THE PONTOON ON THIS DRAWING IS INTENDED FOR USE WITH 1 TONNE CLEATS POSITIONED IN CLOSE PROXIMITY TO INTERCOSTAL OR END CHANNEL. HIGHER CAPACITY CLEATS ARE DETAILED ELSEWHERE.
- THE WORKS WILL BE STRUCTURALLY ADAQUIATE FOR THE ANTICIPATED USEAGE.
- THE WORKS TO COMPLY WITH ALL RELEVANT AUSTRALIAN CODES INCLUDING THE QUEENSLAND GOVERNMENT EPA'S OPERATIONAL POLICY 'BUILDING AND ENGINEERING STANDARDS FOR TIDAL WORKS' AND AS3962-2001 'GUIDELINES FOR DESIGN OF MARINAS'
- THE PONTOON IS DESIGNED FOR UNRESTRICTED ACCESS WITH:

MINIMUM STRUCTURAL UNIFORM DISTRIBUTED LIVE LOADING CAPACITY OF 3kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.2 WITH EQUIVALENT 50mm RESERVE BUOYANCY CLAUSE 4.7.1

MINIMUM LIVE FLOATATION LOADING CAPACITY OF 3kPa AND MINIMUM LIVE LOAD STABILITY LOADING CAPACITY OF 2kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.3

For any queries please see H-beevor

DRG No.	REFERENCE DRAWING	REV	REVISION	BY	CKD	DATE
012-001	CLOSED END - STANDARD	A	FOR APPROVAL	HB	-	09/01/17

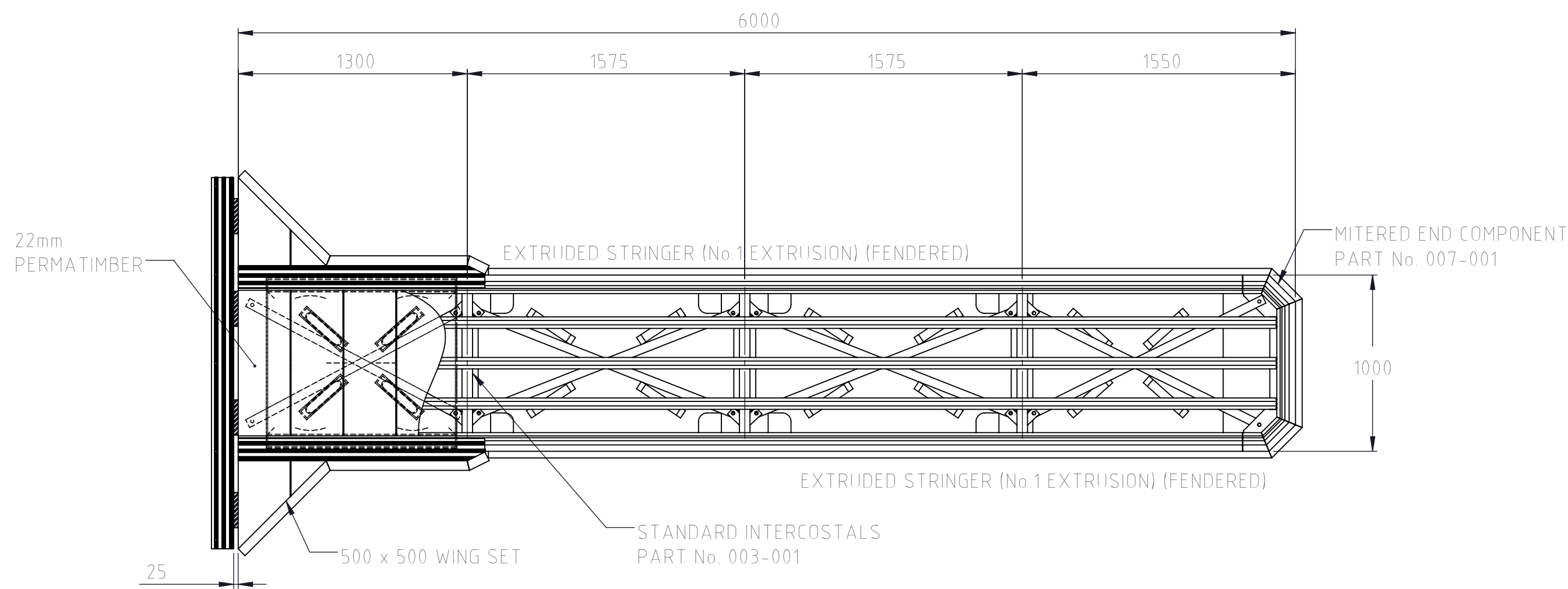
DRAWING APPROVALS		DESIGN APPROVALS	
AUTHOR	HB	AUTHOR	HB
APPROVER	PS	APPROVER	PS
DATE RELEASED		DATE RECEIVED	

ALL DIMENSIONS IN mm UON	
SHEET:	2 of 2

THIRD ANGLE PROJECTION	
DO NOT SCALE	
SCALE	1:25
SIZE	A2

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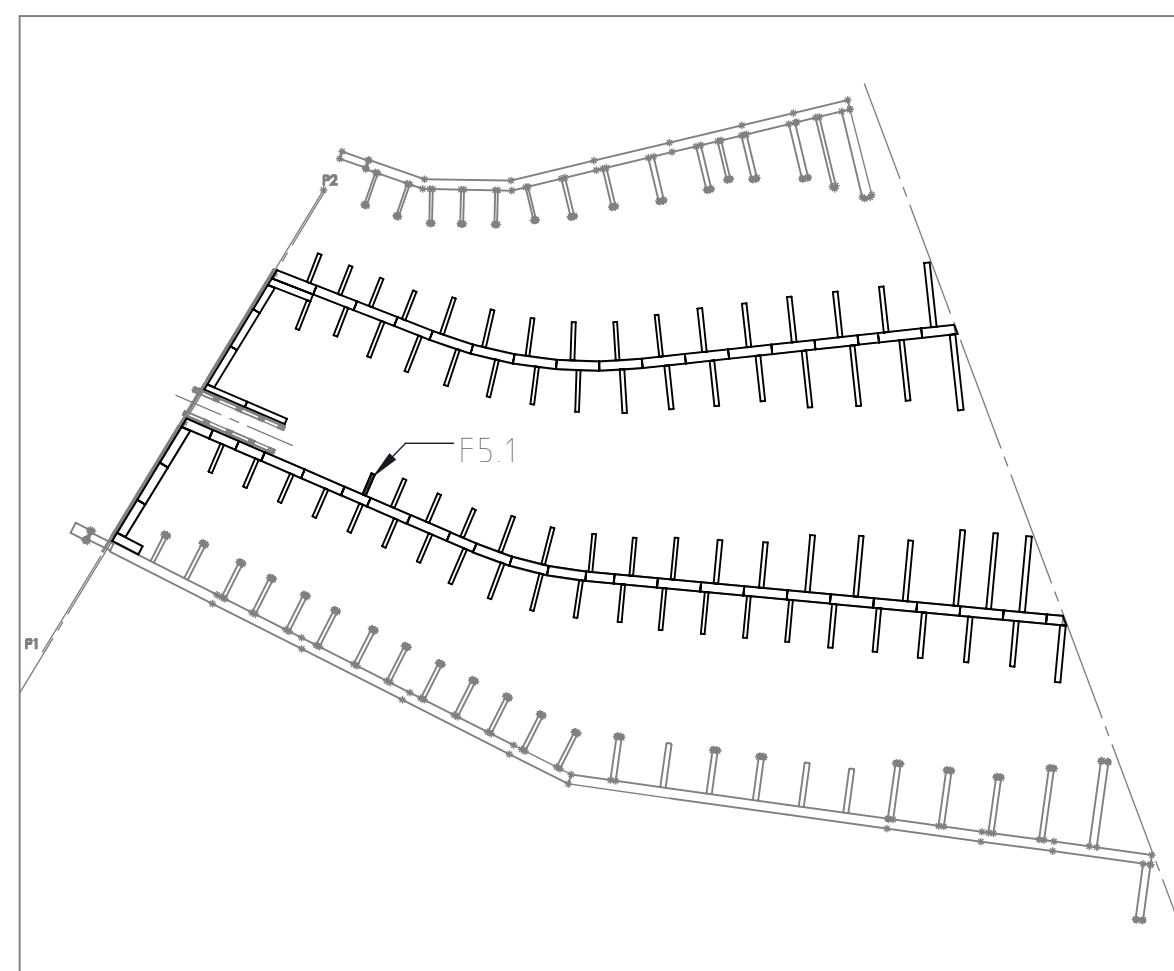
DESCRIPTION	
J4.16 FINGER MODULE 17000 x 1500 FINGER	
DWG	83-FM-19
MATERIAL	
FINISH	
UNIVERSAL MARINA SYSTEMS PTY LTD MANDURAH DC PO BOX 2010 MANDURAH, 6210, WA	PART: 83-J4F-2004
DWG REV.	MODEL REV.



NOTES:

- MATERIALS**
ALL ALUMINIUM TO CONFORM TO AS1664 GRADE 6082/T5 & T6
- BOLTS**
ALL BOLTS TO BE STAINLESS STEEL HIGH STRENGTH BOLTS, GRADE A4-80 CLASS 80 TO ISO 3506 NOMINAL STRENGTH 800 MPa
- WELDING**
ALL WELDS TO BE CONTINUOUS 6 FILLET WELD ALL ROUND UNO IN ACCORDANCE WITH AS 1665
- FLOATATION**
XX No. PE-XX FLOATS - XX x XX x XX DEEP FREEBOARD = 546

MATERIAL LIST		
ELEMENT	GRADE	PRODUCT CODE
100 x 60 x 4 RHS	6082 T5	
UMS No. 1 EXTRUSION	6082 T6	
152.4 x 63.5 CHANNEL	6082 T5	
101.6 x 50.8 CHANNEL	6082 T5	
50 x 8 FLAT BAR	6082 T5	
160 x 12 FLAT BAR	6082 T5	
UMS No. 3 EXTRUSION (TOP HAT)	6082 T6	



PONTOON MODULE LOCATION
SCALE 1:2000

DESIGN STATEMENT:

- THE UNIVERSAL MARINA SYSTEMS PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR SHELTERED WATERS IN REGION 'X' IN ACCORDANCE WITH AS1170.2 WITH CURRENT FLOW OF 1m/s AND MAXIMUM WAVE HEIGHT OF 300mm IN ACCORDANCE WITH AS3962-2001. PONTOON SHOWN ON THIS DRAWING IS INTENDED FOR USE AS MARINA FINGERS WITH MAXIMUM PILE SPACING OF 22m ALONG WALKWAY. MAXIMUM CANTILEVER LENGTH 12m. CANTILEVER FINGERS GREATER THAN 12m REQUIRE A PILE AT THE UNSUPPORTED END. PILES OR OTHER ANCHORAGE SUPPORT SYSTEMS DO NOT FORM PART OF THIS DRAWING AND TO BE CERTIFIED SEPERATELY.
- THE PONTOON ON THIS DRAWING IS INTENDED FOR USE WITH 1 TONNE CLEATS POSITIONED IN CLOSE PROXIMITY TO INTERCOSTAL OR END CHANNEL. HIGHER CAPACITY CLEATS ARE DETAILED ELSEWHERE.
- THE WORKS WILL BE STRUCTURALLY ADAQUATEFOR THE ANTICIPATED USEAGE.
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MINIMUM LIVE FLOATATION LOADING CAPACITY OF 3kPa AND MINIMUM LIVE LOAD STABILITY LOADING CAPACITY OF 2kPa IN ACCORDANCE WITH THE REQUIREMENTS OF AS3962-2001 CLAUSE 4.7.3

For any queries please see HBeavor

DO NOT MANUFACTURE

DRG No.	REFERENCE DRAWING	REV	REVISION	BY	CKD	DATE
1	2	3	4	5	6	7

DRAWING APPROVALS			DESIGN APPROVALS		
AUTHOR	HB	19/01/2017	AUTHOR	HB	19/01/2017
APPROVER	PS	19/01/2017	APPROVER	PS	19/01/2017
DATE RELEASED					
DATE RECEIVED					

ALL DIMENSIONS IN mm UON	1 of 1
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THIRD ANGLE PROJECTION
DO NOT SCALE
SCALE: 1:25
SIZE: A2

UMS
UNIVERSAL MARINA SYSTEMS PTY LTD
PH: (08) 9584 4851
admin@umsau.com.au
www.universalmarinasytems.net

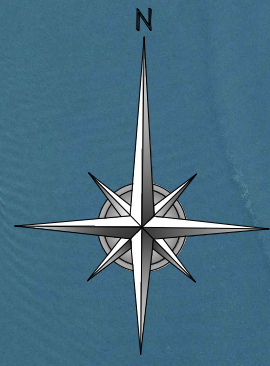
DESCRIPTION	F5.1 FINGER MODULE 6000 x 1000		
DWG	83-FM-01		
MATERIAL			
FINISH			
UNIVERSAL MARINA SYSTEMS PTY LTD MANDURAH DC PO BOX 2010 MANDURAH, 6210, WA	PART:	83-J5F-2001	DWG REV. MODEL REV.



0 100
SCALE REFERENCE (m)

LEGEND

POINT	EASTING	NORTHING
A	- 390846.58,	6458810.21
B	- 390883.33,	6458837.15
C	- 391140.70,	6458875.42
D	- 391386.61,	6458240.44
E	- 391134.57,	6458213.96



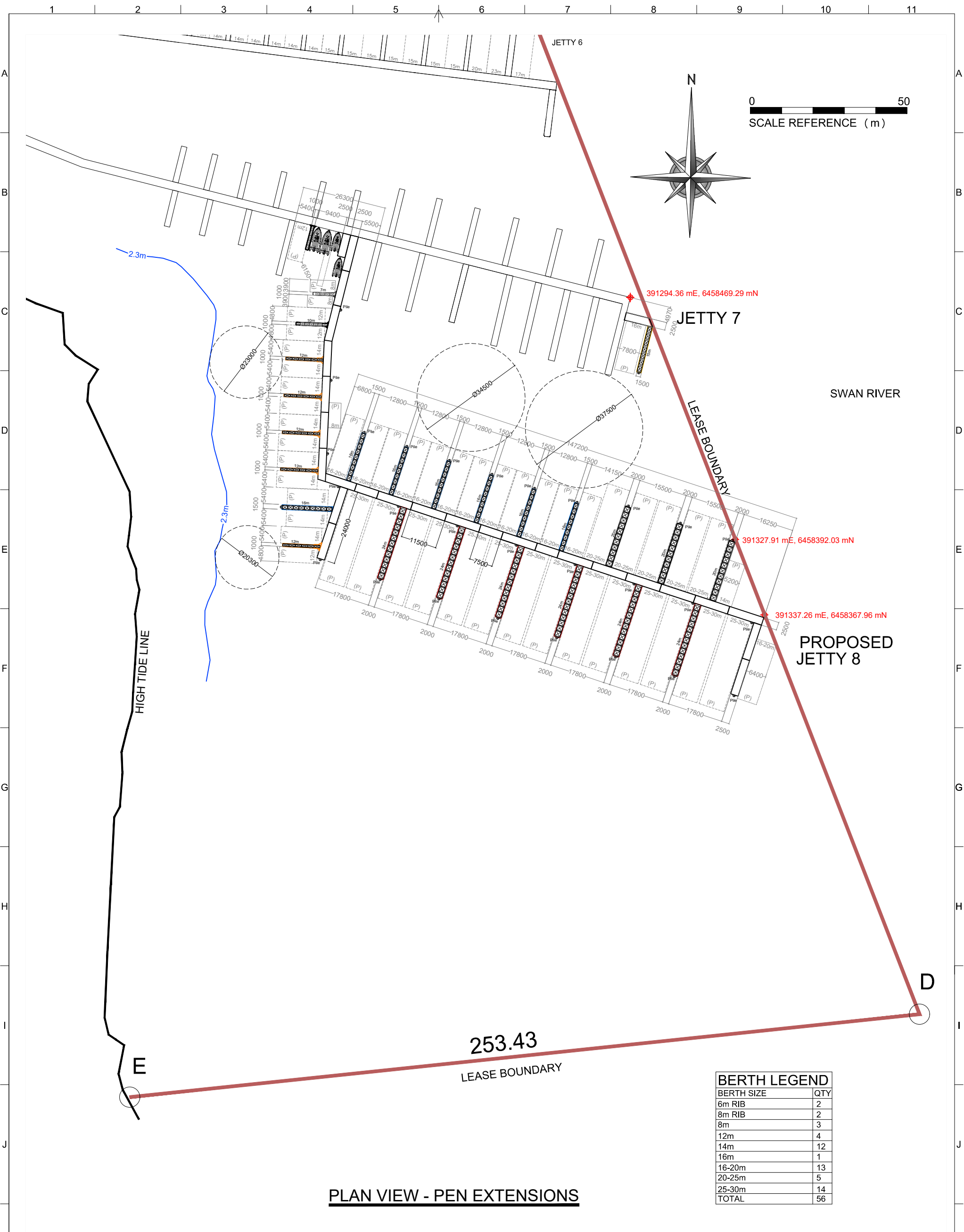
LOCALITY PLAN - SOPYC



0428 855 828 tpdrafting@westnet.com.au www.tpdrafting.com.au

Universal Marina Systems 1 Cox St, Pinjarra WA 6208
Phone – (08) 9531 1082
Email – admin@umsau.com

Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference
Designed by	Checked by	Approved by - date	Filename
			Date
			Scale
			NTS
PROPOSED PEN EXTENSIONS SOUTH OF PERTH YACHT CLUB			LOCALITY PLAN
JOB #			21-31
Edition			A3
Sheet			10F2
RevNo	Revision note	Date	Signature Checked



PLAN VIEW - PEN EXTENSIONS

BERTH LEGEND	
BERTH SIZE	QTY
6m RIB	2
8m RIB	2
8m	3
12m	4
14m	12
16m	1
16-20m	13
20-25m	5
25-30m	14
TOTAL	56



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Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference		
Designed by	Checked by	Approved by - date	Filename	Date	Scale
				24.06.2021	NTS
PROPOSED PEN EXTENSIONS			GENERAL ARRANGEMENT		
SOUTH OF PERTH YACHT CLUB			JOB #	Edition	Sheet
			21-31	A3	10F2
RevNo	Revision note	Date	Signature	Checked	



0 100
SCALE REFERENCE (m)

LEGEND

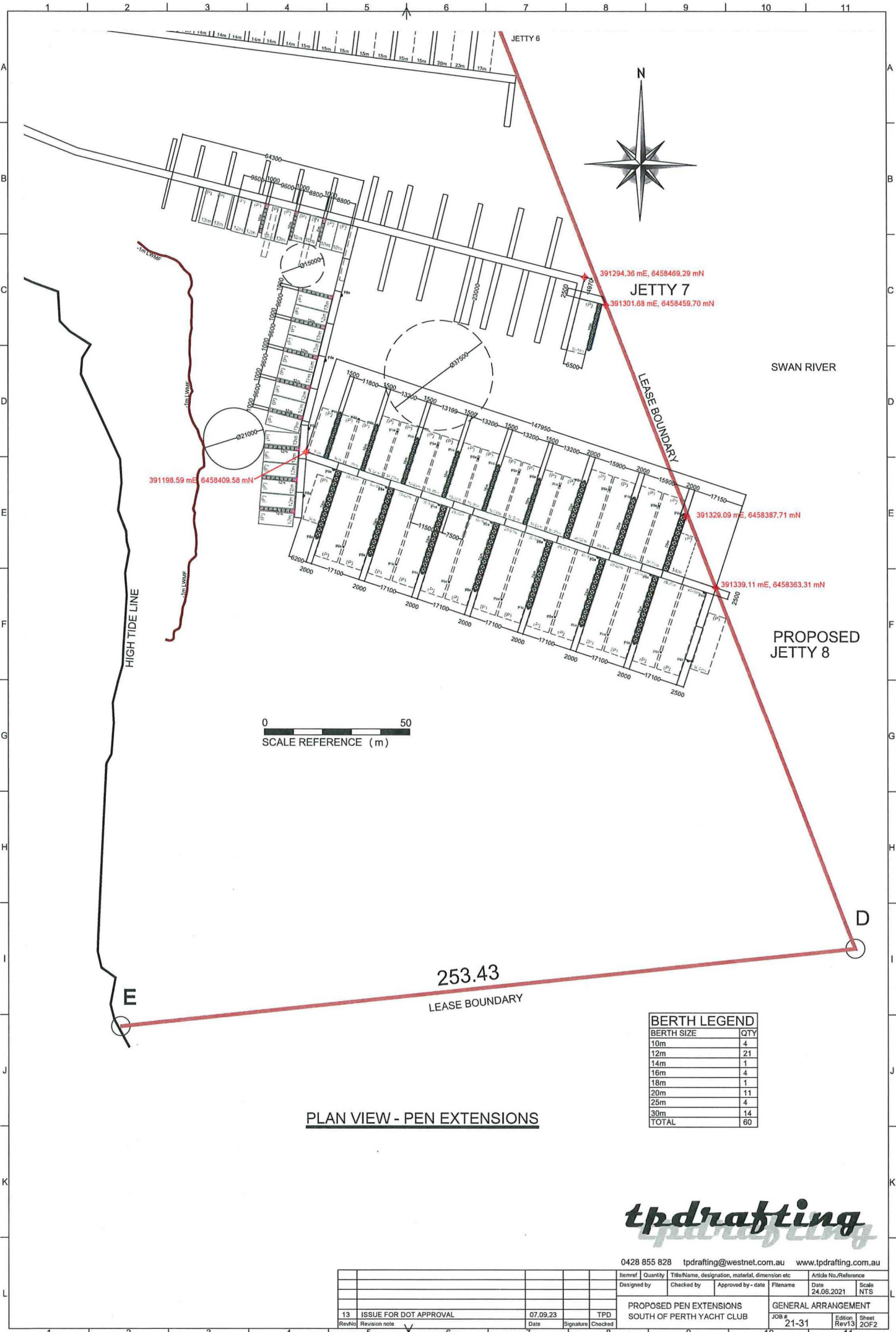
POINT	EASTING	NORTHING
A	- 390846.58	6458810.21
B	- 390883.33	6458837.15
C	- 391140.70	6458875.42
D	- 391386.61	6458240.44
E	- 391134.57	6458213.96

LOCALITY PLAN - SOPYC



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Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference
Designed by	Checked by	Approved by - date	Filename
			Date 24.06.2021
			Scale NTS
13		ISSUE FOR DOT APPROVAL	
RevNo	Revision note	Date	Signature
		07.09.23	TPD
			Checked
PROPOSED PEN EXTENSIONS			LOCALITY PLAN
SOUTH OF PERTH YACHT CLUB			JOB # 21-31
			Edition Rev13
			Sheet 10F2



391198.59 mE, 6458409.58 mN

391294.36 mE, 6458469.29 mN
JETTY 7
 391301.68 mE, 6458459.70 mN

391329.09 mE, 6458387.71 mN

391339.11 mE, 6458363.31 mN

253.43
 LEASE BOUNDARY

PLAN VIEW - PEN EXTENSIONS

BERTH LEGEND	
BERTH SIZE	QTY
10m	4
12m	21
14m	1
16m	4
18m	1
20m	11
25m	4
30m	14
TOTAL	60



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Item#	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference
Designed by	Checked by	Approved by - date	Filename
Date	Signature	Checked	Scale
24.06.2021	TPD		NTS
13 ISSUE FOR DOT APPROVAL		07.09.23	TPD
RevNo	Revision note	Date	Signature
PROPOSED PEN EXTENSIONS		GENERAL ARRANGEMENT	
SOUTH OF PERTH YACHT CLUB		JOB #	Editor
		21-31	Rev13
			Sheet
			20F2