



*Swan and Canning Rivers Management Act 2006*

**PART 5**

**DETERMINATION OF DEVELOPMENT APPLICATION**

FILE NUMBER : 2018/1118  
APPLICANT : Western Australia Police Force (Water Police)  
APPLICANT'S ADDRESS : 100 Harvest Road, North Fremantle  
LANDOWNER : Swan River Trust (River reserve)  
LAND DESCRIPTION : Lot 300 on Plan 47450 (Reserve 48325), adjacent to Lot 447 on Plan 217041 (Reserve 7077)  
DEVELOPMENT : Removal and replacement of existing jetty  
VALID FORM 1 RECEIVED : 13 February 2018  
DETERMINATION : **APPROVAL WITH CONDITIONS**

The application to commence development in accordance with the information received on 13 February 2018, and additional information received on 8, 17 and 18 May 2018 is APPROVED subject to the following conditions:

1. Approval to implement this decision is valid for four (4) 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, the applicant shall submit to the Department of Biodiversity, Conservation and Attractions, and secure approval for, an updated Construction Environmental Management Plan.

The updated Construction Environmental Management Plan shall describe how the proposed works (including demolition) will be managed to minimise environmental impacts and include, unless otherwise agreed in writing:

- detailed work method statements that describes the manner under which the contractor proposes to undertake works onsite for each stage of the works;
- timeframes and responsibilities for tasks identified;
- contact details of essential site personnel, construction period and operating hours;
- piling and associated matters;
- the ongoing management of controls used to reduce the risk of sediment and stormwater runoff;
- the contingency actions proposed when environmental controls are not adequate;

- detail of machinery and associated refuelling, noting that no refuelling shall take place within the Swan Canning Development Control Area;
  - asbestos removal management (if necessary);
  - waste management and material re-use;
  - vibration and dust management;
  - the protection of the river from inputs of debris, litter, fill, rubbish or other deleterious material;
  - public safety and amenity;
  - traffic, access and parking management for contractors and the public;
  - complaints and environmental incident management plan;
  - the containment of stockpiles of materials;
  - that emergency spill kits are to be onsite at all times;
  - a detailed site map showing the location of:
    - perimeter fencing and hoarding;
    - laydown areas;
    - on-site storage and bunding of materials and equipment; and
    - site access and parking.
4. Prior to the commencement of works, the applicant shall submit to the Department of Biodiversity, Conservation and Attractions, and secure approval for, a Lighting Plan.
- The Lighting Plan shall demonstrate how low level lighting is to be used to illuminate the jetty resulting in minimal light spill on the water and to the sky to ensure no adverse ecological consequences.
5. Prior to the commencement of works, the applicant shall submit to the Department of Biodiversity, Conservation and Attractions, and secure approval for, the schedule of colours, building materials and finishes for the development (**Advice Note 3**).
6. Prior to the commencement of works, the applicant shall obtain a jetty modification licence from the Department of Transport, Coastal Facilities Management.
7. Prior to commencement of works, the applicant is to submit to the Department of Biodiversity, Conservation and Attractions, drawings/plans of the jetty modification which have been certified and signed by an experienced, practising Maritime Engineer that the design is in accordance with AS3962-2001 *Guidelines for the design of marinas* and AS4997 *Guidelines for the design of maritime structures* (**Advice Note 5**).
8. Prior to the commencement of works, the applicant is to engage a consultant to: undertake a dive survey of the existing piles and wharf to determine whether any marine species will be impacted by the proposed works; prepare and submit a report on the findings to the Department of Biodiversity, Conservation and Attractions; and relocate any marine species if necessary. The consultant must be suitably qualified to perform this work.

#### **During works**

9. The works shall take place in accordance with the approved Construction Environmental Management Plan, Lighting Plan, and final design plans/drawings.
10. Public access to Harvey Beach Reserve, Point Direction Reserve and car parking off Direction Way is to be maintained during the construction works.

#### **On completion of works**

11. On the completion of the works, the applicant shall remove all waste materials, equipment and machinery and ensure that the site is cleaned-up to the satisfaction of the Department of Biodiversity, Conservation and Attractions.



## ADVICE TO APPLICANT

1. Notification of commencement of work and plans can be emailed to [rivers.planning@dbca.wa.gov.au](mailto:rivers.planning@dbca.wa.gov.au).
2. The applicant is to notify the City of Fremantle as to the date of the commencement of works.
3. With regard to **Condition 5**, the applicant is advised that the selected building materials and colour scheme for the development should be of a low reflective standard, and complement the character and landscape setting of the Swan River and surrounding foreshore.
4. The applicant is advised to contact the Department of Transport, Coastal Facilities Management to obtain a jetty modification licence.
5. With regard to **Condition 7**, the drawings are to specify a maximum number of design vessels for the proposed structures.
6. The applicant shall contact the Department of Planning, Lands and Heritage (Aboriginal Heritage Directorate) to ensure that the proposed works do not breach any section of Part IV (Protection of Aboriginal Sites) of the *Aboriginal Heritage Act 1972* (the Act) and is advised that an approval under section 18 of the Act is likely to be required.
7. The applicant is advised that this approval does not negate the need to obtain any other approval from relevant agencies.
8. The applicant is advised that all incidents of pollution or spills within the Swan Canning Development Control Area shall be reported immediately to the Department of Biodiversity, Conservation and Attractions, on 9219 9000 or 0419 192 845.
9. The applicant is advised that the City of Fremantle has requested to be notified of any potential impacts to adjacent reserves during the works.



Hon Stephen Dawson MLC  
**MINISTER FOR ENVIRONMENT**

Date: 28/6/18

**DEPARTMENT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS REPORT**

PROPOSAL : Removal and replacement of existing jetty  
LOCATION : Lot 300 on Plan 47450 (Reserve 48325), adjacent to Lot 447 on Plan 217041 (Reserve 7077), 100 Harvest Road, North Fremantle  
APPLICANT : Western Australia Police Force (Water Police)  
LANDOWNER : Swan River Trust (River reserve)  
LOCAL GOVERNMENT : City of Fremantle  
MRS CLASSIFICATION : Reserve for Waterway  
LG CLASSIFICATION : N/A  
DECISION TYPE : Part 5, *Swan and Canning Rivers Management Act 2006*  
ATTACHMENTS : 1. Location plan  
2. Site plan  
3. Design plans  
RECOMMENDATION : **APPROVAL WITH CONDITIONS**

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**REPORT**

**1.0 INTRODUCTION**

- 1.1 The Department of Biodiversity, Conservation and Attractions (DBCA) has received an application from the Western Australia Police Force (Water Police) to remove and replace its existing jetty structure in the Swan River adjacent to Lot 447 on Plan 217041 (Reserve 7077), 100 Harvest Road, North Fremantle (Attachment 1). The jetty forms part of the infrastructure exclusively used by the Water Police, and is therefore inaccessible to the public.
- 1.2 Part of the existing jetty was constructed in the 1950s, with another jetty added in 1986.
- 1.3 The jetty is within an existing River reserve lease area (lease area), and is used to moor and load emergency response vessels (Attachment 2). The whole structure is now in a state of disrepair, with the outermost jetty closed for safety reasons, and requires replacing. The closed jetty has restricted the number of vessels able to be moored at the facility, which has the potential to significantly disrupt operations.
- 1.4 A new layout of the jetty within the lease area is proposed to improve safety and efficiency of manoeuvring, loading and unloading vessels (Attachment 3).
- 1.5 As the works are located entirely within a lot that is in the Swan Canning Development Control Area, the application is being processed pursuant to Part 5 of the *Swan and Canning Rivers Management Act 2006* (SCRM Act).
- 1.6 The Director General of DBCA has prepared this report in accordance with section 75 of the SCRM Act.



## 2.0 CONSULTATION

### City of Fremantle

2.1 The City of Fremantle (the City) had no objection to the proposal and recommended that if an approval is issued, it should lapse in four years if development has not substantially commenced.

2.2 The City also requested that:

- Public access to Harvey Beach Reserve, Point Direction Reserve and car parking off Direction Way be maintained during construction; and
- It be notified of any potential impacts to the adjacent reserves during the works.

The City also requested that the current “no boating zone” on the north-west side of the jetty be retained. No changes to this gazettal under the Navigable Waters Regulations 1958 are proposed as part of this application.

### Department of Transport

2.3 The Department of Transport had no objection to the proposal subject to the following:

- The proponent is to obtain a jetty modification licence from the Department of Transport, Coastal Facilities Management;
- All drawings/plans of the proposed jetty shall be certified and signed by an experienced Maritime Engineer showing that the design is in accordance with AS3962-2001 *Guidelines for the Design of Marinas* and AS4997 *Guidelines for the Design of Maritime Structures*;
- The drawings are to specify the maximum design vessel(s) for the proposed structures; and
- The applicant being advised that all vessels are to be moored within the existing River reserve lease area, and no construction is to commence until all approvals are obtained.

### Department of Planning, Lands and Heritage (Heritage Operations)

2.4 Heritage Operations had no objection to the proposal and advised that the Construction Environmental Management Plan (CEMP) submitted with the application, demonstrates an understanding of the obligations under the *Aboriginal Heritage Act 1972 (AH Act)* with the correct process being followed. Any conditions required by the AH Act will be included on an approval under section 18 if granted by the Minister.

2.5 The applicant has been advised that an application under section 18 of the AH Act will be required to be submitted to the Department of Planning, Lands and Heritage (DPLH).

## 3.0 PUBLIC COMMENT - SUBMISSIONS ON DRAFT REPORT

3.1 In accordance with the requirements of Part 5 of the SCRM Act, a copy of the draft report and proposed recommendation was provided to the applicant and the City of Fremantle. A copy was also published on the DBCA website for a period of two (2) weeks between 9 July 2018 and 23 July 2018 with an invitation for public submissions.

3.2 No submissions were received.

#### **4.0 RELEVANT POLICIES AND PLANS**

- ◆ State Planning Policy 2.10 - *Swan-Canning River System* (SPP 2.10)
- ◆ Policy 42 – *Planning for land use, development and permitting affecting the Swan Canning Development Control Area* (Policy 42)
- ◆ Policy 44 – *Planning for jetties in the Swan Canning Development Control Area* (Policy 42)

#### **5.0 ENVIRONMENTAL AND PLANNING CONSIDERATIONS**

- ◆ Environmental protection
- ◆ Jetty structures, access, visual amenity and navigation
- ◆ Aboriginal heritage

#### **6.0 BACKGROUND**

- 6.1 The Western Australia Water Police is responsible for policing Western Australia's 13,000 kms of coastline.
- 6.2 The North Fremantle operation comprises of Boating, Diving, and Search and Rescue response centres, and is the Hazard Management Authority for Sea Search and Rescue for Western Australia. It is also responsible for providing co-ordination for more complex search and rescue operations in regional police districts.
- 6.3 The current jetty configuration has the space to moor four vessels of varying size, however due to its deterioration and one of the jetties being closed for safety reasons, only three can be accommodated with one of the vessels required to be docked at the land-backed wharf.
- 6.4 The proposed works involve:
  - Demolition and removal of the existing jetty structures (wharf to remain);
  - Cutting off 18 existing piles;
  - Installation of:
    - 6m fixed sloping jetty (from existing wharf);
    - 13m fixed jetty (leading from sloping jetty);
    - Two 6.8m articulated gangways (from fixed jetty);
    - Two 17.8m floating pontoons (adjoining articulated gangways);
    - Eight piles supporting fixed jetty;
    - Six guide piles for floating pontoons;
    - A wave attenuation structure underneath the main jetty;
    - New lighting consisting of six bollards and two poles;
    - Handrails; and
  - Relocation of existing services such as water supply, electricity and fire fighting equipment.
- 6.5 The proposed works will not increase the intensity of use of the facility and the Water Police will remain the sole user of the site.
- 6.6 The proposed new jetty and configuration will improve the safety and efficiency of the facility.



## 7.0 DISCUSSION

### Environmental protection

- 7.1 SPP 2.10 requires development proposals to maintain and enhance the quality and setting of the river.
- 7.2 In support of SPP 2.10, Policy 42 promotes the protection of the river environment and states that development on and adjacent to the river system should maintain and enhance the ecological health of the river system, including the maintenance of tributary and stream habitat.
- 7.3 Policy 44 requires applications for jetties to demonstrate that they are minimising and managing the effects on the ecological health of the river system including fauna and their ecosystems.
- 7.4 The proposal has the potential to impact the river environment in the following ways:
- Waste materials entering the waterway;
  - Potential impact of underwater noise and vibration from pile driving works on aquatic fauna;
  - Turbidity generated by pile driving and pile cutting operations;
  - Potential loss of marine habitat with the removal of piles; and
  - Fuel spills.
- 7.5 While the application included a CEMP, there was insufficient detail with respect to the demolition and construction process. However, it addresses potential environmental impacts of the works in the following ways:
- The existing piles are proposed to be cut off at the riverbed level to reduce potential turbidity issues involved with removal. The applicant has advised that the piles will only be removed if necessary, and reused where possible;
  - Silt curtains are to be used during all pile-driving, to assist with the resettling of any mobilised sediment and prevent turbidity beyond the immediate work area;
  - Locating any required stockpiled materials away from areas impacted by stormwater flow, flooding, surface water flow or wind; and
  - The piling works are to be undertaken with the use of vibration hammers which will be subject to a 'soft-start-up' procedure to reduce the risk of injury and startle responses by aquatic mammals and other fauna in the area.
- 7.6 The CEMP does not directly address fuel spills, however it does require that a spill kit be kept and maintained onsite during works. DBCA does not support refuelling of machinery within the DCA, and will advise the applicant as such.
- 7.7 The applicant has been advised that a more detailed CEMP will be required to be prepared and approved prior to the commencement of works.
- 7.8 The applicant has advised DBCA that the site does not have refuelling facilities and vessel maintenance and repairs are undertaken off site. The smaller boats are kept out of the water overnight on floating boat lifts which keeps the hulls dry and prevents the use of antifouling products. The larger boat receives antifouling treatment offsite as due to its size, it cannot be lifted and stored out of the water to prevent aquatic growth and build-up on the hull.
- 7.9 Artificial structures in the river such as jetties and wharves over time become habitat for aquatic life. Since the proposal involves the removal of the jetty and its piles which have been in place for a substantial amount of time, some loss of aquatic habitat can be expected.

- 7.10 In 2014, the Department of Defence (DoD) was granted approval for the refurbishment of the jetties and wharf at its facility at Point Preston. DoD undertook a dive survey of the wharf and piles and discovered a colony of Western Australian Seahorses (*Hippocampus subelongatus*). A number of marine species were observed during the dive. It was anticipated that all but the seahorses would swim away during works and recolonise the site over the next few years. The species of seahorse is known to be susceptible to decline, and is listed on the International Union for Conservation of Nature Red List of Threatened Species as 'data deficient'. It is also protected under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*. The applicant carried out a further dive to capture and relocate the seahorses prior to works commencing on the site.
- 7.11 It is recommended that the applicant undertake a dive survey of the subject site to determine if any significant marine species will be impacted by the proposed works. The applicant has been advised of this requirement.

### **Jetty structures, access, visual amenity and navigation**

- 7.12 Policy 44 includes locational and design requirements for public, private and commercial jetties. The existing jetty is for the sole use of the Water Police and is not accessible to the public. This will remain as such for the proposed jetty to ensure the public are not put at risk during the carrying out of the functions of the facility.
- 7.13 Policy 44 requires applications for jetties to demonstrate that they are minimising and managing effects on the landscape character and amenity of the river system. Applicants will likely be required to provide information or details regarding:
- The selected construction materials and colour scheme;
  - Lighting so that it is fit-for-purpose and will not interfere with vessel navigation, adversely affect the amenity of the area, or unacceptably alter the natural patterns of light and dark;
  - Signage so that it is kept to a minimum and not visually obtrusive (signage on jetties should be designed to address use and safety issues only; advertising signage may be supported if it is associated with an approved use of the jetty);
  - The number of existing or approved jetties in the locality and other marine infrastructure such as vessel moorings so the cumulative effect of a new, relocated or extended jetty does not detract from the amenity of the local river system landscape, including views to and from the river; and
  - Hours of operation.
- 7.14 With respect to visual amenity, it is considered that the proposed structure will improve the situation given the state of the existing jetty. It is recommended that the applicant be required to submit and have approved colours and materials of the structures prior to the commencement of works.
- 7.15 The existing structure is lit by two pole lights located on the closed section of the jetty and three pole lights along the wharf. The proposed lighting includes two poles along the main jetty, and two bollard lights along each finger jetty. It is recommended that the applicant be required to submit and have approved a lighting plan prior to the commencement of works.
- 7.16 Conditions of the Jetty and Mooring Licence prevent the licensee from erecting any signage.
- 7.17 The site is adjacent to the Pier 21 Marina, however as there is already a structure in place, the new jetties are unlikely to impact on the amenity of the local river system landscape.



- 7.18 The new jetty will not change the operating hours of the facility which will continue to be staffed 24 hours a day.
- 7.19 It is unlikely that there will be any disruption to the navigation of other vessels at this point in the river as the proposed jetty will be within the footprint of the existing structure and within the River reserve lease area.
- 7.20 All recommendations from the Department of Transport with respect to a jetty modification licence, design requirements and mooring areas can be incorporated within conditions if approved.

#### **Aboriginal heritage**

- 7.21 Policy 42 supports the recognition and protection of heritage places, including the Swan Canning river system which holds important spiritual significance to local Aboriginal people.
- 7.22 The proposal was referred to DPLH, which advised that there was no objection to the proposal subject to the submission of an application under section 18 of the AH Act.
- 7.23 The applicant has advised that consultation with relevant Aboriginal groups has been undertaken and a section 18 Notice will be lodged with DPLH. The applicant will be advised to consult with DPLH in order to seek further clarification regarding heritage matters.

#### **Conclusion**

- 7.24 The Western Australia Police Force has advised that in order to maintain operations at the Water Police facility, the deteriorating jetty structures are in need of replacement. A new layout for the jetty has been prepared which will improve safety and efficiency of manoeuvring, loading and unloading vessels and reduce workplace health and safety risks associated with the facility.
- 7.25 The new design is of a similar scale to the existing facility and therefore is unlikely to have any further impact on the visual or landscape amenity of the area. Potential environmental issues have been addressed in the application and further details can be managed through an updated CEMP.

### **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 its meeting on 12 June 2018, where the Trust resolved to support the report and recommendations.

### **9.0 RECOMMENDATION – APPROVAL WITH CONDITIONS**

That the Director General of the Department of Conservation, Biodiversity and Attractions advises the Minister for Environment that the Western Australia Police Force's proposal to remove and replace its existing jetty structure in the Swan River adjacent to Lot 447 on Plan 217041 (Reserve 7077), 100 Harvest Road, North Fremantle, as described in the application received on 13 February 2018, and additional information received on 8, 17 and 18 May 2018, be approved subject to the following conditions:

1. Approval to implement this decision is valid for four (4) 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.

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  - a detailed site map showing the location of:
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#### **During works**

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#### **On completion of works**

11. On the completion of the works, the applicant shall remove all waste materials, equipment and machinery and ensure that the site is cleaned-up to the satisfaction of the Department of Biodiversity, Conservation and Attractions.

#### **Ongoing**

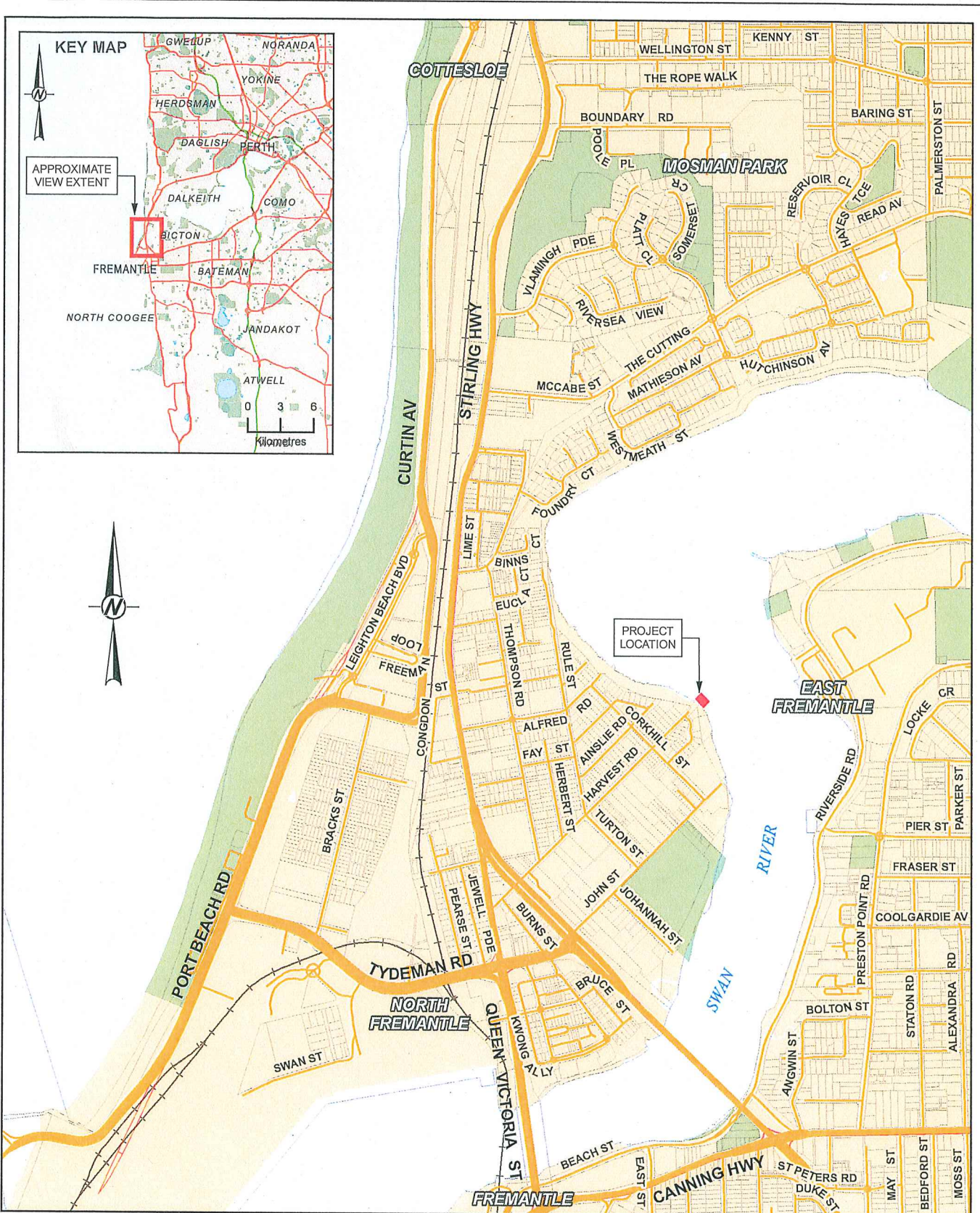
12. All moored vessels using the jetty are to be wholly contained within the existing River reserve lease area.

#### **ADVICE TO APPLICANT**

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2. The applicant is to notify the City of Fremantle as to the date of the commencement of works.
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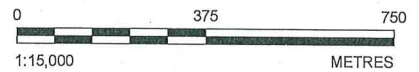
**REFERENCE**

BASED ON INFORMATION PROVIDED BY AND WITH THE PERMISSION OF THE WESTERN AUSTRALIAN LAND INFORMATION AUTHORITY TRADING AS LANDGATE (2017)  
 INSET BASE DATA/ROADS SOURCED FROM STREET PRO DATA 2009.

**NOTES**

1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

**NOT FOR CONSTRUCTION  
 DRAFT**



CLIENT  
 DEPARTMENT OF FINANCE

PROJECT  
 WATER POLICE JETTY

CONSULTANT



YYYY-MM-DD 2017-07-07  
 DESIGNED  
 PREPARED SR  
 REVIEWED  
 APPROVED

TITLE  
 LOCATION PLAN

PROJECT NO. 1778635 CONTROL 002 L REV. A FIGURE 1

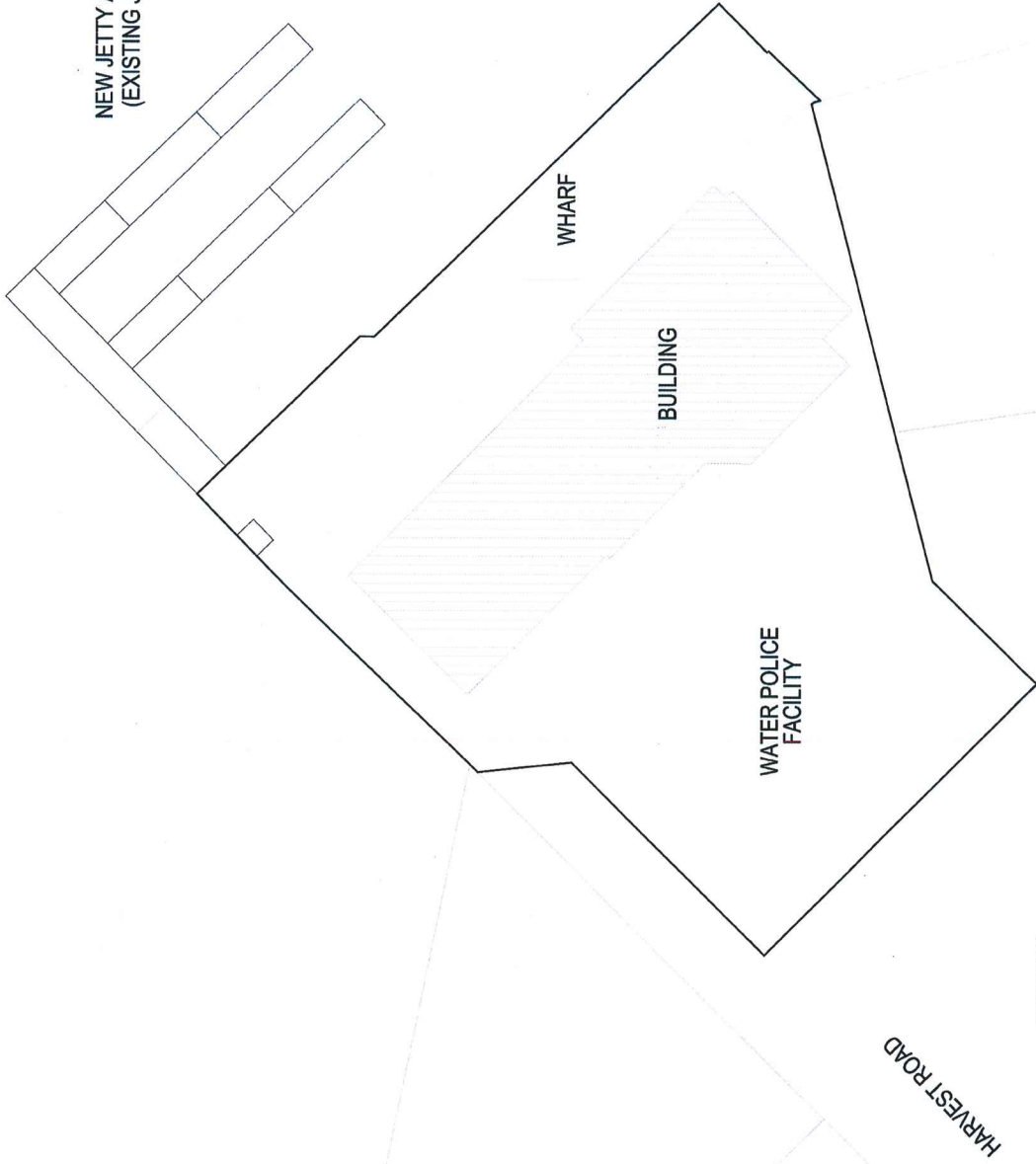






SWAN RIVER

NEW JETTY AND FINGER PONTOONS  
(EXISTING JETTY SHOWN IN GREY)



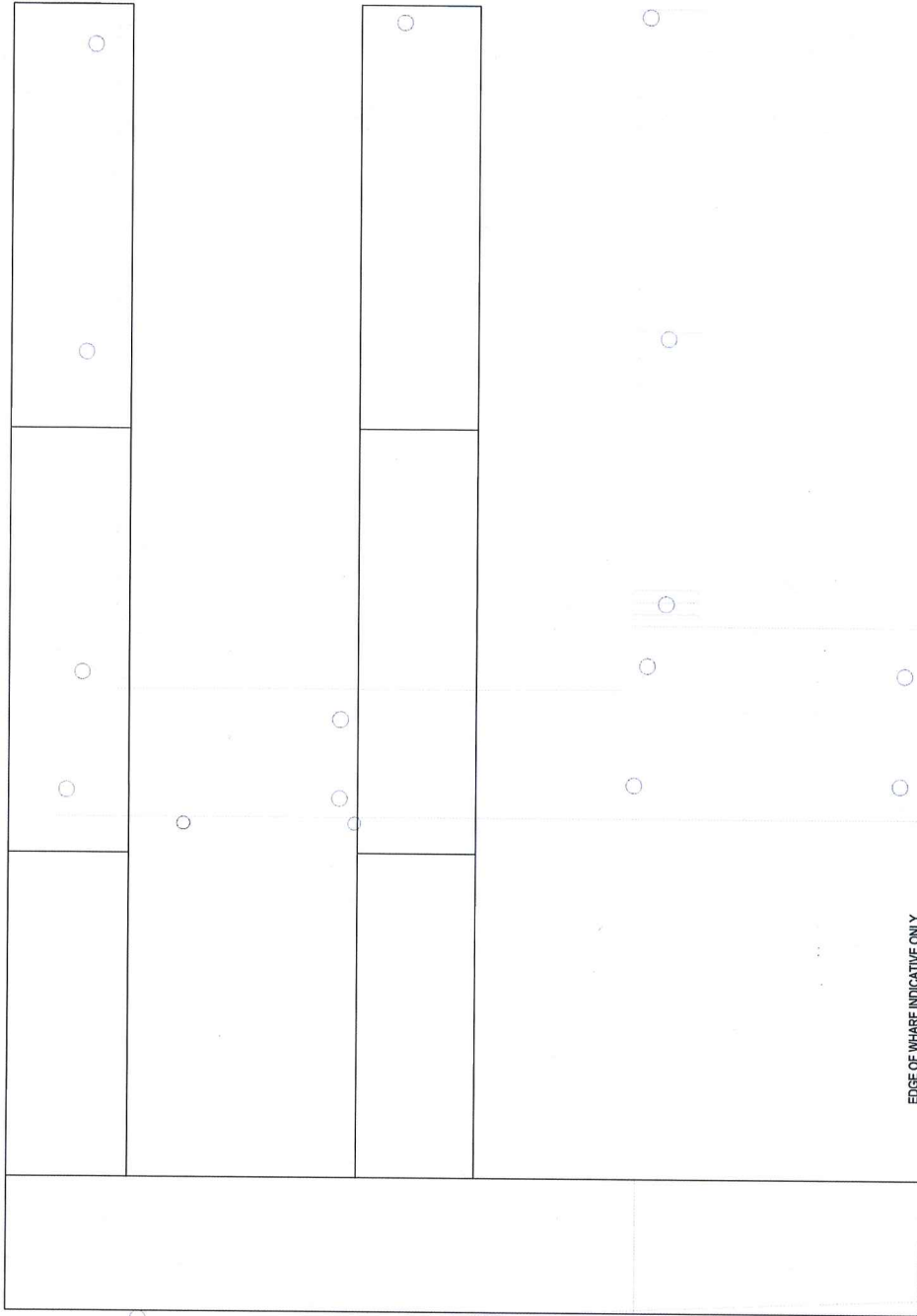
REVISIONS	PROJECT TITLE	PROJECT CODE	DATE
A	WATER POLICE JETTY 100 HARVEST ROAD, NORTH FREMANTLE	GEOFF GAYNOR	JANUARY 2017
ISSUED FOR COMMENT	SITE PLAN	DAVID KATZ	A3
REV.	DRAWN BY	JOB NO.	REVISED
1	SK 01	2205	A



Government of Western Australia  
Department of Finance  
Building Management and Works

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**LEGEND:**  
 ——— - PROPOSED JETTY LAYOUT  
 - - - - - EXISTING JETTY LAYOUT

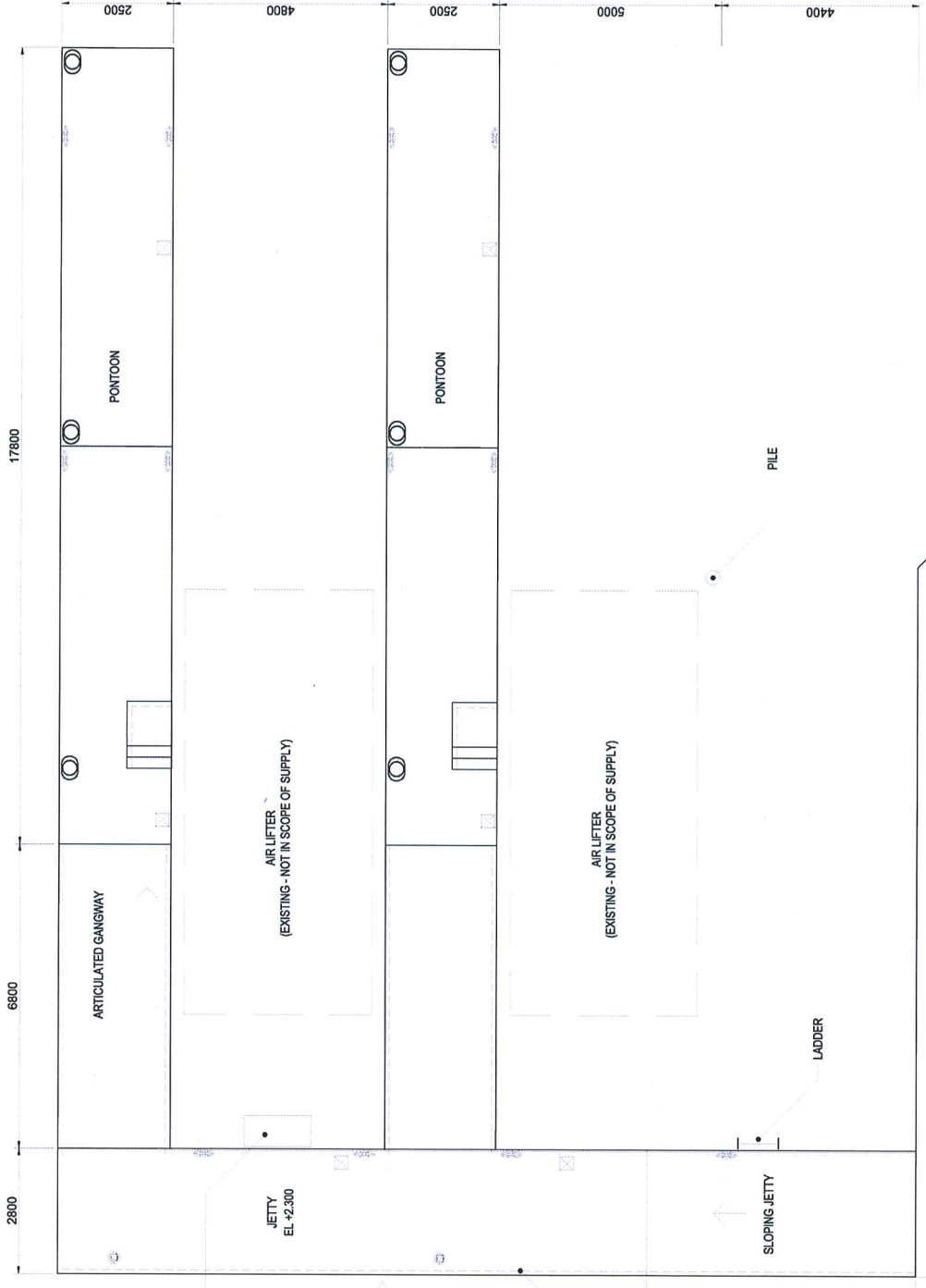
<p><b>Government of Western Australia</b>          Department of Finance          Building Management and Works</p> 		<p><b>PROJECT TITLE</b>          WATER POLICE JETTY          100 HARVEST ROAD, NORTH FREMANTLE</p>		<p><b>PROFESSIONAL ENGINEER</b>          GUY GEORGE GAYNOR</p>		<p><b>DATE</b>          JANUARY 2017</p>																	
<p><b>CLIENT</b>          inter engineering</p> 		<p><b>ENGINEER TITLE</b>          PROPOSED JETTY LAYOUT COMPARED TO EXISTING JETTY</p>		<p><b>DATE</b>          JANUARY 2017</p>		<p><b>PROJECT NO.</b>          2205</p>																	
<p><b>REVISIONS:</b></p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>ISSUED FOR COMMENT</td> <td>24/01/17</td> <td>MDA</td> </tr> <tr> <td>B</td> <td>ISSUED FOR COMMENT</td> <td>16/01/16</td> <td>ASB</td> </tr> <tr> <td>A</td> <td>ISSUED FOR COMMENT</td> <td>16/01/16</td> <td>ASB</td> </tr> </tbody> </table>		NO.	DESCRIPTION	DATE	BY	C	ISSUED FOR COMMENT	24/01/17	MDA	B	ISSUED FOR COMMENT	16/01/16	ASB	A	ISSUED FOR COMMENT	16/01/16	ASB	<p><b>DATE</b>          JANUARY 2017</p>		<p><b>PROJECT NO.</b>          2205</p>		<p><b>PROJECT NO.</b>          2205</p>	
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A	ISSUED FOR COMMENT	16/01/16	ASB																				



B SK05

A SK04

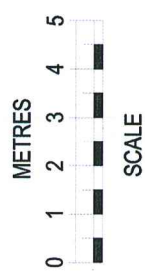
B SK05



AIR LIFTER CONTROL BOX  
INSTALLED AT WORKING HEIGHT  
AND OUTRIGGERED FROM JETTY

SLATS ALONG PERIMETER TO  
CONTROL WASH AND  
TIDAL CURRENTS

HANDRAILS  
(TYPICAL)



LEGEND:

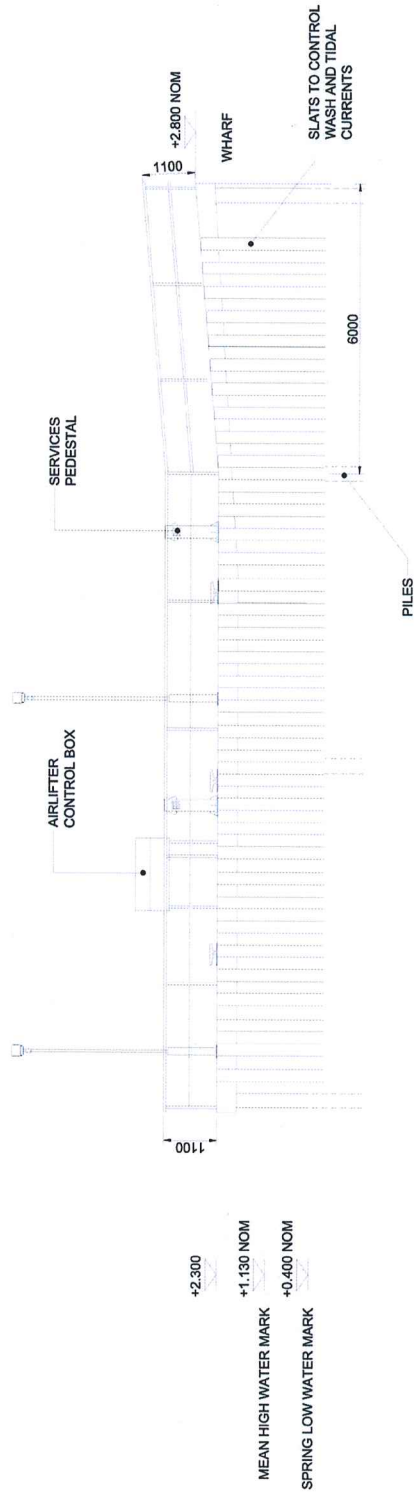
- SERVICES PEDESTAL, COMPRISING 10A AND 20A POWER, WATER AND LIGHT
- CLEATS
- LIGHTING POLE
- GUIDE PILES

DATUM: FREMANTLE LWM

REVISIONS:

C	ISSUED FOR COMMENT
B	ISSUED FOR COMMENT
A	ISSUED FOR COMMENT
NO.	REVISION DESCRIPTION

DATE: 27/01/16  
DRAWN: MFEA  
CHECKED: MFEA  
DESIGNED: MFEA  
PROJECT TITLE: WATER POLICE JETTY  
100 HARVEST ROAD, NORTH FREMANTLE  
DRAWING TITLE: PROPOSED JETTY SCHEMATIC LAYOUT  
CLIENT: Government of Western Australia  
Department of Finance  
Building Management and Works  
PROJECT LEADER: GEOFF GAYNOR  
DESIGNER: DAVID KATZ  
DRAWING AUTHOR: MFEA  
SCALE: AS SHOWN  
DATE: JANUARY 2017  
DRAWING NO: 2205  
SHEET NO: SK03  
SHEET SIZE: A3  
REVISION: C

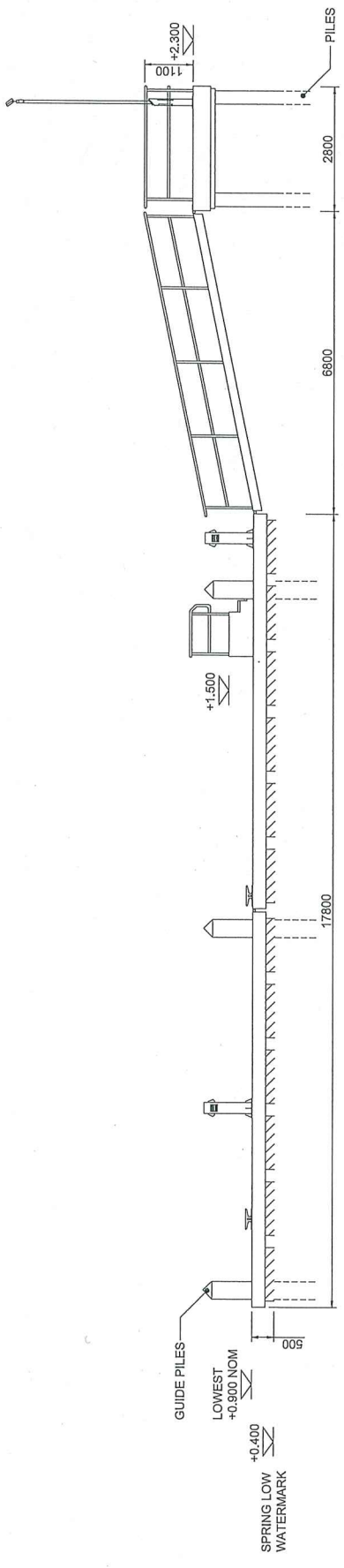


VIEW A-A - ELEVATION LOOKING SOUTH AT LOW WATER MARK  
SCALE 1:100

<b>REVISIONS</b> C ISSUED FOR COMMENT B ISSUED FOR COMMENT A ISSUED FOR COMMENT	PROJECT NO: 240117 MFD: 19/01/16 MFD: 19/01/16 MFD: 19/01/16 DATE: 19/01/16	PROJECT TITLE: <b>WATER POLICE JETTY</b> 100 HARVEST ROAD, NORTH FREMANTLE DRAWING TITLE: <b>PROPOSED JETTY ELEVATION A-A</b>	PROJECT MANAGER: SCOTT GAYNOR DESIGNER: DAVID KATZ DRAWING BY: MFD CHECKED BY: AS SHOWN JOB NO: 2205	DATE: JANUARY 2017 SHEET NO: A3 DRAWING NO: SK04 REVISION: C

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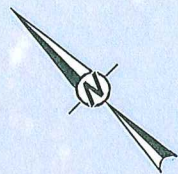




VIEW B-B - ELEVATION LOOKING WEST AT LOW WATER MARK  
SCALE 1:150

REVISIONS	PROJECT LEADER		GEOFF GAYNOR	SIGNATURE
	DESIGNER		DAVID KATZ	
ISSUED FOR COMMENT	DRAWING TITLE		WATER POLICE JETTY	
	PROJECT TITLE		100 HARVEST ROAD, NORTH FREMANTLE	
ISSUED FOR COMMENT	CLIENT		Government of Western Australia Department of Finance Building Management and Works	
	DRAWING TITLE		WATER POLICE JETTY ELEVATION R.R.	
DESIGNER		DATE	JANUARY 2017	
DRAWING TITLE		SCALE	AS SHOWN	
PROJECT LEADER		SHEET SIZE	A3	
DESIGNER		DRAWING NO.		





SK04  
A  
B  
SK05

B  
SK05

AIR LIFTER CONTROL BOX  
INSTALLED AT WORKING HEIGHT  
AND OUTRIGGERED FROM JETTY

SLATS ALONG PERIMETER TO  
CONTROL WASH AND  
TIDAL CURRENTS

HANDRAILS  
(TYPICAL)

SLOPING JETTY

LADDER

ARTICULATED GANGWAY

AIR LIFTER  
(EXISTING - NOT IN SCOPE OF SUPPLY)

AIR LIFTER  
(EXISTING - NOT IN SCOPE OF SUPPLY)

PONTOON

PONTOON

PILE

EXISTING CRANE

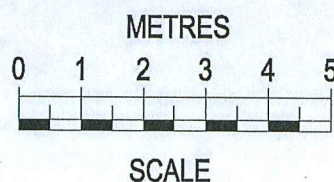
WHARF  
EL +2.800  
NOMINAL

EXISTING  
FIRE FIGHTING  
EQUIPMENT

LEGEND:

- SERVICES PEDESTAL COMPRISING 10A AND 20A POWER, WATER AND LIGHT
- CLEATS
- LIGHTING POLE
- GUIDE PILES

DATUM: FREMANTLE LWM



LEGEND

REFERENCE  
AERIAL IMAGERY 2017-06-04 © NEARMAP (2017)  
PROPOSED DESIGN PROVIDED BY CLIENT. DOCUMENT 2205-  
SK01\_A SK02-SK05\_C.PDF

NOTES

1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

NOT FOR CONSTRUCTION  
**DRAFT**



CLIENT  
DEPARTMENT OF FINANCE

PROJECT  
WATER POLICE JETTY

CONSULTANT

YYYY-MM-DD 2017-11-07

DESIGNED

PREPARED SR

REVIEWED

APPROVED



TITLE  
**CONCEPT DESIGN**

PROJECT NO.  
1778635

CONTROL  
002 L

REV.  
A

FIGURE  
**5**