

Swan and Canning Rivers Management Act 2006

PART 5

DETERMINATION OF DEVELOPMENT APPLICATION

FILE NUMBER

2018/5666

APPLICANT

Royal Freshwater Bay Yacht Club

APPLICANT'S ADDRESS

Attn: Paul Bayliss

Chief Executive Officer

Royal Freshwater Bay Yacht Club

PO Box 373

COTTESLOE WA 6911

LANDOWNER

Swan River Trust (River Reserve 48325)

LAND DESCRIPTION

Swan River (Reserve 48325) adjacent to the Royal

Freshwater Bay Yacht Club, Lot 2534 on Plan 222326 Hobbs

Place, Peppermint Grove (Reserve 17060)

DEVELOPMENT

Replacement of a section of Jetty C

VALID FORM 1 RECEIVED

28 November 2018

DETERMINATION

APPROVAL WITH CONDITIONS

The application to commence development in accordance with the information received on 28 November 2018 and additional information received on 21 March 2019, is APPROVED subject to the following conditions:

1. Approval to implement this decision is valid for two (2) years from the date of the approval. If substantial on-site works have not commenced within this period, a new approval will be required before commencing or completing the development.

Prior to the commencement of works

- 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. Prior to the commencement of works, a Construction Environmental Management Plan shall be submitted to and approved by the Department of Biodiversity, Conservation and Attractions (see Advice Notes 2 and 5).
- 4. Prior to the commencement of works, final design plans/drawings and technical specifications, including details of the external colours, finishes and materials for the new jetty structure, including the starter box, shall be submitted to and approved by the Department of Biodiversity, Conservation and Attractions, on advice from the Department of Transport (see Advice Notes 3 and 5).
- 5. Prior to the commencement of works, the River reserve lease is to be amended to address the realignment of the boundary and to formalise a requirement for the existing Environmental Management System (see Advice Notes 4 and 5).

During works

- 6. All works shall be implemented in accordance with the plans approved under **Conditions 3, 4** and **5.**
- 7. The applicant shall ensure that no damage to the foreshore, riverbank, or waterway (including vegetation and infrastructure) occurs beyond the scope of the approved works. If any inadvertent damage occurs, the applicant is required to notify the Department of Biodiversity, Conservation and Attractions within 48 hours of the damage occurring and rectify the damage at its expense.

On completion of works

8. Upon 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.

On-going

9. No additional boat pens shall be accommodated on the new jetty section.

ADVICE TO APPLICANT

- 1. Notification of commencement of works and submission of documents can be emailed to rivers.planning@dbca.wa.gov.au.
- 2. The Construction 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:
 - scope of works, including demolition and construction methodology;
 - site access and management, including fencing requirements;
 - management of machinery and equipment, including a refuelling procedure and spill response;
 - on-site storage and bunding of materials, equipment, chemicals and fuel;
 - protection of the river from inputs of debris, rubbish or other deleterious material;
 - foreshore protection;
 - sediment and turbidity management, including the risk of mobilising riverbed contaminants;
 - wildlife management, including minimising noise and vibration impacts;
 - public access and safety;
 - · hours of operation and schedule of works; and
 - complaints and incidents.

A site map showing the laydown area, vehicle entry/exit points and pedestrian management (e.g. road closures, alternative routes and public safety signage) shall be included. Emergency spill kits shall be onsite at all times and refuelling of land-based vehicles or machinery is to be undertaken outside the Swan Canning Development Control Area or at a licensed refuelling facility. In the case of pollution events, the Department of Biodiversity, Conservation and Attractions shall be contacted immediately on 9278 0900 or after hours 0419 192 845. For vessels and work barges that have recently been used outside the Swan Canning river system and adjoining coastal areas, the applicant will need to ensure that all traces of aquatic organisms are removed prior to deployment in the Swan Canning river system.

To minimise sediment disturbance, it is recommended that the existing piles are cut-off at the base instead of being removed in its entirety. The plan is to address the most

appropriate means of sediment and turbidity management for the proposed works (e.g. silt curtain). All reasonable efforts shall be taken to control sediment plumes, but where they occur, work must stop whilst the plume is addressed, and work should only recommence once the integrity of the turbidity management device is restored. If plumes or adverse turbidity levels occur beyond the work area, the applicant shall contact the Department of Biodiversity, Conservation and Attractions within two hours on 9278 0900 or after hours 0419 192 845.

Piling operations shall include a soft start up procedure at the commencement of each piling sequence. It is preferred that a vibration piler, rather than a drop hammer, is used as it generates lower noise levels. The contactor shall keep a constant watch for dolphins during piling operations. No pile driving shall start if dolphins are within 200m of the site and piling activity shall cease if a dolphin comes within 50m of the site and shall not recommence until any dolphin has moved more than 200m away or has not been observed for 20 minutes.

- 3. Regarding **Condition 4**, the Department of Transport advises that all detailed drawings/plans for the new jetty section and associated finger jetties are to be signed and certified by an experienced maritime engineer to confirm that they have been designed in accordance with AS3962-2001 *Guidelines for Design of Marinas*. The selection of colours, finishes and materials of the proposed infrastructure should complement the character and landscape setting of the Swan River. If any lighting is proposed, a light spill diagram will need to be provided. Lighting should be low level and designed with minimal light spill to the river or upward to the sky to ensure no adverse ecological consequences.
- 4. Regarding **Condition 5**, an amendment of the River reserve lease (Deed of Partial Surrender and Variation of Riverbed Lease) is required to excise the portion of existing lease area (total relinquished area 290m²) and extend the lease boundary (total increased area 277m²) to accommodate the new Jetty C alignment (as shown in PER170761 ST-02 Revision D, 23 November 2018). The leaseholder shall be responsible for all legal costs associated with the amendment of the lease.
- 5. To allow sufficient time for the Department of Biodiversity, Conservation and Attractions to consider and approve the plans and details required under **Conditions** 3 to 5, the documents shall be submitted to the Department of Biodiversity, Conservation and Attractions at least 30 days before the expected works commencement date.
- 6. The applicant will need to apply for and obtain a jetty modification licence from the Department of Transport Coastal Facilities Management before works commence.
- 7. Regarding marine safety, the applicant is advised to ensure that:
 - a. all in-water operations and activities must be conducted in accordance with Western Australian Marine Safety Legislation; and
 - b. all on-water works areas must be marked with yellow buoys and flashing yellow lights for the duration of the works.
- 8. It is recommended that the applicant, or any third party contractor it engages to undertake the works, notify Department of Transport, Navigational Safety (DoT) by email to navigational.safety@transport.wa.gov.au at least 21 days before works commence, to enable a Temporary Notice to Mariners (TNTM) outlining the scope of the works to be published. The TNTM is to be funded by the applicant or its contractor. Requests for any extension to the works period must be made by the applicant or its contractor prior to the expiry of the approved works period, and following the completion of the works, the applicant or its contractors must notify DoT.
- 9. The applicant is advised that the proposal has the potential to be affected by the 1% annual exceedance probability flood level and potential sea level rise. The onus is on

the applicant to undertake a risk assessment and exercise their judgment in determining the level of risk they are prepared to accept.

The Swan River Trust's Climate Change Risk Assessment Project (2010) sets out a methodology to assess the vulnerability of foreshore areas, which is available on request from the Department of Biodiversity, Conservation and Attractions. It is also recommended that applicants undertake their own research and obtain appropriate independent professional advice relevant to the particular circumstances.

- 10. All noise levels produced by the development construction are to comply with the provisions of the Environmental Protection (Noise) Regulations 1997 (as amended).
- 11. The Department of Water and Environmental Regulation, Contaminated Sites advises that the site is classified under the *Contaminated Sites Act 2003* as 'possibly contaminated investigation required'. It is recommended that adequate safety measures are implemented to minimise the risk of disturbing the suspected contaminated sediments (e.g. TBTs). Further site investigations should be undertaken at the site by the Club to assess the bioavailability of these contaminants and determine whether it will pose a risk to human health and the environment.
- 12. The applicant is advised that the proposed works are located within a high to moderate acid sulphate soil (ASS) risk areas. The Acid Sulphate Soils Guideline Series for guidance on the identification, assessment and management of acid sulphate soils in Western Australia is available from the Department of Water and Environmental Regulation website at www.dwer.wa.gov.au. If any Acid Sulphate 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.
- 13. The applicant is advised to contact the Department of Planning, Lands and Heritage to ensure that the proposed works do not breach any section of Part IV (Protection of Aboriginal Sites) of the Aboriginal Heritage Act 1972 (AHA). Approval under section 18 of the AHA may be required. It is recommended that the applicant consult the South West Aboriginal Land and Sea Council who represent the Wadjuk Native Title Claims Group about the works, which may impact the Swan River. Please refer to the Aboriginal Heritage Due Diligence Guidelines (Department of Aboriginal Affairs and the Department of the Premier and Cabinet 2013) when planning specific development within a Heritage area.

Hon Stephen Dawson MLC

MINISTER FOR ENVIRONMENT; DISABILITY SERVICES; ELECTORAL AFFAIRS

Date: 25 6 19

FILE No.

: 2018/5666

DEPARTMENT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS REPORT

PROPOSAL

: Replacement of a section of Jetty C at the Royal Freshwater Bay

Yacht Club

COST

: \$1.5 million

LOCATION

: Swan River (Reserve 48325) adjacent to the Royal Freshwater

Bay Yacht Club, Lot 2534 on Plan 222326 Hobbs Place,

Peppermint Grove (Reserve 17060)

APPLICANT

: Wallbridge Gilbert Aztec on behalf of the Royal Freshwater Bay

Yacht Club

LANDOWNER

: Swan River Trust (River reserve 48325)

LOCAL GOVERNMENT :

Shire of Peppermint Grove

MRS CLASSIFICATION: Waterways

DECISION TYPE

: Part 5, Swan and Canning Rivers Management Act 2006 -

Ministerial Determination

ATTACHMENTS

1. Aerial photo of subject land

2. Proposed jetty development plans

3. Photos of the existing Jetty C

4. Proposed River reserve lease amendment

RECOMMENDATION

: APPROVAL WITH CONDITIONS

REPORT

1.0 INTRODUCTION

- The Department of Biodiversity, Conservation and Attractions (DBCA) has received an application from Wallbridge Gilbert Aztec (WGA) on behalf of the Royal Freshwater Bay Yacht Club (the Club) proposing to remove an existing 30m section of Jetty C, including associated mooring piles and a race starter's box, and replace with an amended jetty section (with new alignment), new piles, starter box and additional finger jetties. The works will occur in the Swan River (Reserve 48325) adjacent to the Club's premise (see Attachment 1). The Swan River is reserved for 'Waterways' under the Metropolitan Region Scheme.
- 1.2 The Swan River is vested with the Swan River Trust (the Trust).
- The proposed development is to occur on waters completely within the Swan 1.3 Canning Development Control Area (DCA) and therefore requires an approval from the Minister for Environment in accordance with Part 5 of the Swan and Canning Rivers Management Act 2006 (SCRM Act).

1.4 The Director General of DBCA has prepared this report in accordance with section 76 of the SCRM Act.

2.0 CONSULTATION

Shire of Peppermint Grove

- 2.1 The Shire of Peppermint Grove (the Shire) advised that it has no objections to the proposal, and has provided the following comments:
 - It is noted that the proposal will not result in a net change to the River reserve lease area or the number of boat pens;
 - The Club is on the Heritage List of the Shire's Local Planning Scheme 4, however the jetty itself is not part of the heritage value that is attributed to the site in the Municipal Heritage Inventory; and
 - It is recommended that the Club document the works as part of the Club's history.

Department of Water and Environmental Regulation, Contaminated Sites

- 2.2 The Department of Water and Environmental Regulation (DWER), Contaminated Sites advised that the site is currently classified as 'possibly contaminated investigation required' under the *Contaminated Sites Act 2003*. Further discussion on historical contamination is discussed in Section 6 of the report.
- 2.3 DWER Contaminated Sites has assessed the proposal and advises that it has no objections to the proposed development given that the proposed sediment disturbance works are likely to be minimal.
- 2.4 It recommends that a site management plan be prepared to address the potential risks associated with sediment disturbance during the construction works (i.e. piling).

Department of Transport, Maritime Planning

- 2.5 The Department of Transport (DoT) Maritime Planning advised that it has no inprinciple objection to the proposed development, subject to the following recommendations:
 - The Club will need to obtain a variation to its River reserve lease from DBCA for the proposed changes to the lease boundary to accommodate the proposed jetty realignment;
 - The Club will need to apply for, and obtain, a jetty modification licence from DoT,
 Coastal Facilities Management;
 - The design/drawings for the proposed jetty amendment shall be signed and certified by an experienced maritime engineer to confirm that it has been designed in accordance with AS3962-2001 Guidelines for Design of Marinas; and
 - No works shall commence until the above requirements have been satisfied.

Department of Transport, Navigation Safety

2.6 DoT, Navigational Safety advised that it has no objections to the proposal, subject to the following recommendations:

- All on-water operations and activities must be conducted in accordance with the relevant marine legislative provisions;
- Prior to the commencement of works, a temporary notice to mariners (TNTM) outlining the scope of works and works area, navigational markings (lighting) and date of works must be issued. The Club will need to notify DoT at least 21 days prior to works commencing to enable a TNTM to be published; and
- Requests for any extension to the TNTM works period must be made by the applicant or its contractors prior to the expiry of the approved works period, and following the completion of the works, the applicant or its contractor must notify DoT.

Department of Planning, Lands and Heritage

- 2.7 The Department of Planning, Lands and Heritage (DPLH) has reviewed the proposal and advised that the proposed works are located within a Registered Site of Aboriginal Significance (ID 3536 Swan River).
- 2.8 It is noted that approximately 18 existing piles will be removed, and 22 new piles will need to be driven into the riverbed to support the new jetty alignment, finger jetties and mooring pens. Accordingly, the applicant may need to submit a section 18 application under the *Aboriginal Heritage Act 1972* (AHA) by giving notice to the Aboriginal Cultural Materials Committee (ACMC).
- 2.9 DPLH further advised that the South West Aboriginal Land and Sea Council that represents the Wadjuk Native Title Claims Group should also be contacted for its advice on the proposal, and the applicant should refer to the *Aboriginal Heritage Due Diligence Guidelines* (Department of Aboriginal Affairs, 2013).

3.0 PUBLIC SUBMISSIONS

- 3.1 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 referral agencies. A copy was also published on DBCA's website for a period of 14 days between 17 May 2019 and 31 May 2019.
- 3.2 One (1) submission was received from DPLH to advise that Advice Note 13 (Section 10 Recommendations) is considered appropriate to inform the applicant of the requirements under the AHA.

4.0 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)

5.0 ENVIRONMENTAL AND PLANNING CONSIDERATIONS

- River Reserve Lease
- Environmental Protection
- Jetty Design
- Visual Amenity
- Heritage
- Acid Sulphate Soils
- Contamination

6.0 BACKGROUND

- 6.1 The Club premises covers approximately 2.2ha of land and approximately 5.24ha over water (see **Attachment 1**). The Club has a land lease from the Western Australian Conservation and Parks Commission for its land-based facilities (i.e. clubroom, car park, storage and fuel facilities) and a River reserve lease from the Trust for its river-based facilities (i.e. jetties and mooring pens).
- 6.2 The Club was originally founded in 1896, and since then, the clubhouse has undergone significant extensions and refurbishment. In recent years, one of the major developments at the Club consisted of alterations and additions to its kitchen and clubroom, new storage facilities, veranda and external bar/kiosk. A Part 5 Development Approval (SRT920-17) was granted on 25 August 2010. In regard to on-water works, the last major project consisted of the replacement of Jetty G, with a Part 5 Development Approval (SRT920-15) for those works granted on 25 February 2005.
- 6.3 In recent years, the Club has applied to DBCA on a number of occasions to undertake minor jetty infrastructure repairs (e.g. pile replacement, floating boat lifts etc.) in accordance with the Swan and Canning Rivers Management Regulations 2007.
- 6.4 The current application proposes the following works:
 - Remove an approximate 30m section of Jetty C, including one (1) finger jetty, starter box, three (3) jetty piles and 15 mooring piles; and
 - Replace and realign the Jetty C section, including installation of seven (7) new finger jetties, starter box, five (5) jetty piles and 17 mooring piles (see **Attachments 2 and 3**).
- 6.5 The Club has recently engaged a contractor to assess the current condition of Jetty C, and it has been revealed that the alignment of the rear section of Jetty C does not comply with AS3962-2001 *Guidelines for Design of Marinas* (AS3962). The fairway channel is too narrow, with its narrowest point being approximately 10.6m in width. In accordance with AS3962, the minimum fairway channel width should be 15m.
- 6.6 The proposed works to realign the existing jetty approximately 2m to the east will provide a wider fairway channel and ensure that the jetty is compliant to AS3962, for vessels (approximately 10m long) to safely access the jetty.

6.7 The Club has advised that no additional berths/mooring pens are proposed as part of this application. It is noted that minor changes to the berthing pen widths are proposed, however the applicant has advised that the size of the berths (i.e. vessel length) will not change.

7.0 DISCUSSION

River Reserve Lease Amendment

- 7.1 Policy 43 requires new development associated with yacht clubs, marinas and other aquatic-based clubs to be located within its existing River reserve lease area, with a presumption against developing outside an existing lease boundary. Where significant development is proposed, the applicant will need to apply for a new lease or amend the existing lease. Lease extensions have the potential to preclude use and access of the River reserve by the wider community.
- 7.2 The Club is currently on a 1985 lease which has out-dated lease provisions under which the protection of the environment was not extensively addressed, and the rental cost is at a significantly reduced percentage of the market rent. The Club has prepared an Environmental Management System (EMS) for its operation which identifies the risk that the activities of the Club may pose to the foreshore and river environment, and the strategies to reduce these risks. Although the EMS has been reviewed by DBCA, it is not enforceable through provisions within the Club's current River reserve lease.
- 7.3 It should also be noted that the Club decided to exercise its option to renew its River reserve lease in 2010 rather than enter into a new lease agreement with the Government.
- 7.4 All except three of the yacht clubs and marinas on the river agreed to the new lease terms in 2010. It is expected that the remaining clubs will progressively enter into new leases when major redevelopment or expansion has justified such a requirement, or in 2027 when the leases expire.
- 7.5 If the application is approved, the Club will need to amend its River reserve lease boundary to accommodate the section of Jetty C to be replaced and realigned. The proposed River reserve lease variation will consist of the following:
 - relinquish 290m² of its existing lease area, south east between Jetty B and C;
 - expand the lease area to the south of Jetty C by 277m² (net decrease of 13m²) (see **Attachment 4**).
- 7.6 In this case, as the Club is proposing a 'like for like' swap, with no net increase to its River reserve area, it is not considered appropriate to request that the Club enter into the new lease format. However, it is recommended that the requirement to maintain and implement an EMS is formalised through the provisions of the varied lease. The requirement for an EMS is a standard provision in the new leases.

Environmental Protection

7.7 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.

- 7.8 The construction works have the potential to impact on the foreshore and waterway, including disturbance to the riverbed, water quality degradation, foreshore degradation, wildlife (noise) impacts and disruption to public access and safety.
- 7.9 The proposed plans indicate that the existing jetty and mooring piles to be removed will either be cut-off at the base or removed in their entirety. To minimise sediment plumes, it is recommended that the piles are cut-off at the base (i.e. riverbed level) rather than being removed in their entirety.
- 7.10 To ensure that all potential environmental impacts are identified and managed appropriately, it is recommended that a Construction Environmental Management Plan (CEMP) be included as a condition of approval. The CEMP will be required to include details of demolition and construction methodology, protection of water quality, machinery and equipment management (including refuelling), site access and management, public access and safety, waste management and spill response, foreshore protection and minimisation of potential noise and vibration impacts to fauna.

Jetty Design

- 7.11 Policy 44 recognises that appropriately designed and located commercial and community boating facilities, such as jetties and boat ramps, form an integral part of the river system setting and are an important recreational and tourist resource. Policy 44 also seeks to ensure that the location of boating infrastructure does not interfere with vessel navigation.
- 7.12 DoT standard advice to address navigational safety, such as the requirement to ensure all on-water operations and activities are conducted in accordance with relevant marine legislation and a TNTM is organised, will be included on the approval.
- 7.13 Policy 43 requires new jetties and similar structures at yacht clubs be constructed to the standards set by DoT and relevant Australian Standards. The applicant has provided preliminary drawings for the new Jetty C section and associated finger jetties, and it appears the new mooring pens will accommodate vessels with a length between 8m 14m.
- 7.14 DoT Maritime Planning advised that the proposed jetty structures will need to comply with AS3962-2001 *Guidelines for Design of Marinas* and be certified by a qualified and practising marine engineer. These requirements can be included in a condition of approval about the submission of final design plans/drawings.
- 7.15 The proposed works for Jetty C are intended to address AS3962, by increasing the fairway channel width for safe access by vessels. It is assumed that the additional finger jetties will also improve access for Club members to their boats.

Visual Amenity

7.16 Policy 42 states that the design, materials and colour scheme of developments adjacent to the river and foreshores should complement and protect the character and landscape setting of the river.

- 7.17 The preliminary design drawings provided with the application contain limited information regarding the design and construction materials proposed for the new starter box. However, the following construction materials are proposed for the new jetty structures:
 - Steel mooring and jetty piles;
 - Steel substructure/frame for the new Jetty C section and finger jetties; and
 - Pre-cast concrete decking for the new Jetty C section and fibre-reinforced plastic decking for the new finger jetties.
- 7.18 A condition of approval will require the provision of final design drawings, including external colours and finishes for the new jetty structure, including the starter box. It is recommended that colours, materials and finishes that complement the surrounding river environment are used.

Heritage

- 7.19 Policy 42 states that places of cultural and heritage significance, both Aboriginal and European, and of natural heritage are to be conserved.
- 7.20 The proposal is within the boundaries of an Aboriginal site DAA 3536 (Swan River). An advice note will be included to advise the Club to contact DPLH to ensure that the proposed works will not impact on DAA 3536 and that an approval under section 18 of the AHA may be required.

Acid Sulphate Soils

- 7.21 The proposed works are to be undertaken within a high to moderate (Swan River) acid sulphate soils (ASS) disturbance risk area within 3m of the natural surface. The proposed works will require minor ground excavation during the piling works.
- 7.22 The potential for disturbance of ASS during the construction works is considered to be relatively minor and can be addressed through conditions or advice notes of the approval.

Contamination

- 7.23 The site was originally classified as 'possible contaminated investigation required' under the *Contaminated Sites Act 2003* due to a series of assessments detecting antifouling agents (such as those found in marine vessel antifouling paint) within river sediments, which is likely attributed to slipway maintenance of boats and other vessels at the Club.
- 7.24 Past site investigations detected elevated concentrations of TBT within the sediment layer and elevated copper concentrations in the surface waters that exceeds the relevant environmental guidelines. These exceedances indicate that further investigation should be undertaken by the Club to assess the bioavailability of these contaminants and determine whether it will pose a risk to human health and the environment.
- 7.25 DWER, Contaminated Sites has advised that the proposed works are anticipated to generate minor sediment disturbance (i.e. during piling operations) and recommends that this sediment disturbance risk be addressed through the preparation of a site management plan.

8.0 SWAN RIVER TRUST ADVICE

8.1 In accordance with section 75 (3A) of the SCRM Act, the Trust considered DBCA's draft report at a meeting on 9 April 2019, where the Trust resolved to support the report and recommendation.

9.0 CONCLUSION

- 9.1 The proposed works are not considered to be excessive in scale or bulk, as the new jetty section is not intended to accommodate additional berthing pens.
- 9.2 The proposed works will provide a wider fairway channel, improving vessel safety, and ensure that the jetty is compliant with Australian Standards.
- 9.3 Potential environmental impacts from the works can be addressed through the preparation and approval of a CEMP, which would be required as a condition of approval.
- 9.4 For these reasons, the proposal is recommended for approval, subject to conditions and advice.

10.0 RECOMMENDATION - APPROVAL WITH CONDITIONS

That the Director General of the Department of Biodiversity, Conservation and Attractions advises the Minister for Environment that the Royal Freshwater Bay Yacht Club's proposal to replace a section of Jetty C, including jetty and mooring piles, race starter box and install additional finger jetties within the Swan River adjacent to Lot 2534 on Plan 222326 Hobbs Place, Peppermint Grove (Reserve 17060), as described in the application received on 28 November 2018 and additional information submitted on 21 March 2019, be approved, subject to the following conditions:

1. Approval to implement this decision is valid for two (2) years from the date of the approval. If substantial on-site works have not commenced within this period, a new approval will be required before commencing or completing the development.

Prior to the commencement of works

- 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. Prior to the commencement of works, a Construction Environmental Management Plan shall be submitted to and approved by the Department of Biodiversity, Conservation and Attractions (see **Advice Notes 2** and **5**).
- 4. Prior to the commencement of works, final design plans/drawings and technical specifications, including details of the external colours, finishes and materials for the new jetty structure, including the starter box, shall be submitted to and approved by the Department of Biodiversity, Conservation and Attractions, on advice from the Department of Transport (see **Advice Notes 3** and **5**).

5. Prior to the commencement of works, the River reserve lease is to be amended to address the realignment of the boundary and to formalise a requirement for the existing Environmental Management System (see **Advice Notes 4** and **5**).

During works

- 6. All works shall be implemented in accordance with the plans approved under **Conditions 3, 4** and **5.**
- 7. The applicant shall ensure that no damage to the foreshore, riverbank, or waterway (including vegetation and infrastructure) occurs beyond the scope of the approved works. If any inadvertent damage occurs, the applicant is required to notify the Department of Biodiversity, Conservation and Attractions within 48 hours of the damage occurring and rectify the damage at its expense.

On completion of works

8. Upon 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.

On-going

9. No additional boat pens shall be accommodated on the new jetty section.

ADVICE TO APPLICANT

- 1. Notification of commencement of works and submission of documents can be emailed to rivers.planning@dbca.wa.gov.au.
- 2. The Construction 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. scope of works, including demolition and construction methodology;
 - b. site access and management, including fencing requirements;
 - c. management of machinery and equipment, including a refuelling procedure and spill response;
 - d. on-site storage and bunding of materials, equipment, chemicals and fuel;
 - e. protection of the river from inputs of debris, rubbish or other deleterious material;
 - f. foreshore protection;
 - g. sediment and turbidity management, including the risk of mobilising riverbed
 - h. wildlife management, including minimising noise and vibration impacts;
 - i. public access and safety;
 - j. hours of operation and schedule of works; and
 - k. complaints and incidents.

A site map showing the laydown area, vehicle entry/exit points and pedestrian management (e.g. road closures, alternative routes and public safety signage) shall be included. Emergency spill kits shall be onsite at all times and refuelling of land-based vehicles or machinery is to be undertaken outside the Swan Canning Development Control Area or at a licensed refuelling facility. In the case of pollution events, the Department of Biodiversity, Conservation and Attractions shall be contacted immediately

on 9278 0900 or after hours on 0419 192 845. For vessels and work barges that have recently been used outside the Swan Canning river system and adjoining coastal areas, the applicant will need to ensure that all traces of aquatic organisms are removed prior to deployment in the Swan Canning river system.

To minimise sediment disturbance, it is recommended that the existing piles are cut-off at the base instead of being removed in their entirety. The plan is to address the most appropriate means of sediment and turbidity management for the proposed works (e.g. use of a silt curtain). All reasonable efforts shall be taken to control sediment plumes, but where they occur, work must stop whilst the plume is addressed, and work should only recommence once the integrity of the turbidity management device is restored. If plumes or adverse turbidity levels occur beyond the work area, the applicant shall contact the Department of Biodiversity, Conservation and Attractions within two (2) hours on 9278 0900 or after hours on 0419 192 845.

Piling operations shall include a soft start up procedure at the commencement of each piling sequence. It is preferred that a vibration piler, rather than a drop hammer, is used as it generates lower noise levels. The contactor shall keep a constant watch for dolphins during piling operations. No pile driving shall start if dolphins are within 200m of the site and piling activity shall cease if a dolphin comes within 50m of the site and shall not recommence until any dolphin has moved more than 200m away or has not been observed for 20 minutes.

- 3. Regarding **Condition 4**, the Department of Transport advises that all detailed drawings/plans for the new jetty section and associated finger jetties are to be signed and certified by an experienced maritime engineer to confirm that they have been designed in accordance with AS3962-2001 *Guidelines for Design of Marinas*. The selection of colours, finishes and materials of the proposed infrastructure should complement the character and landscape setting of the Swan River. If any lighting is proposed, a light spill diagram will need to be provided. Lighting should be low level and designed with minimal light spill to the river or upward to the sky to ensure no adverse ecological consequences.
- 4. Regarding **Condition 5**, an amendment of the River reserve lease (Deed of Partial Surrender and Variation of Riverbed Lease) is required to excise the portion of existing lease area (total relinquished area 290m²) and extend the lease boundary (total increased area 277m²) to accommodate the new Jetty C alignment (as shown in PER170761 ST-02 Revision D, 23 November 2018). The leaseholder shall be responsible for all legal costs associated with the amendment of the lease.
- 5. To allow sufficient time for the Department of Biodiversity, Conservation and Attractions to consider and approve the plans and details required under **Conditions 3** to **5**, the documents shall be submitted to the Department of Biodiversity, Conservation and Attractions at least 30 days before the expected works commencement date.
- 6. The applicant will need to apply for and obtain a jetty modification licence from the Department of Transport Coastal Facilities Management before works commence.
- 7. Regarding marine safety, the applicant is advised to ensure that:
 - a. all in-water operations and activities must be conducted in accordance with Western Australian Marine Safety Legislation; and
 - b. all on-water works areas must be marked with yellow buoys and flashing yellow lights for the duration of the works.

- 8. It is recommended that the applicant, or any third party contractor it engages to undertake the works, notify Department of Transport, Navigational Safety (DoT) by email to navigational.safety@transport.wa.gov.au at least 21 days before works commence, to enable a Temporary Notice to Mariners (TNTM) outlining the scope of the works to be published. The TNTM is to be funded by the applicant or its contractor. Requests for any extension to the TNTM works period must be made by the applicant or its contractor prior to the expiry of the approved works period, and following the completion of the works, the applicant or its contractors must notify DoT.
- 9. The applicant is advised that the proposal has the potential to be affected by the 1% annual exceedance probability flood level and potential sea level rise. The onus is on the applicant to undertake a risk assessment and exercise their judgment in determining the level of risk they are prepared to accept.

The Swan River Trust's Climate Change Risk Assessment Project (2010) sets out a methodology to assess the vulnerability of foreshore areas, which is available on request from the Department of Biodiversity, Conservation and Attractions. It is also recommended that applicants undertake their own research and obtain appropriate independent professional advice relevant to the particular circumstances.

- 10. All noise levels produced by the development construction are to comply with the provisions of the Environmental Protection (Noise) Regulations 1997 (as amended).
- 11. The Department of Water and Environmental Regulation, Contaminated Sites advises that the site is classified under the *Contaminated Sites Act 2003* as 'possibly contaminated investigation required'. It is recommended that adequate safety measures are implemented to minimise the risk of disturbing the suspected contaminated sediments (e.g. TBTs). Further site investigations should be undertaken at the site by the Club to assess the bioavailability of these contaminants and determine whether it will pose a risk to human health and the environment.
- 12. The applicant is advised that the proposed works are located within a high to moderate acid sulphate soil risk area. The *Acid Sulphate Soils Guideline Series for guidance on the identification, assessment and management of acid sulphate soils in Western Australia* is available from the Department of Water and Environmental Regulation website at www.dwer.wa.gov.au. If any acid sulphate 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.

		warmen and
FINAL REPORT	T ENDORSED	
Signed:	Date: 19/6/19	

DALKETTI Perth Central Cadastre (Land Parcels) Job Ref: 1 Produced at 09:47 AM on March 22, 2019 100 m Attachment (A4) Produced by DBCA, Department of Biodiversity, Conservation and Attractions CLAREMONT Projection: MGA Zone 50 Datum: GDA94 Dept. the 1 of Blodivarity Conservation and Attract GROVE Swan River Trust - DCA 1:5,000 2 Swan River Leases SWANBOURNE MOSMAN PARK EPPERMINT COTTESLOE THERMAN Legend 35°0'0'0'S 35°0'18.0"S S.0.9.0°SE N0006SH9 N09Z8Sb9 N00585149 394250E 48.0 "E Club River reserve lease area Royal Freshwater Bay Yacht 38450CE 46'39.0"E 384500E 39.0°E 384250E 115°46'30.0"E 384250E°46'30.0"E 39400C 115°46'21.0"E 384000E 115°46'21.0"E 383750E 115°46′12.0″E 383750E

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N00585+9

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The Department of Biodiversity, Conservation and Attractions does not quarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted. Roads and tracks on land managed by DBCA may contain unmarked hazards and their surface condition is variable. Exercise caution and drive to conditions on all roads.

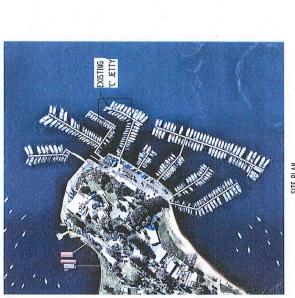
115°46'12.0"E

ROYAL FRESHWATER BAY YACHT CLUB 'C' JETTY REFURBISHMENT





DRAWING LIST	SHEET NAME	PROJECT COVER SHEET	NOTES SHEET	WATER LEASE LAND SWAP OPTIONS	DEMOLITION LAYOUT PLAN	GENERAL ARRANGEMENT PLAN	PILE LAYOUT PLAN	GENERAL SECTIONS	FINGER JETTY DETAILS - SHEET 1	FINGER JETTY DETAILS - SHEET 2	HEADSTOCK DETAILS - SHEET 1	PRECAST DECK UNIT -GA
	SHEET NUMBER	ST-00 PRC	ST-01 NO.12	ST-02 WA	ST-11 DEP	ST-12 GEN	ST-13 PIL	ST-14 GEN	ST-21 FIN	ST-22 FIN	ST-25 HE/	ST-31 PRE



SITE PLAN

DRAWING NUMBER Shelthe, Rev. PER170761 ST-00 C

TENDER ISSUE NOT FOR CONSTRUCTION

GENERAL NOTES

	AND WITH SUCH OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.
2	THE COMPACTOR SHALL BE RESPONSIBLE FOR MAINTANING THE STRUCTURE IN A STABLE COMMITTION AND BENEVIAGE ON PART SHALL BE OVER STREISED DURING CONSTITUCTION ACTIVITIES.
-	THESE DRAWINGS SHALL NOT BE SCALED, ALL DIMENSIONS ARE IN MILLINETRES

SUBSTITUTIONS SHALL BE APPROVED BY THE ENCINEER IN WRITHIS PRIOR TO USE. REPORTED DISCREPANCES TO THE ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

DESIGN CRITERIA - (TABLE G1)

-INPORTANCE LEVEL - ANNUAL PROBABILITY OF EXCEDANCE	= 2 = 1250 (WIND)
DESIGN LIFE:	***************************************
- NEW BEKTHING & MODINING STRUCTURE - ACCESS STRUCTURES AWAI KWAYS PLATFORMS & STARS)	= 15 YEARS
- STEELWORK PAINT/CORROSION PROTECTION SYSTEM	= 15-20 YEARS
- REFER TO CORROSION PROTECTION PLAN (TABLE C2) FOR PROTECTION STRATEGY AND ASSOCIATED CORROSION	
ALLOWANCES	
-RECOMMENDED INSPECTION STRATEGY IS AN ADVANCED VISUAL CONDITION ASSESSMENT (TO PORTS AUSTRALIA WHARF STRUCTURES CONDITION ASSESSMENT MANUAL-WSCAM)	L CONDITION ASSESSMENT MENT MANUAL-WSCAM)

LIVE LOADS:	
- UNFORMET DISTRIBUTED LOAD - CONCENTRATED POINT LOAD (OVER 150mm x 150mm FOOTPRINT)	=5 iPa
WAVE & CURRENT LOADS: - JAXX, WIVE HEIGHT (Hraze) - PERION - DESIGN SYORM SURGE LEVEL.	45mCD
WWD LOADS: -TERGANA CATEGORY -REGIONAL GAST WAS SPEED (MG00); -TERGANAL GAST WAS SPEED (MG00); -TERGANAL GAST THE LER (MG: -TERGANAL GAST THE LER (MC GAT); -CASED MACKET THE THE MG GAT);	=15 =392 m/s =1.0 =1.11

- TERRAINFEIGHT MALTIPLER (MCCAT):	11.11
- SHIELDING MILTIPLIER (MA):	= 1.0
- TOPOGRAPHIC MULTIPLER (M):	- 1,0
BERTHING: MOCHING FACILITES HAVE GENERALLY BEEN DESIGNED TI	

REINFORCEME	REINFORCEMENT NOTATION - (TABLE C6)
ABBREVIATIONS	DENOTES
9,8F	BARS IN BOTTOM FACE
t	BARS IN FAR FACE
EW	EACH WAY
#	BARS IN EACH FACE
SF	BARS IN SIDE FACE
FN	BARS IN NEAR FACE
T,TF	BARS IN TOP FACE
88	BOTTOM MOST BOTTOM BARS
±	TOP MOST TOP BARS
81	BOTTOM BARS PLACED FIRST
82	BOTTOM BARS PLACED SECOND
11	TOP BARS PLACED FIRST
57	TOP BARS PLACED SECOND
XWI	MAXIMUM
NAN	MENTHERY
CTS	AT CENTRES (SPACING)
200	110000

PC12 PC8 20 PC10 PC14 PC4 PC7 DISCREPANCES DISCOVERED DURING CONSTRUCTION ACTIVITIES BETWEBY TINIOS STRUCTURE AND THE DRAWINGS SHALL BE REPORTED TO THE ENCINEER FURTHER ADVICE.

VERY 5 YEARS WITH INTERMEDIATE BASIC VISUAL ASSESSMENT AT 2.5 YEARS	125 YEARS	
NE LOADS: UNFORMEY DISTRUBUTED LOAD CONCENTRATED POINT LOAD (OVER 150mm x 150mm FDOTPRINT)	eS iPa ≠20tN	
MAKE AL CURRENT LOADS: WAX, MANE HEIGHT (H-max) PENIOO DESIGNES RIORIN SURGE LEVEL	#0.9 m #4.8 = 40.5 m CD	
AND LOADS: TEGRAIN CATEGORY: PERCANAL L'EXTAND SPEFIT NAGION:	= 1.5 = 392 m/s	
DRECTION, MATTPLER (MA): DRECTION, MATTPLER (MA): DRECTION MATTPLER (MC CAT): COCCAMPILE (MATTPLER (MC CAT): COCCAMPILE (MATTPLER (MC)) COCCAMPILE (MATTPLER (MC))	2::22	

REINFORCEMENT NOTATION - (TABLE C6)	DENOTES	BARS IN BOTTOM FACE	BARS IN FAR FACE	EACHWAY	BARS IN EACH FACE	BARS IN SIDE FACE	BARS IN NEAR FACE	BARS IN TOP FACE	BOTTOM MOST BOTTOM BARS	TOP MOST TOP BARS	BOTTOM BARS PLACED FIRST	BOTTOM BARS PLACED SECOND	TOP BARS PLACED FIRST	TOP BARS PLACED SECOND	MAXIMUM	MENTHERBA	
REINFORCEM	ABBREVIATIONS	9,8F	t	M3	150	SF	H.	T,TF	88	#	81	82	11	12	MX	Nex	

REINFORCEM	REINFORCEMENT NOTATION - (TABLE C6)
ABBREVIATIONS	DENOTES
9.8F	BARS IN BOTTOM FACE
t	BARS IN FAR FACE
EW	EACHWAY
85	BARS IN EACH FACE
SF	BARS IN SIDE FACE
H.V	BARS IN NEAR FACE
T.TF	BARS IN TOP FACE
88	BOTTOM MOST BOTTOM BARS
F	TOP MOST TOP BARS
81	BOTTOM BARS PLACED FIRST
82	BOTTOM BARS PLACED SECOND
11	TOP BARS PLACED FIRST
27	TOP BARS PLACED SECOND
MAX	MAXIMUM
New	MENTINEDRY
CTS	AT CENTRES (SPACING)
TVD	TVPICAL

OTES	IN ACCORDANCE WITH AUSTRALIAN ID 2, THE SPECIFICATION AND DETAILS
PRECAST CONCRETE NO	ALL WORKMANSHIP AND MATERIALS SHALL BE STANDARD ASSEQ, ASSE10, ASSESS PARTS 1 A
	5

	PROVIDED ON THE DRAWINGS, UNLESS OTHERMISE INSTRUCTED BY WICK.	
23	FORMMORK SHALL BE CLASS 2 TO ASSIGN U.N.O. FRUSH TO TROWELLED FACE SHALL BE EQUIVALENT TO CLASS STRIKENT TO ASSISS SHASH TO ASSISS TO ASSISS OWN C. REFER ALSO TO "CAR 248 PRE-ASSI CONVERTE HANDBOOK".	
60	PANEL SURFACE FINISH SHALL BE AS DETAILED IN THE SPECIFICATION. REFER TO THE	

"Anels requiring mandatory rispections by woa shall be noted on these pramacs or returned shop drammas, parels noted shall not be pourec jath inspected, manala notice of 1 working day shall be provided prigr

HE CONTRACTOR SHALL REFER TO ALL OTHER TRADES TO BISIJRE THAT OPENINGS RELEFT WHERE JECKSKARY AND THAT POINGS, FITTINGS AND ASSOCIATED COMPONENTS REQUIRED TO BE INSTALLED ARE PROVIDED AND BUILT IN AS THE WORK

REFER TO TABLE PCT FOR PRECAST CONVRETE PROPERTIES, FALL MIX CESIGN TO BE SUBMITTED TO WEAFOR INSPECTION PRIOR TO CONSTRUCTION OF PARELS. ACKETS, FIXINGS AND ALL CORBELS SHALL BE POURED MONOUTHICALLY REFER TO TABLE PC2 FOR MINIMAM CLEAR COVER TO REINFORCEMENT IN WALL. PANELS.

ALL BE FIXED TO CAST IN REGLETS, SAW CUTTING WITHOUT

EFALTOWER, FERRILES, BOLTS, MUSS, WASHERS, LPTESS, CAST WITENSE TO BEHOTO EN COLMANDERN DATOCOGNALES WITENSE OF STERMINE TELL USE OUT YORDS, ES OFFIS BOLTS AS SECRED, DO NOT NELL), BING THAN WELLA, DA BOLTS OR MUTS MARREN ANY CRICUMSTANCES. 'S SETTINGHEDING TO CAST NIPATES THE ZING COUNTAGES TO BE GROUND OFFI TO DIVERSIANCE. PC16

WINE COME, BASE STEERS AS ALONGE BR. CAST IN BAR, BASE SCHREICH MALLE, COUNTER, PROJECTION FROM, PRECAST UNIT OF FROM BISTILL CON-HOTTS MAN. CHARLES AND STATE OF THE ANALYSEN WINESTAGE. PROVIDE THE APPICATION BAR, PROSE SHOWN AND SCENEDIN MICH AS AND WINESTAGE. PRECAST UNIT FROM EDIBLECTION BASE SCENEDIN DIT PROPRETENS PRECAST UNIT FROM EDIBLECTION BASE SCENEDIN DIT PROPRETENS PRECAST UNIT CAN CALLED THE DEADWINGS.

PROVINCE ADMINISTRATION OF THE AUTHORITY PC17

USE LARGE DIAMETER PLASTIC TUBE AS A GROUT DUCT TO ENCAPSULATE. Bars umees approved by the superintendent in writing or where cally shown on the drambags.

DE PURPOSE MADE STEEL BRACKETS WITH REINFORCING BARS, BOLTS OR WELDED TO THEM, CAST BITO THE CONDRETE AND TO WHICH STRUCTURE IS HED OR WHICH ARE USED TO SUPPORT THE PRECAST UNIT ON THE ALL PROPOSED GROUT TYPES SHALL BE SUBMITTED TO WGA FOR REVIEW. GROUT TO BE NON-SHRIKY WITH A MINIMAM COMPRESSIVE STRENGTH OF 40MPs (\$ 23 DAY PC18

ALL PROPRIETARY CAST IN STEEL CONNECTOR PLATES SAULL CONFORM TO ASAID WITH ADAPOIST TEST TO CONFORM THE LOON CAPACITIES USED CONFIGURES THAT IN GRADE BARS SAULL BE GROUND BEFORE WELDING TO PLATES. ENSURE FULL KETAL TO MERAL CONFIGUR.

METAL IN METAL COMPANY. AAPRING OF FABRIC HOMES: IS NOT PERMITTED, FABRIC SHALL BE CAKE SHEET UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWNOSS OR APPROVED BY PC21 PC22

PANELS WITH A SINCLE LAYER OF REINFORCING AND VERTICAL GROUT TUBE 3) PANGLEL OT THE PRIME OF THE REPURCHOUS, CLIFF HE HORDOWITA. FORCING LOCALLY FOR THE GROUT TUBE AND PROVIDE ADDITIONAL, 24/12 CLE BANS BY 600-mm. LONG BICK SIDE OF GROUT TUBE HORDOWITALLY AT 100 PC23

THE CONTRACTOR SWALL SUPPLY AND FIT LIFTERS AS REQUIRED TO HANDLE AND BEECT THE PRECEDST LIWIT. THESE SWALL BOCKSTAN PROPRIETARY LIFTERS. THEN SWALL MY TIEL COAPED IN PACES WHICH ARE DEPOSED TO VOEW IN THE FINAL CONDITION WITHOUT APPROVAL BY THE SUPERINTENDENT. IDE FREPROCF CONNECTIONS AND JOINTS AS REQUIRED AND AS SET OUT ON ROHITECTIAAL DRAWINGS TO GIVE THE REQUIRED FIRE RATINGS.

PROVIDE FIREPROF CONNECTIONS AND JOINTS AS REQUIRED AND AS SET OUT ON THE ARCHITECTURAL DRAWINGS TO GIVE THE REQUIRED FIRE PATTINGS. THE EPPOSED FORMED) FACE OF A PANEL IS NOT TO HAVE AN APPLED CONDETE COVER IS TO BE CAPENSED WITHOUT THE USE OF SAR CHAIN HES COROMASTANCES USE ONLY PLASTIC BARC CHAIRS WITH A BUMPLE BLEETO NAMBLISE EPPOSINGE, DO NOT USE PLASTIC TIPPED SITELE URK

neet printed full size, the scale bor is 1:1 (100mm) 50

TENDER ISSUE NOT FOR CONSTRUCTION

PRECASI CONCRETE PROPERTIES - (PADEL PO)	LAILES (INDEED OF)
MINIMUM CEMENT CONTENT	420 kg/m²
GRADE (MPs)	850
MAXIMUM AGGREGATE	20mm
Sillip	80mm ±15mm
COVER - (TABLE PC2)	
DECKS AND CORBELLS	40mm
LEGS	60mm
CAN DEANE	wwyy

SAFETY IN DESIGN (SID)

L HEALTH AND SAFETY ACT WISA HAS UNDERTRABIN. WENT FOR THE PROJECT, AS DESIGNEDS WE ARE TO YOU TO OUR CLEAT THAT SPECIFIES THE WAZARDS (ARLY AWARE, THAT): A) GREATE A RISK TO THE HEALTH OR SAFETY OF PERSONS WHO ARE INVOLVED IN THE CONSTRUCTION, OPFICATION, MANTENANCE AND DECOMMSSIONING OF THE PROJECTS AND SID1

B THAN RECORD (WAYS DISSESSED IN UNITED TO HAUGHE THAN NEE THE COOKE OF WHAT SON DISSESSED IN UNITED TO HAUGHE THAN THE COLD RESULT FRO FREADWAY OFFICENCESSED AT THE UNDER THE WAY THAN THAN COLD RESULT FRO THE SON ASSESSED TO THE PROJECT THAN THAN WERE RESURVAINED TO THE THE ASSESSED TO DES NOT SEEN TO DEBUTY ALL OMETHOURS WITH HAUGHE THE ASSESSED TO THE WAY THAN THE CAN THAN THE THE WAY THE THE ASSESSED THAN THE THE WAY THEN THE SID2 SID3

CONTRACT WILL BE CARRIED OUT BY SUITABLY QUALIFIED PERSONNEL WITH APPROPRIATE SUPERIOR OUTBACT WILL BE CARRIED OUT BY SUITABLY QUALIFIED PERSONNEL WITH APPROPRIATE EXPENIENCE AND COMPETENCE TO UNDERTAKE SUCH TASKS.

ANY ADDITIONAL HAZARDS OR RISKS THAT MAY ARISE CURING THE PROJECT LIFEND COVERED IN THESE INCITES SHOULD BE BROUGHT TO THE ATTENTION OF WICH FOR RENIEW AND DIRECTION ON RESOLUTION. SIDE SID4

OCESS INVOLVED THE FOLLOWING STEPS: IDENTIFICATION.
UENCE ASSESSMENT.

THE PLAND OF CONTROL MEASURES TO MITIGATE RISK.
PROPATION OF CONTROL MEASURES INTO DESIGN.
REATING OF HAZAGOS.
TO PRELEDS IN A DISK MATION FOR THE DETAILED SID ASSESSIBENT FOR THIS THE CLENT MAST PROVIDE A COPY OF THIS ASSESSMENT TO THE PRINCIPAL CONTRACTORS TENDERING ON THIS PROJECT, MANTERIANCE PERSONNEL AND BUX, DING USERS.

SIDS

PROJECT HAZARDS - (TABLE SID1) RESIDUAL PROJECT RESIDUAL PROJECT RESIDUAL PROJECT

HAZARD DESCRIPTION	Demolition is inhorantly damperous. Demolition method statement to be remisered by a structural engineer and submitted to the superintendant.	Dock units are to have designed and approved litting tags & litting methodology to be submitted to the superintendant.	Piling operation to be reviewed and submitted to superintendant in occontinent with specification. Acceptance oriteria for pile emberiorismis to be submitted to superintendant.	Deci units use presisented inferiorement inferiorement which nan courable and colleges underly if a more medical for the lab east with conventional terifocement with conventional terifocement additions to accordance with AS 482 F. Regular considera inspection and imprection works is specifical to the control of the cont	Potential fall rist within marins due to lack of handralts. The design is consistent with hypical functional
(EXTREME/HIGHIMODERATEILOW)	MODERATE	MODERATE	мот	ЭТУЭСЕЙ	MODEPATE
NUMBER	-	2		•	in.
	L		L	L	1

PRECAST CONCRETE PROPERTIES - (TABLE PC1) MANUNCEIGN CONTENT CON

2 88 9

THE UNLERN SHALL CO-ORDINATE WITH ALL TRADES TO ENSURE THAT PROVISION IS WADE FOR CASTING IN OF ANCHORS FOR FENDERS AND CHAIN BRACKETS AS DETAILED ON SUPPLER DRAWINGS OR SPECIFICATIONS.

ALL RENFORCEMENT IN SLABS AND BEAMS SHALL BE SUPPORTED ON INERT CHARS. TO CARE THE RECURSED COVER, SPACING OF THE CHARS TO SLAB REINFORCEMENT SHALL NOT EXCEED 800mm IN EACH DIRECTION.

ALL CONCRETE IN CONTACT WITH GROUND SHALL BE POURED ON A 0.2mm DANF PROOF MEMBRANE U.M.O.

8 8 5

NOS FOR FOR REINFONCED/ENT SHALL BE AS PER TABLE CA, where to be condessed than it is blace, is shall be test for stratter bars to collaras and his bolts. All it die escured to forrandry.

5 555

EMENT SHALL BE INAUTS-KIT-RED BY COMPANIES ACCREDITED THE ALL A PAUL OFFICIAL SHARL AS A PAUL SHALL SH

C16

CERTHCATE OF COMPLIANCE MUST BE FULLY TRACEABLE TO INDMIC CHES OF BOLTS, AND ADDRESS CHEWICAL, MECHANICAL, AND DIMENS

RICATOR SHALL PROVIDE THE ENCINEER WITH BOTH A WAN STRIFCATE PREPAEDD BY AN ACKEDITED TESTING OFCANI Y OF WANALPACTINE, TOGETHER WITH A CORTIFICATE OF CA ED OF AN INOSPENIENT MATA-ACCREDITED TESTING LASOR NACE OF ENCH BATCH OF BOLTS TO THE ABOVE AUSTRALIAN

STB 828 123

BE DISTRIBUTED OVER THE EXTENT INDICATED LINLO.
HENT SPLICES SHALL NOT BE MADE IN POSITIONS OTHER
HE STRUCTURAL DRAWINGS WITHOUT THE PRIOR APPRO

THE CONTRACTOR SHALL ENSURE THAT THE CORROSION PROTECTION COATING IC PROTECTED FROM DAMAGE DURING ERECTION OF SITEEL

WELDING REQUIREMENTS - (TABLE S1)

TYPE SHOP BUTT WELDS

PROVIDE 75mm MAI, OF LEAN MIX CONCRETE TO BOTTOM OF ALL TRENCHES AND / OR PADS POURED THE SAME DAY WHEN EXCAVATED,

SURFACE PROTECTION REQUIREMENTS - (TABLE S2)

ECHANICAL PREP TO AS1627,2 SURFACE PREPARATION GRIT RAST TO CLASS 25 OF AS 1627

FPILL PERETRATION BUTT WELD 100%-JURASON 169%-JURASON 169

ARNIMIM Stren C.F.W. E48xx U.N.O. CATEGORY SP U.N.O. PULL PENETRATION BUTT WELD (F.P.B.W.) CATEGORY SP TO AS1554 U.N.O.

AS15S4 U.N.O. MAGN MRIMALM Brim C.F.W E4Box U.N.O. 10076-CATEGORY SP U.N.O. 2556-16

THE FILLET WELDS IE BUTT WELDS

> GRADE (MP4) AGGREGATE SLUMP (mm) CONCRETE PROPERTIES - (TABLE C3) CONCRETE SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS SURFACE FINISH - (TABLE C2) LOCATION SURFACE DECK PLANKS BTANSIDE FACE LOCATION

RWKAGE SHALL NOT EXCEED 600 MCROSTRAIN ORDANCE WITH AS1012-13

REINFORCEMENT - (TABLE C5)
BARS | GRUDE 500N TO ASSESTE

		I	GILBERT	, Adelaide fa 5000
		5	WALLBRIDGE GILBERT AZTEC	60 Wyatt Steed, Adial South Australia 50 Telechone 08 6773
CHKD.	QN.			-
ENG.	ON			
DRAFT	rv.			
	20222	_		
		i.		
	ER			
NOT	TENE			
DESCRIP	ISSUED FOR			
DATE	01.11.10			
REV.	4			

CONCRETE NOTES

STEELWORK NOTES

LL BE DI ACCORDANCE WITH AS3500, THE		FANDARD AS3610.
IL WORKNANSHIP AND MATERIALS SHAI	PECIFICATION AND THE DRAWINGS.	ORMANORK SHALL BE TO AUSTRALIAN ST

AL HOLLOW SECTIONS SHALL SE GONG COOR MACCOGNACE THIN AS ITS UN WAY STEAMEN CONCECTOR SHALL SE GONG COOR MACCOGNACE ALSTWALL, MET'CO & MACHINED WITH CESTIFICATES PROVING, ABOUE REQUIREMENTS VERNEED BY NAI RECENTIVES OF ORGANISATIONS.
ALL HELLOW SECTIONS TO BE FALLY SEALED, UNESS NOTED OR JAPROVED

ALL PLATENORK (CLEATS, ETC.) TO BE GRADE 250 TO ASJETS U.N.O. ALLEDGES AND CORNERS TO HAVE MINIMUM 3mm RADIUS TO ENSURE PAINT THRENESS IS ACHEVED U.N.O.

LUGS TO BE STAMPED WITH WIL. G SHALL CONFORM WITH THE REQUIREMENTS OF AS1554

ALL BOLTS TO BE GNADE 8.BS U.N.O.
TO BOLTS WINDEDS, SMULE GRANCE 4666 (REFER TO DETAIL), HOLDING DOWN BOLTS SHALL BE GRADE 4.655 H.D. GALV, U.N.O.
REFER TO THALE SS FOR BOLLT TYPES.

ALL ROLLED STEELWORK SECTIONS SHALL BE GRADE 300 PLUS IN ACCORDANCE AS 36782787 - PART 1, ANY LEEL WORK CONKOED PROMINLE LOCATED OUTSI ASTREADLA ARE TO BE PROVIDED WITH CERTIFICATES PROMING ABOVE FROUNDEMENT VERHELD BY NATH, REGISTERED ORGANISATIONS.

WCA SHALL BE GIVEN A MINUMUM OF 72 HOURS PRIOR NOTICE FOR ALL REQUIRED INSPECTIONS.

ALL STANKE ESS STEEL BOLTS TO SE CHACKE AAASNE UND, CONTHUT PETIMEEN STANKES STEEL BOLTS TO BE SCAATED WITH STANKTON THREE. STANKTON THE SALL ALL BOLT THREST O BE SCAATED WITH ALL BOLT THREST TO BE NO PREMIED STANKTON THE WIT HETT TORTHERMS.

514

DE AT LEAST ONE WASHER UNDER THE NUT IN ALL SITUATIONS. DOPNETARY CLASS 8.8 BOLTS, CLASS 8.NUTS, AND ASSOCIATED WASHE COMPLY WITH ASIAZS 1252.

PLCHAIN INSPICES WEATHER FOR LARGE FATI AFEAS OF CONCRETE, BICKER INFINITY AREA, OF CONCRETE, BICKER INFINITY AREA, WITH AREA, WITH AREA INFINITY AND SPEED > WHITH OR A INFINITY AND SPEED > WHITH OR A INFINITY AND SPEED > WHITH OR A INFINITY AND SPEED > STAIRM OR AND THE GROBGOST WIND SPEED > STAIRM OR AND THE GROBGOST WIND

S OF CONCRETE ELEMENTS DO HOT INCLUDE THICKNESS OF ANY APPLIED

LUCTION JOINTS, WHERE NOT SHOWN ON THE DRAWINGS, SHALL BELOCATE RAPROVALOF WGA.

5 85 8 8

AL CONCRETE SWILL BE WEGHNICALLY VIBRATED.
CHASES AND PERETRATIONS, OTHER THAN THOSE SHOWN ON THE STRUCTURA,
GANNINGS, SMALL NOT BE MADE IN CONCRETE MENERES UNLESS APPROYED BY
WAS, ALL CONSTRUCTION POUR JOINTS TO BE SCABBLED AND CLEANED OTHERWISE.

2 22

COVER (mm) - (TABLE C1)

10P 50 50

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BAR LAPS - (TABLE C4)

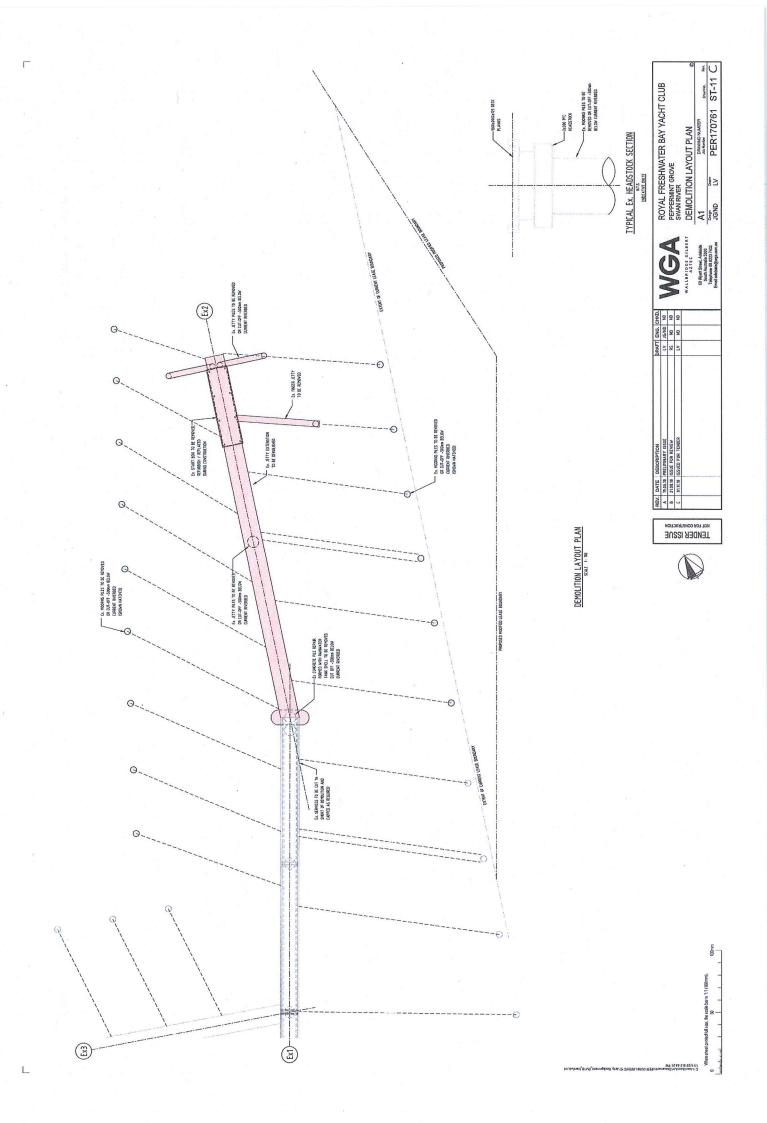
BOLT TYPES - (TABLE S3)
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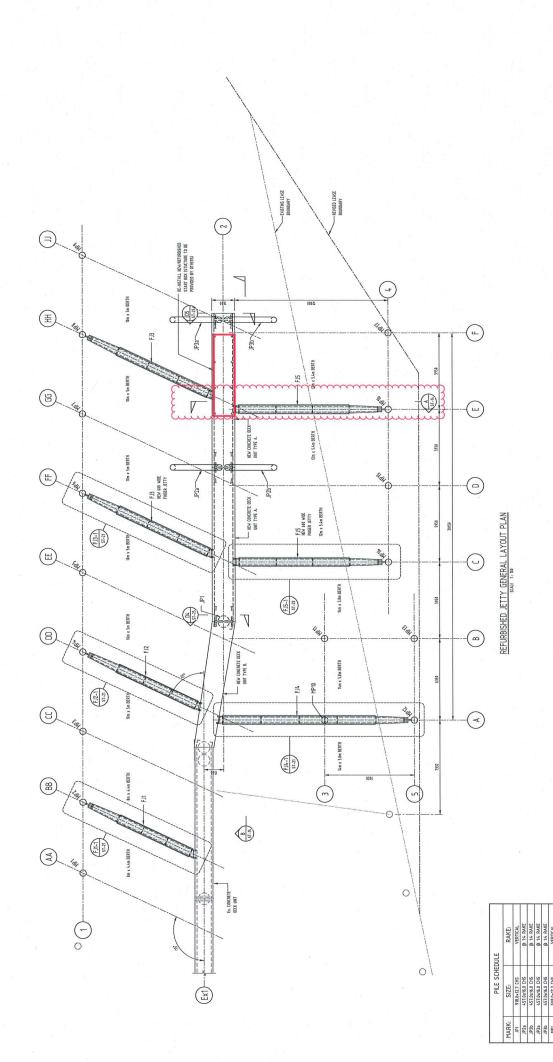
A4-70/8 A4-80/8 4.6/5 8.8/7 8.8/7F

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OTE: FULLY TENSIONED BOLTS OAD INDICATING WASHERS AS F

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Z D Z		PEPPERMINT GROVE SWAN RIVER			
WALLBRIDGE GILBERT AZTEC	NOTES	NOTES SHEET			0
60 Wyntt Street, Adelaide South Amsteria 5000	A1		DRAWING NUMBER	Sheet No.	Raw.
Telephone 08 6223 7433 Email adelaide@wga.com.au	JGND	C Sum	PER170761 ST-01 A	ST-01	4





ROYAL FRESHWATER BAY YACHT CLUB PEPPERMINT GROVE SWAN RIVER GENERAL ARRANGEMENT PLAN

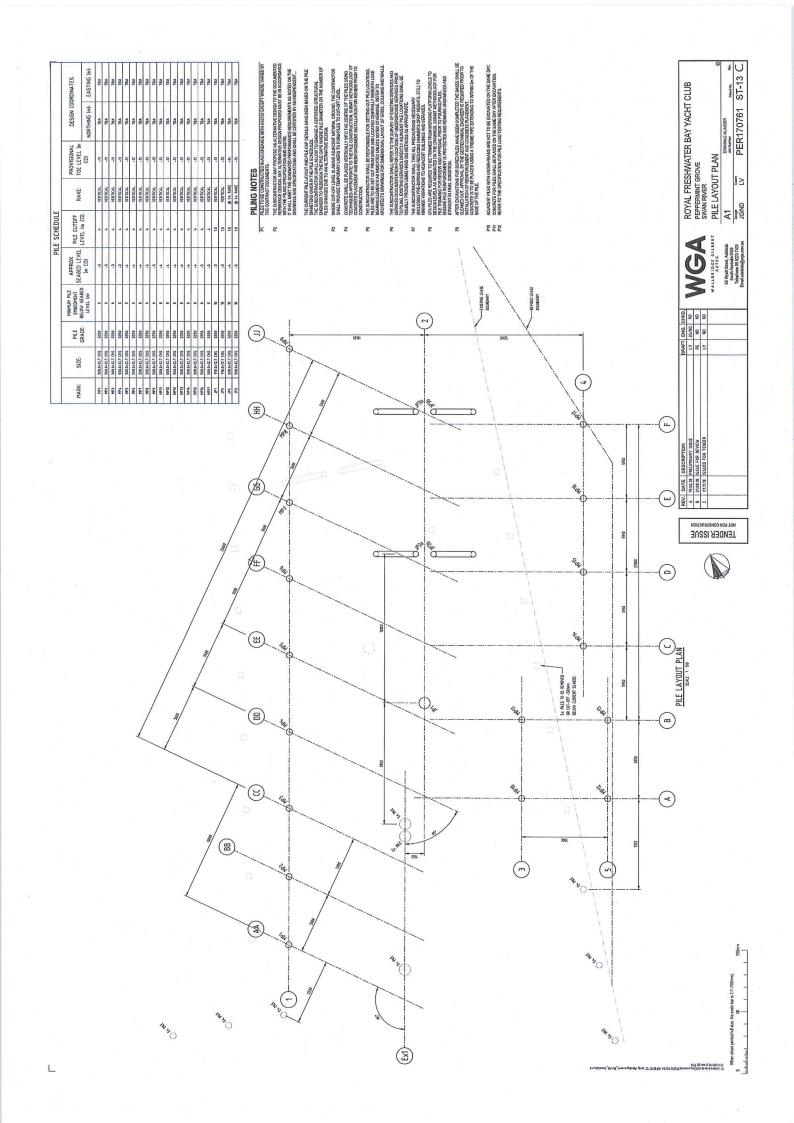
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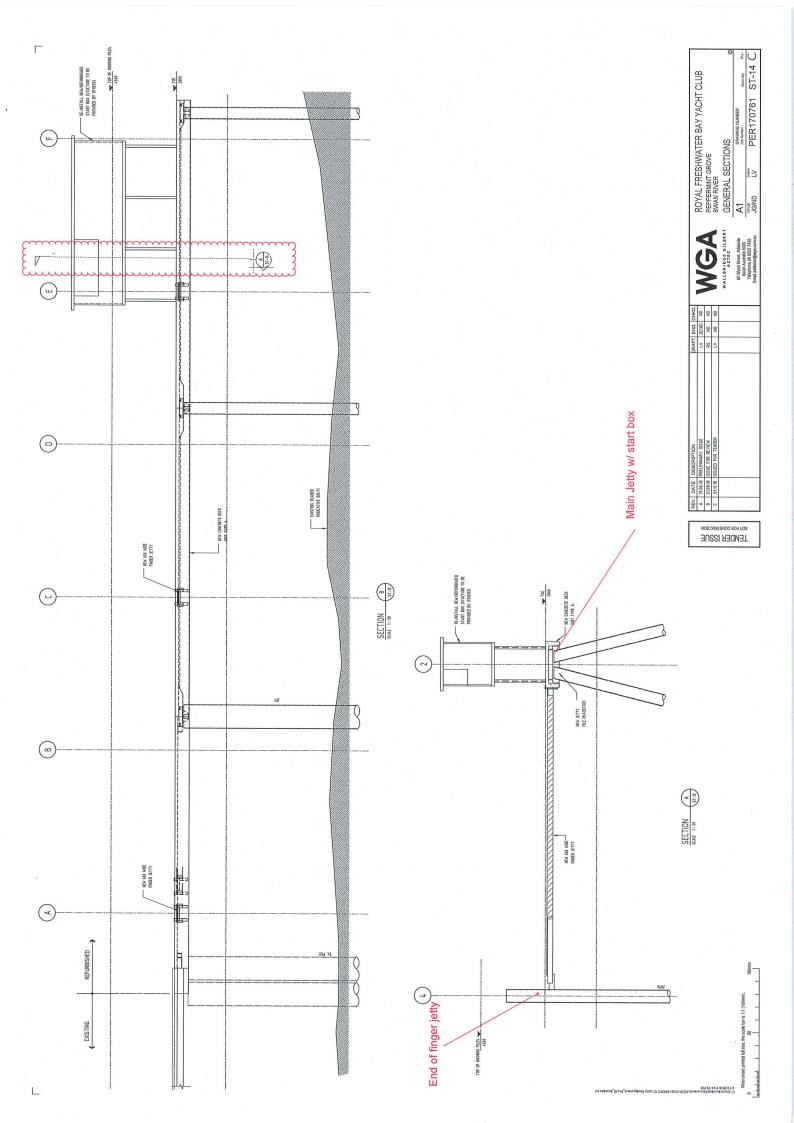
A 19.06.18 PRELIMINARY ISSUE

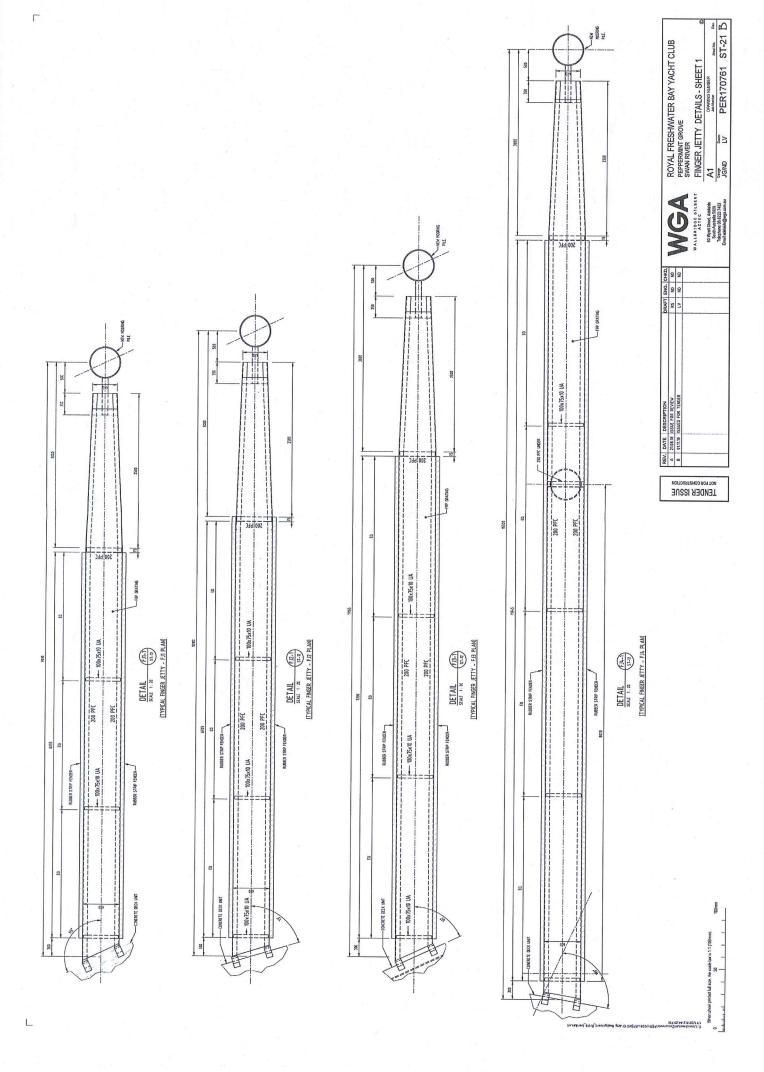
B 21.08.18 ISSUE FOR REVIEW

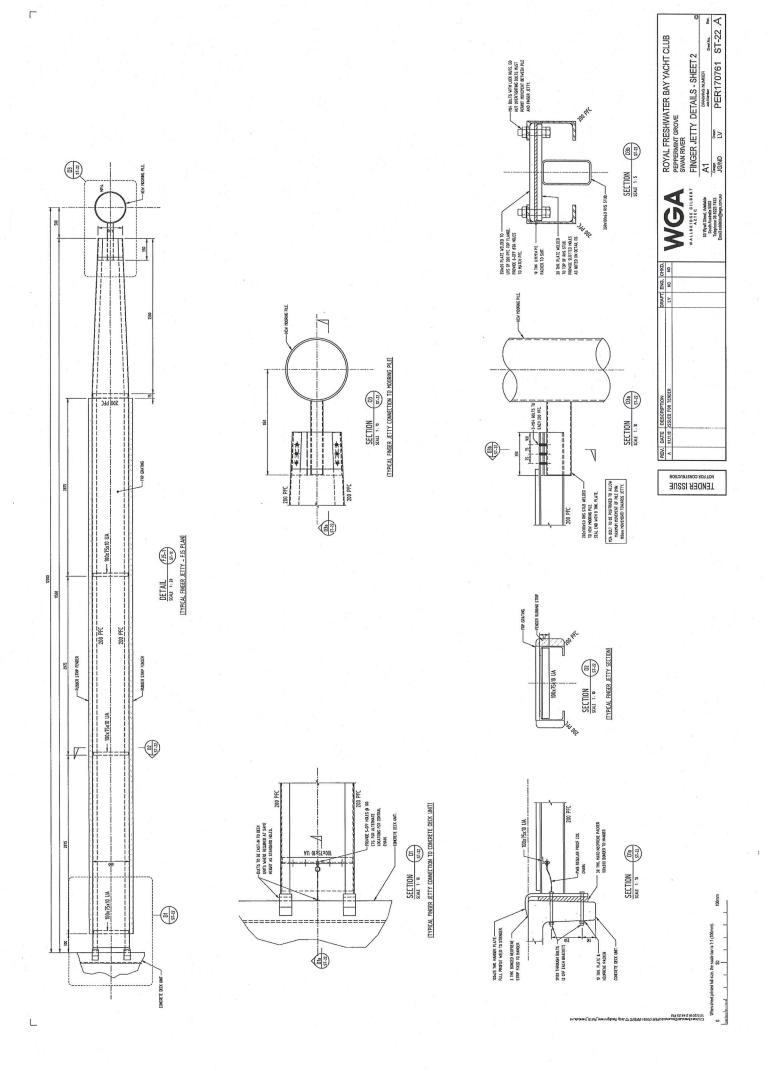
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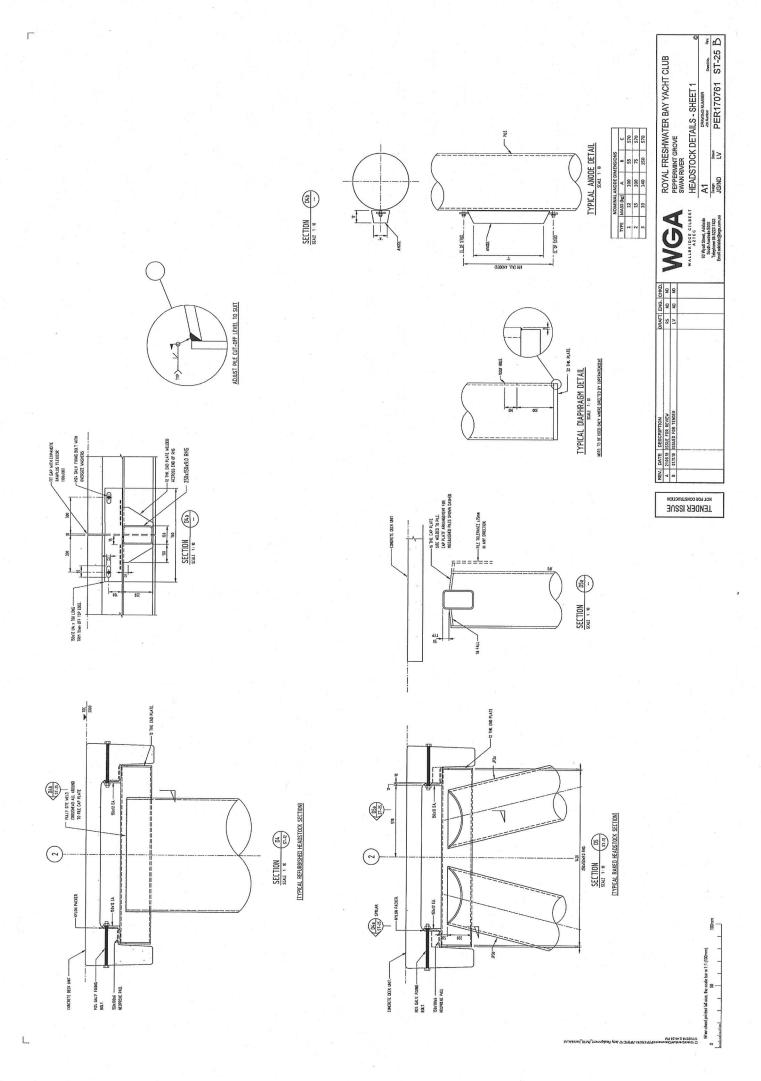
ST-12 C

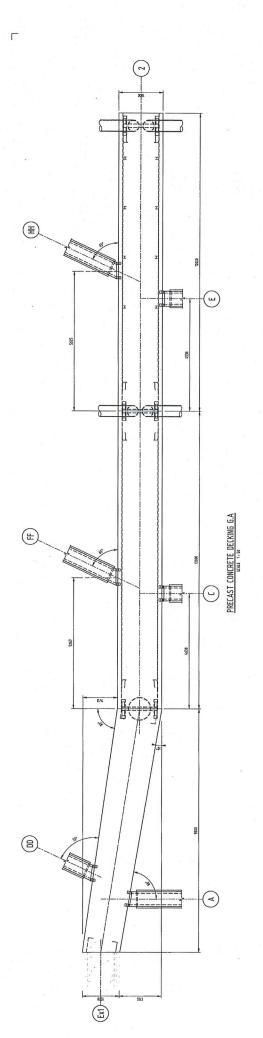












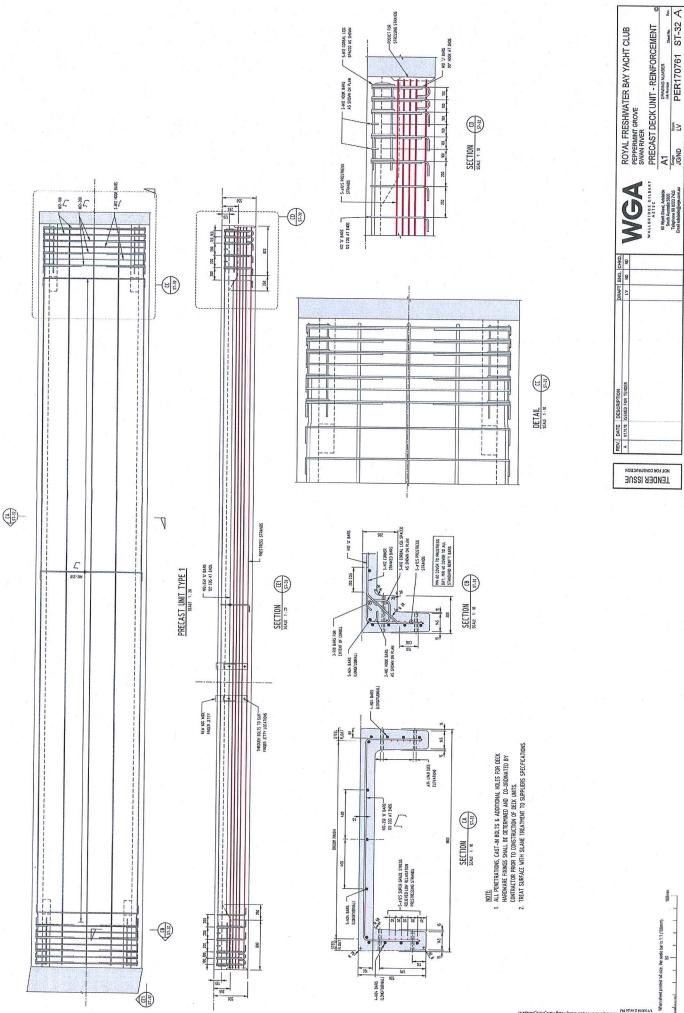
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				Telophone 08 8223 7433 Email adelaide@wgs.com.au	JG/ND LV	PER170761 ST-31 A	ST-31	K

TENDER ISSUE

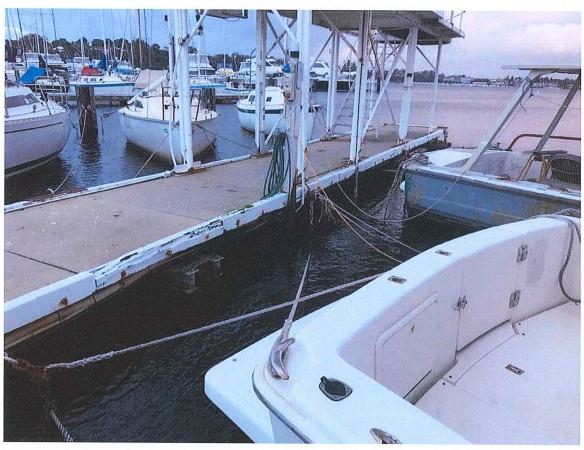
When sheet printed Mallace, the scale bar is 1:1 (100nm).

90

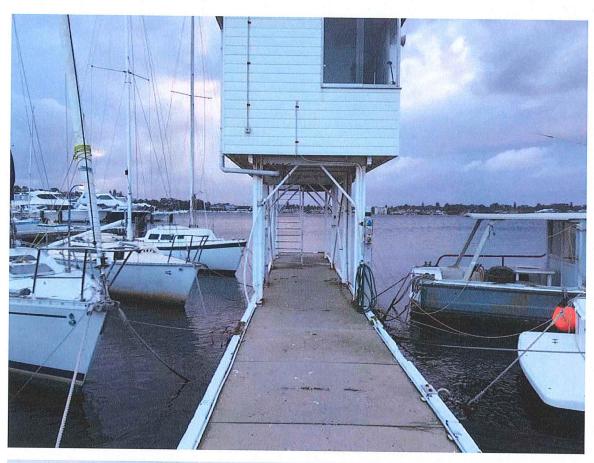
100mm

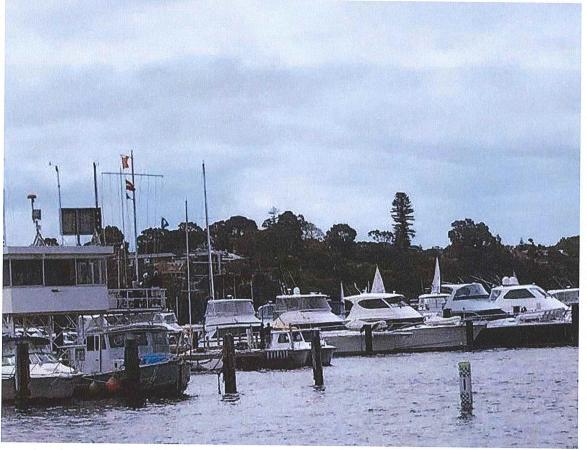


Attachment 3

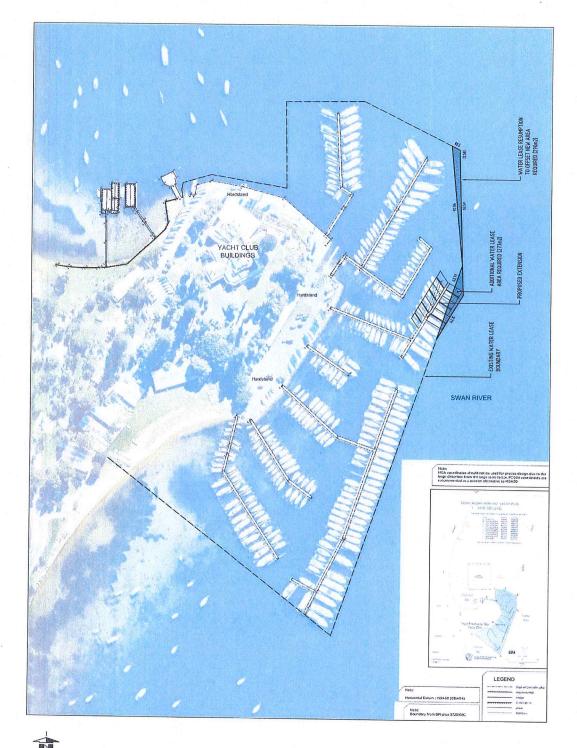








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PLAN SCALE 1:1000

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