

Date : 25/09/2018 9:48:21 AM

From : "No Reply"

To : "MIWSARA" , CTPI@accessstpc.com.au"

Subject : 1809-7328 SRA application correspondence

Attachment : 1809-7328 SRA Response to request for agreement to timeframe extension.pdf;

Please find attached a notice regarding application [1809-7328 SRA](#).

If you require any further information in relation to the application, please contact the Department of State Development, Manufacturing, Infrastructure and Planning on the details provided in the notice.

This is a system-generated message. Do not respond to this email.

GE25-N

alt=



Department of State Development,
Manufacturing, Infrastructure and Planning

Email Id: RFLG-0918-0002-9999

Published on DES Disclosure Log
RTI Act 2009

Our reference: 1809-7328 SRA
Your reference: 17.034

25 September 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd
(Both Receivers and Managers Appointed)(Both in Liquidation)
c/- Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006
CTPI@accesstpc.com.au

Attention: CTPI 49-Sch4

Dear CTPI 49-Sch4

Response to request to extend the action notice period

(Related to section 8 of the Development Assessment Rules)

The Department of State Development, Manufacturing, Infrastructure and Planning received your request to extend the action notice period on 25 September 2018 for your development application described below.

Location details

Street address:	2 Port Drive and 18 Port Drive, Airlie Beach
Real property description:	Lot 115 on SP260215, Lot 120 on SP218220 and Lot 123 on SP218220
Local government area:	Whitsunday Regional Council

Application details

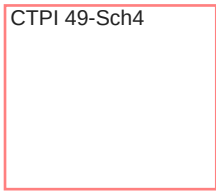
Development permit	Operational work for prescribed tidal works - new marina arm (Arm A) within the Port of Airlie Marina and associated onshore works.
--------------------	---

The department agrees to extend the action notice period until 19 November 2018.

For further information please contact Felicity Laub, Senior Planning Officer, on (07) 4898 6814 or via email MIWSARA@dsdmip.qld.gov.au who will be pleased to assist.

Yours sincerely

CTPI 49-Sch4

A red rectangular box, likely a placeholder for a signature or stamp.

Kylie Drysdale
Planning Manager

cc Whitsunday Regional Council, info@whitsundayrc.qld.gov.au

Published on DES Disclosure Log
RTI Act 2009

Date : 19/09/2018 1:28:00 PM
From : "No Reply"
To : "MIWSARA", CTPI accesstpc.com.au"
Cc : "info@whitsundayrc.qld.gov.au"
Subject : 1809-7328 SRA application correspondence
Attachment : 1809-7328 SRA Action notice not properly referred.pdf;

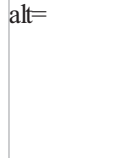
Please find attached a notice regarding application [1809-7328 SRA](#).

If you require any further information in relation to the application, please contact the Department of State Development, Manufacturing, Infrastructure and Planning on the details provided in the notice.

This is a system-generated message. Do not respond to this email.

RA2-N

alt=



Department of State Development,
Manufacturing, Infrastructure and Planning

Email Id: RFLG-0918-0002-9586

Published on DES Disclosure Log
RTI Act 2009

Our reference: 1809-7328 SRA
Your reference: 17.034

19 September 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd
(Both Receivers and Managers Appointed) (Both in Liquidation)
C/- Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006
CTP@accessipc.com.au

Attention: CTPI 49-Sch4

Dear CTPI 49-Sch4

Action notice

(Given under section 8 of the Development Assessment Rules)

The Department of State Development, Manufacturing, Infrastructure and Planning received your referral agency material for the following premises on 18 September 2018.

Location details

Street address:	2 Port Drive and 18 Port Drive, Airlie Beach
Real property description:	Lot 115 on SP260215; Lot 120 on SP218220 and Lot 123 on SP218220
Local government area:	Whitsunday Regional Council

Under the Planning Regulation 2017, the relevant referral requirements for the development application are as follows:

- 10.17.3.1.1 Tidal works or work in a coastal management district – Coastal Assessment
- 10.17.3.2.1 Tidal works or work in a coastal management district – Marine Safety

The application does not meet the requirements for a properly referred application under section 54 of the *Planning Act 2016*. The reasons for this decision are:

- Evidence has not been provided that the proposed work will not result in the removal, destruction or damage (temporary or permanent) or marine plants; OR
- Referral in accordance with Schedule 10, Part 6, Division 3, Subdivision 3, Table 1 of the Planning Regulation 2017 for removal, destruction or damage of marine plants, with the associated fee and State Development Assessment Provisions (SDAP) response to State code 11: Removal, destruction or damage of marine plants.

The application will not be accepted as properly referred until the following actions are taken:

- Evidence that the proposed work will not result in the removal, destruction or damage (temporary or permanent) of marine plants; OR
- Referral in accordance with Schedule 10, Part 6, Division 3, Subdivision 3, Table 1 of the Planning Regulation 2017 for removal, destruction or damage of marine plants, with the associated fee and SDAP response to State code 11: Removal, destruction or damage of marine plants.

The above actions must be completed within 20 business days of receiving this notice, or a further period agreed with the department, to avoid your application lapsing.

For further information please contact Felicity Laub, Senior Planning Officer, on (07) 4898 6814 or via email MIWSARA@dsdmip.qld.gov.au who will be pleased to assist.

Yours sincerely

CTPI 49-Sch4



Kylie Drysdale
Planning Manager
Mackay Isaac Whitsunday Regional Office

Cc: Whitsunday Regional Council, info@whitsundayrc.qld.gov.au

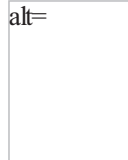
Date : 23/10/2018 12:57:14 PM
From : "No Reply"
To : "MIWSARA" , CTPI accesstpc.com.au"
Cc : "info@whitsundayrc.qld.gov.au"
Subject : 1809-7328 SRA application correspondence
Attachment : 1809-7328 SRA Application properly referred.pdf;

Please find attached a notice regarding application [1809-7328 SRA](#).

If you require any further information in relation to the application, please contact the Department of State Development, Manufacturing, Infrastructure and Planning on the details provided in the notice.

This is a system-generated message. Do not respond to this email.

RA34-N



Department of State Development,
Manufacturing, Infrastructure and Planning

Email Id: RFLG-1018-0003-2165

Published on DES Disclosure Log
RTI Act 2009

Our reference: 1809-7328 SRA
Your reference: 17.034

23 October 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd
(Both Receivers and Managers Appointed)(Both in Liquidation)
Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006
CTPI@accessstpc.com.au

Attention: CTPI 49-Sch4

Dear CTPI 49-Sch4

Referral confirmation notice

(Given under section 8.2 of the Development Assessment Rules)

The development application described below is taken to be properly referred to the Department of State Development, Manufacturing, Infrastructure and Planning under Part 2: Referral of the Development Assessment Rules.

Location details

Street address:	2 Port Drive and 18 Port Drive, Airlie Beach QLD
Real property description:	Lot 115 on SP260215; Lots 120 and 123 on SP218220
Local government area:	Whitsunday Regional Council

Application details

Development permit	Operational work - new marina arm (Arm A) within the Port of Airlie Marina
--------------------	--

The referral confirmation period ended on 19 September 2018. The department's assessment will be under the following provisions of the Planning Regulation 2017:

- 10.17.3.1.1 Tidal works or work in a coastal management district (coastal assessment)
- 10.17.3.2.1 Tidal works or work in a coastal management district (maritime safety)

For further information please contact Felicity Laub, Senior Planning Officer, on (07) 4898 6814 or via email MIWSARA@dsdmip.qld.gov.au who will be pleased to assist.

Yours sincerely

CTPI 49-Sch4

A red rectangular box, likely representing a redacted signature or stamp.

Kylie Drysdale
Planning Manager

cc Whitsunday Regional Council, info@whitsundayrc.qld.gov.au

Published on DES Disclosure Log
RTI Act 2009

Date : 1/11/2018 9:09:56 AM
From : "MIWSARA"
To : "Felicity Laub"
Subject : FW: Should be 1809-7328 SRA not - 1809-7325 SRA
Attachment : PA - Application supported - Conditions_1.pdf;

FYA – deleted from MIWSARA inbox. Please upload to MyDAS2.

Regards
Odette

From: Joanne M Guley <Joanne.M.Guley@msq.qld.gov.au>
Sent: Wednesday, 31 October 2018 3:54 PM
To: MIWSARA <MIWSARA@dsdmip.qld.gov.au>
Subject: Should be 1809-7328 SRA not - 1809-7325 SRA

Sorry!! Bit of a Typo
Jo

From: Joanne M Guley
Sent: Wednesday, 31 October 2018 3:51 PM
To: 'MIWSARA@dsdmip.qld.gov.au' <MIWSARA@dsdmip.qld.gov.au>
Subject: 1809-7325 SRA

Good Afternoon,

The letter for application 1809-7325 SRA has been despatched.

Regards

Joanne Guley
Administrative Officer | Maritime Operations (Mackay Region)
Maritime Safety Queensland | Department of Transport and Main Roads

Floor 3 | Mackay Government Office Building | 44 Nelson Street | Mackay Qld 4740
PO Box 58 | Mackay Qld 4740
P: (07) 49443715
E: Joanne.M.Guley@msq.qld.gov.au
W: www.tmr.qld.gov.au

WARNING: This email (including any attachments) may contain legally privileged, confidential or private information and may be protected by copyright. You may only use it if you are the person(s) it was intended to be sent to and if you use it in an authorised way. No one is allowed to use, review, alter, transmit, disclose, distribute, print or copy this email without appropriate authority.

If this email was not intended for you and was sent to you by mistake, please telephone or email me immediately, destroy any hardcopies of this email and delete it and any copies of it from your computer system. Any right which the sender may have under copyright law, and any legal privilege and confidentiality attached to this email is not waived or destroyed by that mistake.

It is your responsibility to ensure that this email does not contain and is not affected by computer viruses, defects or interference by third parties or replication problems (including incompatibility with your computer system).

Opinions contained in this email do not necessarily reflect the opinions of the Department of Transport and Main Roads, or endorsed organisations utilising the same infrastructure.

Development Application Recommendation: Approved with Conditions

DSDMIP reference: 1809-7328 SRA
DSDMIP role: Referral Agency
DSDMIP regional office: SARA Mackay, Isaac and Whitsunday
DSDMIP email: MIWSARA@dsdmip.qld.gov.au
TA reference: TMR18-025883
TA contact name: Joanne Guley
TA contact details: (07) 4944 3715
TA approver: Captain Zainol Ahmad

1.0 Application details

Street address: 18 Port Drive, Airlie Beach QLD 4802
Real property description: 120SP218220, 123SP260215
Local government area: Whitsunday Regional Council
Applicant name: Meridian Airlie Beach Pty Ltd and Meridien AB Pty Ltd
Applicant contact details: C/- Access Town Planning Consultants PO Box 703
Fortitude Valley QLD 4006
CTPI 2 accesstpc.com.au

2.0 Aspects of development and type of approval being sought

Aspect Of Development	Type Of Approval	Description
Operational Works	Development Permit	New Marina Arm 'A'

3.0 Matters of interest to the state

The development application has the following matters of interest to the state under the provisions of the *Planning Regulation 2017*:

Trigger Mode	Trigger Number	Trigger Description
Maritime Safety	10.17.3.2.1	Development application for operational work that is assessable development under section 28, other than work for government supported transport infrastructure or carried out by the Gold Coast Waterways Authority, if the work is in tidal waters and any of the following apply— (a) the work is tidal works, other than the following tidal works in Gold Coast waters— (i) a boat ramp, jetty or private pontoon; (ii) a drainage outlet; (iii) a stormwater outlet; (iv) a revetment wall associated tidal works in subparagraphs (i) to (iii); (b) the work is the disposal of dredge spoil, or other solid waste material, in tidal water; (c) the work is reclaiming land under tidal water; (d) the work is constructing a canal, if the canal relates to reconfiguring a lot

4.0 Assessment of Application

4.1 Evidence or other material

Our agency relied on the following evidence or material in making its assessment:

Title of Evidence / Material	Prepared by	Date	Reference no.	Version/Issue
ATPC Planning Report	Access Town Planning Consultants		17.034	V1 5.9.18
Revised Confirmation Notice	Whitsunday Regional Council	13.09.18		

4.2 Considerations and assessment

The Applicant proposes to construct a new Marina Arm "A" consisting of 8 vessel berths within the Port of Airlie, Airlie Beach. The Port of Airlie is a mixed-use facility that includes among other things a Marina, Maritime Passenger Terminal and various Maritime Services.

The application has been assessed against the SDAP v2.3, State Code 7: Maritime Safety and our agency wishes to impose the following conditions to the offshore components on the development application.

5.0 Recommendations

5.1 Technical agency advice for SARA as referral agency

Our agency:

- (a) recommends the following issues be addressed by applying conditions that should attach to any development approval (*Planning Act 2016* section 56(1)(b)(i)):

SARA model conditions version: 3.0

No.	Conditions of Development Approval	Condition Timing
1809-7328 SRA - Operational Work : Construct New Marina Arm "A"		
Aids to navigation		
1	MS06 - [Model Condition] (a) The construction, operation or maintenance of the approved development must not damage or interfere (physically or by electrical or electro-magnetic emissions) with any aid to navigation. (b) In the event that damage, or interference is caused to any aid to navigation, the Harbour Master must be immediately contacted on 07) 4944 3700, and at the applicant's cost the damage or interference must be promptly repaired replaced or interference removed.	(a) At all times (b) As indicated
General		
2	MS03 - [Model Condition]	Within two (2) weeks of the

R

No.	Conditions of Development Approval	Condition Timing
	(a) "As Constructed" drawings of the approved structure must be provided to RHM (Mackay Region), PO Box 58, Mackay Qld 4740.	completion of the works.
3	<p>MS01 - [Model Condition]</p> <p>(a) Provide written notice to RHM (Mackay Region), PO Box 58, Mackay Qld 4740, when the development authorised under this approval is scheduled to commence.</p> <p>Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given.</p> <p>(b) Provide written notice to RHM (Mackay Region), PO Box 58, Mackay Qld 4740, when the development authorised under this approval has been completed.</p> <p>Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given.</p>	<p>(a) At least two (2) weeks prior to the commencement of works.</p> <p>(b) Within two (2) weeks of the completion of works.</p>
Lighting - construction		
4	<p>MS04 - [Model Condition]</p> <p>All vessels, structures, plant and equipment associated with the construction of the approved works must be lit/marked in accordance with the following specifications and requirements such that undertaking the construction works does not cause a risk to the safe navigation of ships:</p> <p>(a) Any anchors deployed must be marked with yellow buoys and underwater items fitted with FL yellow lights.</p> <p>Lighting provided must not obscure, disguise or otherwise interfere with the effectiveness of navigational lighting.</p>	While the works are occurring.
Lighting - operation		
5	<p>MS05 - [Model Condition]</p> <p>The structure must be lit/marked in accordance with the following specifications, such that it does not cause a risk to the safe navigation of other ships:</p> <p>(a) Lighting on the jetty/pontoon must be fixed, white and pointed downward</p> <p>Lighting provided must not obscure, disguise or otherwise interfere with the effectiveness of navigational lighting.</p>	At all times

6.0 Endorsement

Officer

Joanne Guley
Administrative Officer
(07) 4944 3715
MSQ_IDAS_Mackay@msq.qld.gov.au

Approver



Captain Zainol Ahmad
Regional Harbour Master (Mackay Region)
07 4944 3700
MSQ_IDAS_Mackay@msq.qld.gov.au
31/10/2018

Published on DES Disclosure Log
RTI Act 2009

RA7-TA

SARA technical agency assessment response

Technical agency (TA)— Department of Environment and Science

DSDMIP reference: 1809-7328 SRA
DSDMIP role: referral agency
DSDMIP regional office: Mackay Isaac Whitsunday regional office
DSDMIP email: MIWSARA@dsdmip.qld.gov.au
[NB: all responses are to be returned to this email address]

TA reference:
TA contact name: David Toms
TA contact details: 3330 5045
TA approver: Amanda Gray

1.0 Application details

Street address: 18 Port Drive, Airlie Beach; Coconut Grove, Airlie Beach; 2 Port Drive, Airlie Beach
Real property description: 115SP260215; 120SP218220; 123SP218220
Local government area: Whitsunday Regional Council

Applicant name: Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Both Receivers and Managers Appointed)(Both in Liquidation)
Applicant contact details: Access Town Planning Consultants, PO Box 703
FORTITUDE VALLEY QLD 4006
CTPI@accessstpc.com.au

2.0 Aspects of development and type of approval being sought

Nature of development	Approval type	Category of assessment
Operational work	Development permit	Code assessment
Description of proposal: Operational works (prescribed tidal works) for a new marina arm (Arm A) within the Port of Airlie Marina and associated onshore works.		

3.0 Matters of interest to the state

The development application has the following matters of interest to the state under the provisions of the Planning Regulation 2017:

Trigger	Description	Technical agency	Fast track?
10.17.3.1.1	Development application for assessable development under section 28, other than an application- (a) for prescribed tidal works in a canal; or (b) for work that is for the installation,	DES Coastal Assessment	N

	maintenance or repair of overhead cables or lines that extend over tidal water; or (c) for tidal works that is boring or tunnelling under the bed of tidal water, if the works do not disturb the bed of the tidal water (d) that the chief executive is the prescribed assessment manager for		
10.17.3.2.1	Development application for operational work that is assessable development under section 28, other than work for government supported transport infrastructure or carried out by the Gold Coast Waterways Authority, if the work is in tidal waters and any of the following apply- (a) the work is tidal works, other than the following tidal works in Gold Coast waters- (i) a boat ramp, jetty or private pontoon; (ii) a drainage outlet; (iii) a stormwater outlet; (iv) a revetment wall associated with tidal works in subparagraphs (i) to (iii); (b) the work is the disposal of dredge spoil, or other solid waste material, in tidal water; (c) the work is reclaiming land under tidal water; (d) the work is constructing a canal, if the canal relates to reconfiguring a lot	DTMR Maritime	N

4.0 Assessment

4.1 Considerations and assessment

This application seeks an operational works (prescribed tidal works) development permit for the construction of a new marina arm within the existing Port of Airlie Marina, together with associated onshore operational works. The site comprises of Lot 115 on SP260215 (onshore component) and parts of Lots 120 and 123 on SP218220 (offshore component). The street address of the onshore component is 18 Port Drive, Airlie Beach.

Location

The site is located in the Port of Airlie precinct of Airlie Beach, and includes both an onshore component and an offshore component (Figure 1). The onshore component fronts onto the eastern side of Port Drive and is located immediately to the south of the Cruise Whitsundays maritime terminal and the Port of Airlie public car park. The offshore components are located adjacent to, and immediately to the east of, the onshore component.



Figure 1 – Site context

Coastal Assessment

The site is within –

- The Coastal management District
- The Erosion Prone Area

MSES Assessment

There are no mapped MSES within the works footprint. The applicant has completed a marine plants survey. No evidence of seagrasses or other stiffer substrate capable of supporting vegetation growth were observed.

Development Proposal

Off-Shore Works

- A new floating pontoon fixed to, and held in place by, eight new piles (Figure 2). The main pontoon will comprise of six pods, with a perpendicular finger made up of a further two pods.
- A new 18.8m x 2m gangway providing pedestrian access to the pontoon. The onshore end of the gangway will be supported by a new stub jetty attached to the revetment wall that will join to the end of the onshore footpath described below.
- Eight standalone mooring piles.
- The design of the proposed offshore works is compliant with all current and relevant Australian codes and standards, including all Australian Standards mentioned in the Code for Assessable Development that is Prescribed Tidal Works (Schedule 3 of the *Coastal Protection and Management Regulation 2017*).
- Water and power supply services, and associated fittings and lighting, will be attached to the pontoon structures. Lighting and visibility measures are to be provided in accordance with the requirements of State Code 7 (Maritime Safety) and AS4282- 1997.
- No sewerage services are proposed. All effluent and wastewater generated by vessels utilising the marina is required to be disposed of offsite.

Onshore Works

- These works are for water supply, in the form of a domestic and fire-fighting water supply, for footpath access from the existing easement road within Lot 115 and
- For the provision of underground conduits to permit the extension of a power supply to the proposed marina arm.
- It is proposed to construct a new, 1.5m wide section of concrete footpath on the southern and eastern sides of the easement road and cul-de-sac head, and a new branch giving access to the stub jetty and gangway.
- In addition, it is proposed to install a new section of 100mm electrical conduit from the end of the as-built conduit traversing the public car park, following the alignment of the proposed footpath to a base for a proposed new switchboard/fire control service cabinet near the stub jetty, to allow for a power supply to be extended to the proposed marina arm.

The overall referral requirement is to ensure coastal processes and resources are not interfered with or compromised as part of the proposed works. Although the infrastructure to be installed is going to have some effect on coastal processes at a local scale, overall tidal flows and existing sediment processes of the local area will not experience a significant residual impact as a result of the works and therefore the purpose of State Code 8 has been fulfilled.

Model conditions are required to ensure the development complies with the requirements of SDAP.

Evidence or other material on which findings are based:

The following tools may be helpful in your desktop analysis and assessment:

- DES Environmental Reports Online <https://environment.des.qld.gov.au/report-request/environment/>
- DNRM Regulated Vegetation Mapping <https://www.qld.gov.au/environment/land/vegetation/map-request/>
- DES Map of Referable Wetlands <https://www.des.qld.gov.au/ecosystems/wetlands/referable-wetlands-form.php>
- DES WetlandInfo <http://wetlandinfo.des.qld.gov.au/wetlands/>
- DES Protected Plants Flora Survey Trigger Map <http://www.des.qld.gov.au/licences-permits/plants-animals/protected-plants/map-request.php>
- DES Species List <https://environment.des.qld.gov.au/report-request/species-list/>
- Queensland Wetland Buffer Guideline <http://wetlandinfo.des.qld.gov.au/resources/static/pdf/resources/reports/buffer-guide/wetland-buffer-guideline-14-04-13.pdf>
- DSDMIP SPP Interactive Mapping <http://dsdmip.qld.gov.au/planning/state-planning-instruments/spp-interactive-mapping-system.html>
- *Planning Act 2016 and Planning Regulation 2017*;
- *Environmental Offsets Act 2014 and Environmental Offsets Regulation 2014*;
- The State Development Assessment Provisions as published by the Department of Infrastructure, Local Government and Planning;
- Development application material and submitted plans.

State development assessment provisions (SDAP) Version 2.4 – State code 8: Coastal development and tidal works

Table 8.2.1: All development

Performance outcome	Relevance to the proposal and advice (does the submitted report show compliance with the SDAP)
Development in the erosion prone area	
<p>PO1 Development does not occur in the erosion prone area unless the development:</p> <ol style="list-style-type: none"> 1. is one of the following types of development: <ol style="list-style-type: none"> a. coastal-dependent development; or b. temporary, readily relocatable or able to be abandoned; or c. essential community infrastructure; or d. redevelopment of an existing permanent building or structure that cannot be relocated or abandoned; and 2. cannot feasibly be located elsewhere. 	
Complies with the applicable acceptable outcomes and therefore the performance outcome	<p>Complies with PO1</p> <p>The proposed development is coastal-dependent development.</p>
<p>PO2 Development other than coastal protection work:</p> <ol style="list-style-type: none"> 1. avoids impacting on coastal processes; and 2. ensures that the protective function of landforms and vegetation is maintained. 	

Performance outcome	Relevance to the proposal and advice (does the submitted report show compliance with the SDAP)
<p>Note: In considering reconfiguring a lot applications, the state may require land in the erosion prone area to be surrendered to the State for coastal management purposes under the <i>Coastal Protection and Management Act 1995</i>.</p> <p>Where the planning chief executive receives a copy of a land surrender requirement under the <i>Coastal Protection and Management Act 1995</i>, this must be considered in assessing the application.</p>	
Complies with the applicable acceptable outcomes and therefore the performance outcome	<p>Complies with PO2</p> <p>The proposed works will not impact upon coastal processes. The proposed works will not cause any disturbance to existing landforms or vegetation that provide protection.</p> <p>Coastal fluvial sedimentology processes will not be significantly impacted and the works will not have a net effect on beach nourishment or any quarry material movement along the coast (longshore sediment drift).</p> <p>Locating the works elsewhere is not feasible due to the location of the marina and other associated marine infrastructure.</p>
<p>PO3 Development is located, designed and constructed to minimise the impacts from coastal erosion by:</p> <ol style="list-style-type: none"> 1. locating the development as far landward as practicable; or 2. where it is demonstrated that 1 is not feasible, mitigate or otherwise accommodate the risks posed by coastal erosion. 	
Complies with the applicable acceptable outcomes and therefore the performance outcome	<p>Complies with PO3</p> <p>The proposed development is an additional marina arm within an established marina and will have no effect on coastal erosion, nor be affected by it.</p> <p>Given the type of development proposed, locating the development further landward is impracticable.</p> <p>Works have been developed so as to avoid and mitigate coastal hazards and not adversely impact on coastal processes.</p>
<p>PO4 Development does not significantly increase the risk or impacts to people and property from coastal erosion.</p>	
Complies with the applicable acceptable outcomes and therefore the performance outcome	<p>Complies with PO4</p> <p>The proposal does not significantly increase the risk or impacts to people and property from coastal erosion.</p> <p>A standard condition (CP02A) will be added to mitigate any adverse impacts.</p>
<p>PO5 Development other than coastal protection work avoids directly or indirectly increasing the severity of coastal erosion either on or off the site.</p>	
Complies with the applicable acceptable	<p>Complies with PO5</p>

<i>Performance outcome</i>	<i>Relevance to the proposal and advice (does the submitted report show compliance with the SDAP)</i>
outcomes and therefore the performance outcome	<p>Works will not directly or indirectly increase the severity of coastal erosion either on or off the site.</p> <p>Development will not increase the severity of coastal erosion or off the site (as above).</p>
PO6 In areas where a coastal building line is present, building work is located landward of the coastal building line unless coastal protection work has been constructed to protect the development.	
Not applicable	<p>N/A</p> <p>A coastal building line is not present.</p>
Development in the erosion prone area	
<p>PO7 Development of artificial waterways, canals and dry-land marinas minimises impacts on coastal resources by:</p> <ol style="list-style-type: none"> 1. maintaining the tidal prism volume of the natural waterway to which it is connected 2. demonstrating a whole-of-life strategy for the disposal of dredged material. 	
Not applicable	<p>N/A</p> <p>The proposed works do not include artificial waterways.</p>
Coastal protection work	
<p>PO8 Works for beach nourishment minimise adverse impacts on coastal processes and avoid any increase in the severity of erosion on adjacent land by:</p> <ol style="list-style-type: none"> 1. sourcing sand from an area that does not adversely impact on the active beach system 2. ensuring imported sand is compatible with natural beach sediments and coastal processes of the receiving beach. 	
Not applicable	<p>N/A</p> <p>The proposed works do not include beach nourishment.</p>
<p>PO9 Erosion control structures are only constructed where there is an imminent threat to buildings or infrastructure of value, and there is no feasible option for either:</p> <ol style="list-style-type: none"> 1. beach nourishment; or 2. relocation or abandonment of structures. <p>Note: The monetary value of buildings or infrastructure should be more than the cost of associated erosion control structures.</p>	
Not applicable	<p>N/A</p> <p>The proposed works do not involve erosion control structures.</p>
PO10 Erosion control structures minimise interference with coastal processes, or any increase to the severity of erosion on adjacent land by:	

Performance outcome	Relevance to the proposal and advice (does the submitted report show compliance with the SDAP)
<ol style="list-style-type: none"> 1. locating the erosion control structure as far landward as practicable and directly adjacent to the structure it is intended to protect 3. where required and feasible, importing sand to the site to mitigate any increase in the severity of erosion 2. the design of the structure. 	
Not applicable	N/A As above

Water quality

PO11 Development:

1. maintains or enhances environmental values of receiving waters
2. achieves the water quality objectives of Queensland waters
3. avoids the release of prescribed water contaminants to tidal waters.

Note: See Environmental Protection (Water) Policy 2009 for the relevant water quality objectives.

Does not comply with the applicable acceptable outcomes, an alternative solution is proposed that complies with the performance outcome

Complies with PO11

The works are not anticipated to cause any significant impact to water quality and will not actively release contaminants or exacerbate erosion that may affect water clarity and turbidity.

Erosion and sedimentation measures will be incorporated into the construction to ensure that water quality is not compromised. This will be managed through an approved Port of Airlie OEMP, in terms of protecting water quality.

Erosion and sediment control measures will be put in place during construction to protect nearby waters and will be conditioned for.

A standard condition regarding erosion and sediment control (CP02A) and Acid Sulphate Soils (CP08) will be added.

The Local Government (assessment manager) will take carriage of the requirements of the State Planning Policy (SPP) Water Guidelines.

Category C and R areas of vegetation

PO12 Development:

1. avoids impacts on category C areas of vegetation and category R areas of vegetation; or
2. minimises and mitigates impacts on category C areas of vegetation and category R areas of vegetation after demonstrating avoidance is not reasonably possible.

Not applicable

Not applicable

There are no Category C or Category R areas at or in the vicinity of the proposed works site.

Public use of and access to state coastal land	
PO13 Development maintains or enhances public use of and access to and along state coastal land (except where this is contrary to the protection of coastal resources or public safety).	
Complies with the applicable acceptable outcomes and therefore the performance outcome	Complies with PO13 The proposed development will not impact on public access to the foreshore..
PO14 Private marine development ensures that works: <ol style="list-style-type: none"> 1. are used for marine access purposes only 2. minimise the use of state coastal land 3. do not interfere with access between navigable waterways and adjacent properties. 	
Not applicable	N/A The proposed works are not private marine development.
PO15 Development ensures erosion control structures are located within the premises they are intended to protect unless there is no feasible alternative.	
Not applicable	N/A The development does not involve erosion control structures.
Matters of state environmental significance	
PO16 Development: <ol style="list-style-type: none"> 1. avoids impacts on matters of state environmental significance; or 2. minimises and mitigates impacts on matters of state environmental significance after demonstrating avoidance is not reasonably possible; and 3. provides an offset if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable significant residual impact on a matter of state environmental significance. <p>Statutory note: (3) only applies to development on Brisbane core port land within the area identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan. For the Brisbane Port LUP, see www.portbris.com.au.</p> <p>Note: Guidance for determining if the development will have a significant residual impact on the matter of state environmental significance is provided in the Significant Residual Impact Guideline, Department of State Development, Infrastructure and Planning, 2014. Where the significant residual impact is considered an acceptable impact on the matter of state environmental significance and an offset is considered appropriate, the offset should be delivered in accordance with the <i>Environmental Offsets Act 2004</i>.</p>	
Does not comply with the applicable acceptable outcomes, an alternative solution is proposed that complies with the performance outcome	Complies with PO16. The proposal does not have any impacts on matters of state environmental significance.

Table 8.2.2: All operational work

Performance outcome Acceptable outcomes	Relevance to the proposal and advice (does the submitted report show compliance with the SDAP)
Private marine development	
PO17 Private marine development does not require the construction of coastal protection work, shoreline or riverbank hardening or dredging for marine access purposes.	
Not applicable	N/A The proposed works are not private marine development.
Disposal of solid waste or dredged material from artificial waterways	
PO18 Solid waste from land and dredged material from artificial waterways is not disposed of in tidal water unless it is for beneficial reuse.	
Not applicable	N/A The proposed works do not include disposal of solid waste or dredged material from artificial waterways.
Disposal of dredged material other than from artificial waterways	
PO19 Dredged material is returned to tidal water where this is needed to maintain coastal processes and sediment volume.	
Not applicable	N/A
PO20 Where it is not needed to maintain coastal processes and sediment volume, the quantity of dredged material disposed to tidal water is minimised through beneficial reuse or disposal on land.	
Not applicable	N/A
All dredging and any disposal of dredged material in tidal water	
PO21 All dredging and any disposal of dredged material in tidal water is: <ol style="list-style-type: none"> 1. demonstrated to be safe with regard to protection of the marine environment and by meeting the National Assessment Guidelines for Dredging 2009, Department of Environment and Energy, 2009, or later version; and 2. supported by a monitoring and management plan that protects the marine environment and that complies with the National Assessment Guidelines for Dredging 2009, Department of Environment and Energy, 2009, or later version. 	
Not applicable	N/A
Reclamation	

- PO22** Development does not involve reclamation of land below tidal water, other than for the purposes of:
1. coastal-dependent development, public marine development or community infrastructure; or
 2. strategic ports, priority ports, boat harbours or strategic airports and aviation facilities, in accordance with a statutory land use plan or master plan, where there is a demonstrated net benefit for the state or region and no feasible alternative exists; or
 3. coastal protection work or work necessary to protect coastal resources or coastal processes.

Not applicable

N/A

5.0 Recommendations

5.1 Technical agency advice for SARA as referral agency

Our agency:

- (a) recommends the following issues be addressed by applying conditions that should attach to any development approval (*Planning Act 2016* section 56(1)(b)(i)):

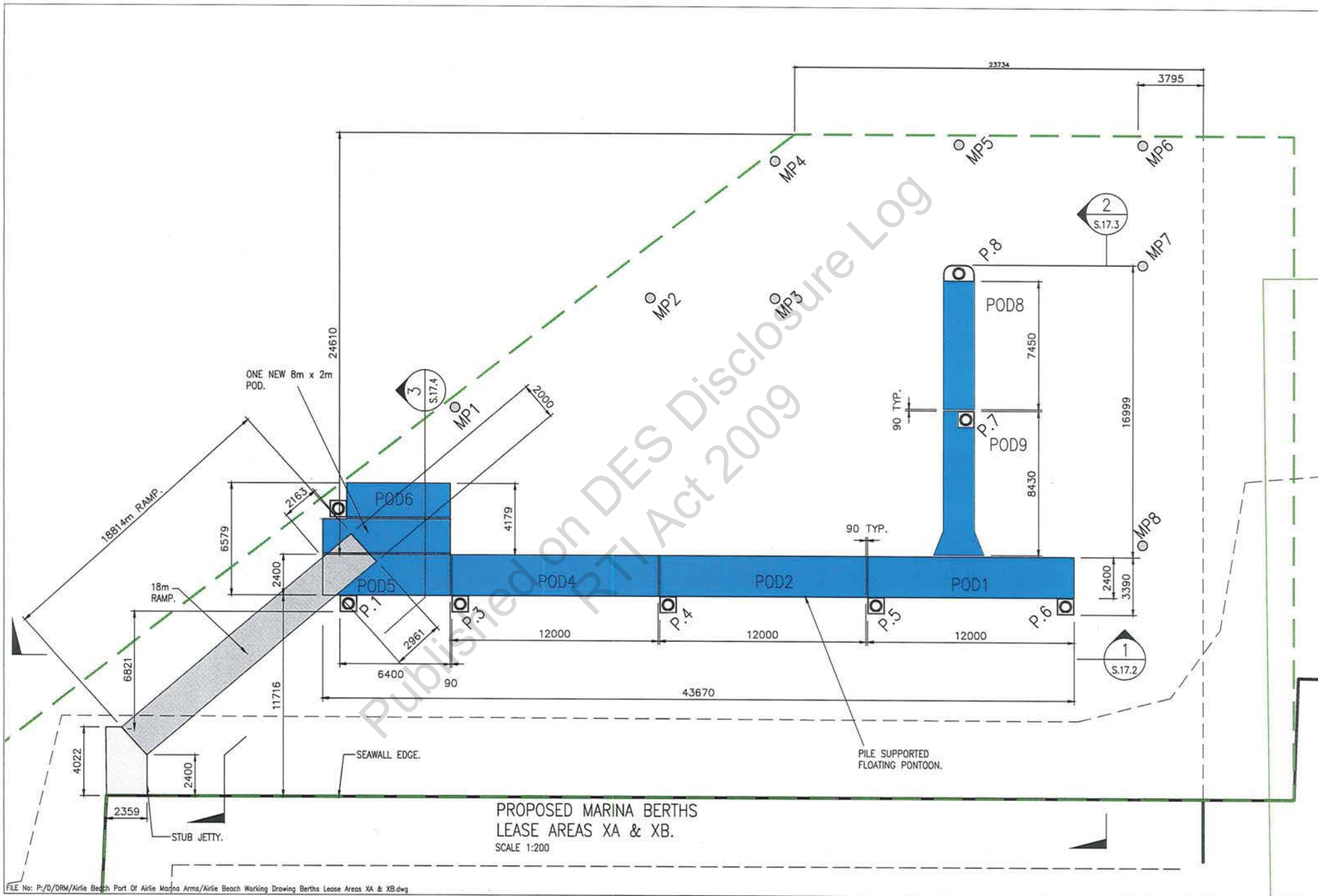
Aspect of development: Operational Works		
No.	Condition ID	Issues to be addressed or variations to model condition
1.	AD01	<p>The Port of Airlie – Proposed Arm ‘A’ Marina Berths works must be carried out generally in accordance with the following plans:</p> <ul style="list-style-type: none"> • Plan on proposed revised lease areas XA in lot 123 & XB in lot 120 on SP218220 showing berthing facility, prepared by Australian Ports and Marinas, dated 23/08/18, drawing no. 2260818, sheet S.17.1, version D • Section 1 – Revised lease areas XA in lot 123 & XB in lot 120 on SP218220 showing berthing facility, prepared by Australian Ports and Marinas, dated 23/08/18, drawing no. 2260818, sheet S.17.2, version D • Section 2 – Revised lease areas XA in lot 123 & XB in lot 120 on SP218220 showing berthing facility, prepared by Australian Ports and Marinas, dated 23/08/18, drawing no. 2260818, sheet S.17.3, version D • Section 3 on 18m ramp, prepared by Australian Ports and Marinas, dated 23/08/18, drawing no. 2260818, sheet S.17.4, version D • Port of Airlie, Marina Arm A, locality plan and general notes, prepared by Trevor Glasson Consulting Services, dated 8/8/18, drawing no. 18018 20B, version B • Port of Airlie, Marina Arm A, footpath detail, prepared by Trevor Glasson Consulting Services, dated 8/8/18, drawing no. 18018 22B, version B <p>Timing: For the duration of the works</p>
2.	CP01	<p>For the proposed works, only use clean materials and ensure that the works do not cause contamination.</p> <p>Timing: For the duration of works</p>
3.	CPO2A	<p>Erosion and sediment control measures which are in accordance with Best Practice Erosion and Sediment Control (BPESC) guidelines for Australia</p>

R

		<p>(International Erosion Control Association), are to be installed and maintained to prevent the release of sediment to tidal waters.</p> <p>Timing: For the duration of works</p>
4.	CPO3	<p>Should the proposed Arm 'A' Marina Berths works collapse, fail or otherwise suffer structural consequences which impact their integrity or ability to function as intended, the works must be:</p> <p>(a) reinstated in accordance with this development approval; or (b) removed and disposed of at an appropriately licensed facility.</p> <p>Timing: As soon as reasonably practicable subsequent to the damage</p>
5.	CP08	<p>(a) In the event that the works cause disturbance or oxidisation of acid sulfate soil, the affected soil must be treated and thereafter managed (until the affected soil has been neutralised or contained) in accordance with the current <i>Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines</i>, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014.</p> <p>(b) Certification by an appropriately qualified person, confirming that the affected soil has been neutralised or contained, in accordance with (a) above is to be provided to palm@des.qld.gov.au or mailed to:</p> <p style="padding-left: 40px;">Department of Environment and Science Permit and Licence Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001</p> <p>Timing:</p> <p>(a) Upon disturbance or oxidisation until the affected soil has been neutralised or contained (b) At the time the soils have been neutralised or contained</p> <p>Note: Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.</p>

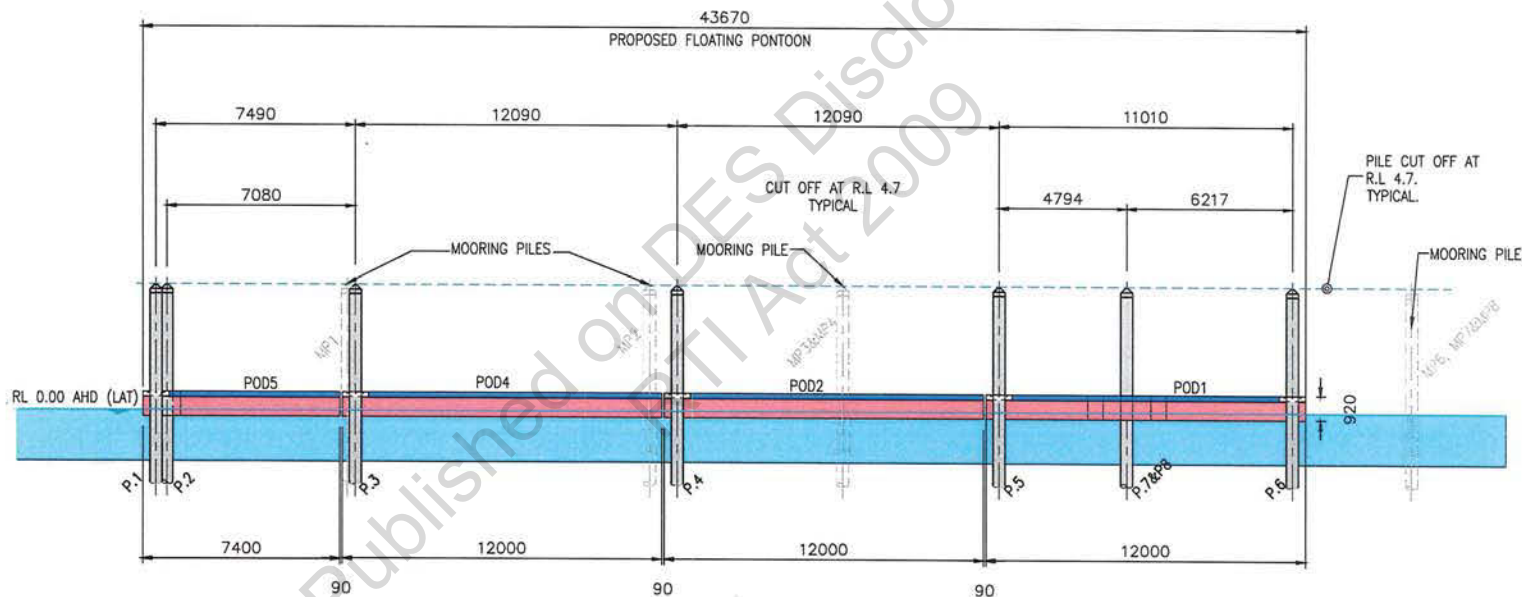
6.0 Endorsement

Officer	David Toms	Environmental Officer	3330 5045	david.toms@des.qld.gov.au
	sign:			date:
Reviewer	Dan Garnett	Principal Environmental Officer	3330 5357	Dan.Garnett@des.qld.gov.au
	sign: CTPI 49-Sch4			date: 20/11/18
Approver	Amanda Gray	Manager		Amanda.gray@des.qld.gov.au
	sign: CTPI 49-Sch4			date: 20/11/18



FILE No: P/D/DRM/Airline Beach Port Of Airline Marina Arms/Airline Beach Working Drawing Berths Lease Areas XA & XB.dwg

<p>Copyright</p> <p>this design and drawing are not to be used or reproduced wholly or in part without written permission</p> <p>21-004</p>	<table> <tr> <td>D</td><td>GENERAL AMENDMENTS</td><td>23.08.18</td><td>CTP</td><td>3.10.17</td></tr> <tr> <td>C</td><td>GENERALLY AMENDED - NOTES & TITLES.</td><td>20.08.18</td><td>CTP</td><td>02.08.18</td></tr> <tr> <td>B</td><td>AMENDED 18814mm RAMP AND STUB JETTY.</td><td>07.08.18</td><td>CTP</td><td>02.08.18</td></tr> <tr> <td>A</td><td>DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION</td><td>02.08.18</td><td>CTP</td><td>02.08.18</td></tr> </table>	D	GENERAL AMENDMENTS	23.08.18	CTP	3.10.17	C	GENERALLY AMENDED - NOTES & TITLES.	20.08.18	CTP	02.08.18	B	AMENDED 18814mm RAMP AND STUB JETTY.	07.08.18	CTP	02.08.18	A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION	02.08.18	CTP	02.08.18	<p>PLAN ON PROPOSED REVISED LEASE AREAS XA IN LOT 123 & XB IN LOT 120 ON SP218220 SHOWING BERTHING FACILITY</p>	<p>Australian Ports and Marinas</p> <p>DATE: 30, 330 WATTLE STREET DOWNEY DOWNEY, NSW, AUSTRALIA 2007 www.austliorportsandmarinas.com.au</p> <p>YOUR MARITIME DEVELOPMENT PARTNER - PRELIMINARY & FEASIBILITY STUDIES - PLANNING & APPROVALS - DESIGN FOR CONSTRUCTION - TENDERING & PROJECT MANAGEMENT</p> <p>PH: +61 2 9282 8928 F: +61 2 9282 8928 E: info@portsandmarinas.com.au</p>	<p>PORT OF AIRLIE - PROPOSED ARM 'A' MARINA BERTHS. LEASE XA IN LOT 123 & LEASE XB IN LOT 120, ON SP218220. FOR: MERIDIAN AIRLIE BEACH Pty Ltd AIRLIE BEACH</p> <p>ISSUE DRAWING NO. D 2260818 SHEET NO. S.17.1</p>
D	GENERAL AMENDMENTS	23.08.18	CTP	3.10.17																				
C	GENERALLY AMENDED - NOTES & TITLES.	20.08.18	CTP	02.08.18																				
B	AMENDED 18814mm RAMP AND STUB JETTY.	07.08.18	CTP	02.08.18																				
A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION	02.08.18	CTP	02.08.18																				



1 ELEVATION
S.17.1 SCALE 1:200

FILE No: P:/D/DRM/Airlie Beach Port Of Airlie Marina Arms/Airlie Beach Working Drawing Berths Lease Areas XA & XB.dwg

Copyright		this design and drawing are not to be used or reproduced wholly or in part without written permission		21-004	
D	PILES HEIGHT AMENDED TO R.L.4.7	CTP	23.08.18	CT	23.10.17
C	GENERALLY AMENDED - NOTES & TITLES	CTP	20.08.18	CT	20.08.18
B	AMENDED 1881mm RAMP AND STUB JETTY	CTP	07.08.18	CT	12.08.18
A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION	CTP	02.08.18	CT	02.08.18
LETTER	DETAILS OF AMENDMENT	BY	DATE	BY	DATE

SECTION 1 - REVISED LEASE AREAS XA IN LOT 123 & XB IN LOT 120 ON SP218220 SHOWING BERTHING FACILITY

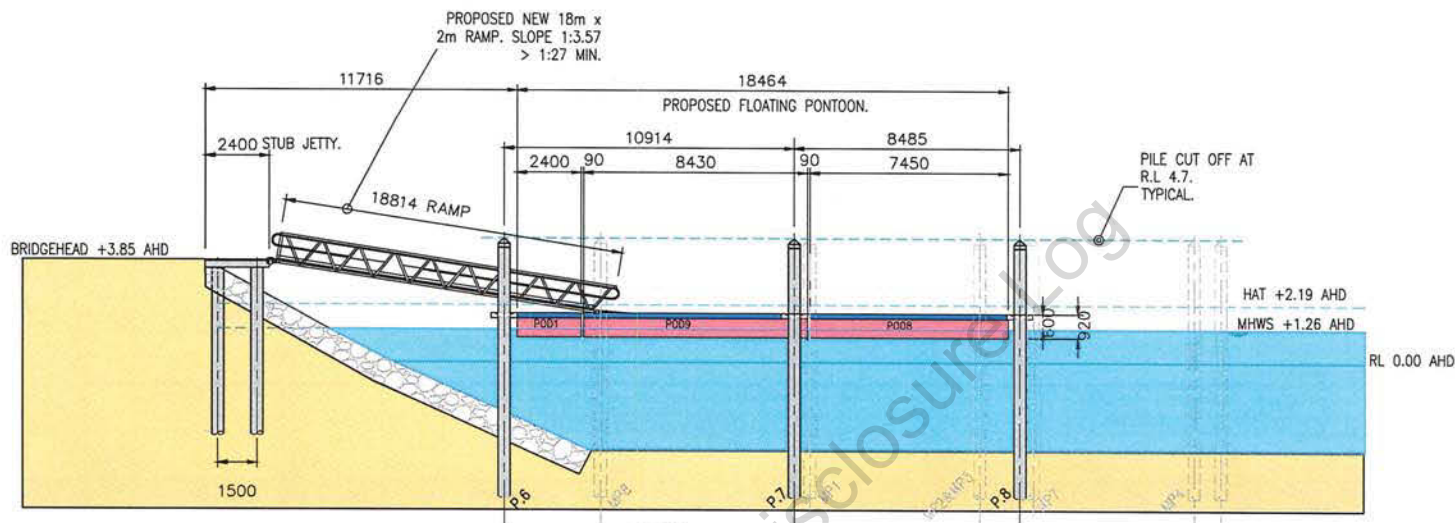
Australian Ports and Marinas

SUITE 30, 330 HUTTEN STREET SYDNEY NSW, AUSTRALIA 2007
www.austliaportsandmarinas.com.au

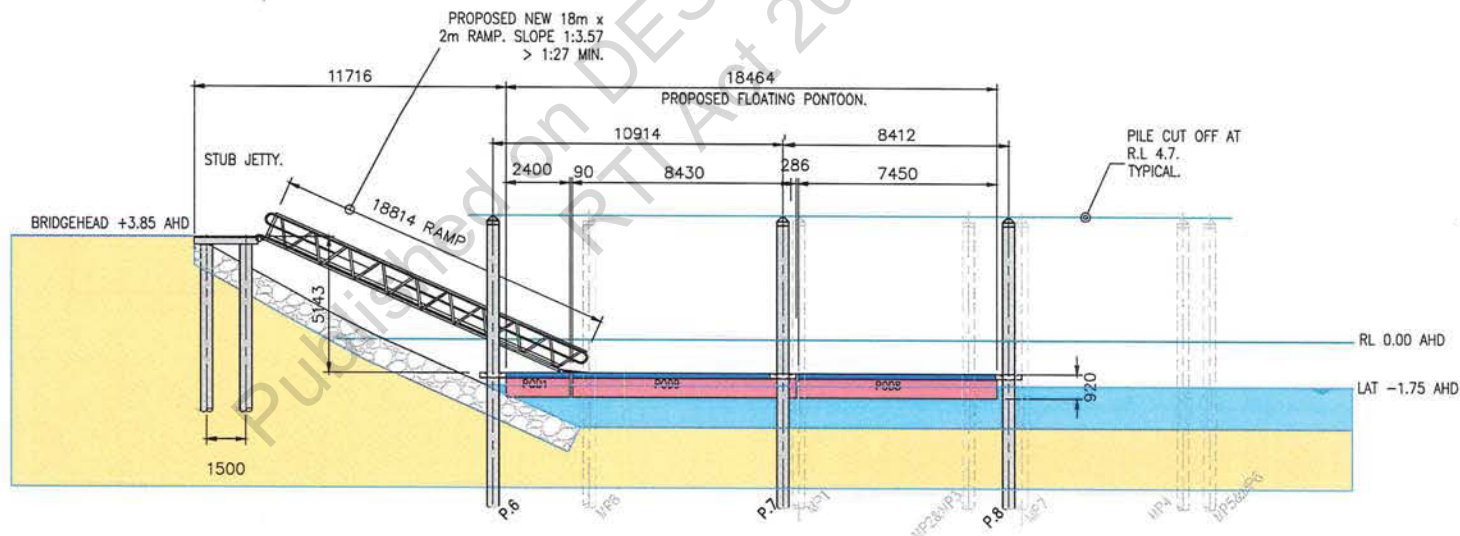
YOUR WHARF DEVELOPMENT PARTNER
- PRELIMINARY & FEASIBILITY STUDIES
- PLANNING & APPROVALS
- DESIGN FOR CONSTRUCTION
- TENDERING & PROJECT MANAGEMENT

FOR: MERIDIAN AIRLIE BEACH Pty Ltd
AIRLIE BEACH

ISSUE	DRAWING No.
D	2260818
SHEET No.	S.17.2



2 ELEVATION ON MLWS.
S.17.1 SCALE 1:200



2 ELEVATION ON LAT -175 AHD
S.17.1 SCALE 1:200

FILE No: P/D/DRM/Airle Beach Port Of Airle Marina Arms/Airle Beach Working Drawing Berths Lease Areas XA & XB.dwg

Copyright		this design and drawing are not to be used or reproduced wholly or in part without written permission		21-004	
D	PILES HEIGHT AMENDED TO RL4.7 - REMOVED INCORRECT REFERENCES	CTF	23.08.18	CT	23.10.17
C	GENERALLY AMENDED - NOTES & TITLES.	CTF	20.08.18	CT	02.08.18
B	AMENDED 18814mm RAMP AND STUB JETTY.	CTF	07.08.18	CT	02.08.18
A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION	CTF	02.08.18	CT	02.08.18
LETTER	DETAILS OF AMENDMENT	BY	DATE	CT	02.08.18

SECTION 2 - REVISED LEASE AREAS XA IN LOT 123 & XB IN LOT 120 ON SP218220 SHOWING BERTHING FACILITY

Australian Ports and Marinas

SUITE 34, 330 WATTLE STREET SYDNEY, NSW, AUSTRALIA 2007

PH +61 2 9292 8928

www.australianportsandmarinas.com.au

YOUR WHARF DEVELOPMENT PARTNER

- PRELIMINARY & FEASIBILITY STUDIES
- PLANNING & APPROVALS
- DESIGN FOR CONSTRUCTION
- TENDERING & PROJECT MANAGEMENT

PORT OF AIRLE - PROPOSED ARM 'A' MARINA BERTHS, LEASE XA IN LOT 123 & LEASE XB IN LOT 120, ON SP218220.

FOR: MERIDIAN AIRLIE BEACH Pty Ltd

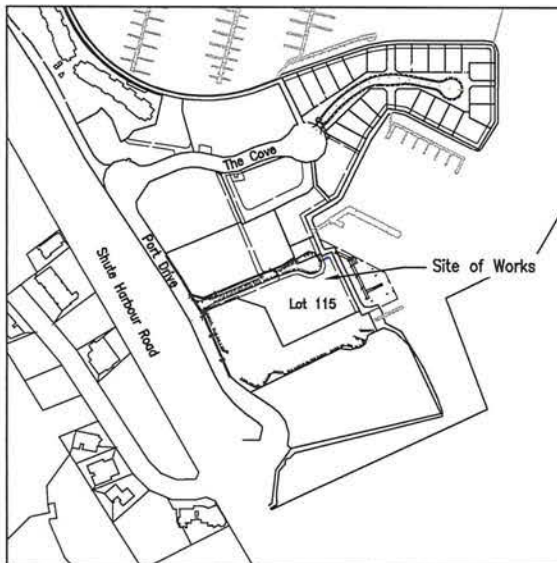
AIRLIE BEACH

ISSUE D

DRAWING No. 2260818

SHEET No.

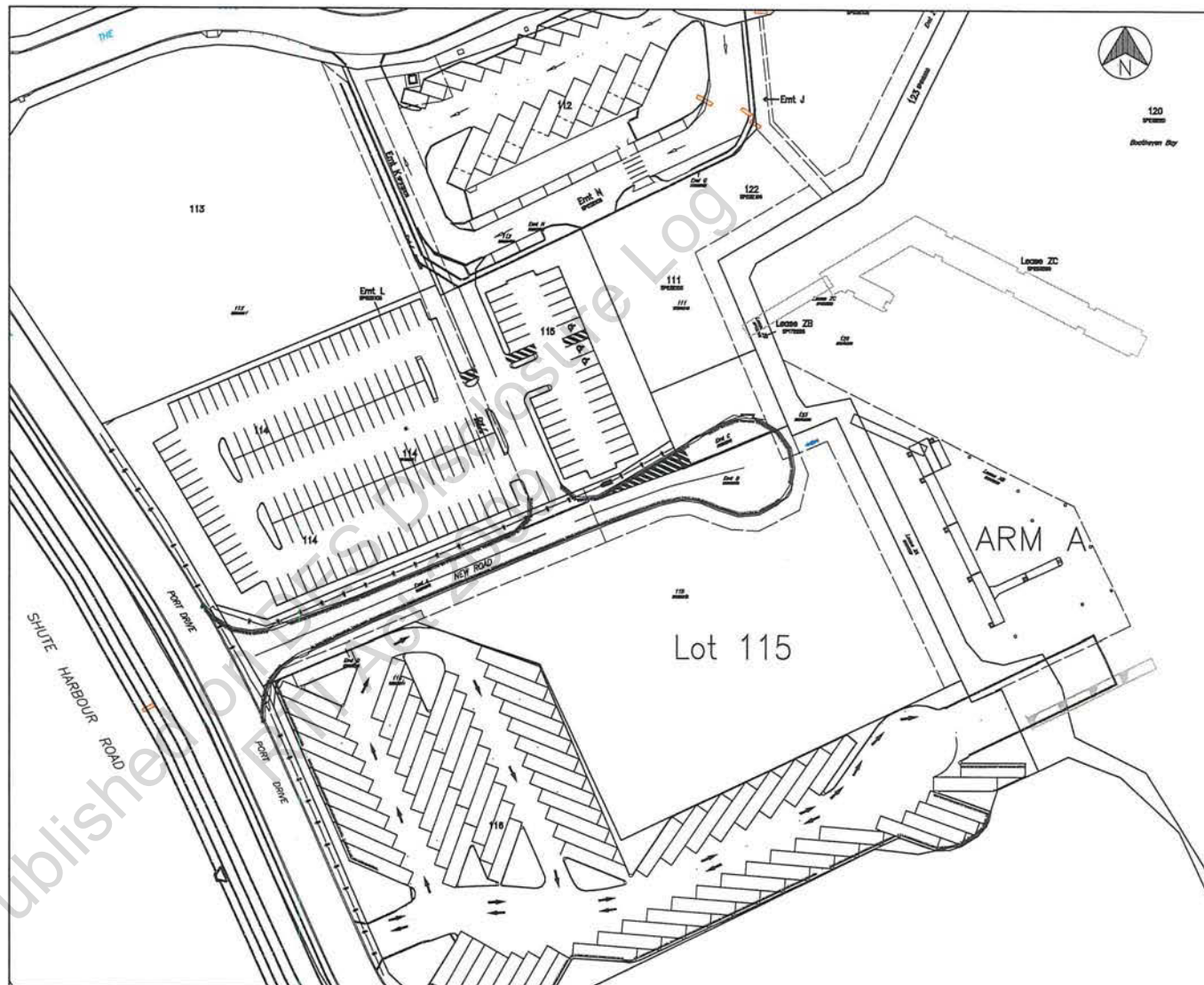
S.17.3



LOCALITY PLAN
Scale 1:2500

General Notes

1. All work on this contract is to be carried out in accordance with the job specification, the Whitsunday Regional Council Development Manual, the associated WRC Standard Drawings and to the satisfaction of the Superintendent.
2. The Contractor is to contact Ergon, Telstra, Council and any other service authorities and locate existing underground services prior to construction.
3. Conduit locations, if shown on the plans, are provisional only, and the Contractor is to liaise with the Superintendent, Telstra and the Electrical Consultant for their final plans immediately prior to laying road and footpath conduits.
4. The engineering design is based partly on a data terrain model, computer generated from the site survey and some elements of the survey data are interpolated and may vary from the actual site conditions. The Contractor shall liaise with the Superintendent and the Surveyor and set out the works only from the approved reference pegs and level bench marks.
5. The Contractor is to arrange his works in accordance with these plans and Council's Development Manual so erosion, deposition of silt, and stormwater runoff from the site does not exceed the pre-construction rates at any times as a result of their actions.
6. No work is to commence on the site until the approval of Council has been received in writing and an official pre-start meeting with representatives of Council, the Contractor and the Superintendent has been held. The Contractor is to obtain a copy of the minutes of the pre-start meeting and shall comply with all requirements thereof.
7. No work is to commence on the site until the Contractor has confirmed with the Superintendent the plans and documentation they have are the latest amendment and are approved for construction.



Drawing No	Description
18018 20	Locality Plan and General Notes
18018 21	Domestic and Fire Water Service Detail
18018 22	Footpath Detail
18018 23	Electrical Conduit plan

Certified by
CTPI 49-Sch4
CTPI

APPROVED FOR
CONSTRUCTION

Real Property Description
Lot 115 on SP 218220
Port Drive, Airlie Beach
Parish of Conway, County of Herbert

No.	Date	By	Revision Description
A	7/5/16	CTP	Original Issue
B	8/8/16	CTP	Gateway length amended

SCALES
Horizontal 0 1 in 500 (A1) 20m.
WHITSUNDAY REGIONAL COUNCIL
DEVELOPMENT APPLICATION No.

Designed CTF
Checked
Approved

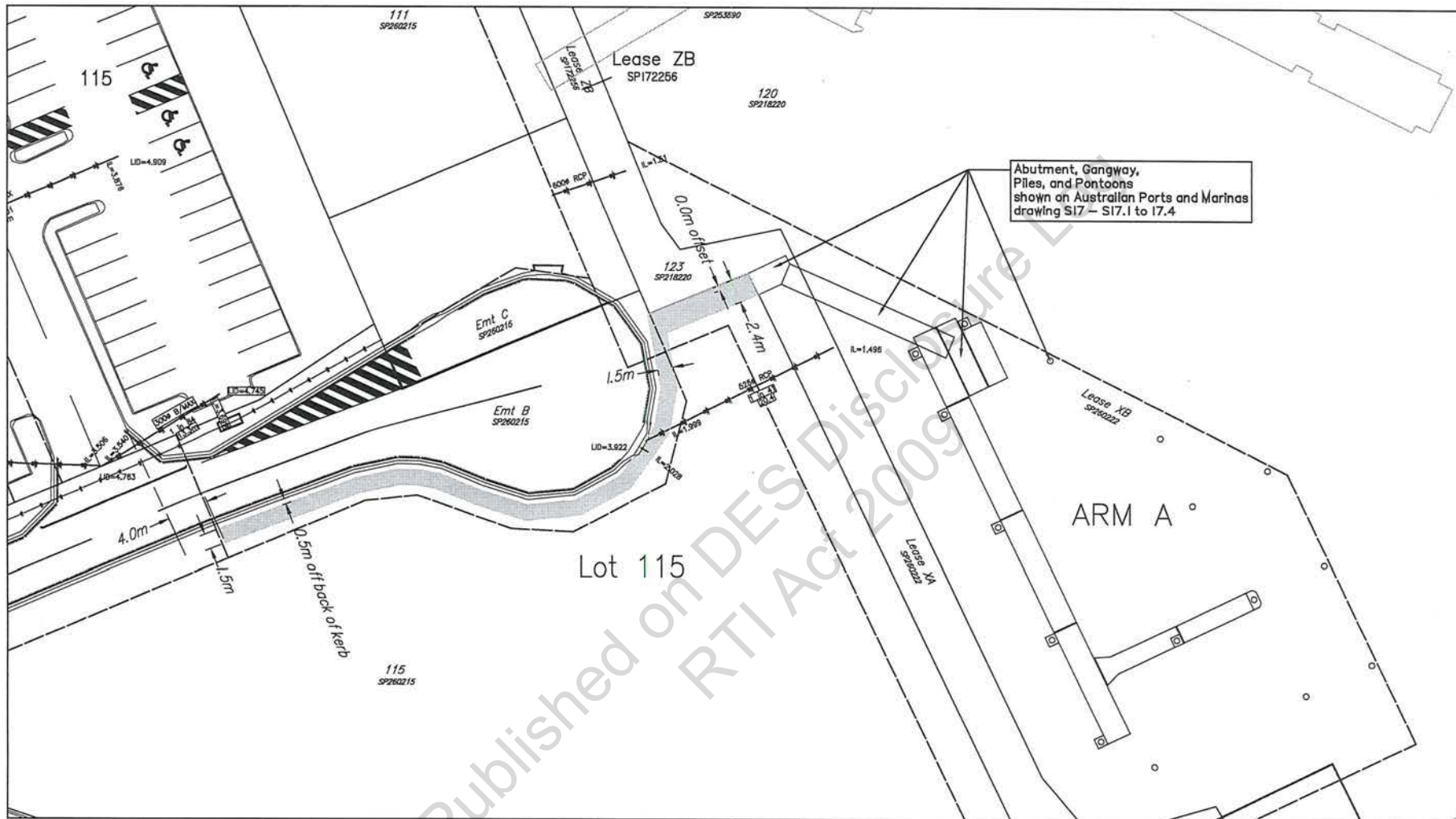
Trevor Glasson
Consulting Services

Address PO Box 983
Proserpine QLD 4800
Mobile 0432 323 823
Email trevor.glasson@tgspond.com

Meridian AB Pty Ltd (Administrators Appointed) and
Meridian Airlie Beach Pty Ltd (Administrators Appointed)
(Both Receiver and Managers Appointed)
trading as Windward Airlie Beach Partnership

Port of Airlie
Marina Arm A
Locality Plan and General Notes

Scale: 1:500 (A1)
Drawing No: 18018 20B



Concrete Footpath



100mm thick concrete
with F72 mesh
25Mpa concrete

Certified by

CTPI 49-Sch4

CTPI 49-Sch4

APPROVED FOR
CONSTRUCTION

Real Property Description
Lot 120 on SP 218220
Port Drive, Airlie Beach
Parish of Carway, County of Herbert

No.	Date	By	Revision Description
A	7/5/18	CTP	Original Issue
B	8/9/18	CTP	Gangway length amended

SCALES
Horizontal 0 1 in 200 (A1) 20m
WHITSUNDY REGIONAL COUNCIL
DEVELOPMENT APPLICATION No. _____

Designed CT
Checked
Approved

Trevor Glasson
Consulting Services

Address

PO Box 983
Proserpine QLD 4800
0432 323 823
trevor.glasson@bigpond.com

Meridian AB Pty Ltd (Administrators Appointed); and
Meridian Airlie Beach Pty Ltd (Administrators Appointed)
(Both Receiver and Managers Appointed)
trading as Windward Airlie Beach Partnership

Port of Airlie
Marina Arm A
Footpath Detail

Scale: 1:200 (A1)

Drawing No:
18018 22B



ACCESS
Town Planning Consultants

P: CTPI 49-Sch4

E: CTPI@accessnpc.com.au

A: PO BOX 703,
Fortitude Valley QLD 4006

Our Ref: 17.034
Your Ref: 1809-7328 SRA

19 October 2018

The Senior Planning Officer
DSDMIP
MIW Regional Office

Attention: Felicity Laub
Electronic Lodgement

Dear Felicity,

**APPLICANT'S RESPONSE TO A REFERRAL ACTION NOTICE
PROPOSED NEW MARINA ARM A, PORT OF AIRLIE MARINA, AIRLIE BEACH**

We act for Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Both Receivers and Managers Appointed)(Both in Liquidation), applicants for the above-mentioned development application.

This correspondence and attachments provide the applicant's response to your department's action notice dated 19 September 2018.

Attached is a brief report by Hydrobiology confirming that *"the installation of the proposed marina berth pylons as depicted (on the proposed development plans) is not going to result in the removal, damage or destruction (temporary or permanent) of marine vegetation."*

As such, the subject application does not require referral pursuant to Schedule 10, Part 6, Division 3, Subdivision 3, Table 1 of the *Planning Regulation 2017*.

Please direct any queries to the undersigned.

Yours faithfully
ACCESS TOWN PLANNING CONSULTANTS

CTPI 49-Sch4

CTPI 49-Sch4

Director

Meridien Airlie Beach Pty Ltd & Meridien AB Pty Ltd
(Receivers and Manager's Appointed) (Both in
Liquidation)
Trading as Windward Airlie Beach Partnership
PO Box 586
Airlie Beach Q 4802

18 October 2018

CC: CTPI 49-Sch4 (Balmain Asset Management); CTPI 49-S
CTPI 49- Access Town Planning)

PROPOSED MARINA BERTHS – LEASE XA IN LOT 123/SP218220 AND LEASE XB IN LOT 120/SP218220

Dear Sirs,

Hydrobiology was commissioned to undertake a vegetation survey at Airlie Beach within the direct footprint of proposed marina berths. The study sites are located in lease XA (Lot 123) and lease XB (Lot 120) on SP218220 in Boathaven Bay, Airlie Beach (Attachment A). The proposed construction will begin at the bridgehead and involves a stub jetty, ramp, floating pontoon (comprised of individual pods) and mooring piles.

The first survey was conducted on foot at low tide (5:50am, 12 October 2018), and involved a visual assessment of the seawall edge (lease XA) and shallow waters (lease XB). The intertidal section of the seawall as well as adjacent mooring piles were covered in oysters (Figure 1). The substrate was dominated by 95% silt with 5% gravel; despite agitating the sediments there was **no evidence of seagrasses or other stiffer substrate capable of supporting vegetation growth** (Figure 1). A visual observation of a faint oil film on the water was noted.

The second survey was conducted by boat at 9:50am (Figure 3). The high turbidity of the waters precluded any useful footage from the underwater camera (CCTV ¼ Sony CCD Fishing Underwater LED Camera). That is, waters were too cloudy to identify any features (Figure 3). The turbidity was a product of continual resuspension of the silty substrate with the wash generated by the adjacent cruise/ferry terminal and is likely a continual presence as there was no rainfall during the preceding 24 hours.

The presence of high turbidity hinders the photosynthetic abilities of seagrass, rendering their presence unlikely. Previously recorded seagrasses in broader Boathaven Bay (not in the vicinity of the proposed marina berths) include 6 species (*Halophila ovalis*, *H. decipiens*, *H. spinulosa*, *Halodule uninervis*, *Syringodium isoetifolium* and *Zostera muelleri*) (FRC 2015). *H. ovalis* and *H. uninervis* are more commonly found in shallow (<5m) waters. All aforementioned species are sensitive to resuspensions of silt as well as anoxic sediments. **The installation of the proposed marina berth pylons as depicted in Attachment A is not going to result in the removal, damage or destruction (temporary or permanent) of marine vegetation.**



STREET
27 / 43 Lang Parade
Auchenflower 4066
QUEENSLAND



POSTAL
PO Box 2151
Toowong 4066
QUEENSLAND



CONTACT
+61 (0)7 3721 0100 P
info@hydrobiology.biz

During surveys GPS (GDA94) coordinates were recorded (track displayed in Figure 3) as well as any pertinent notes. Photos of the direct surrounding environment were also taken for context.

It is worth noting that adjacent to the proposed construction is lease ZC, which currently operates as a cruise ship terminal and lease YB, operating as a public recreational boat ramp. Further along is Lot 117 which is currently being used as a dredged sediment stockpile (Figure 2). The impacts as a result of activities operating out of these adjacent leases as well as maintenance dredging (minimum depth of 2.5m, running adjacent to lease ZC) indicates that any marine vegetation that manages to colonise the local substrate will have a limited lifespan. Surrounding substrate exposed at low tide, so within the established depth ranges and available light to support growth, showed no signs of seagrass.

If you have any questions or require any clarification, please don't hesitate to contact Hydrobiology on (07) 3721 0100.

CTPI 49-Sch4

CTPI 49-Sch4

Scientist, Ecology and Biodiversity Management

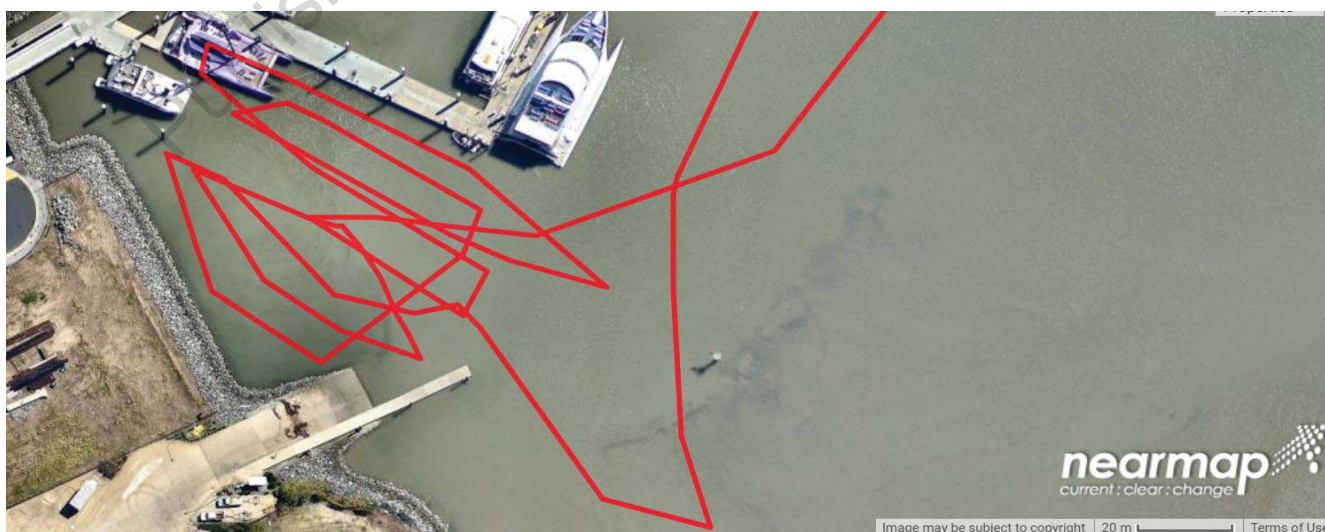
Our Reference: BAM1803_L_1_v1-1.docx



Figure 1: Low tide visual survey. Left: oysters on intertidal seawall. Right: Silt substrate



Figure 2 Adjacent cruise ship moorings and public boat ramp



*Note: GPS tracks are recorded to $\pm 25\text{m}$

Figure 3 Satellite imagery of study area with path taken by boat using drop camera (red)

ATTACHMENT A – SELECTED DEVELOPMENT DRAWINGS

Published on DES Disclosure Log
RTI Act 2009

PROPOSED LOT 123 & LOT 120 IN SP218220

BERTH FACILITIES . AIRLIE BEACH.

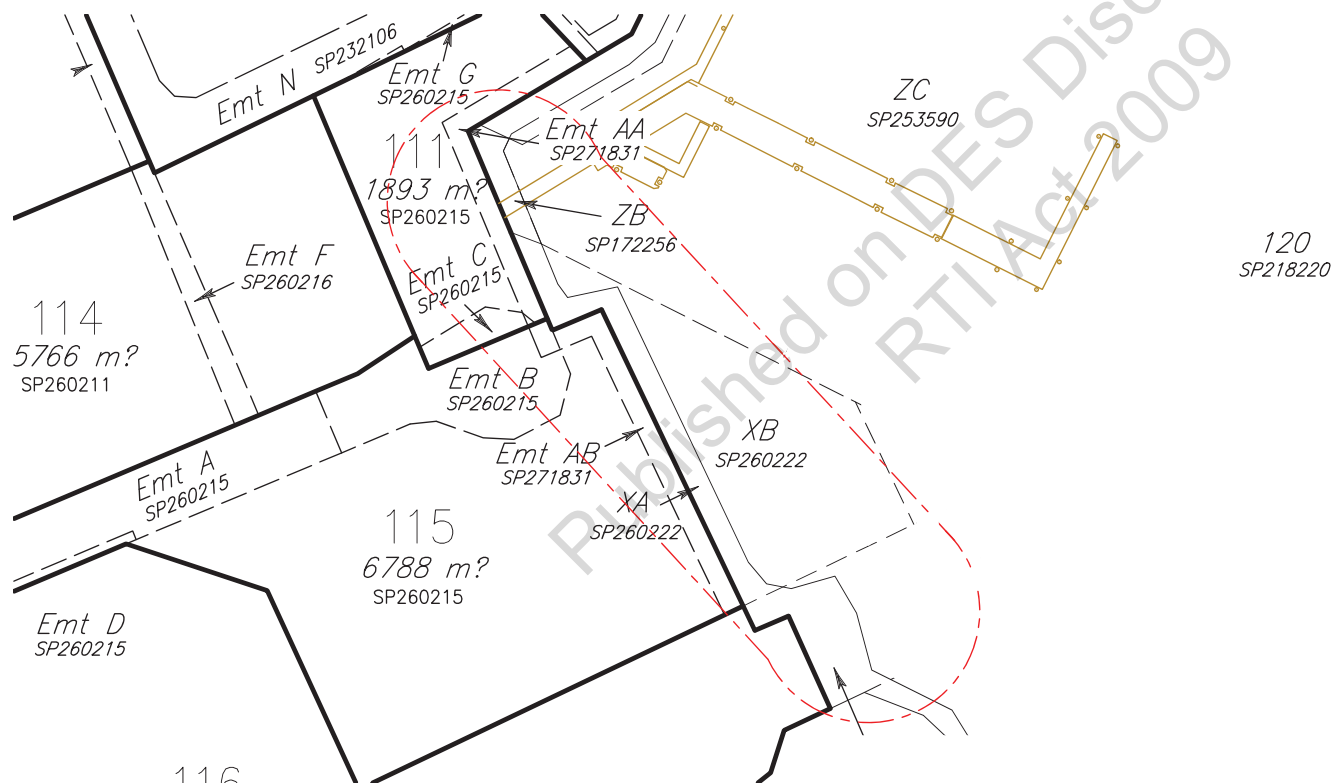
AIRLIE BEACH DRAWING SCHEDULE	
TITLE	SHEET NUMBER
COVER SHEET AND DRAWING SCHEDULE	S.17
PLAN ON PROPOSED COMMERCIAL BERTHS	S.17.1
SECTION 1	S.17.2
SECTION 2	S.17.3
SECTION 3	S.17.4

GENERAL NOTES:

THE DESIGN OF THE STUB JETTY, 18.8m RAMP, FLOATING MARINA SECTIONS, MARINA SUPPORT PILES & ALL MOORING/FENDER PILES IS STRICTLY IN ACCORDANCE WITH ALL CURRENT & RELEVANT AUSTRALIAN CODES & STANDARDS INCLUSIVE OF;

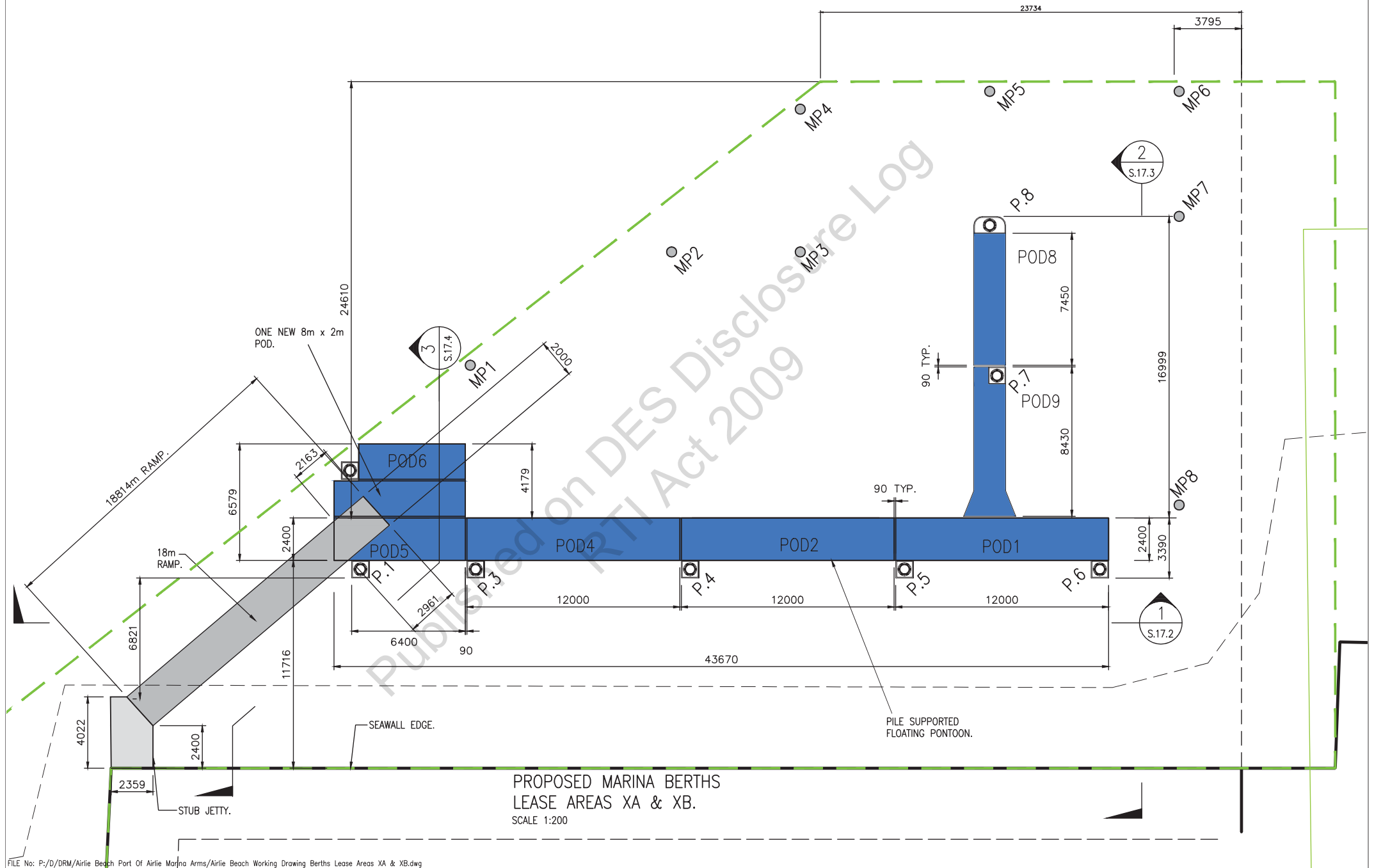
1. AS/NZS 1170.0.
2. AS/NZS 1170.1.
3. AS/NZS 1170.2.
4. AS/NZS 1170.4.
5. AS3962.
6. AS4997.
7. STRICTLY IN ACCORDANCE WITH THE COASTAL PROTECTION & MANAGEMENT ACT 1995.

LIGHTING & VISIBILITY MEASURES TO BE PROVIDED STRICTLY IN ACCORDANCE WITH STATE CODE 7 (MARITIME SAFETY) & AS4282-1997.



FILE No: P:/D/DRM/Airlie Beach Port Of Airlie Marina Arms/Airlie Beach Working Drawing Berths Lease Areas XA & XB.dwg

Copyright this design and drawing are not to be used or reproduced in any part without written permission 21004	D	GENERALLY AMENDED – RED HATCHED AREA REMOVED.	<div>DESIGNED 23.08.18 DRAWN 20.08.18 CHECKED 02.08.18 BY DATE</div>	<div>23.10.17 2.08.18 2.08.18 2.08.18</div>	COVER SHEET AND DRAWING LIST File A	<div>Australian Ports and Marinas SUITE 36, 330 WATTLE STREET SYDNEY SYDNEY, NSW, AUSTRALIA 2007 www.australportsandmarinas.com.au</div>	<div>YOUR MARITIME DEVELOPMENT PARTNER – PRELIMINARY & FEASIBILITY STUDIES – PLANNING & APPROVALS – DESIGN FOR CONSTRUCTION – TENDERING & PROJECT MANAGEMENT PH: +61 2 9282 9926 M: +61 2 9282 9926 E: info@australportsandmarinas.com.au</div>	PORT OF AIRLIE – PROPOSED ARM 'A' MARINA BERTHS. LEASE XA IN LOT 123 & LEASE XB IN LOT 120, ON SP218220. FOR: MERIDIAN AIRLIE BEACH PTY LTD AIRLIE BEACH	ISSUE	DRAWING No.
	C	GENERALLY AMENDED – NOTES & TITLES.							D	2260818
	B	AMENDED 18814mm RAMP AND STUB JETTY.								
	A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION								
	LETTER	DETAILS OF AMENDMENT								



FILE No: P:/D/DRM/Airline Beach Port Of Airline Marina Arms/Airline Beach Working Drawing Berths Lease Areas XA & XB.dwg

Copyright

this design and drawing are not to be used or reproduced in any part without written permission

LETTER	DETAILS OF AMENDMENT
D	GENERAL AMENDMENTS
C	GENERALLY AMENDED - NOTES & TITLES.
B	AMENDED 18814mm RAMP AND STUB JETTY.
A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION

CTP	DESIGNED	3.10.17
CTP	DRAWN	02.08.18
CTP	CHECKED	02.08.18
CTP	APPROVED	02.08.18
CTP	BY	DATE

PLAN ON PROPOSED REVISED
LEASE AREAS XA IN LOT 123 &
XB IN LOT 120, ON SP218220
SHOWING BERTHING FACILITY

Australian
Ports and Marinas
SUITE 36, 330 WATTLE STREET SYDNEY
SYDNEY, NSW, AUSTRALIA 2007
www.australianportsandmarinas.com.au

YOUR MARITIME DEVELOPMENT PARTNER
- PRELIMINARY & FEASIBILITY STUDIES
- PLANNING & APPROVALS
- DESIGN FOR CONSTRUCTION
- TENDERING & PROJECT MANAGEMENT

PORT OF AIRLIE - PROPOSED ARM 'A' MARINA
BERTHS. LEASE XA IN LOT 123 & LEASE XB IN
LOT 120, ON SP218220.
FOR: MERIDIAN AIRLIE BEACH PTY LTD

ISSUE	DRAWING No.
D	2260818
	SHEET No.
	S.17.1

Council reference: 20181227
Contact Officer: D W Mackay
Officer Direct Line: 4945 0651

13 September 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd
(Both Receiver and Managers Appointed) (Both in Liquidation)
C/- Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006

Customer Service Centres

Bowen

P: 07 4761 3600
67 Herbert Street
Bowen Qld 4805

Collinsville

P: 07 4785 5366
Cnr Stanley and Conway Streets
Collinsville Qld 4804

Proserpine

P: 07 4945 0200
83-85 Main Street
Proserpine Qld 4800

F: 07 4945 0222

E: info@whitsundayrc.qld.gov.au

W: www.whitsundayrc.qld.gov.au

ABN 63 291 580 128

Dear Sir/Madam

CONFIRMATION NOTICE

(Given under section 2 of the Development Assessment Rules)

The development application described below was properly made to the Whitsunday Regional Council on 11 September 2018.

Location details

Street address: 18 Port Drive AIRLIE BEACH, 2 Port Drive AIRLIE BEACH
Real property description: L: 120 P: BHM SP: 218220 T: TL 0/23003 & LEASE ZC/SP253590LEASES EAI, L: 115 SP: 260215 T: & EMT A, B & D& AB/SP271831, L: 123 P: BHM SP: 218220 T: TL 0/233003
Local government area: Whitsunday Regional Council

Application details

Application number: 20181227
Approval sought: DEVELOPMENT PERMIT FOR OPERATIONAL WORKS - NEW MARINA ARM 'A' PORT OF AIRLIE
Applicable Planning Scheme: WHITSUNDAY REGIONAL PLANNING SCHEME 2017

Public notification details

Part 4 of the Development Assessment Rules is not applicable to this development application.

Referral details

Part 2 of the Development Assessment Rules is applicable to the development application.

The development application must be referred to all relevant referral agency(s) within 10 business days starting the day after receiving this notice, or a further period agreed with the assessment manager; otherwise the application will lapse under section 31 of the Development Assessment Rules.

This list is provided for your information only. It is the applicant's responsibility to identify any referral agencies for the application and give each referral agency a copy of:

- the application (including the application forms and supporting material)
- this confirmation notice, and
- any required fee.

Matters of state interest	Development type	Relevant provisions of the Regulation	Referral agency's powers	Lodgement details
Tidal works or work in a coastal management district	Operational work	Schedule 10, part 17, div 3, table 1	Concurrence	<p><u>MyDAS2 electronic lodgement:</u> http://www.dilgp.qld.gov.au/planning/development-assessment/electronic-lodgement.html</p> <p><u>Standard post lodgement:</u> DILGP SARA – Mackay Isaac Whitsunday Regional Office PO Box 257 MACKAY QLD 4740</p> <p><u>Email lodgement:</u> MIWSARA@dilgp.qld.gov.au</p>
Assessable development under s28 involving a marina, as defined under the <i>Transport Operations (Marine Pollution) Act 1995</i> , with more than 6 vessel births	Operational work	Schedule 10, part 17, div 3, table 4	Advice	<p><u>Standard lodgement</u> QFES PO Box 5845 Townsville QLD 4810</p> <p><u>Email lodgement</u> https://elodge.qfes.qld.gov.au/elodge/#goToLoginRequest</p>

Tidal works or work in a coastal management district	Operational work	Schedule 10, part 17, div 3, table 2	Concurrence	<p><u>MyDAS2 electronic lodgement:</u> http://www.dilgp.qld.gov.au/planning/development-assessment/electronic-lodgement.html</p> <p><u>Standard post lodgement:</u> DILGP SARA – Mackay Isaac Whitsunday Regional Office PO Box 257 MACKAY QLD 4740</p> <p><u>Email lodgement:</u> MIWSARA@dilgp.qld.gov.au</p>
--	------------------	--------------------------------------	-------------	---

Other details

You have stated you agree to accept an information request. The Whitsunday Regional Council may make an information request and is proceeding with its assessment of the development application.

Should you require any further information, please contact Council as referenced above.

Yours faithfully

CTPI 49-Sch4

Doug Mackay
Manager Development Assessment

Our reference: 1809-7328 SRA
Your reference: 17.034

19 September 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd
(Both Receivers and Managers Appointed) (Both in Liquidation)
C/- Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006
CTPI@accessipc.com.au

Attention: Mr. CTPI 49-Sch4

Dear CTPI 49-Sch4

Action notice

(Given under section 8 of the Development Assessment Rules)

The Department of State Development, Manufacturing, Infrastructure and Planning received your referral agency material for the following premises on 18 September 2018.

Location details

Street address:	2 Port Drive and 18 Port Drive, Airlie Beach
Real property description:	Lot 115 on SP260215; Lot 120 on SP218220 and Lot 123 on SP218220
Local government area:	Whitsunday Regional Council

Under the Planning Regulation 2017, the relevant referral requirements for the development application are as follows:

- 10.17.3.1.1 Tidal works or work in a coastal management district – Coastal Assessment
- 10.17.3.2.1 Tidal works or work in a coastal management district – Marine Safety

The application does not meet the requirements for a properly referred application under section 54 of the *Planning Act 2016*. The reasons for this decision are:

- Evidence has not been provided that the proposed work will not result in the removal, destruction or damage (temporary or permanent) or marine plants; OR
- Referral in accordance with Schedule 10, Part 6, Division 3, Subdivision 3, Table 1 of the Planning Regulation 2017 for removal, destruction or damage of marine plants, with the associated fee and State Development Assessment Provisions (SDAP) response to State code 11: Removal, destruction or damage of marine plants.

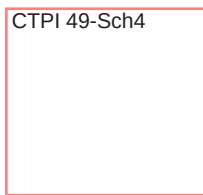
The application will not be accepted as properly referred until the following actions are taken:

- Evidence that the proposed work will not result in the removal, destruction or damage (temporary or permanent) of marine plants; OR
- Referral in accordance with Schedule 10, Part 6, Division 3, Subdivision 3, Table 1 of the Planning Regulation 2017 for removal, destruction or damage of marine plants, with the associated fee and SDAP response to State code 11: Removal, destruction or damage of marine plants.

The above actions must be completed within 20 business days of receiving this notice, or a further period agreed with the department, to avoid your application lapsing.

For further information please contact Felicity Laub, Senior Planning Officer, on (07) 4898 6814 or via email MIWSARA@dsdmip.qld.gov.au who will be pleased to assist.

Yours sincerely



Kylie Drysdale
Planning Manager
Mackay Isaac Whitsunday Regional Office

Cc: Whitsunday Regional Council, info@whitsundayrc.qld.gov.au

Request to extend a period

Section 33 of the Development Assessment Rules

SARA Reference:1809-7328 SRA (Assessment Manager Ref: 20181227)	[application reference number]
Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Both Receivers and Managers Appointed)(Both in Liquidation)	[applicant's name]
c/- Access Town Planning Consultants PO Box 703 Fortitude Valley Qld 4006 CTPI: accesstpc.com.au	[contact address/email address]
CTPI 49-Sch4	[contact number]
25/9/2018	[notice date]
Whitsunday Regional Council/SARA	[assessment manager/referral agency's name]
WRC: PO Box 104 Proserpine Qld 4800 SARA: PO Box 257 Mackay Qld 4740	[assessment manager/referral agency's address]

RE: Development application for:

Operational Works (Prescribed Tidal Works) : Marina Arm 'A' Port of Airlie Marina, Airlie Beach

2 Port Drive and 18 Port Drive, Airlie Beach

Lots 115 on SP260215 and 120 and 123 on SP218220

Dear Sir/Madam

For the development application identified above, I would like to request your agreement to extend the period:

[tick applicable box]

- ☐ under section 3.2 of the Development Assessment Rules (response to action notice)
- ☐ under section 5.1 of the Development Assessment Rules (to refer the application to a referral agency)
- ☐ under section 13.1 of the Development Assessment Rules (respond to an information request)
- ☐ under section 18.1 of the Development Assessment Rules (notice about compliance with public notification requirements)
- ☒ other, [please specify]

Section 8.2 of the DA Rules (response to an action notice issued by a referral agency)

Currently this period is set to end on 18/10/2018, I request this period be extended to 19/11/2018.

Please advise in writing at your earliest convenience whether you agree to this request. If you wish to discuss this matter further, please contact me on the above telephone number.

Yours sincerely

CTPI 49-Sch4

CTPI 49-Sch4

Director, Access Town Planning Consultants

(Applicants' authorised representative)

cc: *The Chief Executive Officer, Whitsunday Regional Council*

Published on DES Disclosure Log
RTI Act 2009

Our reference: 1809-7328 SRA
Your reference: 17.034

23 October 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd
(Both Receivers and Managers Appointed)(Both in Liquidation)
Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006
CTPI 4 accesstpc.com.au

Attention: CTPI 49-Sch4

Dear CTPI 49-Sch4

Referral confirmation notice

(Given under section 8.2 of the Development Assessment Rules)

The development application described below is taken to be properly referred to the Department of State Development, Manufacturing, Infrastructure and Planning under Part 2: Referral of the Development Assessment Rules.

Location details

Street address:	2 Port Drive and 18 Port Drive, Airlie Beach QLD
Real property description:	Lot 115 on SP260215; Lots 120 and 123 on SP218220
Local government area:	Whitsunday Regional Council

Application details

Development permit	Operational work - new marina arm (Arm A) within the Port of Airlie Marina
--------------------	--

The referral confirmation period ended on 19 September 2018. The department's assessment will be under the following provisions of the Planning Regulation 2017:

- 10.17.3.1.1 Tidal works or work in a coastal management district (coastal assessment)
- 10.17.3.2.1 Tidal works or work in a coastal management district (maritime safety)

For further information please contact Felicity Laub, Senior Planning Officer, on (07) 4898 6814 or via email MIWSARA@dsdmip.qld.gov.au who will be pleased to assist.

Yours sincerely

CTPI 49-Sch4

Kylie Drysdale
Planning Manager

cc Whitsunday Regional Council, info@whitsundayrc.qld.gov.au

Published on DES Disclosure Log
RTI Act 2009

Our reference: 1809-7328 SRA
Your reference: 17.034

28 November 2018

Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Both Receivers and Managers Appointed)(Both in Liquidation)

c/- Access Town Planning Consultants, PO Box 703

FORTITUDE VALLEY QLD 4006

CTPI@accessstpc.com.au

Attention: CTPI 49-Sch4

Dear CTPI 49-Sch4

Further advice

(Given under section 35 of the *Development Assessment Rules*)

The Department of State Development, Manufacturing, Infrastructure and Planning has reviewed your development application for the following premises.

Location details

Street address:	2 Port Drive and 18 Port Drive, Airlie Beach
Real property description:	Lot 115 on SP260215 and Lots 120 and 123 on SP218220
Local government area:	Whitsunday Regional Council

As discussed in our conversation on 27 November 2018, the department has identified the following outstanding issues:

Maritime safety

1. The development application proposes a new marina arm within the Port of Airlie Marina within close proximity to a public boat ramp and an existing marina arm, used by public passenger ferries.
2. The area where the works are proposed are located within a navigable waterway. The State Development Assessment Provisions (SDAP), State code 7: Maritime safety, PO3 states "Development does not impede the safe movement of vessels in a navigable waterway."
3. Please provide evidence demonstrating that the proposed marina arm will not impede the safe movement of vessels within the marina, with specific reference to potential conflict with vessels using the boat ramp, existing marina arm and proposed marina arm.

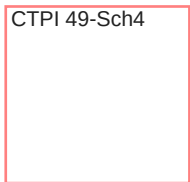
4. The SDAP, State code 7, AO3.3 notes that *"Where development proposes to temporarily or permanently limit... the size of vessels which can navigate a waterway, it is recommended that a vessel traffic management plan be provided."*
5. A vessel traffic management plan is defined in the SDAP, State code 7 as *"includes information on changes and increases to local vessel traffic resulting from the proposed development protect and methods of cumulative vessel traffic management for all stages of the proposal lifecycle, to ensure safety of navigation at all times."*

It is recommended that you address these concerns promptly, noting that the department considers your development application does not currently satisfy the applicable outcomes identified in the State Development Assessment Provisions (SDAP).

For further information please contact Felicity Laub, Senior Planning Officer, on (07) 4898 6814 or via email MIWSARA@dsmip.qld.gov.au who will be pleased to assist.

Yours sincerely

CTPI 49-Sch4



Kylie Drysdale
Planning Manager

Our Ref: 17.034

Your Ref: SPD-0714-009929

11 September 2020

The Chief Executive Officer
State Assessment and Referral Agency
PO Box 257
Mackay Qld 4740

Online Lodgement

Dear Sir/Madam

**CHANGE APPLICATION UNDER SECTION 78(1) OF THE PLANNING ACT 2016
PORT OF AIRLIE MARINA, LOT 120 ON SP218220, AIRLIE BEACH**

We act for Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Both Receivers and Managers Appointed)(Both in Liquidation), and submit the attached change application under Section 78(1) of the *Planning Act 2016* on our clients' behalf.

This application concerns the Port of Airlie Marina in Airlie Beach, which was the subject of an operational works development permit and environmental authority granted by the then Environmental Protection Agency in 2005, for tidal works, land reclamation, disposal of dredge spoil and works on state coastal land. The original permit numbers are IPDC00251205D32 (operational works development permit) and IPDE00112605E72 (environmental authority).

Following a change to the operational works development permit, granted by the then Department of State Development, Infrastructure and Planning in 2014 (ref. SPD-0714-009929), the development permit is subject to Condition 36, providing as follows:

"Any dredging not fully enclosed from tidal waters is only to be undertaken between:

a) March and September in any year; and

b) March and October in the year 2008, provided that dredging on tidal land above the level of Lowest Astronomical Tide is undertaken prior to September 2008;

To minimise the impacts on seagrasses and to avoid the cyclone season."

Our clients are proposing to undertake urgent maintenance dredging within part of the marina, including within the entrance channel, to ensure adequate depths are maintained for safe navigation purposes, including by larger vessels such as those operated by the local ferry service to/from the Whitsunday Islands and the Great Barrier Reef. It is necessary for the dredging window to be extended to include October, in order to permit this urgent dredging to occur and be completed within the allowable window, as the services of a suitable dredging contractor was not able to be secured until very recently, due to travel restrictions arising from the Covid-19 pandemic.

This has necessitated this change application which requests that Condition 36 (as amended) be further amended to provide as follows:

"36. Any dredging not fully enclosed from tidal waters is only to be undertaken between March and October in any year, to minimise the impacts on seagrasses and to avoid the cyclone season."

The following accompany this application:

- Planning Act Form 5 (**Appendix A**).
- Department of Natural Resources, Mines and Energy's letter of today's date confirming its consent to this change application (**Appendix B**).
- An environmental assessment report by Hydrobiology, dated 26 August 2020 (**Appendix C**).

This change is a minor change as defined under the Act, as:

- It will not result in a substantially different development. There will be no physical change in the approved development.

Insofar as the tests set out in Schedule 1 of the Development Assessment Rules (V1.2 dated 6 December 2019) are concerned:

- No new use(s) will be involved;
 - no new land parcel will be involved;
 - there will be no change to any built form,
 - there will be no change to the ability of the development to operate as intended;
 - no integral component of the development will be removed;
 - there will be no change to traffic generation;
 - no significant new or different impacts will be introduced;
 - no off-set or incentive will be removed; and
 - there will be no impact on infrastructure provision.
- No prohibited development will be included as a consequence of the proposed change.
 - The changed development would not require any additional referrals.
 - The proposed change does not trigger a requirement for public notification.

Please direct any queries to the undersigned.

Yours faithfully

ACCESS TOWN PLANNING CONSULTANTS

CTPI 49-Sch4

CTPI 49-Sch4

Director

APPENDIX A

DA FORM 5

Published on DES Disclosure Log
RTI Act 2009

Change application form

Planning Act Form 5 (version 1.2 effective 7 February 2020) made under Section 282 of the Planning Act 2016.

This form is to be used for a change application made under section 78 of the *Planning Act 2016*. It is important when making a change application to be aware of whether the application is for a minor change that will be assessed under section 81 of the *Planning Act 2016* or for an other change that will be assessed under section 82 of the *Planning Act 2016*.

An applicant must complete all parts of this form, and provide any supporting information that the form identifies as being required to accompany the change application, unless stated otherwise. Additional pages may be attached if there is insufficient space on the form to complete any part.

Note: All terms used in this form have the meaning given under the *Planning Act 2016*, the *Planning Regulation 2017*, or the *Development Assessment Rules (DA Rules)*.

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Receivers and Managers Appointed)(Both in Liquidation)
Contact name (only applicable for companies)	CTPI 49-Sch4
Postal address (P.O. Box or street address)	c/o Access Town Planning Consultants, PO Box 703
Suburb	Fortitude Valley
State	Qld
Postcode	4006
Country	Australia
Email address (non-mandatory)	CTPI@accesstpc.com.au
Mobile number (non-mandatory)	CTPI 49-Sch4
Applicant's reference number(s) (if applicable)	17.034

2) Owner's consent - Is written consent of the owner required for this change application?

Note: Section 79(1A) of the *Planning Act 2016* states the requirements in relation to owner's consent.

- ☒ Yes – the written consent of the owner(s) is attached to this change application
☐ No

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)				
3.1) Street address and lot on plan				
☒ Street address AND lot on plan (all lots must be listed), or ☐ Street address AND lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).				
a)	Unit No.	Street No.	Street Name and Type	Suburb
	-	L120	Coconut Grove	Airlie Beach
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4802	120	SP218220	Whitsunday Regional Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)



3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay) Note: Place each set of coordinates in a separate row.				
☐ Coordinates of premises by longitude and latitude				
Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)	
		☐ WGS84 ☐ GDA94 ☐ Other:		
☐ Coordinates of premises by easting and northing				
Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	
3.3) Additional premises				
☐ Additional premises are relevant to the original development approval and the details of these premises have been attached in a schedule to this application ☒ Not required				

PART 3 – RESPONSIBLE ENTITY DETAILS

4) Identify the responsible entity that will be assessing this change application Note: see section 78(3) of the Planning Act 2016
State Assessment and Referral Agency

PART 4 – CHANGE DETAILS

5) Provide details of the existing development approval subject to this change application			
Approval type	Reference number	Date issued	Assessment manager/approval entity
☒ Development permit ☐ Preliminary approval	IPDC00251205D32 (SPD-0714-009929)	23 June 2005 (20 August 2014)	EPA (DSDIP)
☐ Development permit ☐ Preliminary approval			
6) Type of change proposed			
6.1) Provide a brief description of the changes proposed to the development approval (e.g. changing a development approval for a five unit apartment building to provide for a six unit apartment building):			
Please refer to the accompanying letter – change to Condition 36 to extend dredging window to October in any given year			
6.2) What type of change does this application propose?			
☒ Minor change application – proceed to Part 5 ☐ Other change application – proceed to Part 6			

PART 5 – MINOR CHANGE APPLICATION REQUIREMENTS

7) Are there any affected entities for this change application

☒ No – proceed to Part 7

☐ Yes – list all affected entities below and proceed to Part 7

Note: section 80(1) of the Planning Act 2016 states that the person making the change application must give notice of the proposal and the details of the change to each affected entity as identified in section 80(2) of the Planning Act 2016.

Affected entity	Pre-request response provided? (where a pre-request response notice for the application has been given, a copy of the notice must accompany this change application)	Date notice given (where no pre-request response provided)
	☐ No ☐ Yes – pre-request response is attached to this change application	
	☐ No ☐ Yes – pre-request response is attached to this change application	
	☐ No ☐ Yes – pre-request response is attached to this change application	

PART 6 – OTHER CHANGE APPLICATION REQUIREMENTS

Note: To complete this part it will be necessary for you to complete parts of DA Form 1 – Development application details and in some instances parts of DA Form 2 – Building work details, as mentioned below. These forms are available at <https://planning.dsdmip.qld.gov.au>.

8) Location details - Are there any additional premises included in this change application that were not part of the original development approval?

☐ No

☐ Yes

9) Development details

9.1) Is there any change to the type of development, approval type, or level of assessment in this change application?

☐ No

☐ Yes – the completed Sections 1 and 2 of Part 3 (Development details) of DA Form 1 – Development application details as these sections relate to the new or changed aspects of development are provided with this application.

9.2) Does the change application involve building work?

☐ No

☐ Yes – the completed Part 5 (Building work details) of DA Form 2 – Building work details as it relates to the change application is provided with this application.

10) Referral details – Does the change application require referral for any referral requirements?

Note: The application must be referred to each referral agency triggered by the change application as if the change application was the original development application including the proposed change.

☐ No

☐ Yes – the completed Part 5 (Referral details) of DA Form 1 – Development application details as it relates to the change application is provided with this application. Where referral is required for matters relating to building work the [Referral checklist for building work](#) is also completed.

11) Information request under Part 3 of the DA Rules

☐ I agree to receive an information request if determined necessary for this change application

☐ I do not agree to accept an information request for this change application

Note: By not agreeing to accept an information request I, the applicant, acknowledge:

- that this change application will be assessed and decided based on the information provided when making this change application and the assessment manager and any referral agencies relevant to the change application are not obligated under the DA Rules to accept any additional information provided by the applicant for the change application unless agreed to by the relevant parties
 - Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.
- Further advice about information requests is contained in the [DA Forms Guide: Forms 1 and 2](#).

12) Further details

- ☐ Part 7 of DA Form 1 – Development application details is completed as if the change application was a development application and is provided with this application.

PART 7 – CHECKLIST AND APPLICANT DECLARATION

13) Change application checklist

I have identified the:

- responsible entity in 4); and
- for a minor change, any affected entities; and
- for an other change all relevant referral requirement(s) in 10)

☒ Yes

Note: See the Planning Regulation 2017 for referral requirements

For an other change application, the relevant sections of [DA Form 1 – Development application details](#) have been completed and is attached to this application

☐ Yes

☒ Not applicable

For an other change application, where building work is associated with the change application, the relevant sections of [DA Form 2 – Building work details](#) have been completed and is attached to this application

☐ Yes

☒ Not applicable

Supporting information addressing any applicable assessment benchmarks is attached to this application

Note: This includes any templates provided under 23.6 and 23.7 of DA Form 1 – Development application details that are relevant as a result of the change application, a planning report and any technical reports required by the relevant categorising instrument(s) (e.g. the local government planning scheme, State Planning Policy, State Development Assessment Provisions). For further information, see [DA Forms Guide: Planning report template](#).

☐ Yes

☒ Not applicable

Relevant plans of the development are attached to this development application

Note: Relevant plans are required to be submitted for all relevant aspects of this change application. For further information, see [DA Forms Guide: Relevant plans](#).

☐ Yes

☒ Not applicable

14) Applicant declaration

- ☒ By making this change application, I declare that all information in this change application is true and correct.
- ☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the responsible entity and any relevant affected entity or referral agency for the change application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*.

Note: It is unlawful to intentionally provide false or misleading information.

Privacy – Personal information collected in this form will be used by the responsible entity and/or chosen assessment manager, any relevant affected entity or referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the change application.

All information relating to this change application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, *Planning Regulation 2017* and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the *Planning Regulation 2017*, and the access rules made under the *Planning Act 2016* and *Planning Regulation 2017*; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

PART 8 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received:

Reference number(s):

QLeave notification and payment

Note: For completion by assessment manager if applicable

Description of the work			
QLeave project number			
Amount paid (\$)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Published on DES Disclosure Log
RTI Act 2009

APPENDIX B

DNRME CONSENT LETTER

Published on DES Disclosure Log
RTI Act 2009

11 September 2020

Meridien Airlie Beach Pty Ltd & Meridien AB Pty Ltd
C/ [CTPI 49-Sch4] – Access Town Planning Consultants
PO Box 703
FORTITUDE VALLEY QLD 4006



Department of
Natural Resources,
Mines and Energy

Dear [CTPI 49]

**APPLICATION FOR OWNERS CONSENT – MINOR CHANGE APPLICATION –
OPERATIONAL WORKS (TIDAL WORKS) – LOT 120 ON SP218220 & USL (PORT OF
AIRLIE)**

Reference is made to your request dated 31 August 2020 for owner's consent required to accompany the development application for Minor Change application in respect of Operational Works (Tidal Works) within Lot 120 on SP218220 and adjoining USL (Port of Airlie).

The department hereby gives owner's consent as the owner to accompany the development application for the purpose of section 52(2) of the *Planning Act 2016* to change a development application.

Although owner's consent for the change application has been provided and no tenure under the Land Act is required, you are to undertake works only if and when the change application has been approved by the responsible entity, and in accordance with the conditions of that approval.

A copy of this letter is to be attached to your change application as the required evidence of owners consent.

You will also need to comply with all other legislative and regulatory requirements which may also include approvals that are not part of the assessment of the change application under the *Planning Act 2016* e.g. a marine park permit if in a marine park.

Further, please note that the above consent will expire on **11 March 2021**. Should the change application not be lodged with the responsible entity prior to this date, your client will be required again to lodge the DA Form 5 and any attachments with this Department with a further request for owner's consent - any further request will need to be reconsidered by the Department.

It is also advised that any land use activities must comply with the *Aboriginal Cultural Heritage Act 2003* or the *Torres Strait Islander Heritage Act 2003*.

Finally, owner's consent is required under the *Planning Act 2016* to enable the application to be considered properly made for lodging with the responsible entity and is a completely separate process to assessment of the application under the *Planning Act 2016*.

Accordingly, the State may act at a later date as referral agency in the assessment of the change application - providing owner's consent will not influence any role the State may have in this development assessment.

If you wish to discuss this matter please contact Megan Warrenner on 07 4999 6862.

All future correspondence relative to this matter is to be referred to the contact Officer at the address below or by email to SLAM-Mackay@dnrme.qld.gov.au. Any hard copy correspondence received will be electronically scanned and filed. For this reason, it is recommended that any attached plans, sketches or maps be no larger than A3-sized.

Please quote reference number 2020/012737 in any future correspondence.

Yours sincerely

CTPI 49-Sch4

Carey Gabriel

Senior Land Officer

A duly authorised delegate of the Minister
under the current Land Act (Ministerial) Delegation

APPENDIX C

HYDROBIOLOGY REPORT

Published on DES Disclosure Log
RTI Act 2009

The Chief Executive Officer
Mackay Isaac Whitsunday Regional Office
Planning and Development Services, Planning Group
Queensland Treasury
PO Box 257, Mackay QLD 4740

26 August 2020

By email to: miwsara@dsdmip.qld.gov.au

Our reference: B20042 PoA Dredge Window Extension v1-0

CHANGE APPLICATION (MINOR) – OPERATIONAL WORKS (TIDAL WORKS) - LOT 120 ON SP218220 AND UNALLOCATED STATE LAND (PORT OF AIRLIE)

Dear Sir/Madam,

I write on behalf of CTPI 49-Sch4 Receiver and Manager of Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd, trading as Windward Airlie Beach Partnership (Receiver and Manager appointed) (in liquidation) (referred to as Meridien).

Condition 36 of SPD-0714-009929 states that:

Any dredging not fully enclosed from tidal waters is only to be undertaken between:

a) March and September in any year; and

b) March and October in the year 2008, provided that dredging on tidal land above the level of Lowest Astronomical Tide is undertaken prior to September 2008;

To minimise the impacts on seagrasses and to avoid the cyclone season.

The Environmental Authority (EPPR00332613) held by the Port of Airlie has no dredge window restriction.

As discussed with the Department of Environment and Science on 10 June 2020 (email correspondence with Senior Environmental Officer Sharon Grimes) when it was first identified that it was unlikely that a dredge contractor could be sought within the appropriate window) Meridien seeks an amendment to this condition to allow dredging in the month of October 2020, a 1-month extension on the current dredging window of April-September.

Commissioning the dredge contractor and mobilising the dredge have been delayed due to travel restrictions associated with novel coronavirus i.e. COVID-19 in 2020. With an ease in restrictions the contractor has now been engaged, with the earliest window commencing mid-September (due to a backlog of similar projects).



27 / 43 Lang Parade
Auchenflower 4066
QUEENSLAND



PO Box 2151
Toowong 4066
QUEENSLAND



+61 (0)7 3721 0100 P
info@hydrobiology.biz

Commonwealth EPBC Approval

The Port of Airlie is also governed by an EPBC approval (2001/298) that permits a dredging window between April and August of any given year. On 20 August 2020, DAWE approved an extension of the dredge window until end of October 2020. A copy of this approval is provided in Appendix H.

1. BACKGROUND

Meridien is planning to undertake operational dredging to remove approximately 3,300 m³ of material above the -2.5m LAT level from parts of the access channel and ferry terminal basin. Appendix A provides the data obtained from the hydrographic survey which become the basis for estimating the dredging volume. The dredging will take place within the approved footprint and depth limits using equipment currently authorised under the State Environmental Authority.

The site, including maintenance dredging, has an Operational Environmental Management Plan (OEMP Revision 03) that details the legal compliance, measures and monitoring required of the Port (Appendix B). This version of the OEMP was approved by the (now) Department of Agriculture, Water and the Environment (DAWE) on 23 February 2017. Relevant to maintenance dredging is Environmental Control Procedure 1A, and water quality monitoring Section 9.2 of this document. However please note that dredging, like all operations at the Port of Airlie, will occur in accordance with all relevant procedures of the OEMP.

The dredge proposed for this dredging program, which is a small hybrid mechanical and hydraulic (cutter suction) dredge, is the same as used in the last maintenance dredging campaign in 2014. Specifications are provided in Appendix C. This dredge has a number of advantages, particularly in terms of flexibility through its manoeuvrability and the ability to switch between mechanical and hydraulic dredge methods to suit the specific location and material to be removed. However the dredge will operate at a relatively low dredging rate, and, the dredging activity itself is relatively complicated as the amount of material to be removed is not uniformly distributed and there is a need to maintain access to the marina and boat ramp. It is considered unlikely that the dredging rate will exceed 200m³/day. Meridien has therefore identified a risk that dredging may not be complete until late in October.

An extension to the dredging window was approved for the months of September and October 2008 and for the month of September 2014, respectively. Meridien seeks a similar extension of one month, to October 2020, for the dredging program in 2020. This letter includes an assessment of the potential impacts of the requested extension on matters of national and state environmental significance (MNES/MSES), drawing on monitoring results from the 2008 and 2014 dredging programs.

2. POTENTIAL FOR IMPACTS ON ENVIRONMENTAL VALUES

2.1 ENVIRONMENTAL VALUES POTENTIALLY AFFECTED BY DREDGING

Key environmental values present at and adjacent to Port of Airlie that may be affected by dredging are documented in Section 6 of the Operation Environmental Management Plan (OEMP) and are summarised as follows:

Port of Airlie is located within and immediately adjacent to the Great Barrier Reef World Heritage Area (GBRWHA), the boundary of which is the low water mark along the Queensland coast. Section 6.6.1 of the OEMP provides a review of the contribution that Port of Airlie and the surrounding Boathaven Bay makes to the outstanding universal value (OUV) of the GBRWHA. Features of Boathaven Bay are considered to make a very limited contribution to the OUV of the GBRWHA.

However, the waters of Boathaven Bay provide a buffer to more distant features that are considered to contribute to the OUV of the GBRWHA and depend on good water quality, and hence, maintenance of water quality in Boathaven Bay is considered important to the integrity of the GBRWHA. Aquatic ecosystems of Boathaven Bay may also contribute to overall habitat requirements of animals such as marine turtles, dugongs and fish, all of which contribute to the biodiversity of the GBRWHA.

Port of Airlie is located outside any areas that are actively managed as part of the GBRWHA. Port of Airlie does however make a contribution to presentation of the OUV of the GBRWHA as it provides an important gateway for visitors to the Whitsunday region of the GBRWHA and the GBRWHA more broadly.

Intertidal and shallow subtidal seagrass beds are present throughout Boathaven Bay. While not in themselves considered MNES, seagrass beds provide foraging resources for listed threatened and migratory species as well as a variety of fish species. Seagrass beds in Boathaven Bay have not been identified as important habitat for any listed threatened or migratory species (SKM 2002, SKM 2004 and Dobbs 2011). Seagrass beds in Boathaven Bay do make some contribution to fisheries but this contribution is not unique in the region and is very minor in comparison to total availability of resources (Gribble et al, 2010). Boathaven Bay also features muddy substrate habitat which may provide foraging habitat for some species that contribute to the biodiversity of the GBRWHA.

Stands of mangroves within Boathaven Bay are classified as regional ecosystems under the Queensland regional ecosystem classification, but are not directly within the area to be dredged. Boathaven Bay also features muddy substrate habitat which may provide foraging habitat for some species.

Offsets were previously provided for mangrove and seagrass habitat that was lost due to development of Port of Airlie and these requirements have been fully discharged. There are no mangroves or seagrasses within the dredging footprint.

Listed threatened and migratory species occurring in Boathaven Bay are as follows:

- Loggerhead turtle *Caretta caretta* (endangered, migratory), green turtle *Chelonia mydas* (vulnerable, migratory), hawksbill turtle *Eretmochelys imbricate* (vulnerable, migratory) and flatback turtle *Natator depressus* (vulnerable, migratory) are known or likely to occur in small numbers in Boathaven Bay and more broadly, Pioneer Bay. Nesting is not known to occur anywhere in Boathaven Bay or Pioneer Bay, and suitable beaches for nesting are not present. Green turtles feed on seagrass beds, and hawksbill turtle may also occasionally forage on seagrass beds.
- Dugong *Dugong dugon* (migratory) are also known to feed on seagrass beds in Boathaven Bay and other seagrass beds in the region. The Whitsunday region is not identified as being an important region to dugong however, dugong are quite mobile and may migrate some distance in search of food if local resources are depleted (http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=28).
- Suitable habitat for the vulnerable water mouse *Xeromys myoides* is present in the Campbells Creek estuary to the south-east of Port of Airlie. There have been no sightings of water mouse in this habitat but water mice are known from Cannonvale, 6 km to the west (Queensland Department of Environment and Resource Management, 2010).
- Migratory shorebirds utilise intertidal mudflats in Boathaven Bay for foraging, however numbers observed do not meet the important population criteria set out in the Significant Impact guidelines for migratory Shorebirds (SKM 2002, SKM 2004 and DEWHA 2009). Migratory shorebirds may arrive in Australia as early as August each year, but are generally at peak numbers from November-March.

Although ecological studies have been undertaken in Boathaven Bay since the 1980s, none of the studies have identified any key biological events such as fish spawning taking place in Boathaven Bay (Gribble et al 2010, SKM 2002, Dobbs 2011).

The estuary of Campbells Creek and mangroves to the south-east of Port of Airlie are identified as being of general ecological significance (GES) but are not of high ecological significance, or wetland protection areas. The state planning policy interactive mapping system also identifies mangrove stands as being essential habitat and of value to listed (endangered or vulnerable) fauna.

There is no vegetation that provides connectivity. Port of Airlie is not located in or near a wild river area. Protected wildlife habitat has not been identified at or near Port of Airlie. There are no protected areas within or adjacent to Port of Airlie and Port of Airlie is outside the Great Barrier Reef Marine Park and Great Barrier Reef Coastal Marine Park with the nearest boundary 1.5km to the north (see also Section 6.6.2 of the OEMP).

There are no fish habitat areas at or adjacent to Port of Airlie and the area is not important in terms of providing fish passage. There are no legally secured offset areas at or adjacent to Port of Airlie.

2.2 REVIEW OF POTENTIAL IMPACTS

Potential impacts arising from the dredging activity are:

- Degradation of water quality due to release of sediment to the water column
- Reduced seagrass productivity due to increased turbidity and associated reduced light availability and/or deposition of sediment
- Injury of or disturbance to marine fauna, particularly dugong and marine turtles
- Disturbance to wader birds foraging on adjacent intertidal mudflats.

There is no direct loss of marine plants. Previous surveys have indicated that sediment contaminant levels are within both the draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (Queensland EPA 1998) and the National assessment guidelines for dredging, (Australia Government 2009) and hence mobilisation of contaminants is not considered a likely impact. Previous surveys have also indicated that potential acid sulfate soils present are self-neutralising and hence acidification due to oxidation of potential acid sulphate soils is not expected.

Additional sampling of representative areas to be dredged was undertaken in early August 2020, and confirmed earlier investigations. Concentrations of contaminants in sediment samples were below adopted guidelines.

Existing approvals are in place in relation to the impacts identified above, and the management of each of these impacts is covered in the OEMP such that compliance with conditions of approval and other regulatory requirements is achieved.

The following sections provide an analysis of whether extending the dredging window to October might exacerbate impacts.

2.2.1 THE OUV OF THE GBRWHA – WATER QUALITY

Maintenance of water quality is the key value that waters of Boathaven Bay contribute to the OUV of the GBRWHA. Hence, if extending the proposed dredging activity into October would cause degradation of water quality, this in turn may impact on the OUV of the GBRWHA.

Dredging and management of dredge material will be subject to achieving compliance with water quality triggers set in the Queensland environmental authority (EPPR00332613). The OEMP contains management and monitoring plans to achieve this compliance, including tiered contingency measures in the event that water quality triggers are exceeded.

Water quality monitoring results from the last maintenance dredging in 2014 indicate that the compliance requirements were met throughout the dredging activity. However it is noted that an audit in 2016 identified an issue with recording of monitoring results during a maintenance dredging program in the second half of 2014. Dissolved oxygen was recorded at levels below compliance (typically 10 to 20% saturation, which is not plausible) however this was later attributed to machine error and operator inexperience. Measurements of pH collected coincident with the DO levels were neutral, confirming no acid generation at the time of measurement. During the dredging period, there was no evidence of any environmental harm arising from depletion of oxygen in the water column, for example dead or distressed fish.

As a response to this measurement error the OEMP was revised to require the water quality monitoring to be undertaken by a suitably qualified scientist. For this 2020 dredging campaign, the owners appointed Environmental Advisor, Hydrobiology, will resource the water quality monitoring program and has substantial experience in this area in Australia and overseas.

As the dredge proposed for the 2020 dredging activity is the same as that used for dredging in 2014 and is considerably smaller than that used for dredging in 2008, it is expected that there will not be any non-compliances with the water quality approval conditions for 2020.

Consideration needs to be given to whether any impacts on water quality may be more significant in September and October compared to the currently approved months of April, May, June, July or August. Monthly rainfall data for Hamilton Island Bureau of Meteorology weather station for the period 2007 to present are provided as a graph in Appendix D. These data indicate that there is very little difference in rainfall in September and October compared to the months of April to August. The highest daily rainfalls recorded in September and October are 100.4 mm and 94 mm respectively while the highest daily rainfall recorded in the months of April to August is 182.8mm (on 5th July 1988). The average rainfall is actually lower in September than in other months - even the lowest of the year, with average rainfall in September being 26.6 mm compared to a range within the dredging window of 185 mm (April) to 40.6mm (August). For the month of October, its average rainfall of 41.8 mm is well within the range of the dredging window and is very comparable with the month of August. Hence, there is little likelihood of significant rain events or extended rain periods combining with the effects of dredging to raise turbidity in Boathaven Bay.

Wind speed and direction is also important, as Boathaven Bay is exposed to northerly and north-westerly winds. Winds from these directions create larger waves in Boathaven Bay and being a shallow bay with fine sediments, these waves can result in significant re-suspension of sediments. Wind roses of August, September and October at Hamilton Island are presented in Appendix E. The wind roses show a shift from predominantly southerly winds in August to a more dominant south-easterly component in both September and October. Stronger winds also become slightly more common in September and October. There is an increase in occurrence of winds from the north-west in September and October, but this still remains a minor component of the wind rose, and high windspeed is uncommon. Hence, the likelihood of wind and wave events combining with dredging to exacerbate turbidity in inshore areas in October is not considered significantly higher than in August or other months. It should also be noted that if strong northerly or north-westerly winds occur at any stage of the dredging activity, dredging would cease for safety reasons.

Overall, it is concluded that extending the dredge window into October is not likely to increase the significance of impacts on the OUV of the GBRWHA as no increase in water quality impacts is expected.

2.2.2 THE OUV OF THE GBRWHA – SEAGRASS BEDS

Federal and State environmental approval conditions included requirements for seagrass surveys prior to, during and after construction. Baseline seagrass monitoring was undertaken in November 2004 by frc environmental and December 2005 by GHD, respectively. GHD then undertook construction phase monitoring in November 2007, June 2008 and November 2008. Biosis Research undertook a post-construction monitoring activity in July 2012, followed by frc environmental who undertook the last two seagrass monitoring activities so far in November 2014 and in November 2015, respectively. Dredging of the access channel took place from June 2008 to October 2008. Other construction activities largely took place in an enclosed area, however there were some discharges of treated “tailwater” from water treatment ponds during construction from early 2007 to early 2009. All discharges occurred within the requirements of the approved Construction Environmental Management Plan (CEMP) and Queensland environmental authority conditions in relation to water quality.

Seagrass beds are known to be highly variable both inter-annually and seasonally in species composition, biomass/abundance and depth range of seagrass. In northern Australia, seasonal declines of seagrass communities usually start in about February of each year and seagrasses are at their lowest abundance in winter before recovering and reaching a peak in late spring. Inter-annual declines are often linked with storm events where high rainfall and wave activity can significantly increase turbidity and sedimentation levels. These variations can make monitoring of impacts of a particular activity on seagrass beds difficult. The survey methodology developed for Port of Airlie included control-impact gradients within Boathaven Bay as well as a control site at Charlies Bay, a bay with similar orientation and bathymetry to Boathaven Bay.

Detection of construction-related impacts on seagrasses in Boathaven Bay was complicated by severe weather events. Rainfall that was significantly higher than average occurred in February 2007, January 2008, February 2008, February 2009, November 2010, December 2010, March 2011, March 2012 and July 2012. High rainfall events are associated with influx of fresh water and sediment loads. High sediment loads reduce light availability to seagrasses and in more severe events result in deposition of sediment on seagrasses. All of these factors can reduce seagrass growth, biomass and abundance (see, for example Erftemeijer and Lewis, 2006, Campbell and McKenzie 2004). Effects of high rainfall events are more marked in a bay such as Boathaven Bay which has a developed catchment than the control site, Charlies Bay, which has a largely vegetated catchment and this must be taken into account when undertaking comparative interpretation of results between the impact and control sites. In particular, construction on steep slopes draining into Boathaven Bay in 2008 is likely to have contributed significantly to sediment inputs in severe rainfall events (see also Appendix F for photographs of sediment loss from these steep slopes).

An evaluation of construction and post-construction seagrass monitoring is provided in Appendix G. In summary, seagrass monitoring has shown a reduction in biomass at both the impact site (Boathaven Bay) and the control site (Charlies Bay) since baseline surveys were completed in 2004 and 2005 (2005 may have represented an unusually high peak in seagrass abundance). This decline is slightly more marked in Boathaven Bay compared to Charlies Bay, indicating an anthropogenic influence in Boathaven Bay. Seagrass biomass did increase from June 2008 to November 2008, although November 2008 levels were below November 2007 levels. This indicates that while seagrasses were affected, the seagrass beds remained viable and effects had been sub-lethal.

The survey in July 2012 showed the lowest biomass recorded at any time since surveys began in both the control and impact sites, although it is acknowledged that seagrass biomass is naturally lower in winter

months compared to spring and summer. This is also consistent with seagrass loss across the Queensland coast (see, for example, Davies et al 2013).

The seagrass monitoring also indicated a contraction in depth range of seagrasses in Boathaven Bay through 2007 and 2008 that was more significant than in Charlies Bay, however this trend had reversed by the July 2012 survey. This indicates some reduced light penetration in Boathaven Bay compared to Charlies Bay during 2007 and 2008. The recorded recovery of depth distribution in Boathaven Bay by 2012 indicates that impacts on seagrass beds were sub-lethal and sufficient root and seed stock remained for recovery to commence once conditions improved.

GHD concluded that reduction in biomass and depth distribution of seagrasses in Boathaven Bay was likely to be at least partly attributable to anthropogenic effects, but could not differentiate between the effects of sediment releases from dredging and from land-based runoff and the effects of severe wet weather events generally (GHD February 2008, GHD August 2008, GHD January 2009).

Biosis Research concluded from the July 2012 survey that *"It cannot be categorically ruled out that the construction of Port of Airlie and dredging of the channel may have had an impact on seagrass distribution and biomass in Boathaven Bay. The impacts of storm and flood events since previous assessments appear to have been apparent, however some obvious restoration has occurred and current condition reflect the natural variation in seagrass communities."*

Biosis research's finding is consistent with other studies that show that seagrasses recover within several years of exposure to high sediment levels provided that the duration of exposure is not sufficient to cause complete death of the seagrasses (see also Erftemeijer and Lewis 2006, Campbell and McKenzie 2004, Davies et al 2013).

The last two surveys conducted in November 2014 and in November 2015 showed that the seagrass in Boathaven Bay appeared to be in relatively good condition with the depth range of *Z. muelleri* equal or greater than most previous years. A more stable and dense inshore bed dominated by *Z. muelleri* had formed compared to in 2004. While the inshore edge of *Z. muelleri* had moved seaward, the upper depth limit had not changed. Furthermore, the lower depth limit had significantly decreased. As the biomass of seagrass near the channel was significantly higher than or similar to that further away, it is unlikely that this change is related to an impact from creation of the channel, indicating the Port of Airlie development does not appear to have negatively impacted seagrass close to it. This pattern of change is consistent with increased sedimentation resulting from development in the catchment increasing the turbidity of the water, and sediment deposition decreasing water depth in the inshore area.

Rainfall data for 2013 and 2014 indicates that the most recent wet season has been similar to average, with the only month recording significantly higher than average rainfall being November 2013. This indicates that seagrasses in Boathaven Bay have not been placed under any additional weather-related stress in 2014.

These results indicate that while dredging-related impacts on both the biomass and depth distribution of seagrasses in Boathaven Bay cannot be ruled out, impacts identified were within natural variations in seagrass abundance and extent. Further, seagrasses do not appear to have suffered lethal effects and recovery is apparent. An extension of the seagrass dredging window from August to September and October is not likely to change this outcome as dredging in 2008 was undertaken from June-October. It should also be noted that the dredge proposed for the 2020 dredging activity is the same one used in the 2014 dredging program and is significantly smaller than that used in 2008. In addition, the volume of material to be removed is also significantly lower, with 3,225 m³ to be removed in 2020, compared to over 120,000 m³ in 2008 and 16,000 m³ in 2014.

In terms of impacts on the OUV of the GBRWHA, the seagrass beds of Boathaven Bay are not considered to make any measurable contribution to the OUV itself, but do contribute to the integrity of the GBRWHA as species such as turtles and dugong and fish species, which are identified as important to the OUV, may utilise seagrass beds such as those in Boathaven Bay at various stages in the species' life cycle. As changes observed in monitoring before, during and after the 2008 dredging activity are within natural variability of seagrass beds, and recovery is apparent, it is not expected that an extension of the 2020 dredging window by one month to October 2020, will cause any adverse effects on the role that seagrasses of Boathaven Bay play in the overall integrity of the GBRWHA.

In accordance with the original project Approvals, the final seagrass monitoring event post-construction has occurred (in 2015). No further seagrass monitoring is proposed.

2.2.3 LISTED THREATENED AND MIGRATORY SPECIES – MARINE

Four species of marine turtles (threatened and migratory) are known or likely to occur in Boathaven Bay, and two of these species forage on shallow seagrass beds as mature individuals. Dugong (migratory) are also known to occur in Boathaven Bay and feed on seagrass beds. As impacts to seagrasses are not expected to fall outside natural variability in seagrass beds, foraging resources for turtles and dugong are not expected to be significantly affected.

Turtles and dugong are also vulnerable to vessel strike and turtles can be caught in hydraulic dredging equipment. This risk does not increase significantly if the dredging window is extended, particularly since the overall duration of dredging will not increase.

None of these species is known to undertake breeding activities in September or October that might be disrupted by dredging, and in any case, Boathaven Bay is not considered important to the lifecycle of any of these species.

There are a number of controls in place through the OEMP that will minimise potential impacts on turtles and dugong. A six-knot speed limit is already in place at Port of Airlie, and in most cases, equipment associated with dredging will move at slower speeds. The amphibious dredge has a small cutter suction dredge head which is unlikely to entrain mature turtles. Juvenile turtles are generally pelagic and are not known to feed in shallow inshore areas and are therefore at limited risk from the dredging activity. The OEMP contains procedures in relation to checking the dredging area for turtles and dugongs and ceasing operations if the animals move close to the dredging equipment.

Water mouse may utilise mangrove habitat in Campbells Creek. This habitat will not be directly or indirectly affected by the dredging activity. Water mouse are nocturnal and foraging activities would not be affected by dredging activity as night-time works are not expected to be necessary.

2.2.3 LISTED THREATENED AND MIGRATORY SPECIES – MIGRATORY SHOREBIRDS

Migratory shorebirds are known to forage on the intertidal mudflats of Boathaven Bay, however the area does not meet the criteria for supporting an important population. Migratory shorebirds spend the summer months in Australia, arriving as early as August each year, but more usually around November. Most migratory shorebirds have left by March or April.

Some species of shorebirds can be disturbed from foraging by activity (see for example Wildlife Unlimited 2014). The mudflats of Boathaven Bay are already subject to some disturbance from activity due to proximity to an urban population, including a major road.

Extending the dredging window into October may mean that there are small numbers of early-arriving migratory shorebirds using the mudflats near Port of Airlie, and these may be disturbed by noise and activity associated with the dredging. However, there are significant alternative foraging sites within several kilometres of Port of Airlie, and if birds are driven to relocate for a short period of time, adverse impacts on bird health are not expected.

I trust that the requested extension to the dredging window is acceptable and on behalf of Meridien seek approval from the Minister of the Environment or appropriate delegate for this extension.

Please do not hesitate to contact me if I can provide any further information in this regard.

Yours sincerely

CTPI 49-Sch4

Regional Manager

CTPI 49-Sch4

Project Manager

REFERENCES

APPENDIX A. HYDROGRAPHIC SURVEY

APPENDIX B. OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX C. DREDGE SPECIFICATIONS

APPENDIX D. RAINFALL DATA

APPENDIX E. WIND SPEED AND DIRECTION

APPENDIX F. SEDIMENT INPUT FROM 2008 RAIN EVENTS

APPENDIX G. EVALUATION OF SEAGRASS MONITORING RESULTS

APPENDIX H. EPBC 2001/298 VARIATION APPROVAL

Published on DES Disclosure Log
RTI Act 2009

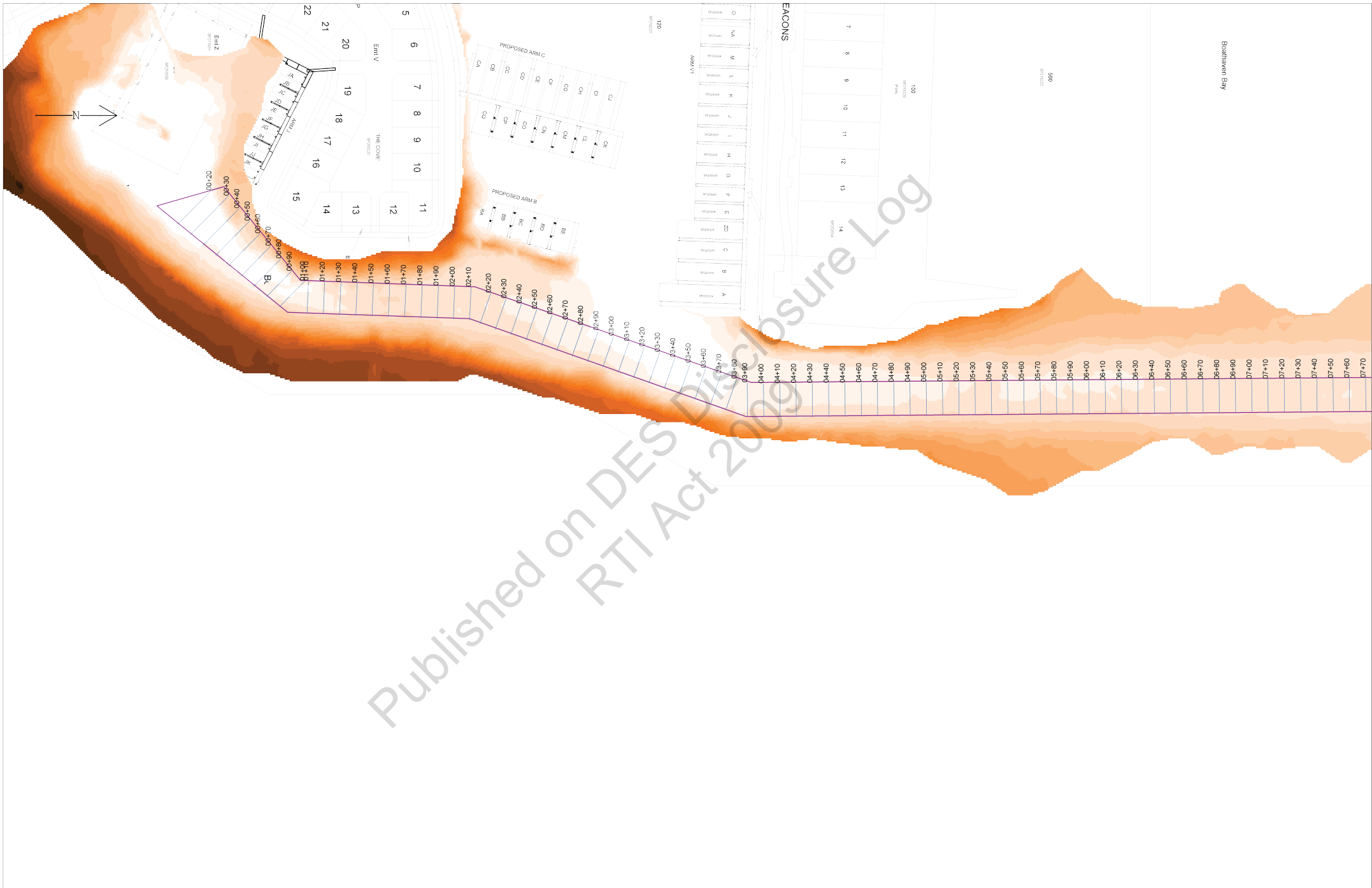
REFERENCES

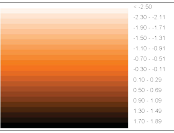
- Campbell, S.J., and McKenzie, L.J. (2004) 'Flood related loss and recovery of intertidal seagrass meadows in southern Queensland, Australia', *Estuarine, Coastal and Shelf Science*. 60, pp. 477-490.
- Davies, JD, McCormack, CV and Rasheed, MA (2013) 'Port Curtis and Rodds Bay seagrass monitoring program, Biannual Western Basin & Annual Long Term Monitoring November 2012', Centre for Tropical Water & Aquatic Ecosystem Research (TropWATER) Publication, James Cook University, Cairns.
- Department of the Environment and Resource Management (2010) 'National recovery plan for the water mouse (false water rat) *Xeromys myoides*', Report to Department of Sustainability, Environment, Water, Population and Communities, Canberra. Department of the Environment and Resource Management, Brisbane.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2009) 'Significant impact guidelines for 36 migratory shorebird species', EPBC Act policy statement 3.21, Australian Government, Canberra.
- Dobbs, Kirstin (compilation.) (2011) 'Identifying special or unique sites in the Great Barrier Reef World Heritage Area', Great Barrier Reef Marine Park Authority, Townsville.
- Erftemeijer, P and Lewis R (2006) 'Environmental impacts of dredging on seagrass: A review', *Marine Pollution Bulletin*. 52, pp.1553-1572.
- frs environmental (2015) 'Port of Airlie 2014 Seagrass Monitoring Program', Brisbane.
- frs environmental (2016) 'Port of Airlie 2015 Seagrass Monitoring Program', Brisbane.
- Gribble, N, Rose, C, Vickers, M and Chalmers, S (2010) 'Port of Airlie Marina Development Project; Fisheries resources monitoring in Boathaven Bay', Department of Employment, Economic Development and Innovation, Queensland.
- SKM (2002) 'Port of Airlie supplementary environmental impact assessment', Brisbane.
- SKM (2004) 'Port of Airlie addendum to supplementary environmental impact assessment', Brisbane.
- Wildlife Unlimited (2014) 'Migratory shorebird monitoring Port Curtis and the Curtis Coast, annual summer survey 2014', Report to Gladstone Ports Corporation.

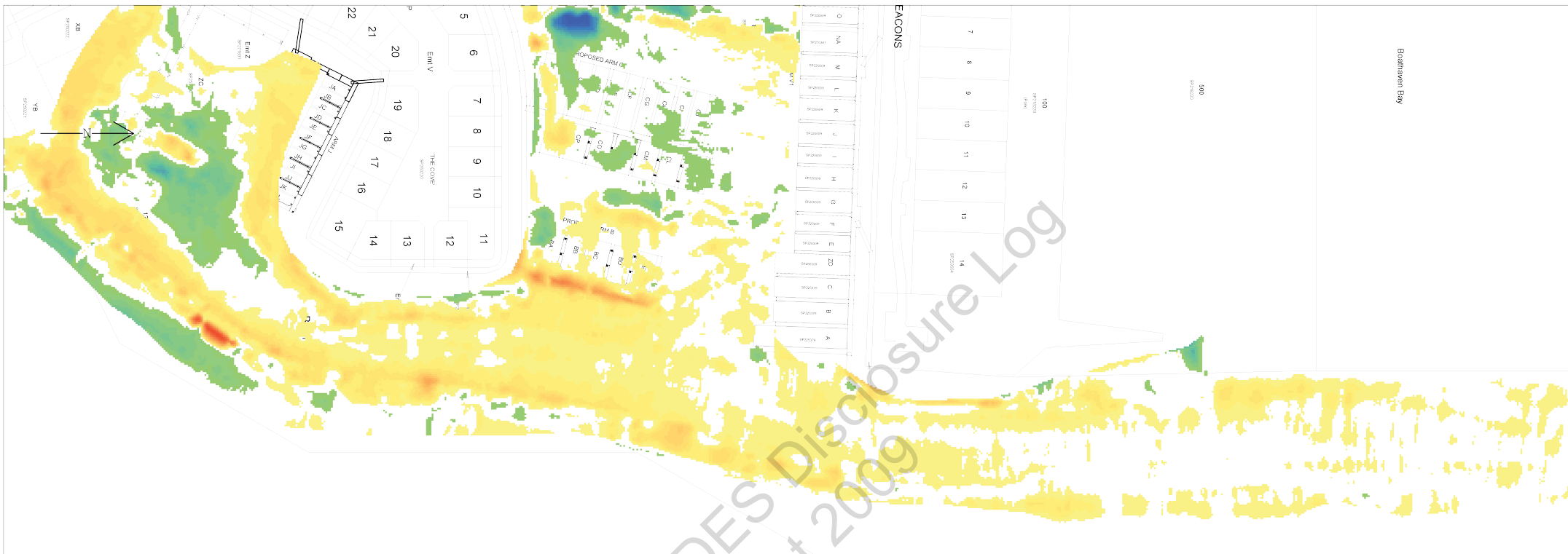
APPENDIX A. HYDROGRAPHIC SURVEY

Published on DES Disclosure Log
RTI Act 2009

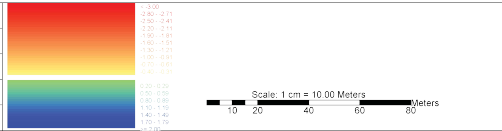




Revisions					<p>This survey has been carried out using a singlebeam survey system to IHO S44 Standard for 1b order surveys and that:</p> <p>(A) Line Spacing of 5 metres has been achieved over the survey area</p> <p>(B) A depth uncertainty of +/- 0.25m for reduced depths (95% confidence level)</p> <p>(C) Data processing and modeling has been carried out using a 1m interpolate grid</p> <p>(D) Selected soundings shown on this plan are minimum depths within a 2m radius circle of influence</p> <p>(E) Horizontal position has an uncertainty of +/- 0.5m (95% confidence level)</p> <p>(F) Soundings taken on 20/09/2019</p>	<p>Vertical Datum AUSGeoid09 Soundings are in metres and decimetres reduced to chart datum (LAT) Chart Datum is 1.75 below AHD</p> <p>Horizontal Datum 1984-1992 re-observation, epoch 1994.0 GRS-80 Ellipsoid GDA94 Datum Map of Australia 1994 (MGA84) Zone 55</p>	 Veris	Port Of Airlie Material Above -2.5 LAT Survey: September 2019	<p>RTK GPS observations referenced to PSM177563 Easting: 661162.636 Northing: 7757296.415 RL 4.752 (AHD)</p>	<p>Surveyed by:  CAD: 110420_1_PD_07_RevH Dwg No: POA-D-001 Job No: 432289-005 Sheet 2 of 2</p>
No	By	Date	21-004							



Revisions			
1.0	CTP	2020/05/11	Initial Release
No	By	Date	21-004



This survey has been carried out using a singlebeam survey system to IHO S44 Standard for 1b order surveys and that:
(A) Line Spacing of 5 metres has been achieved over the survey area
(B) A depth uncertainty of +/- 0.25m for reduced depths (95% confidence level)
(C) Data processing and modeling has been carried out using a 1m interpolate grid
(D) Selected soundings shown on this plan are minimum depths within a 2m radius circle of influence
(E) Horizontal position has an uncertainty of +/- 0.5m (95% confidence level)
(F) Soundings taken on 20/09/2019

Vertical Datum
AusGeoid09
Soundings are in metres and decimetres reduced to chart datum (LAT)
Chart Datum is 1.75 below AHD
Horizontal Datum
ITRF1992 realisation, epoch 1994.0
GRS80 Ellipsoid
GDA94 Datum
File A
Map of Australia 1994 (MGA84) Zone 55



Port Of Airlie
Surface Comparison
Survey: 2018 vs September 2019

RTK GPS observations referenced to PSM177563
Easting: 462162.636
Northing: 7757296.415
RL 4.752 (AHD)

Surveyed	CTP
CAD: 110420_1_PD_07_RevH	
Dir: No: POA-D-001	
Job No: 432289-005	
Sheet 1 of 2	

APPENDIX B. OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

Published on DES Disclosure Log
RTI Act 2009



Operation Environmental Management Plan

Revision 03



Contents

Contents	i
1. Introduction	1
1.1 Environmental Policy	1
1.2 Public Availability	1
1.3 Guide to the Operation Environmental Management Plan (OEMP)	2
1.3.1 Document Structure	2
1.3.2 List of Procedures	3
1.3.3 List of Forms	4
2. Aspects and Impacts	5
2.1 Introduction	5
2.2 Application of OEMP to other Parties at Port of Airlie	5
2.3 Aspects and Impacts	6
2.4 Impact Significance	17
2.5 Hazard and Risk Analysis	19
2.6 Evaluating Impacts of New or Changed Activities	20
3. Legal Requirements and Other Obligations	24
3.1 Applicable Legislation	24
3.1.1 Commonwealth	24
3.1.2 Queensland	24
3.1.3 Regional Government	34
3.2 Approvals Register	34
3.3 Schedule of Conditions and Commitments for Operation	38
3.3.1 EPBC Act Approval 2001/298	38
3.3.2 Queensland Coordinator-General's Report – Schedule 1	39
3.3.3 Operational Works Development Permit – Tidal Works	45
3.3.4 Environmental Authority Dredging EPPR00332613	48
3.3.5 Seabed Lease 0/233003	50
3.3.6 Harbour Master's Requirements	51
3.3.7 Other Commitments	52
4. Roles and Responsibilities	55
4.1 Defined Roles and Accountabilities	55
4.2 Delegation of Responsibilities	58
5. Objectives and Targets	59

5.1	Objectives, Targets and Performance Criteria	59
5.2	Reporting Requirements	61
6.	Environmental Values	62
6.1	Overview	62
6.2	Land and Sea Use	62
6.3	Bathymetry	63
6.4	Hydrodynamic Processes	64
6.4.1	Currents and Wave Climate	64
6.4.2	Dredging Plumes	65
6.4.3	Siltation Rates	67
6.5	Climate	67
6.6	Conservation Estate and Protected Areas	70
6.6.1	Great Barrier Reef World Heritage Area/National Heritage Place	70
6.6.2	Great Barrier Reef Marine Park	74
6.6.3	Threatened Species	75
6.6.4	Migratory Species	81
6.6.5	National Parks and Conservation Areas	84
6.7	Marine and Coastal Habitat Values	86
6.7.1	Seagrasses	86
6.7.2	Mangroves	86
6.7.3	Coral Reefs	87
6.7.4	Terrestrial Habitat Values	87
6.8	Surface Water Quality	89
6.8.1	Water Quality Values	89
6.8.2	Water Quality Guidelines	89
6.8.3	Current Influences on Water Quality	90
6.8.4	Previous Water Quality Studies	92
6.8.5	2004 and 2012 Monitoring Events	93
6.9	Geology and Sediment Characteristics	96
6.9.1	Local and Regional Geology	96
6.9.2	Sediment Characteristics	96
6.9.3	Settlement Rates	97
6.9.4	Post-Construction Characteristics	98
6.9.5	Acid Sulfate Soils	98
6.9.6	Sediment Contamination	99
6.10	Noise	100
6.10.1	Acoustic Environmental Values	100
6.10.2	Acoustic Quality Objectives	100

6.10.3	Baseline Noise Data	101
7.	Environmental Control Procedures	102
ECP-1A	- Dredge Management Plan (Channel, Ferry Basin)	103
ECP-1B	- Dredge Management Plan (Marina Basin)	110
ECP-2	- Dredge Material Handling Area Management Plan	115
ECP-3	- Noise Management	118
ECP-4	Dust Management Plan	120
ECP-5	- Protected Species Management Plan	122
ECP-6	- Environmental Management of Contractors	124
ECP-7	- Acid Sulfate Soils Management Plan	128
ECP-8	- Waste and Resource Management Plan	131
ECP-9	- Prevention of Water Contamination	136
ECP-11	Cultural Heritage Management Plan	139
ECP-12	- Pest Management Plan	140
8.	Training and Awareness	142
8.1	General Site Induction	142
8.2	Management Training	142
8.3	Contract Specific Environmental Induction - Operational Dredging	143
8.4	Training Register and Records	143
9.	Monitoring and Auditing Requirements	145
9.1	Summary	145
9.2	Water Quality Monitoring	145
9.2.1	Potential Impacts	145
9.2.2	Objectives	146
9.2.3	Approach	146
9.2.4	Baseline Data	146
9.2.5	Water Quality Sampling Locations	146
9.2.6	Water Quality Limits	149
9.2.7	Monitoring Schedule	151
9.2.8	Monitoring Methods	152
9.2.9	Calibration	153

9.2.10	Data Recording and Review	153
9.3	Seagrass Monitoring Program	155
9.3.1	Background	155
9.3.2	Potential Impacts	156
9.3.3	Baseline Data	156
9.3.4	Monitoring Program	156
9.3.5	Monitoring Schedule	159
9.3.6	Other Requirements	161
9.3.7	Data Review and Reporting	161
9.3.8	Corrective Action	161
9.3.9	References	162
9.4	Noise Monitoring	163
9.4.1	Overview	163
9.4.2	Noise Limits and Guidelines	163
9.4.3	Complaints Monitoring	163
9.4.4	Corrective Actions	164
9.5	Environmental Management Plan Audits and Review	164
9.5.1	General Environmental Management Audits	164
9.5.2	Annual Review	165
9.6	General Checklists	165
9.6.1	Daily checklist – Dredging and Dredge Material Handling	167
9.6.2	Weekly Checklist – General Site Inspection	170
9.6.3	Pre-Wet Season Checklist	173
9.6.4	Post Severe Weather Event Checklist	175
9.7	Field Oxidation Test Procedure (Acid Sulfate Soils)	177
10.	Continuous Improvement	178
10.1	The Continuous Improvement Cycle	178
10.2	Summary of Evaluation and Review Processes	179
10.3	Corrective Actions	180
10.3.1	Corrective Action Procedure	180
10.3.2	Corrective Action Form	181
10.4	Environmental Management Program	183
10.5	OEMP Review and Amendment Procedure	185
11.	Incident Management	187
11.1	Environmental Hazard Identification	187
11.2	Incident Reporting Procedure	192
11.3	Spill of Fuel or Oil	193
11.4	Incident Report and Investigation Form	196

12. Communications and Reporting	199
12.1 External Communications	199
12.1.1 Communications and Reporting Principles	199
12.1.2 Stakeholder Identification	199
12.1.3 Communication Techniques	201
12.1.4 External Stakeholder Communication Matrix	202
12.1.5 Reporting of Incidents and Emergencies	203
12.1.5.1 Reporting of non-Compliance and Environmental Harm (EP Act)	203
12.1.5.2 Reporting of Marine Pollution from Vessels	204
12.1.5.3 Reporting Dead or Injured Marine Animals	204
12.1.6 Other Statutory Reporting Requirements	204
12.1.7 Visitor Information	205
12.1.8 Complaints Procedure	206
12.1.9 Complaints/Inquiries Form	209
12.2 Internal Communications	210
12.2.1 Availability of OEMP	210
12.2.2 Management Meetings and Reports	210
12.2.3 Other Internal Meetings	210
12.2.4 Contractor Meetings	211
13. Document and Records Management	212
13.1 Filing System	212
13.2 Document Control	214
13.3 Retention of Documents and Records	214

1. Introduction

1.1 Environmental Policy

POA is inextricably linked with the Airlie Beach community. We also recognise we operate in an environmentally sensitive area with potential to impact on Great Barrier Reef World Heritage Values. We are committed to the protection of the environment in the course of providing world class, highest standard boat harbouring and retail/accommodation services while also maximising community benefit.

Through the commitment and involvement of all staff, Meridien will maintain an environment management system appropriate to the environmental impacts of all its activities, products and services.

In order to achieve our environmental objectives, Meridien is committed to the following actions and practices:

- Ensure as a minimum that all operations are managed in accordance with Federal and State legislative requirements, local by-laws and formal Government policies. This will ensure the demonstration of due diligence.
- Take into account environmental considerations in all activities, including investment and corporate strategies and in the purchase of goods and services.
- Make all staff and contractors aware of the environment policy and provide an appropriate level of training to all involved with the operation. The Environment Policy will be made publicly available.
- Adopt a beyond compliance approach, incorporating both in-house and external independent environmental reviews to identify, evaluate, manage and report on environmental risks, opportunities and the ongoing conduct of environmental programs.
- Pursue practical and cost effective initiatives to continually minimise adverse environmental effects, particularly addressing energy, water and, wastes within the operation while also ensuring minimal impacts on the natural environment.
- Actively review innovative and cost effective management or technological options for all aspects of the operation to deliver maximum impact reduction and societal benefit at the same time.

Signed CTPI 49-Sch4
Asset Manager

Date 18.12.12

1.2 Public Availability

As required in conditions of project approval under the Environmental Protection and Biodiversity Conservation Act, this Operation Environmental Management Plan (OEMP) is available to the public for viewing, on request:

- On the Port of Airlie Website <http://www.portofairlie.com.au/>
- At the Marina Office, 33 Port Drive (office hours only).

1.3 Guide to the Operation Environmental Management Plan (OEMP)

1.3.1 Document Structure

The OEMP contains the following elements:

Main Document

Component	Function
1 Introduction	Contains Environmental Policy and overview of the OEMP
2 Aspects and Impacts	<p>Sets out the range of activities being conducted which may potentially interact with the environment (aspects) and the potential changes to the environment, either positive or negative that may arise as a result of the activities (impacts).</p> <p>Includes procedures for assessing impacts of new activities, facilities or components or significant changes in the way that activities are carried out</p>
3 Legal and Other Obligations	<p>Identifies legislative instruments relevant to the project.</p> <p>Identifies and sets out requirements for the range of permits and approvals required for the project.</p> <p>Sets out the commitments made in the SEIS and the conditions imposed on the project by various approvals.</p> <p>Identifies where in the OEMP actions exist to ensure that legal and other obligations are fulfilled.</p>
4 Roles and Responsibilities	Defines roles and responsibilities in relation to environmental management and compliance
5 Objectives and Targets	Contains objectives and targets for environmental performance
6 Existing Environment	Summarises key environmental and social values relevant to the location and activities carried out.
7 Environmental Control Procedures – Operation Phase	Contains procedures to be carried out during operation of the Port of Airlie to ensure that (a) all conditions and requirements are fulfilled and (b) sound practice environmental management is achieved, (refer to Section 0).
8 Training and Awareness	Induction and ongoing awareness raising programs for all levels within the operation team. Register of training undertaken.
9 Monitoring and Auditing Requirements	Sets out requirements for environmental monitoring including baseline and operation monitoring requirements. Includes an audit program.
10 Continuous Improvement	Procedure for continuous improvement and a continuously updated list of corrective actions identified as a result of monitoring and auditing activities and complaints. Provides the basis for continuous improvement of the OEMP.
11 Incident Response	An emergency response plan relating to environmental aspects of emergencies. Includes incident reporting and investigation procedures and forms.
12 Communications	Sets out procedures for communication within the project team and with

Component	Function
and Reporting	stakeholders. Sets out requirements for reporting within the project team and to statutory authorities.
13 Document and Records Management	A register of all documents relating to the project and where electronic and/or hard copies of these are located. Filing system for documents and records required to be kept under the OEMP.

Note that the OEMP does not cover public health and safety, workplace health and safety or road traffic and transport related issues.

1.3.2 List of Procedures

Procedure No.	Title	Reference
ECP-1A	Dredge Management Plan (Channel and ferry basin)	Section 7
ECP-1B	Dredge Management Plan (Marina basin)	Section 7
ECP-2	Dredge Material Handling Area Management Plan	Section 7
ECP-3	Noise Management Plan	Section 7
ECP-4	Dust Management Plan	Section 7
ECP-5	Protected Species Management Plan	Section 7
ECP-6	Environmental Management of Contractors	Section 7
ECP-7	Acid Sulfate Soils	Section 7
ECP-8	Waste, Energy, Materials Management Plan	Section 7
ECP-9	Prevention of Water Contamination Management Plan	Section 7
ECP-10	Blank	NA
ECP-11	Cultural Heritage Management Plan	Section 7
ECP-12	Weed and Pest Management	Section 7
EAP-1	Environmental Assessment Procedure	Section 2
IRP-1	Incident Reporting Procedure	Section 11
IRP-2	Spill of Fuel or Oil	Section 11
CRP-1	Complaints	Section 12
CAP-1	Corrective Action Procedure	Section 10
CAP-2	OEMP Amendment Procedure	Section 10

ECP = Environmental Control Procedure

IRP = Incident Response Procedure

CRP = Communications and Reporting Procedure

CAP = Corrective Action Procedure

1.3.3 List of Forms

Form Number	Title	Reference
1	Daily Checklist – Dredging and Dredge Material Handling	Section 9.6.1
2	Weekly Checklist – General Site Inspection	Section 9.6.2
3	Pre-wet Season Checklist	Section 9.6.3
4	Post Severe Weather Event Checklist	Section 9.6.4
5	Corrective Action Request	Section 10
6	Incident Report	Section 11
7	Complaints and Inquiries	Section 12
8	Training Register	Section 8
9	Blank	
10	Blank	
11	Assessment of Impacts of New or Amended Activities	Section 2.4
12	Daily Water Quality Monitoring Record Sheet	Section 9.2
13	Environmental Management Program	Section 10.4

2. Aspects and Impacts

2.1 Introduction

This section provides an analysis of the key aspects involved in day to day operation and maintenance of the Port of Airlie, the potential environmental impacts associated with each aspect and a reference to the section within the OEMP that addresses the management of those potential impacts. As of January 2014, there was considerable vacant land at Port of Airlie as well as additional development of marina infrastructure and hence, this aspects and impacts register also covers likely impacts of further development within Port of Airlie. Figure 2-1 shows the current components of Port of Airlie.

The aspects and impacts has been developed based on actual and potential impacts identified during the environmental impact assessment process (SKM 2002, SKM 2003), and adjusted to reflect current activities at Port of Airlie. This assessment of aspects and impacts has also formed the basis for the various environmental management, control and monitoring requirements set out in this OEMP.

As Port of Airlie proceeds, there may also be changes to the way that the marina is operated and maintained, or new activities or developments that were not anticipated in the original impact assessment. This section therefore also provides a process and template for evaluating impacts in the event that new activities are proposed, or there are changes to the existing operations.

A hazard and risk assessment is provided in Section 11 of the OEMP.

2.2 Application of OEMP to other Parties at Port of Airlie

Meridien is not responsible for management of all aspects of marina operations and activities that might give rise to environmental impacts. Other parties with responsibilities for environmental management at Port of Airlie include:

- Whitsunday Regional Council (WRC). WRC are directly responsible for management of public areas and infrastructure at Port of Airlie. As of 2014, all items had been handed over to WRC and are currently "on maintenance" with the exception of the public car park which is under construction with completion scheduled for 2015. This is indicated in Table 2-1.
- Whitsunday Sailing Club. Whitsunday Sailing Club has rights to marina berths in Arms I, in the north-west corner of the marina basin as well as an interest in land (Lot 104) designated for a future marine academy. Whitsunday Sailing Club is also one of the nearest neighbours of Port of Airlie, with the club facilities and yard located adjacent to the marina to the north-west
- Outrigger, which operates The Boathouse apartment complex as a limited service hotel.
- Various retail tenants at The Boathouse
- Cruise Whitsundays which will commence operation of the ferry terminal later in 2014
- Private landholders, including The Beacons and The Cove residential lots
- Sub Lessees and renters of marina berths.

Table 2-1 includes aspects and impacts attributable to these parties and the activities conducted by each party. This OEMP applies directly only to Meridien's activities at Port of Airlie, and hence, the procedures, management actions and monitoring requirements apply only to those aspects which are within the control of Meridien.

However Meridien will also act with due diligence in regard to minimising impacts of other parties involved at Port of Airlie including by:

- Providing a copy of this OEMP to WRC, Whitsunday Sailing Club, Cruise Whitsunday and Outrigger
- Making a reasonable effort to communicate legal compliance requirements and other obligations and good practice requirements to the various parties. Further detail is provided in OEMP Section 12.1.
- Raising environmental issues in regular meetings and communications (see also OEMP Section 12).
- Working proactively with the other parties to identify and resolve environmental issues and impacts where possible.

2.3 Aspects and Impacts

The cause and effect relationships between carrying out various activities (aspects) and the ultimate impact on environmental and community values can be complex, particularly in coastal environments. A two-step approach has been taken whereby:

- The potential mechanisms for impacts on environmental values arising from each activity (aspect) are identified as primary impacts (Table 2-1)
- The potential impact or effect on environmental and community values caused by the primary impacts are then identified (Table 2-2).

The potential significance of impacts on environmental and community values are also assessed in Table 2-2 using the significance assessment criteria set out in Section 2.4. Links are provided to where the management controls relevant to each impact are addressed in the OEMP. It must be noted that some of the impacts are outside the control of Meridien, however Meridien will take a proactive approach with all users of Port of Airlie to maintain awareness of environmental impacts and appropriate controls.

Table 2-1 Aspects and Impacts

Aspect	Responsible Party	Primary Impacts ¹
Use of marina berths for short and long term occupancy	Meridien Vessel owners	<ul style="list-style-type: none"> • Generation of sewage and wastewater • Generation of general and putrescible waste
Operation and occupancy of vessels		<ul style="list-style-type: none"> • Use of energy • Use of potable water • Release of toxicants from antifoulants • Bilge water discharges (hydrocarbons, pests) • Introduction of pests and items subject to quarantine requirements • Release of litter and debris from fishing equipment • Provision of access to GBRMP and GBRWHA

Aspect	Responsible Party	Primary Impacts ¹
Operation of sailing club marina berths	Whitsunday Sailing Club Vessel owners	<ul style="list-style-type: none"> • Generation of sewage and wastewater • Generation of general and putrescible waste • Use of energy • Use of potable water • Release of toxicants from antifoulants • Bilge water discharges (hydrocarbons, pests) • Introduction of pests and items subject to quarantine requirements • Release of litter and debris from fishing equipment • Provision of access to GBRMP and GBRWHA
Maintenance of marina pontoons, berths and other marine structures	Meridien	<ul style="list-style-type: none"> • Release of organic material during antifouling • Release of chemical contaminants during antifouling • Provision of hard substrate for sessile organisms
Operation of marina administration offices and depot	Meridien	<ul style="list-style-type: none"> • Generation of office waste • Generation of sewage • Use of energy • Use of potable water
Operation of bus terminal and transport interchange	Whitsunday Regional Council	<ul style="list-style-type: none"> • Provision of access to GBRMP and GBRWHA • Generation of sewage • Use of energy • Use of potable water • Noise and exhaust from bus movements
Operation of The Boathouse apartments and hotel	Outrigger	<ul style="list-style-type: none"> • Generation of sewage and wastewater • Generation of general and putrescible waste • Use of energy • Use of potable water
Operation of restaurants, bars and retail outlets	Outrigger Various tenants	<ul style="list-style-type: none"> • Generation of sewage and wastewater • Generation of grease trap wastes • Generation of general and putrescible waste • Use of energy • Use of potable water • Generation of noise and odour from extraction fans
Operation of maritime training centre	To be advised	<ul style="list-style-type: none"> • To be determined based on planned activities
Management and maintenance of carparks and landscaped areas	Meridien (on behalf of WRC, to be handed over to WRC once "off maintenance")	<ul style="list-style-type: none"> • Generation of contaminated stormwater (hydrocarbons, sediment, nutrients, pesticides) • Weed invasion

Aspect	Responsible Party	Primary Impacts ¹
Management and maintenance of beach	Meridien (on behalf of WRC, to be handed over to WRC once "off maintenance")	<ul style="list-style-type: none"> Loss of structural integrity Loss of sand and release of sand and sediment to water
Occupancy of residences on freehold land	Individual owners/tenants	<ul style="list-style-type: none"> Generation of sewage and wastewater Generation of general and putrescible waste Use of energy Use of potable water Generation of contaminated stormwater (hydrocarbons, sediment, nutrients, pesticides, litter) Release of litter and debris from fishing equipment Weed invasion
Operation of boat ramp and car park	Whitsunday Regional Council	<ul style="list-style-type: none"> Generation of contaminated stormwater (hydrocarbons, sediment, nutrients, pesticides, litter) Release of litter and debris from fishing equipment Provision of access to GBRMP and GBRWHA Noise from vehicles and boat launching activities
Operation of ferry terminal	Cruise Whitsunday	<ul style="list-style-type: none"> Provision of access to GBRMP and GBRWHA Generation of sewage Use of energy Use of potable water Noise and exhaust from ferry movements
Storage and dispensing of fuel	Cruise Whitsunday	<ul style="list-style-type: none"> Spill or leak of fuel to the environment
Operation of maritime services area	To be advised	<ul style="list-style-type: none"> To be determined based on planned activities
Operation and maintenance of stormwater system	Meridien (on behalf of WRC, to be handed over to WRC once "off maintenance")	<ul style="list-style-type: none"> Generation of contaminated stormwater (hydrocarbons, sediment, nutrients, pesticides) Release of gross pollutants
Operation and maintenance of water supply	Meridien (on behalf of WRC, to be handed over to WRC once "off maintenance")	<ul style="list-style-type: none"> Leaks of potable water
Operation and maintenance of sewerage	Meridien (on behalf of WRC, to be handed over to WRC once "off maintenance")	<ul style="list-style-type: none"> Leaks of untreated sewage
Construction activities – buildings and land-based infrastructure	Meridien Individual Developers	<ul style="list-style-type: none"> Ground disturbance Generation of noise Generation of dust Traffic on internal and external roads

Aspect	Responsible Party	Primary Impacts ¹
Construction activities – pontoons, berths and other marine structures	Meridien	<ul style="list-style-type: none"> • Generation of noise • Generation of underwater noise • Generation of sediment plumes • Displacement of sediment (“mud wave”) • Traffic on internal and external roads
Dredging	Meridien	<ul style="list-style-type: none"> • Generation of sediment plumes • Interaction with dugongs, turtles and other marine species. • Generation of noise • Generation of underwater noise
Management of dredge material handling area	Meridien	<ul style="list-style-type: none"> • Release of contaminated tailwater • Generation of dust • Visual impact

¹ Impacts are listed here for completeness only. Listing here does not imply that there is a significant likelihood of this impact occurring or that significant damage will result if it does occur.



Figure 2-1 – Port of Airlie – Key Components

Table 2-2 Significance of Impacts on Environmental and Community Values

Primary Impacts (impact mechanisms)	Effects on Environmental and Community Values	Raw Impact			OEMP Reference	Residual impact		
		Value	Magnitude/ Consequence	Significance		Value	Magnitude/ Consequence	Significance
Bilge water discharges (indirect control only, legislative controls in place)	• Pollution of waters in marina and Boathaven Bay	Moderate	Low	Low	ECP-9	Moderate	Low	Low
	• Toxicity to marine animals	High	Negligible	Negligible	ECP-9	High	Negligible	Negligible
	• Introduction of aquatic pests	High	Moderate	High	ECP-9 ECP-12	High	Low	Moderate
Displacement of sediment ("mud wave")	• Mobilisation of suspended solids to the water column	Moderate	Moderate	Moderate	EAP-1, ECP-6	Moderate	Low	Low
Loss of sand, structural integrity of beach and other structures	• Mobilisation of suspended solids to the water column	Moderate	Moderate	Moderate	ECP-13 Form 3, Form 4	Moderate	Low	Low
	• Collapse in severe weather event	Moderate	Low	Low	Form 3, Form 4	Moderate	Low	Low
Generation of contaminated stormwater (hydrocarbons, sediment, nutrients, pesticides, gross pollutants)	• Pollution of waters in in marina and Boathaven Bay	Moderate	Low	Low	ECP-9 Form 2	Moderate	Low	Low
	• Toxicity to marine animals	High	Low	Moderate	ECP-9 Form 2	High	Negligible	Negligible
	• Entanglement of marine animals	High	Low	Moderate	ECP-9 Form 2	High	Low	Moderate
	• Accumulation of contaminants in sediments	Moderate	Low	Low	ECP-9 Form 2	Moderate	Negligible	Negligible
	• Reduction in visual amenity of marina and surrounding areas	Moderate	Low	Low	ECP-9 Form 2	Moderate	Negligible	Negligible
Generation of dust	• Visual impact.	Moderate	Low	Low	ECP-4	Moderate	Negligible	Negligible
	• Pollution of waters	Moderate	Low	Low	ECP-4	Moderate	Negligible	Negligible

Primary Impacts (impact mechanisms)	Effects on Environmental and Community Values	Raw Impact			OEMP Reference	Residual impact		
		Value	Magnitude/ Consequence	Significance		Value	Magnitude/ Consequence	Significance
Generation of general and putrescible waste	• Dust clouds obscuring traffic on Shute Harbour Road.	Moderate	Moderate	Moderate	ECP-4	Moderate	Negligible	Negligible
	• Odour	Moderate	Low	Low	ECP-8	Moderate	Negligible	Negligible
	• Attraction of insects, mice and rats	Low	Low	Low	ECP-8	Low	Negligible	Negligible
	• Release of litter/gross pollutants	High	Moderate	High	ECP-8, Form 2	High	Negligible	Negligible
	• Contamination of water	Moderate	Low	Low	ECP-8 Form 2	Moderate	Negligible	Negligible
	• Exposure of humans to bacteria and pathogens	High	Low	Moderate	ECP-8	High	Negligible	Negligible
Generation of grease trap wastes	• Loss of resources contained in the waste	Low	Low	Low	ECP-8	Low	Low	Low
	• Odour	Moderate	Low	Low	ECP-8	Moderate	Negligible	Negligible
	• Contamination of water	Moderate	Low	Low	ECP-8	Moderate	Negligible	Negligible
Generation of noise – various activities including building construction	• Exposure of humans to bacteria and pathogens	High	Low	Moderate	ECP-8	High	Negligible	Negligible
	• Disturbance to marina users, guests and patrons at accommodation and food and beverage businesses	Moderate	Mod-low Depending on duration	Moderate- low	ECP-3, ECP-6	Moderate	Mod- negligible Depending on duration	Moderate- negligible
	• Disturbance to residents and guests of adjacent hotels, apartments and houses and patrons of food and beverage businesses	Moderate	Mod-low Depending on duration	Moderate- low	ECP-3, ECP-6	Moderate	Mod- negligible Depending on duration	Moderate- negligible
	• Disturbance to and reduced enjoyment of recreational and social activities.	Moderate	Low	Low	ECP-3, ECP-6	Moderate	Low	Low

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 12

Primary Impacts (impact mechanisms)	Effects on Environmental and Community Values	Raw Impact			OEMP Reference	Residual impact		
		Value	Magnitude/ Consequence	Significance		Value	Magnitude/ Consequence	Significance
Release of litter, release of debris from fishing equipment (indirect control only, legal requirements in place)	• Entanglement of marine fauna, including turtles, dugong and fish	High	Moderate	Moderate	ECP-6 Form 2 OEMP Section 12	High	Low	Low
	• Entanglement of birds, particularly shorebirds	High	Moderate	Moderate	ECP-6 Form 2 OEMP Section 12	High	Low	Low
	• Reduction in visual amenity of marina and surrounding areas	Moderate	Low	Low	ECP-6 Form 2 OEMP Section 12	Moderate	Negligible	Low
Generation of office waste	• Loss of resources contained in the waste	Low	Low	Low	ECP-8	Low	Low	Low
Generation of sediment plumes, release of sediment contaminated water – dredging, land based works	• Reduced light penetration affecting health of seagrasses and other benthic organisms	High	Moderate – low depending on duration	High-moderate	ECP-1 ECP-2 ECP-6 ECP-9 Section 9.3	High	Low	Low
	• Deposition of sediment smothering seagrasses and other benthic organisms	High	Moderate – low depending on duration	High-moderate	ECP-1 ECP-2 ECP-6 ECP-9	High	Negligible	Negligible
	• Re-mobilisation of contaminants to the water column	Moderate	Low	Low	ECP-9	Moderate	Negligible	Negligible
Generation of sewage and wastewater	• Odour	Moderate	Low	Low	ECP-8 Form 2	Moderate	Negligible	Negligible
Leaks of untreated sewage	• Contamination of water, including with nutrients and suspended solids	Moderate	Moderate	Moderate	ECP-8, ECP-9, Form 2	Moderate	Negligible	Negligible

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\User\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 13

Primary Impacts (impact mechanisms)	Effects on Environmental and Community Values	Raw Impact			OEMP Reference	Residual impact		
		Value	Magnitude/ Consequence	Significance		Value	Magnitude/ Consequence	Significance
	<ul style="list-style-type: none"> Exposure of humans to bacteria and pathogens 	High	Moderate	High	ECP-8, ECP-9, Form 2	High	Negligible	Negligible
Generation of underwater noise	<ul style="list-style-type: none"> Disturbance to foraging of marine turtles and dugong 	High	Low	Moderate	ECP-1 ECP-5	High	Negligible	Negligible
	<ul style="list-style-type: none"> Instigation of avoidance behaviour in marine fauna 	High	Low	Moderate	ECP-1 ECP-5	High	Negligible	Negligible
	<ul style="list-style-type: none"> Damage to hearing mechanisms for marine fauna and to fish generally 	High	Negligible	Negligible	NA	High	Negligible	Negligible
Ground disturbance	<ul style="list-style-type: none"> Exposure of soils to erosive forces (and subsequent release of sediment to marina basin and adjacent waters) 	Moderate	Low	Low	ECP-6	Moderate	Negligible	Low
	<ul style="list-style-type: none"> Reduction in visual amenity 	Moderate	Low	Low	ECP-6	Moderate	Negligible	Low
	<ul style="list-style-type: none"> Removal of landscape trees 	Low	Low	Low	ECP-6	Low	Low	Low
Interaction with dugongs, turtles and other marine species (indirect control only)	<ul style="list-style-type: none"> Disturbance to foraging behaviours 	High	Low	Moderate	ECP-1 ECP-5	High	Negligible	Negligible
	<ul style="list-style-type: none"> Physical injury or death 	High	High	High	ECP-1 ECP-5	High	Negligible	Negligible
Introduction of pests and items subject to quarantine requirements	<ul style="list-style-type: none"> Competition with native flora and fauna – terrestrial 	Low	Low	Low	ECP-12 ECP-6 Form 2	Low	Negligible	Negligible
Weed invasion	<ul style="list-style-type: none"> Release of aquatic pests 	High	Moderate	High	ECP-12	High	Low	Low
	<ul style="list-style-type: none"> Increased predation of native fauna and consumption of native flora (terrestrial) 	Low	Low	Low	ECP-12 ECP-6 Form 2	Low	Negligible	Negligible
	<ul style="list-style-type: none"> Sickness or death of marine animals 	High	Moderate	High	ECP-12	High	Low	Low

CONTROLLED DOCUMENT

Contact CTPI49@ashenv.com to check date of latest version

C:\Users\CTPI49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 14

Primary Impacts (impact mechanisms)	Effects on Environmental and Community Values	Raw Impact			OEMP Reference	Residual impact		
		Value	Magnitude/ Consequence	Significance		Value	Magnitude/ Consequence	Significance
	<ul style="list-style-type: none"> Reduced habitat for native (terrestrial) animals 	Moderate	Low	Low	ECP-12 ECP-6 Form 2	Moderate	Negligible	Negligible
Leaks of potable water	<ul style="list-style-type: none"> Loss of water resource 	Moderate	Low	Low	Form 2	Moderate	Negligible	Negligible
	<ul style="list-style-type: none"> Erosion and generation of sediment laden water 	Moderate	Low	Low	Form 2	Moderate	Negligible	Negligible
Provision of access to GBRMP and GBRWHA (indirect control only, use of GBRMP is subject to legal and management requirements imposed by of GBRMPA)	<ul style="list-style-type: none"> Increased pressure on ecosystem values through release of waste and litter, fishing, physical damage from anchoring, diving and snorkelling 	High	Low	Moderate	Section 12	High	Low	Moderate
	<ul style="list-style-type: none"> Increased awareness and appreciation of the values of the GBRMP and GBRWHA 	High	Low (Positive)	Moderate (positive)	Section 12	High	Low (Positive)	Moderate (positive)
	<ul style="list-style-type: none"> Enjoyment and relaxation 	Moderate	Low (positive)	Low (positive)	Section 12	Moderate	Low (positive)	Low (positive)
Provision of hard substrate for sessile organisms	<ul style="list-style-type: none"> Increased primary and secondary production 	Moderate	Low (positive)	Low (positive)	NA	Moderate	Low (positive)	Low (positive)
	<ul style="list-style-type: none"> Increased food sources for fish and some marine turtles 	High	Low (positive)	Moderate (positive)	NA	High	Low (positive)	Moderate (positive)
Release of chemical contaminants during antifouling Release of toxicants from antifoulants (indirect control only, legislative controls in place)	<ul style="list-style-type: none"> Pollution of waters in marina and Boathaven Bay 	Moderate	Moderate	Moderate	ECP-9	Moderate	Negligible	Negligible
	<ul style="list-style-type: none"> Toxicity to marine animals 	High	Moderate	High	ECP-9	High	Negligible	Negligible
	<ul style="list-style-type: none"> Accumulation of contaminants in sediments 	Moderate	Low	Low	ECP-9	Moderate	Negligible	Negligible
Release of organic material during	<ul style="list-style-type: none"> Pollution of waters in marina 	Moderate	Low	Low	ECP-9	Moderate	Negligible	Negligible
	<ul style="list-style-type: none"> Pollution of waters in Boathaven Bay 	Moderate	Low	Low	ECP-9	Moderate	Negligible	Negligible

CONTROLLED DOCUMENT

Contact CTPI 49_ashenv.com to check date of latest version

C:\User CTPI 49-Sch4 Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 15

Primary Impacts (impact mechanisms)	Effects on Environmental and Community Values	Raw Impact			OEMP Reference	Residual impact		
		Value	Magnitude/ Consequence	Significance		Value	Magnitude/ Consequence	Significance
antifouling (indirect control only, legislative controls in place)	<ul style="list-style-type: none"> Increased biological oxygen demand in waters 	Moderate	Low	Low	ECP-9	Moderate	Negligible	Negligible
Release of contaminated supernatant from dredge material handling pond	<ul style="list-style-type: none"> Reduced light penetration affecting health of seagrasses and other benthic organisms 	High	Moderate	High	ECP-2 Section 9.3	High	Low	Low
	<ul style="list-style-type: none"> Deposition of sediment smothering seagrasses and other benthic organisms 	High	Moderate	High	ECP-2	High	Negligible	Negligible
	<ul style="list-style-type: none"> Re-mobilisation of contaminants to the water column 	Moderate	Moderate	Moderate	ECP-2	Moderate	Negligible	Negligible
Spill or leak of fuel to the environment (indirect control only, legislative controls in place)	<ul style="list-style-type: none"> Pollution of soils/sediments. 	Moderate	Moderate	Moderate	ECP-9 Section 11	Moderate	Negligible	Negligible
	<ul style="list-style-type: none"> Pollution of waters 	Moderate	Moderate	Moderate	ECP-9 Section 11	Moderate	Negligible	Negligible
	<ul style="list-style-type: none"> Toxicity to marine animals and plants 	High	Moderate	High	ECP-9 Section 11	High	Low	Moderate
Traffic on internal and external roads	<ul style="list-style-type: none"> Noise and exhaust fumes 	Moderate	Negligible	Negligible	NA	Moderate	Negligible	Negligible
	<ul style="list-style-type: none"> Injury or death to pedestrians 				Outside EMP scope			
Use of energy	<ul style="list-style-type: none"> Loss of non renewable (fossil fuel) resources 	Moderate	Low	Low	ECP-8	Moderate	Low – negligible	Low-negligible
	<ul style="list-style-type: none"> Release of greenhouse gases (if sourced from non-renewable sources) 	High	Low	Moderate	ECP-8	High	Low – negligible	Low-negligible
Use of potable water	<ul style="list-style-type: none"> Consumption of water resources 	Moderate	Low	Low	No controls	Moderate	Low	Low
Visual impact	<ul style="list-style-type: none"> Reduced amenity and enjoyment for visitors 	Moderate	Moderate	Moderate	Form 2	Moderate	Low	Low

CONTROLLED DOCUMENT

Contact CTPI 49 ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 16

2.4 Impact Significance

This section provides a basis for determining the significance of impacts for the purposes of prioritising management effort, and assessing impacts of new activities and changes to operations.

Impact significance is determined as the product of:

- The sensitivity or value of the environmental or social system, resource or receptor being affected, and
- The magnitude of impact on that system, resource or receptor.

While the determination of each of these components requires specialist input, Table 2-3 sets out some guidance as to determining value or sensitivity ratings, and Table 2-4 provides some guidance on determining magnitude and consequence of change or impact. Table 2-5 shows a matrix for determining the overall significance of an impact, based on the formula that impact significance is the product of value or sensitivity and consequence or magnitude of the impact. The significance ratings in Table 2-5 can be used for both raw and residual impacts.

Table 2-3 includes a “very high” category in relation to the value or sensitivity of values or resources. Although Port of Airlie and surrounding waters below LAT are located in the GBRWHA, an assessment of the extent to which the OUV of the GBRWHA is expressed in and around Port of Airlie indicates that there are no particularly important expressions. Some features of Boathaven Bay make a minor contribution to the OUV of the GBRWHA, however there are no features considered to make a moderate or higher contribution.

Note that hazards and associated risks are identified and evaluated in Section 11 of the OEMP.

Table 2-3 Value or Sensitivity of Systems and Resources

Rating	Indicative Values and Sensitivities at Port of Airlie
Very high	<ul style="list-style-type: none"> • Feature or attribute that makes a moderate or high contribution to the OUV of the GBRWHA, feature or attribute that is an important or representative example of the OUV of the GBRWHA. Refer Section 6.6.1, which sets out features of Boathaven Bay and surrounds which make a contribution to the OUV of the GBRWHA.
High	<ul style="list-style-type: none"> • Seagrass habitat • Migratory shore birds • Marine turtles and dugong • Mangrove habitat • Water quality – high conservation value (refer ANZECC 2000, Section 3.1.3.1) (note that there are no high conservation value waters within Boathaven Bay or Pioneer Bay) • Essential infrastructure such as Shute Harbour Road, mains water, main stormwater drains, power, sewerage
Moderate	<ul style="list-style-type: none"> • Water quality – slightly to moderately disturbed systems (refer ANZECC 2000, Section 3.1.3.1) (note that water within the marina basin and Boathaven Bay is classified as slightly to moderately disturbed) • Restaurants and hotels • Public parks and recreation areas • Internal infrastructure within Port of Airlie • Migratory terrestrial birds • Least concern (common) native animals
Low	<ul style="list-style-type: none"> • Muddy substrate habitat

Table 2-4 Consequence and Magnitude of Impact

Rating	Descriptor and examples
Extreme	<p>Extremely severe consequences, consequences that are significant on a wide scale, for example, the scale of the GBRWHA. Impacts that are long term and/or effectively irreversible</p> <p>Examples include:</p> <ul style="list-style-type: none"> • Destruction of an attribute that contributes to the OUV of the GBRWHA • Local or more widespread extinction of a native species • Severe social disruption with significant health or economic loss to a large proportion of the community, death or injury to humans
High	<p>Severe consequences, significant within the Whitsunday region of the GBRWHA and/or Whitsunday Regional Council area, likely to be non-compliant with legislation and policy requirements, medium to long term with some potential for reversibility. For example:</p> <ul style="list-style-type: none"> • Significant modification to an attribute that contributes to the OUV of the GBRWHA • Destruction of habitat important or significant modification such that the area of habitat or carrying capacity is reduced by more than (nominally) 10% • Water quality degradation (when considered against relevant water quality guidelines) such that one or more values of water resources are degraded to "highly disturbed" ecosystems • Social disruption, people unable to continue normal activities • Economic loss affecting profitability of several business, or livelihood of several families/households
Moderate	<p>Moderate consequences, significant within the Pioneer Bay marine area, and the Airlie Beach/Cannonvale urban area. For example:</p> <ul style="list-style-type: none"> • Degradation of habitat but less than 10% of area affected and/or carrying capacity is not reduced by more than 10% • Water quality degradation but no significant reduction in values, water quality is still within expected range for "slightly to moderately disturbed" ecosystems • Minor social disruption, minor economic loss affecting a small number of people and businesses
Low	<p>Low consequences, of significance at a local scale, short term and reversible. Examples include:</p> <ul style="list-style-type: none"> • Disruption to native animal movements and behaviours • Disruption to recreational activities and some minor disruption to other community activities
Negligible (no change)	No measurable change in availability of resources or function of systems, no measurable effect on people.

Table 2-5 Impact Significance Matrix

Receptor Value / Sensitivity	Impact Magnitude				
	Extreme	High	Moderate	Low	Negligible
Very high	Extreme	Extreme	High	Moderate	Negligible
High	Extreme	High	High	Moderate	Negligible
Moderate	High	High	Moderate	Low	Negligible
Low	High	Moderate	Low	Low	Negligible

Note that when determining significance of impacts on matters of national environmental significance under the EPBC Act, impacts are considered significant/unacceptable or not significant/acceptable. In this case, low or moderate impacts should be considered not significant/acceptable and high and extreme impacts should be considered significant/unacceptable.

2.5 Hazard and Risk Analysis

When assessing the risk associated with hazard events such as fuel or oil spills, a qualitative risk assessment matrix is used as shown in Table 2-6. This risk matrix used is generally consistent with the AS/NZS ISO 31000: 2009 Risk management – Principles and guidelines but has been adapted to remove the “almost certain” and “likely” likelihood criteria. Hazards that are “likely” or “almost certain” are effectively the same as impacts, as impacts are defined as the likely consequences of the proposed action. High likelihood hazards should be assessed using the impact significance assessment technique set out in Section 2.4.

Consequence and likelihood descriptors are set out in Table 2-7 and Table 2-8 respectively.

Table 2-6 - Qualitative Risk Assessment Matrix

Likelihood	Consequence				
	Major (5)	Severe (4)	Moderate (3)	Minor (2)	Insignificant (1)
Possible (3)	High	High	Medium	Medium	Low
Unlikely (2)	High	Medium	Medium	Low	Low
Rare (1)	Medium	Medium	Medium	Low	Low

Table 2-7 - Consequence Scale Description (MNES Values)

Descriptor (Rating)	Level of Impact on MNES Values
Insignificant (1)	Negligible effect on environmental values
Minor (2)	Minor, localised environmental impact, no discernible degradation of environmental values, fully reversible with minimal intervention in the short term (<1 year)
Moderate (3)	Moderate level of impact on the environment generally, but confined to Boathaven Bay and reversible with minimal intervention in the short to medium term (1-5 years)
Severe (4)	Major level of impact within Boathaven Bay, degradation of environmental values lasting longer than five years
Major (5)	Level of impact extends beyond Boathaven Bay, long term degradation of environmental values

Table 2-8 - Likelihood Scale Description

Descriptor (Rating)	Definition
Rare (1)	Frequency of occurrence expected to be < 1%
Unlikely (2)	Frequency of occurrence expected to be 1% to 5%
Possible (3)	Frequency of occurrence expected to be 5% to 20%

2.6 Evaluating Impacts of New or Changed Activities

EAP-3	Evaluating Impacts of New or Changed Activities	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>From time to time, new activities may be carried out, or there may be modifications to the way that activities and operations are carried out. In these instances, the environmental impact assessment form should be completed to determine whether these new or amended activities can be carried out any particular controls or monitoring requirements are triggered, and whether new or amended approvals are required. This must be completed by a person with experience in environmental impact assessment and approvals of coastal and marine projects.</p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> • <i>Environment Protection and Biodiversity Conservation Act 1999</i> • <i>Environmental Protection Act 1994</i> • <i>Sustainable Planning Act 2009</i>. • Existing approvals – see Section 3.3 			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> • New activities or changes to the way that activities are carried out do not occur until: <ul style="list-style-type: none"> • Potential environmental impacts have been evaluated and management and mitigation measures have been identified that ensure that residual impact significance and risks are lower than moderate • Compliance with existing approvals and legal requirements have been checked and new or amended approvals obtained as necessary • The OEMP has been amended as required to ensure that required management and mitigation measures are undertaken. 			
Management Actions:		Responsibility:	Timing:
<p>1. When planning new activities, review environmental impacts and risks. If there is potential for a moderate or higher significance impact or moderate or higher risk to community or environmental values, engage a suitably qualified environmental specialist to complete OEMP Form 11 (Assessment of Impacts of New or Amended Activities).</p>		Asset Manager	Ongoing
<p>Monitoring and Auditing:</p> <p>As per weekly checklist.</p>			

EAP-3	Evaluating Impacts of New or Changed Activities	Revision 03	Issued: Dec 2016
<p><u>Corrective Action:</u></p> <ul style="list-style-type: none"> If environmental assessment indicates raw (unmitigated) impact significance or risk is moderate or higher: <ul style="list-style-type: none"> Identify suitable measures to avoid, minimise or otherwise mitigate the impact significance so that residual significance is moderate or low (note that the threshold for unacceptable impacts is set as moderate, however it is still considered desirable to attempt to reduce moderate impacts to low if possible) Amend the OEMP as required to ensure that the mitigation measures and any monitoring, corrective action and reporting requirements are adequately reflected Ensure that the Asset Manager and any relevant team members are aware of changes to the OEMP and requirements in relation to managing the impact of the new or amended activity. If risk assessment indicates that raw (unmanaged) risk is medium or above: <ul style="list-style-type: none"> Identify suitable measures to avoid, minimise or otherwise mitigate the hazard so that residual risk is moderate or low (note that the threshold for unacceptable risk is set as moderate, however it is still considered desirable to attempt to reduce moderate risks to low if possible) Amend the OEMP as required to ensure that the mitigation measures and any monitoring, corrective action and reporting requirements are adequately reflected Ensure that the Asset Manager and any relevant team members are aware of changes to the OEMP and requirements in relation to managing the impact of the new or amended activity. If residual impact significance remains high or above, the activity cannot be carried out If residual risk remains high or above, the activity cannot be carried out (the exception to this is where a risk remains high because fatality is the consequence, and a safety plan has been developed to address this risk) If the new or amended activity is not in accordance with existing approval conditions, or requires additional approval, then the activity cannot commence until: <ul style="list-style-type: none"> Any relevant approvals have been amended Anew required approvals have been obtained The requirements of the OEMP have been updated to reflect new/revised conditions of approval The Asset Manager and relevant team members are aware of changes to the OEMP and related legal/approval requirements. 			
<p><u>Reporting:</u></p> <ul style="list-style-type: none"> Retain copies of Form 11 on OEMP files (see OEMP Section 13) Updated approvals register and new/updated approvals on OEMP legal and other obligations files Training records in relation to any training or awareness required in relation to management of impacts and hazards 			
<p><u>Cross References:</u></p> <ul style="list-style-type: none"> Section 6 Section 9 			

OEMP Form 11		Assessment of Impacts of New or Changed Activities	
1. PROJECT NAME:		2. COMPLETED BY:	3. DATE COMPLETED
4. ACTIVITY DESCRIPTION (Include purpose of the activity, location, scale/magnitude descriptors, equipment used, duration. Attach drawings as required.)			
5. ENVIRONMENTAL AND COMMUNITY VALUES POTENTIALLY AFFECTED (refer Section 6, identify sensitive receptors and values, discuss importance of values potentially affected)			
6. POTENTIAL IMPACTS (Describe potential impacts of the activity. Level of detail should be commensurate with the scale of impacts. Evaluate the potential significance based on requirements of Section 2.3 of OEMP):			
7. HAZARD AND RISK (Identify hazards (unplanned events or accidents) that could occur as a result of the activity. Evaluate risk based on requirements of Section 11.2 of OEMP)			
8. MANAGEMENT AND MITIGATION (Describe management and mitigation measures required to ensure impacts and risks are at acceptable levels (no impacts with significance higher than medium, no hazards with risk higher than medium)			
9. COMPLIANCE ASSESSMENT			
9.1 COMPLIANCE WITH EXISTING APPROVALS (Review existing approval conditions (see Section 3) and identify whether any amendments are required to allow the activity to go ahead)			
9.2 NEW APPROVAL REQUIREMENTS (identify whether additional approval requirements are triggered)			
10. MONITORING AND CORRECTIVE ACTION (Identify what monitoring is required to check effectiveness of proposed mitigation measures and check compliance with conditions of approval. Identify what corrective actions and contingencies might be required if monitoring indicates non-compliance).			
11. AMENDMENT TO THE OEMP (Identify amendments required to the OEMP to achieve compliance and ensure that impacts and risks are managed to acceptable levels).			
12. TRAINING/AWARENESS RAISING REQUIREMENTS:			
13. REVIEWER COMMENTS:			
Name: _____ Signature: _____ Date: ____/____/____			

14. APPROVER COMMENTS:

Receiver and Manager: Signature: _____ Date: ____/____/____

15. FOLLOW UP ACTIONS:

Approval conditions amended (as required)	Signature:	Date complete:
New approvals obtained (as required)	Signature:	Date complete:
OEMP amendments made:	Signature:	Date complete:
Training and awareness undertaken	Signature:	Date complete:

Published on DES Disclosure Log
RTI Act 2009

CONTROLLED DOCUMENT

Contact CTPI 49-S@ashenv.com to check date of latest version
C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx
21-004 File A

REVISION 01
DATE OF ISSUE: Dec 2016
PAGE 23

Page 107 of 392

3. Legal Requirements and Other Obligations

3.1 Applicable Legislation

3.1.1 Commonwealth

Key Commonwealth environmental legislation relevant to Port of Airlie includes:

- *Environmental Protection and Biodiversity Conservation Act 1999*
- *Great Barrier Reef Marine Park Act 1975*
- *Environment Protection (Sea Dumping) Act 1981*
- *Quarantine Act 1908*

A summary of these Acts and applicability to Port of Airlie operations is provided in Table 3-1.

3.1.2 Queensland

Key Queensland environmental legislation relevant to Port of Airlie includes:

- *Coastal Protection and Management Act 1995*
 - o *Queensland Coastal Plan*
- *Aboriginal Cultural Heritage Act 2003*
- *Queensland Heritage Act 1992*
- *Environmental Protection Act 1994*
 - o *Environmental Protection (Air) Policy 2008 (EPP (Air))*
 - o *Environmental Protection (Water) Policy 2009 (EPP (Water))*
 - o *Environmental Protection (Noise) Policy 2008 (EPP (Noise))*
 - o *Environmental Protection Regulation 2008*
 - o *Environmental Protection (Waste Management) Regulation 2000*
- *Fisheries Act 1994*
- *Sustainable Planning Act 2009 (SP Act)*¹
 - o *Sustainable Planning Regulation 2009*
- *Land Act 1994*
- *State Development and Public Works Organisation Act 1971 (SDPWO Act)*
- *Transport Operations (Marine Safety) Act 1994 (Marine Safety Act)*
- *Transport Operations (Marine Pollution) Act 1995 (Marine Pollution Act)*

A summary of these Acts and subordinate legislation, together with an assessment of the applicability to Port of Airlie operations is provided in Table 3-1.

¹ Note that new planning legislation is scheduled to be introduced in Queensland in mid 2017 – refer <http://www.dilgp.qld.gov.au/planning-reform.html>

Table 3-1 – Relevant Legislation

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
Commonwealth		
<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	<p>Among other things, the EPBC Act requires actions that might have a significant impact on matters of national environmental significance (MNES) to undergo assessment and only proceed if approval is given.</p> <p>The MNES that trigger assessment under the EPBC Act are:</p> <ul style="list-style-type: none"> • World heritage properties. Port of Airlie is located within the Great Barrier Reef World Heritage Area (GBRWHA), see also Section 6.6.1 • National heritage places. Port of Airlie is located within the Great Barrier Reef National Heritage place, see also Section 6.6.1 • Wetlands of international importance. There are no wetlands of international importance within at least 50km of Port of Airlie • Listed threatened species and ecological communities. Listed threatened species and ecological communities occurring or potentially occurring at and near Port of Airlie are discussed in Section 6.6.3 • Migratory species. Migratory species occurring or potentially occurring at and near Port of Airlie are discussed in Section 6.6.4 • Great Barrier Reef Marine Park (GBRMP). Port of Airlie is not within the GBRMP (see Section 6.6.2), however most vessels utilising Port of Airlie will be accessing the GBRMP. • Commonwealth marine areas. Port of Airlie is not in the Commonwealth marine area. Some vessels utilising Port of Airlie may be accessing the Commonwealth Marine Area • Nuclear actions, including uranium mines. Port of Airlie is not a nuclear action • A water resource in relation to coal seam gas development and large coal mining development. This is not relevant to Port of Airlie. 	<p>Port of Airlie was declared a Controlled Action under the EPBC Act due to potentially significant impacts on the GBRWHA and listed threatened and migratory species (EPBC 2001/298). The project underwent assessment via a bilateral agreement between the Commonwealth and State of Queensland and was approved on 14th July 2004, subject to 11 conditions</p> <p>Some of the conditions are relevant to operation of Port of Airlie and hence the approval remains current.</p> <p>Conditions 5 and 8 of the approval allow Port of Airlie to operate according to an approved Operation Environmental Management Plan. This covers day to day operations and allows for changes in the way that Port of Airlie is operated provided that the matters set out in Section 5 are still protected and the approved version of the OEMP covers the range of operational activities being undertaken.</p> <p>In the event that significant changes to operation occurred, or an expansion of Port of Airlie was envisaged, it is likely that additional approval under the EPBC Act would be required. The key test in this situation is whether the change or expansion has the potential to cause additional significant impacts on any of the MNES protected under EPBC. Guidelines define what is considered a significant impact (http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999/what)</p>

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
<i>Great Barrier Reef Marine Park Act 1975</i>	Establishes the Great Barrier Reef Marine Park (GBRMP) and its managing organisation, Great Barrier Reef Marine Park Authority (GBRMPA). Port of Airlie is well outside the GBRMP boundary, however provides a key starting point for people to visit the GBRMP on both commercial tours and as independent visitors.	Operators of commercial tours into the GBRMP require a permit.
<i>Environment Protection (Sea Dumping) Act 1981</i>	Regulates the dumping of various wastes including dredge material into marine waters. Approval is not required where disposal occurs in State waters.	The waters of Boathaven Bay are coastal waters of the State of Queensland, and hence the <i>Environment Protection (Sea Dumping) Act 1981</i> does not apply to underwater disposal of dredge material within the marina basin.
<i>Quarantine Act 1908</i>	Provides for biosecurity through preventing import of pest species and other exotic species	No specific requirements for Port of Airlie Vessels coming from overseas destinations and from Torres Strait are required to contact Australian Quarantine and Immigration Service (AQIS) for clearance prior to making landfall.
Queensland		
<i>Coastal Protection and Management Act 1995</i>	<p>The <i>Coastal Protection and Management Act 1995</i> (Coastal Act):</p> <ul style="list-style-type: none"> Provides the basis for preparation of a Coastal Plan to guide coastal development, management and protection of coastal resources Establishes requirements for approval of works in coastal zone and particularly in tidal and intertidal areas Assigns ownership of quarry materials in tidal waters to the State. 	<p>The construction of Port of Airlie, including excavation and creation of land areas was covered by approval IPDC00251205D32 (renamed SPD-0714-009929).</p> <p>The maintenance of an approved work is 'excluded work' under the <i>Sustainable Planning Act 2009</i> ('SPA'). As such, activities required to maintain the tidal works do not require development approval provided that:</p> <ul style="list-style-type: none"> The maintenance activities are related to the approved structure. The approved drawings are specified on the development approval; and Applicable conditions of the original development approval are followed (See Section 3.3.3). <p>New works, that is, works that are not part of the approved structure, will require development approval for operational works that are tidal works. This is an IDAS approval.</p> <p>Excavation of material from below the high water mark was undertaken under Quarry Allocation ENAQ0076904. A royalty waiver was also obtained for this excavation. The full quantity of material was excavated and hence, any additional excavation will require a new quarry allocation.</p>

CONTROLLED DOCUMENT

Contact CTPI 49 ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 26

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
<i>Queensland Coastal Management Plan</i>	Coastal Management Plan – provides guidance on aspects such as coastal landforms and processes, coastal ecosystems and access http://www.ehp.qld.gov.au/coastalplan/	In the event that an approval under the Coastal Act is required, the application must address the requirements of the relevant Coastal Plan.
<i>Aboriginal Cultural Heritage Act 2003</i>	<p>The <i>Aboriginal Cultural Heritage Act 2003</i> (ACH Act) establishes a duty of care to protect items, places and features of Aboriginal cultural heritage significance.</p> <p>The Act establishes a cultural heritage duty of care, specifically that “A person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage”.</p> <p>Duty of care guidelines have been established under the Act to assist with determining whether an activity is likely to cause disturbance to Aboriginal cultural heritage material (DATSIMA, 2004, http://www.datsima.qld.gov.au/resources/atsis/people/cultural-heritage/duty-care-guidelines.pdf).</p> <p>Where there is a risk of an activity disturbing material of Aboriginal cultural heritage significance, the duty of care can be considered discharged if the activities are carried out in accordance with a registered Aboriginal Cultural Heritage Management Plan (CHMP) that has been agreed with the relevant Aboriginal Parties or under a native title agreement or other agreement that addresses cultural heritage. CHMP is required for any project for which an EIS is required regardless of the risk of disturbance to Aboriginal cultural heritage material.</p>	<p>Although Port of Airlie was a project for which an EIS was undertaken, the EIS process was initiated before the ACH Act came into place, and hence there was no statutory requirement for a CHMP.</p> <p>Surveys undertaken for the original EIS (1998) did not identify any items of cultural heritage significance to which the ACH Act would apply. The coastline affected by Port of Airlie had been largely rebuilt as a result of road works and other infrastructure works and any cultural heritage items associated with the coastline were considered likely to have been destroyed.</p> <p>In the event that activities were to occur at Port of Airlie that might disturb areas that have been previously undisturbed, the duty of care guidelines should be consulted to determine whether a CHMP or other agreement in relation to cultural heritage management is required.</p>
<i>Queensland Heritage Act 1992</i>	This Act protects non-indigenous cultural heritage places and items.	There are no known cultural heritage items or places of significance in or near Port of Airlie. Section 89 of the Act requires the discovery of an item that may be important to Queensland’s [post-settlement] history to be reported.
<i>Environmental Protection Act 1994 – Overview</i>	<p>The Environmental Protection Act (EP Act) has the central objective to “protect Queensland’s environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends”.</p> <p>Key relevant aspects of the EP Act are outlined below.</p>	Key provisions relevant to Port of Airlie are summarised below.

CONTROLLED DOCUMENT

Contact CTPI_49@ashenv.com to check date of latest version

C:\User\CTPI_49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 27

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
EP Act – Environmental Nuisance and Environmental Harm	<p>The EP Act defines environmental harm as:</p> <p><i>Any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.</i></p> <p>The EP Act defines environmental nuisance as:</p> <p><i>Unreasonable interference or likely interference with an environmental value caused by aerosols, fumes, light, noise, odour particles or some, or an unhealthy, offensive or unsightly condition because of contamination.</i></p> <p>Environmental harm is further categorised into:</p> <ul style="list-style-type: none"> • Material environmental harm, being harm which is not “trivial or negligible” and where the costs to clean up or otherwise rehabilitate or rectify the damage caused are between \$5,000 and \$50,000. • Serious environmental harm, being significant harm that is irreversible, of a high impact or widespread, or caused to an area of high conservation value. Serious environmental harm is also defined in terms of the costs to address the damage or loss caused, with the threshold set at \$50,000. 	<p>These definitions are relevant when determining whether an event must be reported under the EP Act. In practice however, any event with potential to cause environmental harm, however minor, should be reported.</p>
EP Act – General Environmental Duty	<p>Section 319 of the EP Act establishes a general environmental duty</p> <p><i>A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm</i></p>	<p>This OEMP is the critical measure by which Port of Airlie implements the general environmental duty. This OEMP addresses the requirements of Section 319(2) of the EP Act as follows:</p> <ul style="list-style-type: none"> • Identifies the nature of environmental harm or potential environmental harm that might arise from activities undertaken at Port of Airlie • Identifies the values and sensitivities of the surrounding environment • Proposes reasonable and practicable management measures that are appropriate to the actual and potential harm that might arise and expected to be effective in avoiding and minimising harm.
EP Act – Section 320-320G - duty to notify	<p>Individuals have a duty under the EP Act in relation to notification of environmental harm or potential environmental harm.</p>	<p>Reporting duties relevant to Port of Airlie include:</p> <ul style="list-style-type: none"> • An employee must report an event that has caused

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\User\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 28

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
environmental harm		<p>environmental harm to their employer within 24 hours</p> <ul style="list-style-type: none"> • If the employer cannot be contacted, the individual must contact the DEHP directly • The employer must notify the DEHP within 24 hours of becoming aware of an event that has caused environmental harm • The employer must also contact either the owner or occupier of any land affected by the incident.
EP Act Sections 430 and 431	<p>Conditions of an environmental authority must be complied with</p> <p>The holder of the environmental authority must ensure that everyone acting under the authority complies with the conditions</p>	<p>All aspects of EPPR00332613 must be complied with. Port of Airlie must also exercise due diligence in making sure that all employees, contractors and subcontractors comply with all requirements of the environmental authority.</p>
EP Act – Sections 437-440 - offence to cause material or serious environmental harm	<p>It is an offence to cause environmental harm or nuisance. Penalties are significant and can include imprisonment terms for senior managers. Penalties are higher if the harm or nuisance was caused wilfully compared to negligently.</p>	<p>Environmental harm or nuisance is not unlawful if a condition of an environmental authority expressly authorises a particular type of harm (for example a release of pollutants to the environment), provided that all conditions of the environmental authority are being complied with. If the environmental authority is silent on a particular aspect, then the general requirements in relation to environmental harm apply.</p> <p>Demonstration of due diligence, for example through having an appropriate OEMP in place, and implementing that OEMP, may be a partial defence against this offence, particularly in relation to demonstrating that the harm was not caused wilfully or negligently.</p> <p>The three environmental protection policies (air, water and noise) may be used to determine harm or nuisance.</p>
EP Act – Section 440ZG – water contamination	<p>Section 440ZG of the EP Act makes it an offence to deposit contaminants in water, including releasing contaminants to a stormwater drain, or placing contaminants in a location from where it may be reasonably expected that the contaminant could mobilise to waters.</p> <p>The full list of prescribed contaminants is contained in Schedule 9 of the <i>Environmental Protection Regulation 2008</i>. It is not an offence to discharge contaminants in accordance with an environmental authority.</p>	<p>The only authorised discharge for Port of Airlie is in relation to the Dredge Material Management Pond.</p> <p>Prescribed contaminants include the following substances and wastes that may be generated at Port of Airlie:</p> <ul style="list-style-type: none"> • Chemicals or chemical wastes including cleaning chemicals • Sediment (whether entrained in water or otherwise) • Oils and greases • Food wastes including grease trap waste

CONTROLLED DOCUMENT

Contact CTPI-40@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 29

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
		<ul style="list-style-type: none"> Wastewater from cleaning activities, for example carpet cleaning, high pressure cleaning of buildings and hosing down of outdoor areas and building facades Landscaped area maintenance waste, including grass clippings Water and filter wastes from swimming pools Sewage or sewage residues Paints and any wastes from painting or cleaning materials used in painting.
EP Act Section 443 – control of contaminants	<p>Section 443 of the EP Act requires that:</p> <p><i>A person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance</i></p>	As for Section 440ZG above
EP Act Section 440R – noise from building work	<p>Section 440R of the EP Act states that, when carrying out building work, including any type of construction activity:</p> <ul style="list-style-type: none"> There must be no audible noise before 6:30 am or after 6:30 pm on Monday to Saturday There must be no audible noise on Sundays. 	<p>Building contractors and other contractors carrying out any type of construction work must comply with this requirement.</p> <p>The exception is where the work is dredging or associated activities, in which case the noise limits in EPPR00332613 apply instead.</p>
EP Act – Environmentally Relevant Activities	The EP Act identifies a number of activities that have the potential to cause environmental harm. These are known as environmentally relevant activities (ERA) and are set out in Schedule 2 of the <i>Environmental Protection Regulation 2008</i> (EP Regulation).	<p>Port of Airlie was issued with an environmental authority EPPR00332613 for conduct of ERA 16 – extractive and screening activities in relation to dredging. Note that schedule 2 of the EP Regulation has been revised since the environmental authority was issued; ERA 16 was previously numbered as ERA19 – dredging. As maintenance of an approved structure is exempt development under the SP Act, maintenance dredging does not require approval if carried out in accordance with the conditions of EPPR00332613 and only within the area originally approved for dredging.</p> <p>Other ERAs that might be carried out at Port of Airlie include:</p> <ul style="list-style-type: none"> ERA 8 – chemical storage – more than 500m³ of fuel (Class C1

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
		<p>or C2 combustible liquids under AS1940 or dangerous goods class 3)</p> <ul style="list-style-type: none"> ERA 49 – boat maintenance and repair within 50m of the bed of natural waters.
EP Act – Environmental Protection Policies	<p>Three environmental protection policies are established under the EP Act:</p> <ul style="list-style-type: none"> Environmental Protection (Air) Policy 2008 (EPP (Air)) Environmental Protection (Water) Policy 2009 (EPP (Water)) Environmental Protection (Noise) Policy 2008 (EPP (Noise)) <p>These policies support the EP Act by setting out:</p> <ul style="list-style-type: none"> The environmental values to be enhanced with respect to air, noise and water components of the environment The indicators and objectives that are consistent with protection of the environmental values A framework for decision making in relation to decisions affecting air, noise or water values. 	<p>Port of Airlie is unlikely to give rise to any contaminants that may harm the air environment.</p> <p>Environmental values in relation to the noise environment and acoustic quality objectives are set out in Section 6.11.</p> <p>Environmental values in relation to the water environment and water quality objectives are set out in Section 6.9.</p>
<i>Environmental Protection (Waste Management) Regulation 2000</i>	Among other things, this regulation sets up a waste tracking system for regulated wastes. The tracking system involves completion of a paper or electronic docket system that tracks waste from its origin to final treatment or disposal location.	The requirements of the <i>Environmental Protection (Waste Management) Regulation 2000</i> are typically fulfilled by waste contractors, however Port of Airlie must ensure that this is the case. Types of waste that may require tracking, and management actions are set out in ECP-8.
<i>Fisheries Act 1994</i>	Among other things, the Fisheries Act prohibits the removal of marine plants (including seagrasses, mangroves and saltmarsh) without a permit.	<p>Marine plants permit 2004CA0014 was issued to Port of Airlie in relation to destruction of mangroves and seagrass required for marina construction. This permit has now expired.</p> <p>Clearing of marine plants for maintenance of existing structures is self-assessable development provided that the clearing is carried out in accordance with the Code for Self-Assessable Development <i>Maintenance works on existing lawful structures (other than powerlines and on-farm drains) in a declared Fish Habitat Area or involving the removal, destruction or damage of marine plants</i> http://www.daff.qld.gov.au/_data/assets/pdf_file/0015/51603/MP02</p>

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
		-Existing-lawful-structures-2011.pdf
<i>Sustainable Planning Act 2009 (SP Act)</i>	<p>The SP Act establishes an approvals process for development in Queensland via the Integrated Development Assessment System (IDAS). Development that is assessable under the SP Act is set out in Schedule 3 of the Sustainable Planning Regulation 2009 (SP Regulation) or specified in the relevant planning scheme.</p> <p>Land created for Port of Airlie has been incorporated into the Whitsunday Shire Council Planning Scheme in accordance with SP Act requirements. Activities on the created land will require approval from Whitsunday Shire Council under SP Act.</p> <p>Note that new planning legislation is scheduled to be introduced in Queensland in mid 2017 – refer http://www.dilgp.qld.gov.au/planning-reform.html</p>	<p>Land created for Port of Airlie has been incorporated into the Whitsunday Planning Scheme as “tourism”. Individual developments within Port of Airlie will require development approval against the requirements of the planning scheme.</p> <p>The following additional relevant things may also be assessable development under SP Act:</p> <ul style="list-style-type: none"> • Reconfiguration of a lot • Clearing of marine plants • Conduct of an environmentally relevant activity • Coastal and tidal works • Building works. <p>Note also conditions of Condition 13 of the Coordinator-General's report in relation to certificates of structural and geotechnical compliance and other matters in relation to development approvals.</p>
<i>Land Act 1994</i>	The <i>Land Act 1994</i> is the instrument by which the State Government manages non-freehold land. Under the <i>Land Act</i> , Department of Natural Resources and Mines has the power to issue leases over waters below the high tide mark and to transfer land created in this zone to both freehold and crown ownership.	Seabed lease TL 0/233003 is held in respect to the seabed.
<i>State Development and Public Works Organisation Act 1971 (SDPWO Act)</i>	Among other things, the SDPWO Act provides a mechanism for projects to be declared as coordinated projects (formerly significant projects). Once declared, projects undergo an EIS through a process administered by the Office of the Coordinator-General. On completion of the process, a Coordinator-General's report is issued which may direct whether the project should proceed and, if the project is to proceed, impose conditions directly on the proponent as well as direct various other State and local government agencies to issue approvals for the project on application by the proponent, and the conditions of approval that shall be placed on the project.	Port of Airlie is a significant project under this Act and has been given approval to proceed by the State Government in accordance with the provisions of this Act. A Coordinator General's Report (CoGs Report) has been issued by the Department of State Development under this Act and contains a number of conditions and requirements that must be fulfilled by Meridien in the operational phase of Port of Airlie. These are listed in Section 3.3.2 and 3.3.7 of this OEMP.
<i>Transport Operations (Marine Safety) Act 1994 (Marine Safety Act)</i>	The Marine Safety Act deals with various aspects of marine safety including registration of vessels, licencing of operators of vessels, safety equipment and procedures, navigational aids and management of vessel interactions.	<p>Allows for establishment of an exclusion zone around any marine based works to prevent interaction between equipment and other vessels.</p> <p>Sets out requirements for navigational beacons and related matters</p>

CONTROLLED DOCUMENT

Contact CTPI49@ashenv.com to check date of latest version

C:\User\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 32

Legislation	Summary of Relevant Requirements	Applicability to Port of Airlie (Operations)
		necessary to ensure safe boating activity in the marina and access channel. Registration, licencing and safety requirements apply to all vessels operated by Meridien, its contractors or any other entities operating vessels at Port of Airlie.
<i>Transport Operations (Marine Pollution) Act 1995 (Marine Pollution Act)</i>	The Marine Pollution Act gives effect to Australia's international treaty obligations under MARPOL as these related to Queensland Coastal waters. Provisions include: <ul style="list-style-type: none"> Section 35 – prohibition on discharging noxious liquids into coastal waters. Mandatory reporting of releases from vessels by vessel owner or agent. Part 7 prohibits discharge of treated or untreated sewage from vessels into the marina basin 	Owner or agent of a vessel must report any marine pollution incident arising from a release of contaminants from a vessel. No other specific requirements for Meridien, except to make marina users aware of these requirements and report infringements.
<i>Land Protection (Pest and Stock Route Management) Act 2002.</i>	In relation to weeds and pests, it is an offence to: <ul style="list-style-type: none"> Supply any thing contaminated with the reproductive material (seeds) of a Class 1 pest plant Supply any thing contaminated with certain Class 2 pest plants without a weed hygiene declaration or other written notice Move or transport a vehicle on a road if it is contaminated with soil or other organic matter likely to contain the productive material of a declared pest. Fail to control Class 1 or Class 2 plants on a property 	Port of Airlie may from time to time receive soils and landscaping supplies that may be contaminated with weeds and other pests such as fire ants Construction plant and equipment and other equipment brought to site by contractors may also contain weed seeds or pest animals such as ants which can then cause introduction of weeds onto land at Port of Airlie.

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\User\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 33

3.1.3 Regional Government

Port of Airlie is located in the Whitsunday Regional Council local government area. The relevant planning scheme is the Whitsunday Planning Scheme 2009.

3.2 Approvals Register

The current approvals register for the project is shown in Table 3-2. While these were issued in relation to construction of Port of Airlie, some also contain conditions relevant to the operations phase. Copies of approvals are held on the OEMP files (legal and other obligations).

Approvals for development under the planning scheme are not included here, but it should be noted that these can contain requirements in relation to environmental controls during construction such as erosion and sediment control, noise and waste management. Approvals for building work are also not included here.

Published on DES Disclosure Log
RTI Act 2009

Table 3-2 –Approvals Register

Permit/Approval	Reference	Issuing Authority	Date of Issue	Held by:	Amendments	Currency
EPBC Act Approval	EPBC 2001/298	Department of the Environment and Water Resources (Cwth)	14 July 2004 (consolidated set of conditions issued on 13/5/2008).	Windward AB Pty Ltd and Meridien Airlie Beach Pty Ltd	Amended on issue to correct condition drafting errors Amended 2005 to change entity name Amended 30 August 2007 to align dredging window with EA Amended 13/5/2008 to allow a one-off extension to dredging window. Consolidated set of conditions also issued. Amended 2014 to allow a one-off extension to dredging window	Remains current in relation to operational conditions
Coordinator General's Report	NA	Department of State Development (Qld)	December 2003	Windward AB Pty Ltd (WAB) (ACN: 101 370 772), Whitsunday Sailing Club (WS Club) (ACN: 010 706 626). (Conditions are also imposed on agents, lessees, successors and assigns)	Addendum issued April 2004 Change Report issued 29 August 2014 for on-off extension to dredging window	Remains current in relation to operational conditions and commitments
Marine Plants Permit	2004CA0014	Department of Primary Industries and Fisheries	11 November 2004	Windward AB Pty Ltd and Meridien Airlie Beach Pty Ltd	NA	Expired
Quarry Allocation and Waiver of Royalty	ENAQ00076904	Environmental Protection Agency	1 December 2004	Windward AB Pty Ltd	NA	Expired
Operational Works	SPD-0714-009929	Environmental Protection	20 January	Windward Airlie Beach	Amended 25 January 2007 - Construction	Remains current in relation to operational

CONTROLLED DOCUMENT
Contact CTPI 4@ashenv.com to check date of latest version
C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03
DATE OF ISSUE: Dec 2016
PAGE 35

Permit/Approval	Reference	Issuing Authority	Date of Issue	Held by:	Amendments	Currency
(Tidal works) Marina construction	(Formerly IPDC00251205D32)	Agency Maritime Safety Queensland	2005 Reissued as SPD-0714- 009929 on 20 th August 2014	Partnership	Methodology and Rock Revetment Amended 17 April 2007 – Dredge type Amended 27 August 2007 – construction method Amended 28/5/08 to allow a one-off extension to dredging window Amended 7 April 2014 to remove restriction on dredging method and amend dredge spoil disposal location Amended 20 th August 2014 to extend the dredge window	activities and maintenance of the approved structure
Development Approval for Environmentally Relevant Activity	EPPR00332613 (formerly IPDE00112605E72)	Environmental Protection Agency	EPPR00332613 Issued 14 April 2014 Original approval issued 20 January 2005	Windward AB Pty Ltd	Amended 17 April 2007 – Dredge type Amended 20 April 2007 – noise conditions Amended 27 August 2007 – construction method Amended 14 April 2014 to simplify conditions and remove restriction on dredging method	Remains current in relation to operational activities and maintenance of the approved structure
Operational works (tidal works) Marina berths and arms and wave attenuators	20100017	Whitsunday Regional Council	November 2010		NA	Works are partly completed.

CONTROLLED DOCUMENT

Contact CTPI_49@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 36

Permit/Approval	Reference	Issuing Authority	Date of Issue	Held by:	Amendments	Currency
Operational works (tidal works)	20101139	Whitsunday Regional Council	May 2011		NA	Works underway
Cruise Whitsunday ferry terminal	20121117		March 2013			
Suitable operator	605476 - Meridien AB Pty Ltd 404158 Meridien Airlie Beach Pty Ltd	Department of Environment and Heritage Protection	NA	Meridien AB Pty Ltd Meridien Airlie Beach Pty Ltd	NA	Issued by virtue of holding an environmental authority

Published on DES Disclosure Log
RTI Act 2009

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 37

3.3 Schedule of Conditions and Commitments for Operation

3.3.1 EPBC Act Approval 2001/298

Condition	OEMP Reference
<p>1. Prior to the commencement of the action, the person taking the action must prepare and submit for the Minister's approval a plan or plans to manage the impacts of construction on the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species. The plan or plans must address the matters listed below and state the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing of each of these matters.</p> <p>Construction must not commence before the above plan(s) is approved. The approved plan(s) must be implemented and made publicly available.</p>	<p>A CEMP was submitted and approved. Construction is now complete.</p>
<p>2. A monitoring program must be prepared to manage the impacts of construction and operation on adjacent seagrass, intertidal mudflats, mangrove communities and coral communities within Boathaven Bay. The program must include baseline studies to commence no later than 3 months of this approval being issued, extend throughout the construction phase and continue at least three years following the integrated marina and tourist development has been fully operational.</p> <p>The above program must be submitted for approval to the Minister within 2 months of the date of this approval. The program must be implemented.</p>	<p>Refer Section 9.3</p>
<p>3. To manage the impacts of construction on the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species, the person taking the action can only undertake dredging activities in unprotected waters in the dry season (during the months of April to August).</p>	<p>Not applicable to operation phase</p>
<p>4. Prior to the commencement of any works, the person taking the action must undertake an Acid Sulfate Soil investigation in accordance with the <i>Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils in Queensland</i> (Ahern et al 1998) and the <i>Queensland Government Instructions for the Treatment and Management of Acid Sulfate Soils 2001</i>. In the event that sampling from the investigation reveals Acid Sulfate Soils to be present on-site, the person taking the action must prepare a plan to manage the impacts on the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species.</p> <p>The plan must be submitted for the Minister's approval before the commencement of works. The approved plan must be implemented.</p>	<p>See ECP-7</p>
<p>5. Prior to the commencement of operations, the person taking the action must submit for the Minister's approval a plan or plans to manage operational impacts on the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species. The plan or plans must address the matters listed below and state the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing of each of these matters.</p>	<p>Environmental Management System Guide submitted in 2012 and approved in March 2013</p>
<ul style="list-style-type: none"> Long-term maintenance dredging plan of the marina and access channel, including the management of contaminants, use of turtle exclusion devices, and the dredge spoil rehandling area. 	<p>ECP-1A/B ECP-2</p>
<ul style="list-style-type: none"> Water quality (including the stormwater runoff and quality). 	<p>ECP-9</p>
<ul style="list-style-type: none"> Measures to protect seagrass beds, coral communities, mangroves and mudflats within Boathaven Bay. 	<p>ECP-9</p> <p>Note that impacts on mangrove and coral communities are not expected from operational activities</p>

Condition	OEMP Reference
<ul style="list-style-type: none"> Measures to protect dugong and turtles, including records of sightings, boat strike and mitigating measures to respond to increase in vessel strikes or decline in numbers sighted in the vicinity of the development. Any measures to protect turtle species must be consistent with the 'Recovery Plan for Marine Turtles in Australia, July 2003'. 	ECP-5 ECP-1A/B (operational dredging)
<ul style="list-style-type: none"> Measures to protect False Water Rat habitat. 	ECP-5 Impacts on water mouse (false water rat) are not expected from operational activities.
<ul style="list-style-type: none"> Measures to deal with sewerage treatment. 	ECP-9
<ul style="list-style-type: none"> Emergency response measures. 	OEMP Section 11
6 To manage the impacts on the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species, the person taking the action must undertake ongoing maintenance dredging activities in the dry season only (during the months of April to August both inclusive). For the year 2014, maintenance dredging may be undertaken until the 30th September.	ECP-1A/B
7 Within 6 months of the commencement of construction, the person taking the action must develop and submit an audit program to the Minister for approval. The program must be undertaken by an independent auditor approved by the Minister prior to the commencement of the audit. The audit program must be implemented.	Not applicable to operation phase
8 If the person taking the action wishes to carry out any activity otherwise than in accordance with a plan or program referred to in conditions 1, 2, 5, and 7, the person taking the action may submit for the Minister's approval a revised version of any such plan. If the Minister approves such a revised plan, that plan must be implemented in place of the plan originally approved.	OEMP Section 10
9 If the Minister believes that it is necessary or desirable for the better protection of the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species, the Minister may request the person taking the action to make specified revisions to a plan approved pursuant to conditions 1, 2, 5 and 7, and to submit the revised plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves a revised plan pursuant to this condition, the person taking the action must implement that plan instead of the plan as originally approved.	Noted OEMP Section 10
10 On 1 July each year after the commencement of operations, the Managing Director of the person taking the action must provide a certificate stating that the person taking the action has complied with the conditions of approval.	OEMP Section 12.1
11 If, at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of construction of the Port of Airlie integrated tourist resort and marina development, construction of the Port of Airlie integrated tourist resort and marina development must not thereafter be commenced.	Not applicable, construction commenced within the required time frame

3.3.2 Queensland Coordinator-General's Report – Schedule 1

Condition/Requirement	OEMP Reference
<i>Condition 1:</i>	
(a) A permit must be obtained to remove protected marine plants, including saltcouch, mangroves and seagrass, under section 51 of the Fisheries Act 1994. The permit, which is to include mitigation measures, is to be obtained prior to construction commencing.	Not applicable – construction related

Condition/Requirement	OEMP Reference
(b) A monitoring program for seagrass adjacent to the development site must be prepared in consultation with the Department of Primary Industries and submitted as part of all applications for development permits for the project. The monitoring program is to be developed in accordance with the Department of Primary Industries policy FHMOP 001 (2002) Management and Protection of Marine Plants and is to address, in accordance with FHMOP 005 (2002) – Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss, unacceptable impacts on seagrass beds and contingency measures for responding should those impacts be observed. Monitoring under the program is to be implemented as soon as possible prior to the commencement of construction and continue for a minimum of three years after construction of earthworks.	OEMP Section 9.3
Condition 2	
(a) A protected species management plan must be prepared in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project. The plan is to include: <ul style="list-style-type: none"> o procedures for the observation and recording of dugong and turtle sightings in the area surrounding the site prior to and during dredging and pile driving activities, and the cessation of these works while dugongs and turtles are within the "exclusion zone" (i.e. within 150 metres of dredging or pile driving activities) o procedures for cessation of any works while migratory birds are within the "construction activity area" (i.e. within 25 metres of any construction activity) and minimisation of illumination of the intertidal area to the east of the site. o procedures for the temporary cessation of any works in the event that a species of conservation significance, which has not been identified during studies undertaken since 1985, is found to occur in the area. 	ECP-5 ECP-1 (operational dredging)
(b) Dredging and pile driving for project construction must not be carried out whilst dugongs and turtles are within the exclusion zone.	ECP-1
(c) Construction must not be carried out whilst migratory birds are within the construction activity area.	Not applicable – Construction related
(d) If significant Acid Sulfate Soil is encountered during preconstruction surveys, a survey of the Campbell's Creek area is to be undertaken by the proponent, prior to construction commencing, to determine the presence of any water mice. The survey is to be provided to the Environmental Protection Agency for review.	Completed – construction related (see also Section 6.9.5 of OEMP and ECP-7)
(e) If water mice are detected, a targeted monitoring and management program is to be established, in consultation with the Environmental Protection Agency, prior to construction commencing, to ensure that disturbance of Acid Sulfate Soil and discharge of water from the site does not impact adversely on the species.	Completed – construction related (see also Section 6.6.3 of OEMP)
Condition 3	
(a) Boat speed signs are to be erected and maintained within the marina and access channel area by the proponent as directed by Maritime Safety Queensland (Department of Transport) in accordance with s206A of the <i>Transport Operations (Marine Safety) Act 1994</i> .	Completed, ongoing maintenance undertaken by MSQ and WRC
(b) Educational signs explaining the importance of adhering to boat speed limits within the marina area and access channel are to be erected and maintained by the proponent. The specific number and location of, and information to be displayed on, the signs must be determined in consultation with Maritime Safety Queensland (Department of Transport) and the Environmental Protection Agency.	Boat ramp is now under control of Whitsunday Regional Council
Condition 4	

Condition/Requirement	OEMP Reference
(a) A Dredge Management Plan must be prepared in consultation with the Environmental Protection Agency, Department of Primary Industries and the Great Barrier Reef Marine Park Authority and be submitted as part of all applications by the proponent for development permits for the project. The Plan is to cover dredging for construction and maintenance, and disposal of dredge material especially contaminated sediments	ECP-1 will be submitted to DEHP and DotE for review. A pre-lodgement meeting for maintenance dredging identified that Queensland Fisheries did not need to be further involved in maintenance dredging (Refer record of meeting with SARA SPL-1113-006352)
(b) Arrangements to ensure that construction does not re-suspend sediments, particularly those contaminated with tributyl tin, into the water column or any discharge waters must be included in the Dredge Management Plan.	ECP-1A/B See also Section 6.9.6
(c) construction channel dredging should take place between March and August in any year to minimise impacts on seagrasses and corals and to avoid the cyclone season. For the year 2014, maintenance dredging may be undertaken until 30 September.	ECP-1
(d) As a requirement of tenure designation under the Land Act 1994, following reclamation works, the proposed dredge spoil disposal area marked 'R' on plan 'SK-031 by ML Design' as shown on page 2-17 of the Port of Airlie Addendum to the Supplementary EIS (April 2003) is to be maintained as a 'dredge spoil rehandling area' which is defined as "a purpose built area into which spoil from maintenance dredging of the adjoining marina and associated access channel shall be stored until it is in a consolidated form that enables transportation to a facility that can lawfully accept such material".	Ongoing, see ECP-2
(e) The dredge spoil disposal area must be stringently managed to ensure that adjacent fish habitats, including marine plant and coral communities are not adversely or permanently impacted. Management of this area is to be an integral element of the Dredge Management Plan.	ECP-2
(f) Water quality baseline monitoring of turbidity, sediment pollutant concentrations and other parameters, within Boathaven Bay, Pioneer Bay and Campbell's Creek estuary, is to be undertaken prior to the commencement of construction	ECP-1, OEMP Section 9.2
(g) The findings of the water quality monitoring program are to be used to determine water quality parameters for the Dredge Management Plan and trigger levels for each parameter above which work practices will need to be reviewed or suspended.	ECP-1, OEMP Section 6.8 and Section 9.2
<i>Condition 5</i>	
(a) A detailed design of stormwater systems including an assessment of the stormwater runoff volume and any changes in quantity or quality of this runoff, as a result of the development, is to be prepared.	Completed – construction related
(b) The findings of the stormwater runoff assessment are to be submitted to the Environmental Protection Agency, prior to submission of all applications for development permits for the project for the Environmental Protection Agency's review and comment of any further action which may be required by the development. The findings and any comments by the Environmental Protection Agency are to be submitted as part of all applications for development permits for the project.	Completed – construction related
(c) Best practice environmental management technology sediment and litter control devices must be included on stormwater systems within the development in	Incomplete – sediment and litter

Condition/Requirement	OEMP Reference
consultation with the Environmental Protection Agency.	control devices not included. Stormwater system has been accepted by Whitsunday Regional Council.
<i>Condition 6 – Acid Sulfate Soils</i>	Construction related. Refer Section 6.9.5
<i>Condition 7 – Hydrodynamic modelling</i>	This condition was fulfilled as part of the construction phase, refer OEMP Section 6.4
<p><i>Condition 8 – artificial beach</i></p> <p>With respect to the artificial beach, which is to be constructed as part of the project, the following information is to be submitted to Whitsunday Shire Council and the Environmental Protection Agency for its comment prior to any application for a development permit being lodged:-</p> <ul style="list-style-type: none"> o details of material from which the beach is to be constructed; o volume of the material required for the beach; o dimensions of the beach (including width); o strategy for managing midges; o copy of Agreement for funding and carrying out re-nourishment and maintenance works. <p>The details and Council's comments, if any, in relation to those details are to be submitted as part of all applications for development permits for the project.</p>	<p>Completed</p> <p>Beach is "on maintenance" with Whitsunday Regional Council</p>
<i>Condition 9 – Construction noise management</i>	This condition was fulfilled as part of the construction phase
<i>Condition 10 – traffic management</i>	This condition was fulfilled as part of the construction phase
<i>Condition 11 – Boat Ramp and parking</i>	This condition was fulfilled as part of the construction phase. Whitsunday Regional Council now has responsibility for this area.
<i>Condition 12- public transport interchange</i>	This condition was fulfilled as part of the construction phase. Whitsunday Regional Council now has responsibility for this area.
<i>Condition 13 – in relation to preliminary approval conditions – only conditions relevant to operations are included</i>	
Any vegetation removed shall be disposed of to the requirements of the Whitsunday Shire Council. Transplanting, chipping or removal from site are the preferred solutions.	Landscaped areas are "on maintenance" with Whitsunday Regional Council

Condition/Requirement	OEMP Reference
<p><u>Landscaping</u></p> <p>Landscaping shall be undertaken in accordance with Whitsunday Shire Council's codes and policies applicable at the time of development and shall be maintained thereafter to the satisfaction of Council.</p>	<p>Landscaped areas are "on maintenance" with Whitsunday Regional Council</p>
<p><u>Building</u></p> <p>Prior to issue of any Development Permit, certificates of structural and geotechnical compliance with Australian standards shall be provided by both Structural and Geotechnical Engineers. All work shall be supervised by the Structural and Geotechnical Engineers and a Certificate of Completion provided to Whitsunday Shire Council prior to occupancy of any buildings.</p>	<p>Ongoing through development permit applications</p>
<p><u>Water Reticulation</u></p> <p>The development shall be connected to Whitsunday Shire Council's water network, to the requirements of Council, prior to commencement of the use.</p> <p>All internal and external water reticulation, as a result of the development, shall be designed, constructed and maintained in accordance with Whitsunday Shire Council's codes, policies, standards and specifications, applicable at the time and where relevant, to the Council's requirements.</p>	<p>This aspect has been accepted by Whitsunday Regional Council</p>
<p><u>Sewer Reticulation</u></p> <p>The development shall be connected to Whitsunday Shire Council's sewerage, to the requirements of Council, network prior to commencement of use.</p> <p>All internal and external sewerage reticulation, as a result of the development, shall be designed, constructed and maintained in accordance with Whitsunday Shire Council's codes, policies, standards and specifications, applicable at the time and where relevant to the Council requirements.</p>	<p>This aspect has been accepted by Whitsunday Regional Council</p>
<p><u>Driveways and Parking</u></p> <p>All internal accesses, internal driveways, circulation roads, commercial vehicle provisions, car parking and manoeuvring areas shall be designed in accordance with AS 2890 and comprise a sealed pavement to Whitsunday Shire Council's requirements.</p> <p>Turnarounds and intersections shall be provided to cater for garbage collection trucks and tourist buses to the requirements of Whitsunday Shire Council.</p>	<p>This aspect has been accepted by Whitsunday Regional Council</p>
<p><u>Stormwater and Flooding</u></p> <p>All stormwater drainage works are to be designed and constructed in accordance with the Queensland Urban Drainage Manual and Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.</p>	<p>This aspect has been accepted by Whitsunday Regional Council</p>
<p><u>Road Works</u></p> <p>All roads, to be dedicated as public road within the development site, are to be designed and constructed in accordance with Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.</p> <p>All roadworks external to the site, required to be undertaken as a result of the development, are to be designed and constructed in accordance with Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.</p>	<p>This aspect has been accepted by Whitsunday Regional Council</p>
<p><u>Electricity and telecommunications</u></p> <p>The proposed development shall be connected to electricity and telecommunications to the requirements of the relevant authority.</p>	<p>Complete, connections are in place</p>
<p><u>Developer Contributions</u></p> <p>Contribution towards water supply headworks and sewerage reticulation headworks and any other Whitsunday Shire Council infrastructure able to be lawfully imposed by Council, shall be</p>	<p>Completed during construction phase</p>

Condition/Requirement	OEMP Reference
paid to Council prior to commencement of the use on site. The contributions shall be paid in accordance with the rates applicable at the date of payment.	
<u>Miscellaneous</u> Any alterations, relocations, or upgrading work necessary to electricity, telephone, water mains, sewerage mains, and/or public utility installations resulting from or in connection with the development, or roads and drainage necessary as a result of the development, shall be at full cost to the developer	Completed during construction phase
<i>Condition 14</i>	
(a) Appropriate design/construction and operational Environmental Management Plans (EMPs) as outlined in the Supplementary Environmental Impact Statement and Addendum must be finalised in consultation with the Environmental Protection Agency and Whitsunday Shire Council, where relevant, and submitted as part of all applications for development permits for the project. The EMPs are to cover all activities on site prior to the commencement of dredging, extraction and screening activities through to the completion of the marina and reclamation areas, and also include operation of that part of the development. The EMPs are to incorporate monitoring and corrective action requirements.	This OEMP
(b) An Environmental Management Program covering all marina and reclamation area construction activities on site, prior to the commencement of and following the completion of dredging, extraction and screening activities, is to be developed in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project.	Completed during construction phase
<i>Requirement 1</i> An Industry Participation Plan is to be prepared in accordance with the requirements of the Queensland Government's Local Industry Policy, March 2001 and is to be submitted as part of all applications for development permits for the project. The Plan is to be prepared in consultation with the Industry Capability Network (Queensland).	This condition was fulfilled as part of the construction phase and is no longer relevant.
<i>Requirement 2 – Construction Contract housing</i>	This condition was fulfilled as part of the construction phase and is no longer relevant.
<i>Requirement 3</i>	
(a) The nominated Traditional Owner representatives must be provided with an opportunity to be involved in any monitoring of land and sea cultural heritage during critical parts of the construction phase where coastal areas are first disturbed.	Completed during construction phase
(b) If any suspected evidence of cultural heritage remains is detected in surface or sub-surface deposits during any stage of the project, activities at the site must be halted and the Proponent must make contact with the Regional Manager, Cultural Heritage Branch, Environmental Protection Agency and Traditional Owner representatives (where indigenous cultural heritage material is suspected). If finds of cultural heritage significance are made, an appropriate management and mitigation strategy is to be determined in consultation with the Regional Manager, Cultural Heritage Branch, Environmental Protection Agency and the Traditional Owners (where indigenous cultural heritage material is found).	ECP-11
(c) If requested by the Traditional Owners, information on cultural heritage of the Whitsunday area is to be incorporated into any interpretive material provided as part of the Port of Airlie development.	No such requests received
(d) Requirements (a) to (c) above are to be included in the Environmental Management Plans (EMPs) for design, construction and operation. The EMPs should also address	ECP-11 Note, no negative

Condition/Requirement	OEMP Reference
any development-related negative social impacts to Aboriginal and Torres Strait Islander people in the area, which are identified by the Department of Aboriginal and Torres Strait Islander Policy.	impacts identified
<i>Requirement 4</i>	
(a) A full schedule of all commitments, including those outlined in the SEIS, the Addendum and other correspondence provided to the Department of State Development or Advisory Agencies by the Proponent, is to be provided to the Coordinator-General within 40 working days of the date of issue of this Coordinator-General's Report.	Completed
(b) A written report must be submitted to the Coordinator-General every 6 months after the issue of this Coordinator-General's Report on the progress of implementation of commitments, conditions and requirements, until all commitments, conditions and requirements have been met or as otherwise agreed.	Not undertaken
(c) The Coordinator-General is to be notified, immediately, of any material changes to the project as described in the Supplementary Environmental Impact Statement, Addendum and supporting material which have the potential to change the impacts of the project on the physical, socio-economic and business environments.	No major changes have occurred

3.3.3 Operational Works Development Permit – Tidal Works

Condition	OEMP Reference
[1 - notification]	Completed – construction related
[2, 2a, 2b – approval of CEMP]	Completed – construction related
[3, 3a, 3b, 3c – auditing of CEMP]	Completed – construction related
[4, 4a, 4b – financial assurance]	Completed – construction related
5. All works are to be constructed in accordance with the attached approved drawings and the specifications as detailed on these drawings.	Completed – construction related Refer correspondence from Cardno Ullman and Nolan 31 January 2011.
[6 – scope of approved construction works]	Completed – construction related
[7, 8, 9 – protected species management – construction]	Completed – construction related. See however ECP-5.
10. Educational signs explaining the importance of adhering to boat speed limits within the marina area and access channel are to be erected and maintained by the holder of this approval. The specific number and location of signs, and information to be displayed on the signs, must be determined in consultation with Maritime Safety Queensland (Department of Transport) and the Environmental Protection Agency.	Complete (ongoing)
[11 – stormwater management requirements]	Completed –

Condition	OEMP Reference
	construction related
[12, 13, 14, 15, 16 – beach construction]	Completed – construction related
17. For a period of 3 years following construction of the artificial beach, monitoring of the selected four (4) beach profiles in accordance with survey requirements specified in condition 16 must be undertaken annually, and following a significant storm event where directed by the Environmental Protection Agency. The surveys are to be compared with the design standard of the artificial beach, previous surveys and any assessment undertaken on the need for maintenance (i.e. sand nourishment).	Not completed. Beach has not required nourishment since construction. Beach is “on maintenance” with Whitsunday Regional Council
18. The sand used for maintenance of the artificial beach must be consistent with the following criteria: <ul style="list-style-type: none"> o a fines component of less than 5% (i.e. <0.075mm diameter comprised of silt, clay or organic material); o contaminants below the screening level as specified in the National Ocean Disposal Guidelines for Dredged Material (Environment Australia, May 2002) ; o not contain acid sulfate soils (existing plus potential acidity less than 18 moles H+ per tonne (oven• dry basis) or less than equivalent 0.03%S oxidisable sulfur); and o median grain size diameter (D50) similar to that used for construction of the artificial beach and between 0.5mm to 0.7mm diameter. 	Beach is “on maintenance” with Whitsunday Regional Council
19. Prior to sand nourishment the following information must be supplied to the Environmental Protection Agency: <ul style="list-style-type: none"> o the source(s) of material; o details of quantity of sand to be placed on the beach; o beach profiles at the selected four (4) locations along the beach, measured from the crest of the sheet pile to a distance of 20m seaward of the toe of the beach or location of proposed nourishment, whichever is further (only required for future sand nourishment works); and o confirmation that the material complies with the criteria listed in condition 18. 	Beach is “on maintenance” with Whitsunday Regional Council
20. Following sand nourishment the following information must be provided to the Environmental Protection Agency within 30 days of completion of the sand nourishment project: <ul style="list-style-type: none"> o details of actual quantity of sand placed on the beach; o “as constructed” beach profiles at selected the four (4) locations along the beach, measured from the crest of the sheet pile to a distance of 20m seaward of the toe of the beach or location of nourishment, whichever is further. 	Beach is “on maintenance” with Whitsunday Regional Council
21. The artificial beach is to be maintained in a safe condition in accordance with Drawing Number SK13.	Beach is “on maintenance” with Whitsunday Regional Council
22. All reasonable and practicable measures must be taken to stabilise the artificial beach against wind erosion.	Beach is “on maintenance” with Whitsunday Regional Council
[23, 24, 25, 26, 27 – Reclamation]	Completed – construction related

Condition	OEMP Reference
28 Excavated material and dredge spoil is only to be disposed of in the areas specified on Drawing Number 5393-201-1 ² and RPS 110420-1 VOL-01 Rev B, or in the purpose built dredge spoil pond. Any excess material or dredge spoil must be disposed of at an approved landfill site to the satisfaction of Whitsunday Shire Council.	ECP-1 ECP-2
[29, 30, 31 – temporary works]	Completed – construction related
32 All wastes shall be collected from the site by the holder of this approval and disposed of at an appropriate lawful facility	ECP-8
[33, 34 – temporary works]	Completed – construction related
35 [deleted – refer correspondence from DSDIP SPD-0314-005807 dated 7 April 2014]	
36 Any dredging not fully enclosed from tidal waters is only to be undertaken between: a) March and September in any year; and b) March and October in the year 2008, provided that dredging on tidal land above the level of Lowest Astronomical Tide is undertaken prior to September 2008; To minimise the impacts on seagrasses and to avoid the cyclone season.	ECP-1A/B
37 The only dredging to be carried out is that associated with the construction of the Port of Airlie Marina and access channel within the boundaries specified on Drawing Number SK01-2 SK09-2.	ECP-1A/B
38. No blasting is to occur in areas that are not separated from tidal waters by sheet piling.	NA blasting is not required
[39, 40, 41 – water quality during construction]	Completed – construction related
[42, 43, 44, 45, 46, 47, 48 – stability and certification of works]	Completed – construction related Refer correspondence from Cardno Ullman and Nolan 31 January 2011.
49 Prior to the start of dredging that is outside of the sheet piled walls, undertake a hydrographic survey of the existing bed levels. The survey must be carried out in accordance with the following: 1. Sounding lines shall be spaced at not more than 20 metre centres along the entire survey area. 2. Soundings shall include the area to be dredged that is outside of the sheet piled walls and shall continue beyond the area to be dredged to include: 3. the adjacent sheet pile wall; 4. 50m from the edge of area to be dredged or boundary of the lease area; whichever is further. 5. Soundings shall be taken at every change in grade so as to accurately define the profile of the bed and banks along the line. 6. Soundings shall be plotted on a plan to a suitable scale. 7. The datum for levels shall be Australian Height Datum.	ECP-1

² Note that Drawing Number 5393-201-1 refers to an obsolete construction sequence diagram that is not relevant to operational or maintenance dredging

Condition	OEMP Reference
8. The plans of the surveys shall clearly identify the location of the batters, access channel, sheet pile wall or other features.	
9. The plans of the surveys shall be forwarded in duplicate to the Environmental Protection Agency, within one month of completion of each survey.	
50. Following completion of the dredging works (i.e. construction of the access channel and marina basin) undertake a hydrographic survey of the bed levels. The survey must be carried out in accordance with the following:	ECP1
1. Sounding lines shall be spaced at not more than 20 metre centres along the entire survey area.	
2. Soundings shall include all areas that were dredged and shall continue beyond that area to include:	
3. the adjacent sheet pile wall;	
4. 50m from the edge of area dredged or boundary of the lease area; whichever is further.	
5. Soundings shall be taken at every change in grade so as to accurately define the profile of the bed and banks along the line.	
6. Soundings shall be plotted on a plan to a suitable scale.	
7. The datum for levels shall be Australian Height Datum.	
8. The plans of the surveys shall clearly identify the location of the batters, access channel, sheet pile wall or other features.	
9. Representative cross sections of the lines spaced at not more than 40 metre centres detailing the previous and current bed levels.	
10. The plans of the surveys and cross sections shall be forwarded in duplicate to the Environmental Protection Agency, within one month of completion of each survey.	
Approved drawings are included as a schedule to this approval	NA – construction related

3.3.4 Environmental Authority Dredging EPPR00332613

Condition	OEMP Reference
(1A-1) In carrying out the environmentally relevant activities, the holder of the authority must take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity (ERA), that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this permit.	This OEMP
(1A-2) The holder must:	ECP-1
11. Install all measures, plant and equipment necessary to ensure compliance with the conditions of this development permit; and	OEMP, Section 9
12. Maintain such measures, plant and equipment in a proper and efficient condition; and	
13. Operate such measures, plant and equipment in a proper and efficient manner.	
(1A-3) Record, compile and keep all monitoring results required by this document and present this information to the administering authority when requested, in a specified format.	ECP-5 OEMP Sections 9 and 13

Condition	OEMP Reference
(1A-4) The only form of dredging to be carried out is that associated with the construction of the Port of Airlie Marina and access channel in the site marked in Schedule 11 – Figure 1 of this document.	ECP-1
(1A-5) Excavated material and dredge spoil is only to be disposed of in the areas specified on Drawing nos 5393-201-1 ³ and RPS 110420-1 Vol-01 REV B, or in the purpose built dredge spoil pond. Any excess material or dredge spoil must be disposed of at an approved landfill site to the satisfaction of Whitsunday Shire Council.	ECP-1 ECP-2
(1A-6) The activity must be carried out in accordance with written procedures that:	This OEMP
1. Identify potential risks to the environment from the activity during routine operations, closure and an emergency	Section 2
2. Establish and maintain control measures that minimise the potential for environmental harm	Section 7 (ECPs 1-12)
3. Ensure plant, equipment and measures are maintained in a proper and effective conditions	Section 7 (ECPs 1-12)
4. Ensure plant, equipment and measures are operated in a proper and effective manner	Section 7 (ECPs 1-12)
5. Ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>	Section 8
6. Ensure that reviews of environmental performance are undertaken at last annually.	Section 9, Section 10
(1A-7) Treatment and management of acid sulfate soils must comply with the current edition of the Queensland Acid Sulfate Soil Technical Manual	See OEMP Section 6.9.5 ECP 7
(1A-8) No blasting is to occur in areas that are not separated from tidal waters by sheet piling.	NA – blasting has not been required at any stage
(1B-1) The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any odour sensitive place.	ECP-8
(1B-2) The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any dust sensitive place.	ECP-4
(1C-1) Contaminants must only be released to waters from the release points and in compliance with the release limits listed in Schedule 1C - Table 1.	ECP-2
(1C-2) Monitoring must be undertaken at the locations identified in Schedule 11 – Figure 2 and records kept of contaminant releases to waters from the discharge location for the parameters and not less frequently than specified in Schedule 1C - Table 1. All determinations of the quality of contaminants released must be:	ECP-1, ECP-1 OEMP Section 9.2
<ul style="list-style-type: none"> Performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; Made in accordance with methods prescribed in the latest edition of the Environmental Protection Agency Water Quality Sampling Manual; and Carried out on samples that are representative of the discharge. 	
(1C-3) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.	ECP-2

³ Note that Drawing Number 5393-201-1 refers to an obsolete construction sequence diagram that is not relevant to operational or maintenance dredging

Condition	OEMP Reference
	ECP 9
(1C-4) Prevent the release of sediment to waters or a build-up of sediment in any stormwater drain except as provided for in Schedule 1C – Table 1.	ECP-9, ECP-6 Form 2
(1C-5) There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain except as provided for in Schedule 1C-Table 1.	ECP-9 Form 2
(1D-1) All noise from site activities, excluding pile driving must not exceed the levels specified in Schedule 1D-Table 1 outside habitable rooms with doors and windows open or closed at any noise affected premises.	ECP-3
(1D-2) No percussion pile driving is to occur: <ul style="list-style-type: none"> On Sundays or public holidays Monday to Saturday before 8 am and after 5 pm. 	ECP-3 (no requirements in relation to vibration)
(1D-3) Vibration emitted from activities must not cause a nuisance at any vibration sensitive place.	ECP-3 OEMP Section 9.4
(1E-1) All waste generated in carrying out the activity must be reused, recycled or removed to a facility that can lawfully accept the waste.	ECP-8
(1F-1) Spillage of all chemicals and fuels must be contained within an on-site containment system, and controlled and cleaned up in a manner that prevents environmental harm. (note: All petroleum product storages must be designed, constructed and maintained in accordance with AS 1940 • Storage and Handling of Flammable and Combustible Liquids.)	ECP-9 IRP-2
(1G-1) All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.	CRP-3
(1G-2) In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically or the industrial estate where the site is located.	OEMP-12

3.3.5 Seabed Lease 0/233003

Relevant Condition	OEMP Reference
6 Management of weeds and pests	ECP-12
7 Sustainable management of the physical, biological, productive and cultural values, either on the leased land or in areas affected by the management of the leased land.	OEMP
8 The lessee must ensure that the use and development of the leased land conforms to the Planning Scheme, Local Laws and requirements of the Whitsunday Regional Council, binding on the lessee.	OEMP 3.1.3
10 The lessee must not clear any vegetation on the leased land, unless in accordance with the Integrated Planning Act 1997.	ECP-6 (not strictly relevant as no remnant vegetation on the site)
C354 If, as a result of carrying out works or any other cause attributable to the lessee any revetment wall is damaged or displaced, the lessee must, at the lessees' expense, restore the revetment wall to its former condition and take such other action as is necessary to ensure the stability of the revetment wall to the satisfaction of the	OEMP Form 3 and 4 (damage from storms)

Relevant Condition		OEMP Reference
Whitsunday Regional Council and the Environmental Protection Agency.		
E23	The lessee must ensure that each and every activity undertaken on the leased land which has the potential to pollute and/or contaminate the marina and the adjoining waters is carried out in such a manner as to prevent this from occurring.	OEMP generally
M543	The lessee must not keep, store or permit to be kept or stored on the leased land any materials of a dangerous, flammable or explosive nature unless all statutes, local laws and regulations applicable to the keeping and storage of such materials have been complied with in every respect.	ECP-9
T36	The lessee must at all times take the necessary precautions to ensure that all lights on or above the leased land are shielded to prevent glare or reflection which may interfere with safe navigation of surrounding waterways or with reasonable enjoyment of neighbouring properties .	Addressed through planning scheme requirements
T37	The lessee must, at the lessees' expense and to the satisfaction and requirements of Whitsunday Regional Council, provide facilities for the disposal and collection ashore of human wastes and other litter and dry or wet refuse or waste materials from vessels. The lessee may install an external system to enable the connection to vessels of a line through which sewerage may be pumped to a shore based receival station to enable collection.	ECP-8
T39	The lessee must, at the lessees' expense, maintain a depth of water within the leased land including the basin area and access channels sufficient to allow such waters to be freely navigated at the developed depths at all stages of the tide by the classes of the vessels using the facilities situated therein and should any dredging be required to maintain such depth of water, then the lessee must, at the lessees' expense, be responsible for obtaining the relevant statutory approvals required to permit the carrying out of such dredging and disposal of dredge spoil .	ECP-1

3.3.6 Harbour Master's Requirements

Condition		OEMP Reference
1	Dredging operations shall be carried out by the dredger so that at all times a navigable channel is open to traffic to the satisfaction of the Harbour Master	ECP-1
2	The dredger will at all times, maintain full communications on VHF Channel 16 and other local VHF channels as required	ECP-1
3	If snags or obstructions are encountered during dredging operations, the dredger shall at his cost and expense remove and dispose of them as directed by the Regional Harbour Master	NA
4	On completion of the dredging operation, the dredger shall remove all dredge plant and equipment (including pipes, floats and other equipment used in or in connection with the dredging operations) from the site	ECP-1
5	The dredger must comply with all written instructions issued by the Harbour Master	ECP-1
6	All vessels and/or floating plant engaged in the dredging operation must obtain or hold a valid Certificate of Survey or a valid permit issued by Maritime Safety Queensland pursuant to the <i>Transport Operations (Marine Safety) Act 1994</i>	ECP-1
7	All floating plant and equipment used by the permit holder for purposes of this permit shall conform with the <i>Transport Operations (Marine Safety) Act 1994</i> the <i>Transport Operations (Marine Safety) Regulation 2004</i> and the <i>Transport Operations (Marine Pollution) Act 1995</i> . All floating pipeline shall be appropriately lit and/or marked in accordance with the <i>Transport Operations (Marine Safety) Act 1994</i> .	ECP-1

Condition	OEMP Reference
8 The owner/master of all floating dredge plant shall comply with their general safety obligation in accordance with the <i>Transport Operations (Marine Safety) Act 1994</i> , in particular licencing and safety equipment provisions. All vessels are to be appropriately equipped and crewed in accordance with the <i>Transport Operations (Marine Safety) Act 1994</i> and the <i>Transport Operations (Marine Safety) Regulation 2004</i> .	ECP-1
9 The permit holder must give the Regional Harbour Master two weeks notice, before commencing or ceasing dredging operations. This information is required for the issuing of a Notice to Mariners.	ECP-1
10 All hydrographic surveys to be carried out in accordance with the Maritime Safety Queensland "Standards for Hydrographic Surveys in Queensland Waters". Six months after the completion of dredging works a survey is undertaken – the dredged area is to be resurveyed in accordance with the above standards. Regional Harbor Master (Mackay) to receive a copy of each survey. Regional Harbor Master (Mackay) will declare the channel depth by Notice to Mariner Should siltation of the dredged area occur, it will be the lease holders responsibility to return the area to the declared depth or the Regional Harbour Master (Mackay) will re-declare the area to a lesser depth.	ECP-1
[additional requirements in relation to drawings]	NA
The proponents will be required to establish navigation aids decided upon in consultation with the Regional Harbor Master (Mackay)	Completed (ongoing)

3.3.7 Other Commitments

The following commitments were made in the SEIS/Addendum and are not reflected in conditions of any permits or approvals.

Commitment	OEMP Reference
Preparation of a Vibration Management Plan.	NA – construction related
Representative of Ngara people to remain informed of project commencement.	NA – construction related
Ensure that requirements of Draft EMP (or equivalent requirements) are adopted.	OEMP
Undertake survey of seagrass distribution and health and biological indicators in Boathaven Bay.	Section 6.7.1, 9.3
Undertake geotechnical investigations on soil for mechanical and chemical properties and information used in technical design.	Completed – construction related
Include maintenance dredging of the boat ramp access channel in maintenance dredging of the marina access channel.	ECP-1
Investigate these three factors during the detailed design phase to put into design of tailwater channels: – Quantities of tailwater likely to be generated from the excavation and dredging activities and associated pumping rate.	NA – construction related

Commitment	OEMP Reference
<ul style="list-style-type: none"> – Settlement rates for material being excavated/dredged. – Intensity and duration of rainfall events. 	
Provide a small car parking area at the breakwater park.	Completed
Test fill from locations where contamination may have occurred prior to excavation.	NA – construction related
Continue to work to identify any nearby developments where rock and/or fill is likely to be generated and require off-site disposal and investigate the possibility of utilising this material at the Port of Airlie.	NA – construction related
Conduct dredging works in accordance with DPI&F's Fish Habitat Management Operational Policy (FHMOP 004) – Dredging, Extraction and Spoil Disposal Activities.	NA – construction related (no longer relevant)
Obtain all appropriate permits if quarrying or sand extraction is to be undertaken at location and is not already licenced.	NA – construction related
Design all stormwater systems in accordance with the Queensland Urban Drainage Manual, as required by Whitsunday Shire Council.	Completed – Stormwater system has been handed over to Whitsunday Regional Council
Make "headworks" contributions to Whitsunday Shire Council to cover any costs related to increased demand for water or disposal of sewage. Similarly, negotiate a pro-rata contribution to Whitsunday Shire Council and Department of Main Roads with regard to impacts on the local and state road network.	Completed
Any new urban land uses seek to maintain public access to the coast to protect the public's expectation of access, and reflect water sensitive urban design principles to maintain natural water infiltration and flows and protect water quality.	Completed
Carry out a sediment sampling program as part of the baseline environmental studies proposed prior to commencement of construction.	Completed
In the event that contamination levels in sediment exceed EPA guideline limits, prepare a Site Management Plan in accordance with EPA requirements.	Completed – construction related
If heavily contaminated sediments are identified and these are encapsulated on the site, undertake ongoing monitoring of seepage from these sediments to ensure that contaminants are not being mobilised.	Completed – construction related
Install stormwater management systems at the development, which include removal of sediment and gross solids.	Incomplete – sediment and gross solid removal not included. Stormwater system has been accepted by Whitsunday Regional Council.
During dredging of the channel, carry out visual monitoring of the dredging area to detect dugong and turtles that may swim into the area before or during dredging activities.	ECP-1
If blasting of any rock outcrops is required, carry out the blasting behind the sheet pile or bunded coffer dams. Do not blast in the open sea.	Not required
The construction contractor must maintain a complaints log complaints and respond to any complaints in a timely and effective manner.	Completed – construction related

Commitment	OEMP Reference
Provide 15 car parks for construction workers with additional on-site car parking if necessary.	Completed – construction related
Undertake negotiations with DMR and Whitsunday Shire Council regarding contributions by the proponent to offset any damage to pavements as a result of construction traffic.	Completed – construction related
Design the boat ramp in compliance with Queensland Transport Marine Division Public Boating Facilities Guidelines.	Completed – construction related
There is a need for the proposed retail and commercial components and a more detailed needs assessment, or assessments, to be undertaken in conjunction with future development permit application(s).	No longer relevant
Extend the concept of an integrated Master Plan from the planning process through the development process; with the application of architectural design guidelines to ensure all buildings contribute to the overall vision of the Port of Airlie.	Completed
Design the buildings to reflect the tropical location, and a marine-based theme.	Ongoing (through development permits)
Engage in ongoing consultation activities.	OEMP Section 12

4. Roles and Responsibilities

4.1 Defined Roles and Accountabilities

This section describes the overall accountability and responsibility of the marina management team and associated contractors for environmental compliance and performance. Additional detailed responsibilities for various management actions are identified throughout the OEMP and in particular in the environmental control procedures (ECPs) and other procedures. Roles and responsibilities are set out in Table 4-1 and the corresponding organisational structure is shown in Figure 4-1.

Responsibilities of tenants and other parties are not directly addressed as this OEMP applies to Meridien only. See also OEMP Section 2.2 for further explanation.

Distinction is made between contracts for routine maintenance activities, including waste management, and project-specific contracts which may be issued for non-routine maintenance and major repairs, as well as further development of the marina assets.

Table 4-1 Accountabilities

Position	Accountabilities	Required Competency
Receiver and Manager	Ensure compliance with all aspects of: <ul style="list-style-type: none"> • Legislation and subordinate legislation • Permits and approvals (see OEMP Section 3) 	No specific requirements in relation to environmental management
Asset Manager	Ensure adequate resources are provided for implementation of the OEMP Ensure that the OEMP is regularly reviewed and kept up to date <ul style="list-style-type: none"> • 	Undertake training as per OEMP Section 08
Asset Operations Manager	Act under direction of receivers and managers to: <ul style="list-style-type: none"> • Ensure that all aspects of the OEMP are implemented • Ensure that new or altered activities do not commence until the environmental assessment procedure has been implemented and relevant approvals obtained. • Communicate with tenants and marina users on environmental requirements including legislative and compliance requirements and good practice standards • Manage complaints and enquiries in relation to environmental issues • Proactively manage community and other stakeholder communications and relationships 	Training as per Section 8.1

Position	Accountabilities	Required Competency
	<ul style="list-style-type: none"> Manage the corrective action procedure Manage the incident investigation procedure Ensure that all contracts contain relevant environmental requirements <p>Report against objectives and targets</p>	
Marina Operations Manager Property Operations Manager	<p>Act under direction of receivers and managers to:</p> <ul style="list-style-type: none"> Ensure that routine maintenance contracts, including waste management contracts meet the requirements of this OEMP 	Undertake training as per OEMP Section 08
Marina Operations Manager	<p>Act under direction of receivers and managers to:</p> <ul style="list-style-type: none"> Manage all aspects of environmental performance of contractors undertaking routine maintenance or waste management contracts Ensure that contractors are competent to undertake any environmental management or monitoring aspects of the activity Maintain a filing system for all records required to be kept under this OEMP 	Undertake training as per OEMP Section 08
Routine maintenance and waste management contractors	<p>Comply with all aspects of legislative requirements and approval conditions, including holding authorisation for environmentally relevant activities</p> <p>Ensure familiarity with relevant legislative requirements and approval conditions and the relevant requirements of this OEMP</p> <p>Ensure high standards of environmental performance are achieved</p> <p>Take measures to prevent adverse impacts and incidents from occurring</p>	Contractor personnel must be competent to undertake activities specified in the contract with minimal impact or risk to the environment
All staff	<p>Act under direction of receivers and managers to:</p> <ul style="list-style-type: none"> Ensure that the site and environs are kept in a neat and tidy manner such that risk of environmental impact or incident is minimised Provide "first at scene" response to environmental incidents as required Report any incidents, near misses, actual or potential environmental issues to the Asset Manager 	Undertake training as per OEMP Section 08
Environmental Advisor	<p>Provide advice and assistance to the Asset Manager, Asset Operations Manager and other team members as requested including:</p> <ul style="list-style-type: none"> Keeping the OEMP up to date 	<p>Degree qualification in environmental science or management</p> <p>Minimum five years relevant experience including</p>

CONTROLLED DOCUMENT

Contact CTPI 4@ashenv.com to check date of latest version

C:\User\CTPI 49-Sch4 Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

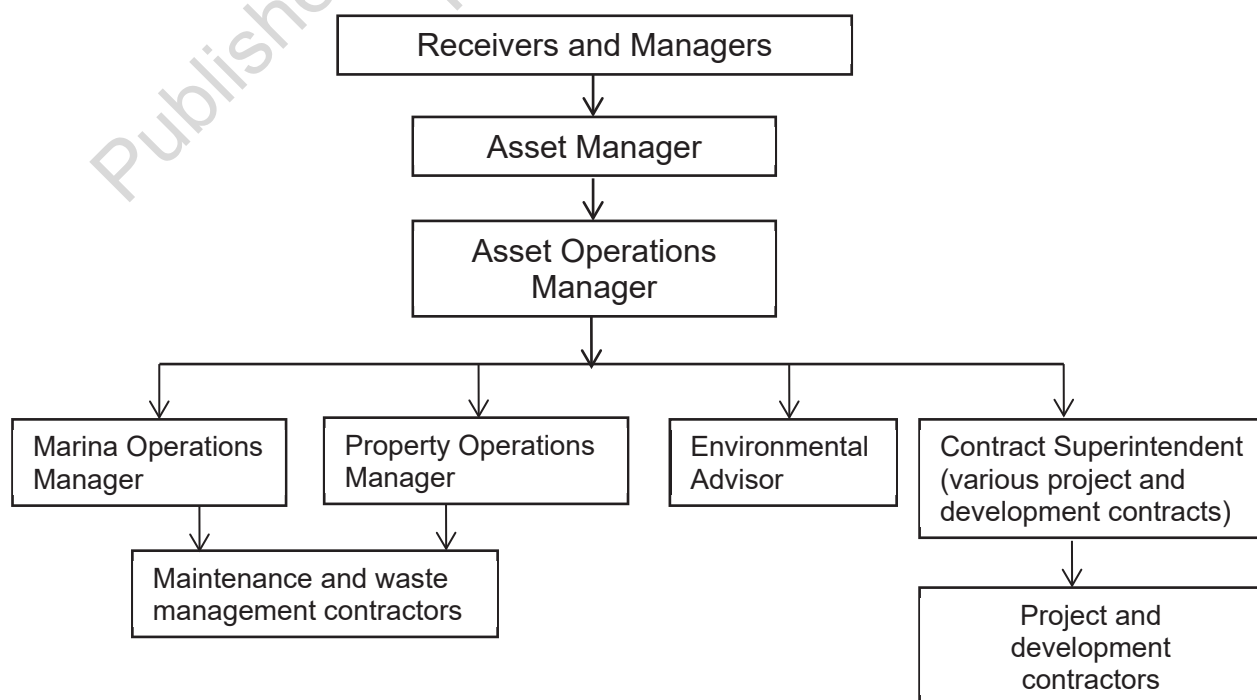
REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 56

Position	Accountabilities	Required Competency
	<ul style="list-style-type: none"> Advising on incident response Reviewing monitoring data Advise on scopes and contracts in relation to environmental monitoring and auditing and other aspects. 	experience with managing activities in the coastal zone and with Federal and Queensland environmental compliance and approval requirements
Contract Superintendent	<p>Manage all aspects of environmental performance of contractors undertaking non-routine or project-specific contracts</p> <p>Ensure compliance with relevant sections of the OEMP in relation to the activity itself, and the performance of the contractor</p> <p>Ensure that contractors are competent to undertake environmental monitoring and management requirements assigned through the OEMP or legislative requirements</p>	<p>Minimum two years relevant experience in management of contracts with moderate to high risk of environmental harm</p> <p>Undertake training as per OEMP Section 08</p>
Contractors - non-routine or project-specific contracts	<p>Comply with all aspects of legislative requirements and approval conditions.</p> <p>Ensure familiarity with relevant legislative requirements and approval conditions and the relevant requirements of this OEMP</p> <p>Ensure high standards of environmental performance are achieved</p> <p>Take measures to prevent adverse impacts and incidents from occurring</p>	<p>Undertake training as per OEMP Section 08</p> <p>Additional competencies may be required depending on activities being undertaken</p>

Figure 4-1 Organisation Structure



4.2 Delegation of Responsibilities

Responsibilities in Table 4-1 and elsewhere in the OEMP can be delegated to others provided that:

- Delegation is in writing and clearly sets out:
 - o the items, matters or actions that are delegated
 - o the required performance requirements
 - o the period over which the delegation is valid.
- The delegator is satisfied that the delegate is suitably competent and has sufficient capacity to undertake the delegated responsibilities
- The delegation is acknowledged by the recipient
- Written evidence of the delegation having been made and acknowledged is maintained on the OEMP files (roles and responsibilities, see Section 12).

Accountability cannot be delegated. Each of the roles set out in Table 4-1 remain accountable for performance of the assigned actions and tasks, even where the responsibility has been delegated.

5. Objectives and Targets

5.1 Objectives, Targets and Performance Criteria

Objectives, targets and performance criteria have been identified for Port of Airlie and are set out in Table 5-1. Note that workplace safety, community safety and traffic are not covered by this OEMP and hence, targets for these aspects have not been developed.

Table 5-1 – Objectives and Targets

Objective	Targets	Performance Criteria/Outcome
Achieve compliance with legal requirements	Legal compliance is achieved at all times	No activities undertaken without appropriate approvals All new or amended activities undergo environmental assessment
	Compliance with conditions of approval is achieved at all times	All activities are undertaken in accordance with relevant conditions of approval
Maintain strong positive relationship with the community	Positive and proactive communication is maintained with key business stakeholders at Port of Airlie	Good relationships with Whitsunday Regional Council, Whitsunday Sailing Club, Cruise Whitsundays, Boathouse Body Corporate and other tenants
	Complaints and requests for information are responded to promptly and courteously	Initial response time <5 business days All complaints (valid or vexatious) closed out within 1 month No valid repeat complaints
	Public access areas and facilities, including boat ramp and navigation access channel are available and contribute to local amenity	All public access areas and facilities are available and fully functional for 50 weeks of each year Public access facilities are in a neat, clean and safe condition at all times when the facilities are available for use
	Disturbance from noise is minimised	No non-compliances with requirements of environmental authority or the EP Act in relation to building and construction works, including dredging and related activities All valid noise-related complaints resolved in accordance with requirements of EP Act
Manage impacts of maintenance and development activities on neighbours	Disturbance from dust is minimised	No visible deposition of dust outside immediate work areas No visible dust plumes leaving Port of Airlie boundary All valid dust-related complaints resolved in accordance with requirements of EP Act

Objective	Targets	Performance Criteria/Outcome
Protect the natural environment and World Heritage values of Boathaven Bay, and the Whitsunday region of the Great Barrier Reef	Water quality in Boathaven Bay is maintained at suitable quality to protect aquatic habitat and other values	<p>Activities do not cause degradation of water quality and the associated environmental values in Boathaven Bay:</p> <ul style="list-style-type: none"> Compliance with the water quality limits set in the environmental authority is considered to protect water quality and associated environmental values during dredging activities. Maintenance of water quality consistent with WQOs for a slightly to moderately disturbed ecosystem is considered to protect water quality and associated environmental values at other times (Table 6.7 in OEMP Section 6)
		No degradation in seagrass attributable to marina activities, including dredging, is observed
	Marine megafauna are protected	No death or injury to turtles, dugong or dolphins as a result of marina activities
	Turtles, dugong and dolphins are not disturbed while foraging	Potentially harmful activities are ceased when marine animals are within exclusion zones
	Pest species are not introduced	<p>No incidents of aquatic pests introduced at Port of Airlie</p> <p>No incidents of new terrestrial weed species at Port of Airlie</p>
	Existing pest species do not proliferate	<p>Weeds in undeveloped areas or landscape areas are removed within one month</p> <p>Rats, mice or feral animals within Port of Airlie are removed within one week</p>
Minimise resource consumption and waste	Energy consumption is minimised	To be determined following first energy and materials audit
	Water consumption is minimised	To be determined following first energy and materials audit
	Waste generation is minimised	To be determined following first energy and materials audit
Implement OEMP effectively	Staff are trained and aware of OEMP requirements	<p>All new staff undergo induction and awareness training within 1 month of commencement</p> <p>All staff undergo refresher training annually</p>
	Audit results indicate effective implementation	<p>No major non-compliances identified in audit results</p> <p>No more than three minor non-compliances identified in audit results</p>
Continually improve environmental management performance	Corrective actions are closed out in a timely manner	Corrective actions which pose a high level of environmental risk, indicate non-compliance with legal and other obligations or non-compliance with the OEMP are closed out within one week

Objective	Targets	Performance Criteria/Outcome
		Other corrective actions are closed out or transferred to the Environmental Management Program within one month.
		Environment Management Program items are completed on schedule.
Effectively prevent incidents and minimise severity of incidents	Incident prevention measures are in place	No incidents causing serious or material environmental harm
		No more than two minor incidents per year (minor incidents are those that do not cause serious or material environmental harm)
	Incident response processes and equipment are in place	Environmental harm arising from incidents does not increase as a result of delayed or inappropriate response.

5.2 Reporting Requirements

Refer Section 12.2.

6. Environmental Values

6.1 Overview

The existing environment of Boathaven Bay and surrounds has been described in previous EIS studies, including the SEIS (SKM November 2002) and Addendum SEIS (SKM April 2003). Baseline data is also available from the original EIS studies undertaken in the 1980s as well as the 1998 EIS (Burchill Partners *et. al.*). Further baseline studies on acid sulphate soils, sediment contamination and other sediment characteristics were undertaken prior to commencement of construction in 2004 (Ullman and Nolan 2004). Further baseline studies were also undertaken on water quality and noise. Queensland Fisheries studied fish habitat values in Boathaven Bay throughout construction in accordance with a mitigation deed between the proponent and Queensland government, culminating in a final report issued in 2010 (DEEDI 2010). Regular surveys of seagrasses were also undertaken prior to, during and post construction, with the latest survey being undertaken by Biosis Research (2012).

This section provides a summary of the key environmental and social values and resources present within and adjacent to Port of Airlie. This summary is intended to inform environmental protection and management measures and allow suitable objectives, targets and performance indicators to be identified.

6.2 Land and Sea Use

Port of Airlie is located in Boathaven Bay (also known as Muddy Bay), at the eastern end of the tourist commercial and retail precinct of Airlie Beach.

Airlie Beach is the primary tourist destination on the mainland Whitsunday Coast and is a tourist destination in its own right providing a range of tourist accommodation, tourist retail, travel agencies and booking offices, restaurants and cafes and a small number commercial offices. The town is providing an increasing range of land and water based tourist activities as well as being a starting point for visits to the Whitsunday islands and the Whitsunday section of the Great Barrier Reef.

The site is bounded by Shute Harbour Road to the south-east, Coconut Grove and Airlie headland to the west and Pioneer Bay to the north and east. Immediately south east of the site is a large recreational complex and former municipal landfill. Adjacent land uses are described in Table 6-1.

Land and sea uses within Port of Airlie include:

- Hotel and apartment style accommodation
- Residential accommodation, including stand-alone houses, villas and apartment buildings
- Private marina berths, including marina berths assigned to Whitsunday Sailing Club. Total marina berth capacity is 290.
- Public and private transport facilities including:
 - o A long distance bus terminal and transport interchange operated by Whitsunday Regional Council
 - o A public boat ramp and associated car park, also operated by Whitsunday Regional Council
 - o A ferry terminal, operated by Cruise Whitsundays
- Public access areas including:
 - o A boardwalk
 - o A public beach along the northern breakwater
 - o Public open space
- A (proposed) maritime services area

CONTROLLED DOCUMENT

Contact CTPI_4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 62

- Public amenities and amenities for occupants of marina berths.

Table 6-1 Adjacent Land and Sea Uses

Direction	Land and Sea Use
South-East	Shute Harbour Road. Tourism accommodation and apartments Private residences
South-West	Recreation reserve (former landfill) Police Citizens Youth Club Campbell Creek and associated mangrove and saltpan areas Light industrial and commercial development, including Edges Boatyard on Campbell Creek
East and North-East	Airlie Beach Hotel, other tourism accommodation Restaurant and retail precinct Whitsunday Sailing Club
North and North-West	Boathaven Bay, Pioneer Bay Yacht moorings

6.3 Bathymetry

Boathaven Bay is a shallow embayment fronting northwards onto the broad open waters of Pioneer Bay. The majority of the seabed within Boathaven Bay is above the lowest astronomical tide and it is only near its confluence with Pioneer Bay that the seabed slopes gradually away into deeper water with depths up to about 2.5m (see Figure 6-1).

The seabed approach slopes to Boathaven Bay are approximately 1:350.



Figure 6-1 – Boathaven Bay Coastal Features (Port of Airlie under Construction)

The latest bathymetric survey of the marina basin and navigation access channel was undertaken in September 2013 by RPS (drawing 110420-1 CD-12 J). The nominal depth of the marina basin, ferry terminal basin and access channel is 2.5m below LAT (LAT is at RL 6.259). As of September 2013, some areas of the access channel and ferry terminal basin were shallower than this.

Parts of the marina basin were also significantly deeper than this, having been over-excavated to obtain residual fill material. Two holes with depths of 4-7m below LAT exist. As part of construction, softer marine sediments were replaced in the marina basin and comparison of surveys from 2010 and 2013 indicates that settlement has occurred.

6.4 Hydrodynamic Processes

6.4.1 Currents and Wave Climate

Tidal flows tend to dominate currents in Boathaven Bay with flows under most conditions being into and out of the north facing bay, with speeds of less than 0.15m/s. Under the influence of moderate north-easterly and south-easterly winds, currents can set to a clockwise circulation of Boathaven Bay, with speeds in the

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 64

order of 0.2 m/s. This represents relatively mild current conditions and littoral transport of sediment is minimal.

Modelling undertaken for the EIS indicated that circulation in the southern part of Boathaven Bay will change slightly as a result of the development with currents deviating from the typical north-south direction around the end of the northern breakwater to enter the marina basin. Currents inside the new marina will be weaker than for the existing configuration and therefore flushing will be reduced slightly. There will be no discernible change to the direction or speed of currents in the rest of Boathaven Bay.

In this low-current environment, wave action is the major force causing resuspension of sediments and hence turbidity in the water column. The wave climate in Boathaven Bay is generally very mild as the bay is enclosed on three sides, and is north facing, with prevailing winds being from the south and south-easterly quarter. Even with winds from the north, the flat approach slopes, in conjunction with the surrounding land features of Pioneer Point and Bluff Point, provide natural protection and wave energy attenuation for the site, particularly during cyclones. Nevertheless, the fetches to the north are quite long, with the main Great Barrier Reef system being some 90 kms offshore. It is from across these open fetches that the largest waves can propagate to the site.

Wave height is less than 0.4m for 76% of the time and exceeds 1m for less than 0.1% of the time. This means that in water below the low tide mark, sediment re-suspension under most conditions is minimal although in the shallower and intertidal waters wave action on exposed or very shallow mudflats causes re-suspension.

Campbells Creek discharges into the southern end of Boathaven Bay, to the east of Port of Airlie (see Figure 6-1). Discharges from this creek have cut a north-east trending channel along the eastern shoreline of Boathaven Bay that is evident from aerial photography. There are also several stormwater drains within and adjacent to Port of Airlie that convey stormwater from Shute Harbour Road and hillside development to the south and west. As these hillside development areas are quite steep, the velocity of stormwater flows can be relatively high.

6.4.2 Dredging Plumes

Global Environmental Modelling Systems (GEMS) carried out environmental modelling studies in 2005 to help identify and assess the impact on hydrodynamic and siltation processes arising from construction of Port of Airlie and particularly dredging of the access channel. The work was undertaken using the GEMS 3D Coastal Ocean Model (GCOM3D) to set up a sophisticated three-dimensional water current model of Pioneer and Boathaven Bays, on grids ranging from 50 m to 10 m horizontal resolution and 1 m depth resolution, and the GEMS 3D Sediment Transport Model (SEDTRAK3D) to determine the fate of suspended particles.

Plumes from the dredging of the access channel were assessed based on use of a hydraulic cutter suction dredge with dredging rate in the order of 250-300m³/hour for 16 hours per day. The plume model was run over a 10 week period to simulate the entire channel capital dredging activity and snapshots of typical outputs from the model in the early (inshore), middle and late (offshore) stages of the channel dredging are shown in Figure 6-2, Figure 6-3 and Figure 6-4. Suspended solids predictions for the hydraulic cutter suction dredge were that the dredging of the access channel may create short term turbidity in the range of 1-50 mg/L when the dredge is working in the shallow, inshore area where tidal currents and flushing are weaker. In the mid and northern ends of the channel, suspended solids levels within 100 m of the hydraulic cutter suction dredge head are less than 10 mg/L.

Typical background suspended solids levels in Boathaven Bay are in the range of 10-40 mg/L (see also Section 6.6).

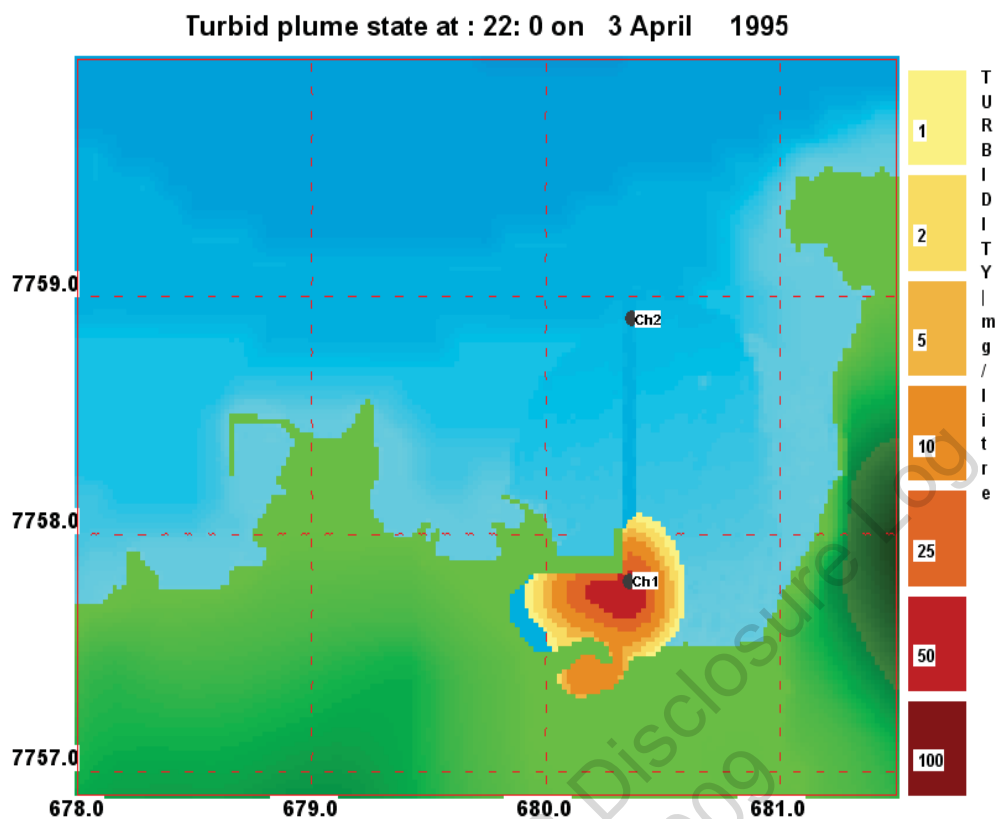


Figure 6-2 Hydraulic Cutter Suction Dredge Plume – Southern End of Channel

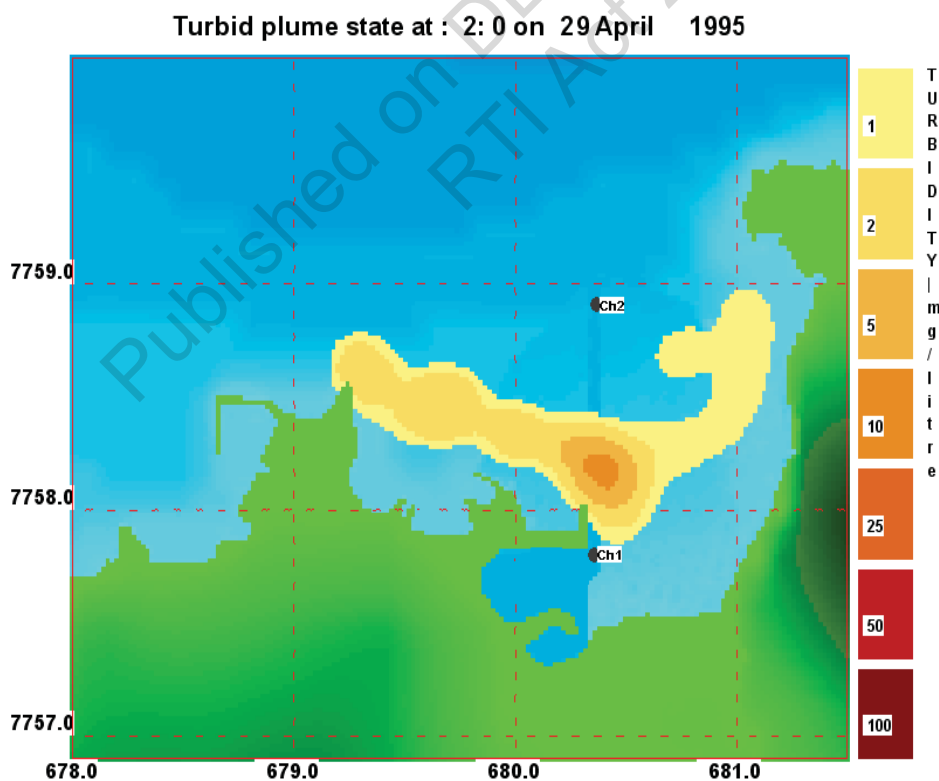


Figure 6-3 Hydraulic Cutter Suction Dredge Plume – Mid – Channel

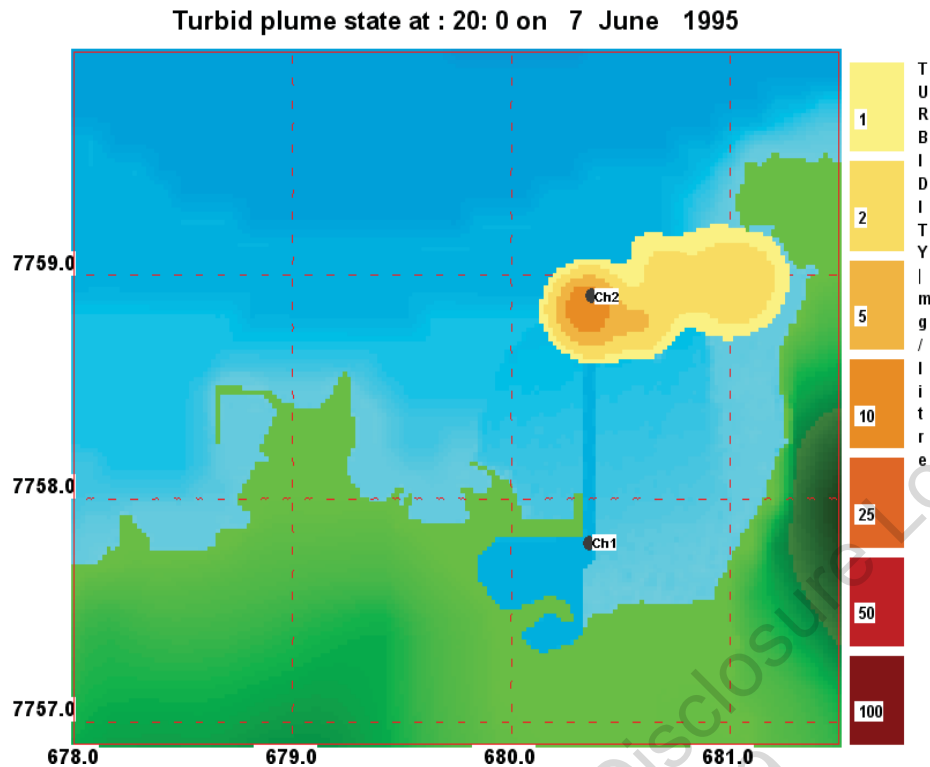


Figure 6-4 Hydraulic Cutter Suction Dredge Plume – Northern End of Channel

6.4.3 Siltation Rates

Annual accumulation of sediments was predicted at levels of 1-5 cm/annum in the marina and access channel. Sufficient time has not lapsed since construction occurred to confirm this, and in addition, settlement of softer sediments replaced in the marina basin has occurred, meaning that sedimentation rates cannot be confirmed at this stage. The development was not predicted to cause changes in sediment accumulation rates in other parts of Boathaven Bay as sediment movement is largely wave influenced. Dredging may also be required from time to time to meet operational requirements.

6.5 Climate

The climate at Airlie Beach is tropical with rainfall predominantly in the months November to March, with highest rainfalls typically in January and February. Monthly rainfall statistics for Proserpine airport are shown in Figure 6-5. Annual rainfall statistics at Proserpine Airport are as follows:

- Median annual rainfall – 1,434 mm
- Average annual rainfall – 1,498 mm
- Highest annual rainfall – 2,572 mm.

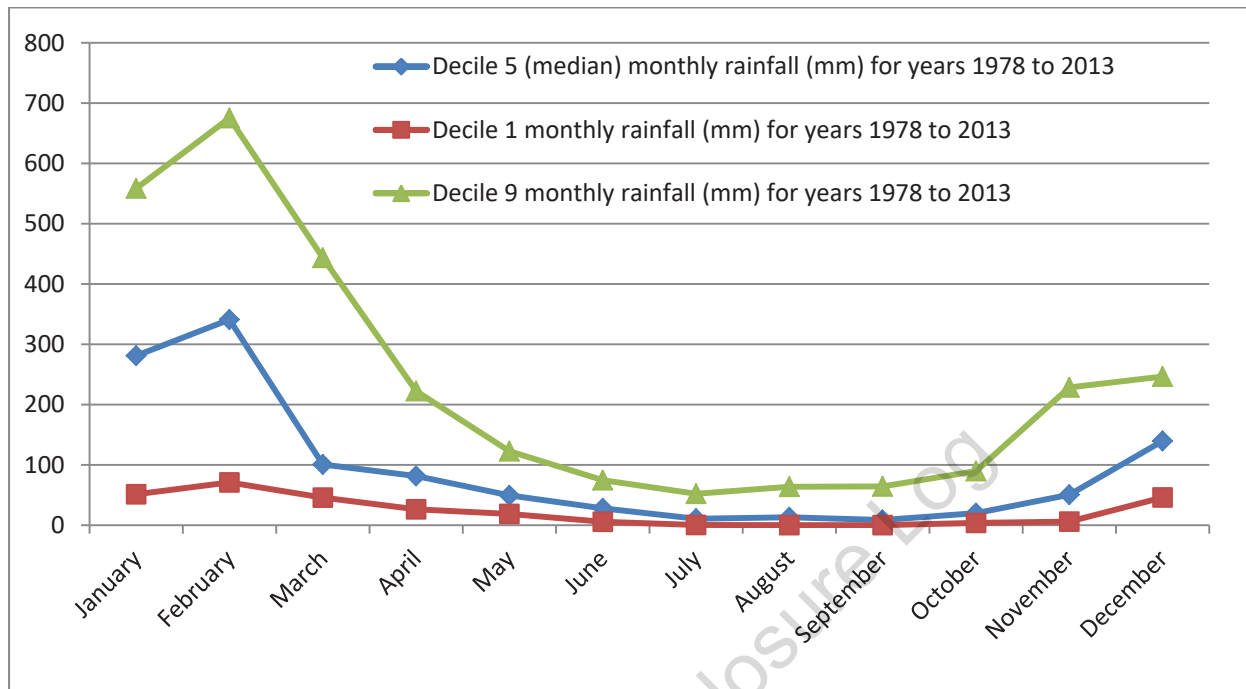


Figure 6-5 – Monthly Rainfall Statistics – Proserpine Airport

The area is subject to intense rainfall events from time to time, typically associated with tropical cyclones or low pressure systems that occur over the summer months. The highest daily rainfall recorded at Proserpine Airport was 370.6mm in December 1990. At Hamilton Island the highest daily rainfall recorded was 412mm in February 1991. Rainfall for a major storm event was predicted for Port of Airlie, based on a 72 hour storm event. Results are presented in Table 6-2.

Table 6-2 Predicted Rainfall – 72 Hour Storm Event

Event	Rainfall Intensity (mm/hr)	Total Rain (mm) (72 hour event)
Q100	14.25	1,026
Q50	12.35	889
Q20	9.99	719
Q10	8.29	597
Q5	6.29	453
Q2	4.96	357

Average daily maximum temperatures at Hamilton Island range from 30.4°C in January to 21.9 °C in July. At Proserpine Airport, average daily maximum temperatures range from 31.4 °C in January to 24.3°C in July.

Prevailing winds are from the south and south east throughout the year, with a higher probability of north-easterly winds during spring and early summer. Wind roses for Hamilton Island, 26km south-east of Airlie Beach were obtained from the Bureau of Meteorology website. Figure 6-6 and Figure 6-7 show the prevailing winds at Hamilton Island for the period August 1985 to March 2002.

9 am
5808 Total Observations

Calm 4%

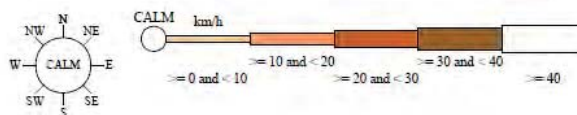
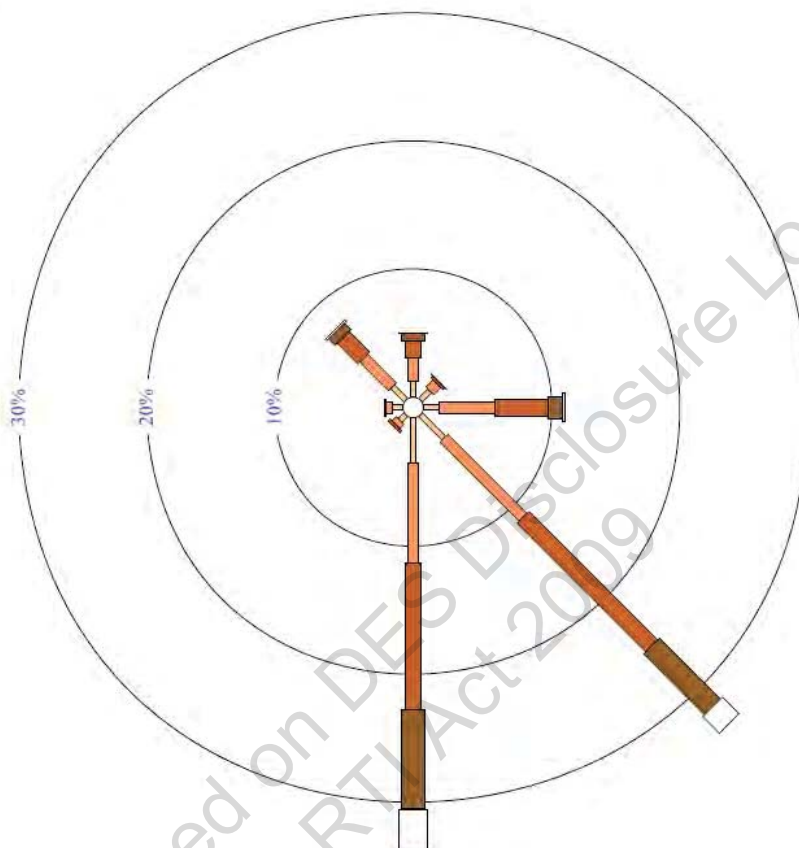


Figure 6-6 – Annual Wind Rose – Hamilton Island, 9am (BoM)

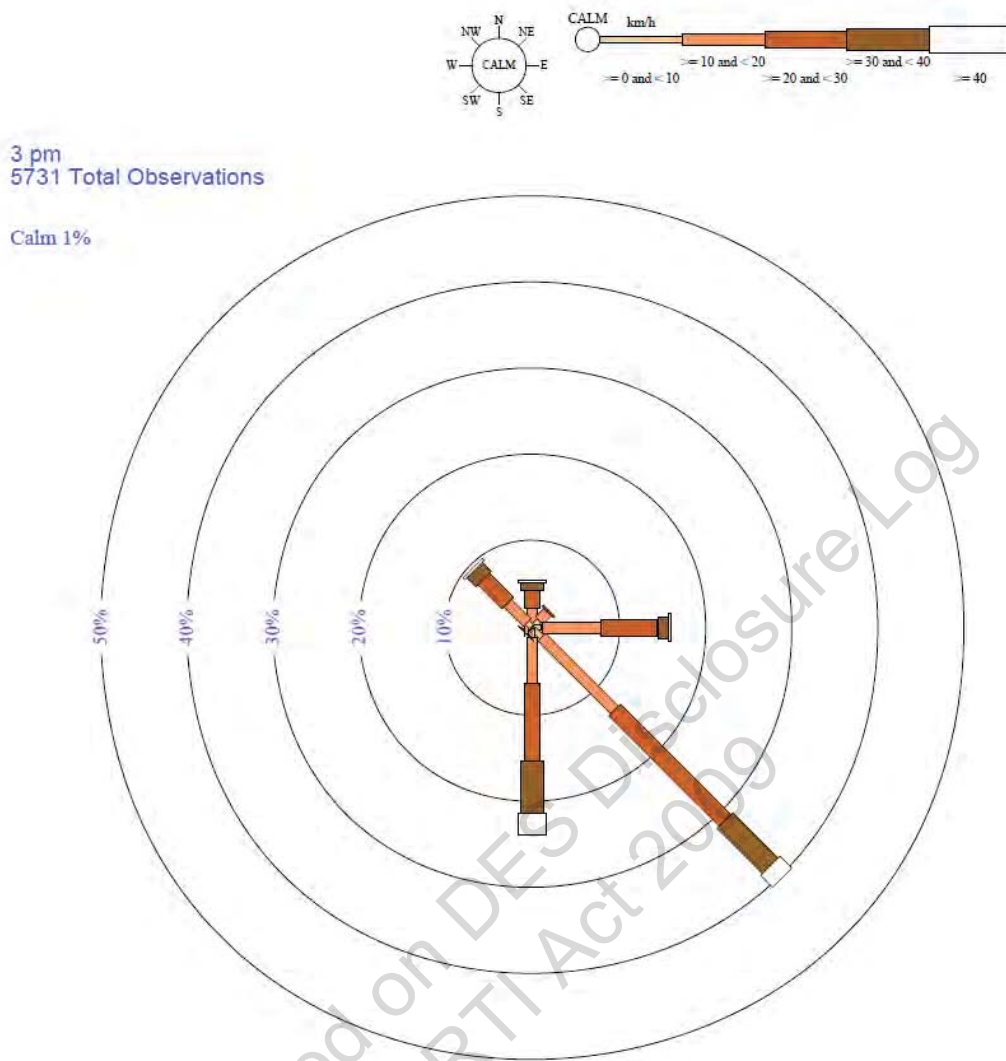


Figure 6-7 – Annual Wind Rose – Hamilton Island, 3pm (BoM)

Evaporation data is not available for the closest weather stations to Airlie Beach. Evaporation at regional BOM stations is as follows:

- Collinsville – 5 mm/day annual daily average, 1825 mm average annual total
- Rockhampton – 5.7 mm/day annual daily average, 2080 mm average annual total
- Townsville – 7 mm/day annual daily average, 2,555 mm average annual total.

6.6 Conservation Estate and Protected Areas

6.6.1 Great Barrier Reef World Heritage Area/National Heritage Place

Port of Airlie is located within the Great Barrier Reef World Heritage Area (GBRWhA) and Great Barrier Reef National Heritage Place (GBRNHP). The official boundary runs along the low tide mark of the mainland, although mapping from the Protected Matters database appears to show the boundary closer to the high tide mark (see Figure 6-8). Note also that the boundaries were not amended to allow for the land generated by construction of Port of Airlie.



Figure 6-8 – Great Barrier Reef World Heritage Area/National Heritage Place Boundary

The GBRWHA meets all four of the selection criteria for world heritage areas that are natural heritage. These criteria are as follows:

- vii. to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- viii. to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
- ix. to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
- x. to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

In June 2012, the World Heritage Committee of the United Nations Educational, Scientific and Cultural Organisation adopted a “retrospective statement” of the outstanding universal value of the GBRWHA (UNESCO June 2012a, see also <http://www.environment.gov.au/node/19766>). The retrospective statement included the various components of the GBRWHA that contribute to its outstanding universal value. An assessment of the extent to which natural features of Port of Airlie and the surrounding area

CONTROLLED DOCUMENT

Contact CTPI 4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 71

contribute to the outstanding universal value of the GBRWHA, as expressed against the four criteria, is provided in Table 6-3.

Table 6-3 Contribution to the OUV of the GBRWHA – Port of Airlie and Surrounds

OUV Criteria	Contribution to OUV – Port of Airlie and Surrounds
<p>Criterion (vii)</p> <p>superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance</p>	<p>Port of Airlie and Boathaven Bay are surrounded by land-based development of Airlie Beach and appears as part of this urban area when viewed from most angles.</p> <p>There are no examples of the superlative or spectacular aesthetic or natural features listed in the statement of OUV at Port of Airlie or in Boathaven Bay. There are no reefs or coral cays visible from the air in the vicinity of Port of Airlie, with the nearest such features being 60km from the coastline. There are no examples of superlative natural phenomena such as turtle or seabird breeding colonies, aggregations of butterflies or other animals, coral reefs or fish spawning areas at Port of Airlie or in Boathaven Bay.</p> <p>The steep forested hills to the south-east are outside the GBRWHA but may be considered reminiscent of the vistas provided in the Whitsunday Islands and Hinchinbrook area but the visual connection between these hills and the GBRWHA is broken by urban development.</p> <p>The features of Port of Airlie and Boathaven Bay therefore make a very limited contribution to the OUV in terms of superlative natural features and exceptional landscapes.</p>
<p>Criterion (viii)</p> <p>outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features</p>	<p>Boathaven Bay, in which Port of Airlie is situated, is a north facing bay typical of the region, featuring deep, soft, muddy substrates. It is exposed to cyclones and other severe weather events which cause substantial reworking of sediment.</p> <p>Boathaven Bay does not contain any of the features noted in the statement of OUV, nor does it contain representative examples of these features (see also Context 2013). Boathaven Bay therefore makes a very limited contribution to the OUV of the GBRWHA in this regard.</p>
<p>Criterion (ix)</p> <p>outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals</p>	<p>This criterion relates to visible signs or evidence of evolutionary processes, including the influence of climate, geology, geomorphological processes and resultant habitats on the evolution of species and ecosystems.</p> <p>The waters of Boathaven Bay do not contain any particular examples of the inter-relationships between geological and geomorphological processes and ecological and biological processes. Boathaven Bay provides habitat for a range of marine animals including dugong and marine turtle, but this habitat is not considered important or unique in the context of evolutionary processes. Surveys have not identified any regionally or locally endemic species in Boathaven Bay nor have any unusual assemblages of plants and animals been observed. The ecosystems in Boathaven Bay are typical of a number of locations in the Mackay-Whitsunday region.</p> <p>Boathaven Bay is therefore considered to make a minimal contribution to the OUV of the GBRWHA on the basis that it does not contain any outstanding or important examples of the features listed in the statement of OUV.</p>

OUV Criteria	Contribution to OUV – Port of Airlie and Surrounds
<p>Criterion (x)</p> <p>contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation</p>	<p>The waters of Boathaven Bay provide habitat for several species of listed threatened marine turtles as well as the migratory dugong and a narrow range of adult and juvenile fish species. Intertidal areas are used by shorebirds for foraging and roosting. Studies undertaken in Boathaven Bay have not identified any habitat that is critical or important to the survival of these species, either before or after development of Port of Airlie, and habitat provided is typical of a number of locations in the Mackay-Whitsunday region of the GBRWHA.</p> <p>Boathaven Bay is therefore not considered to make any significant contribution to the OUV of the GBRWHA, albeit providing habitat of minor value to several iconic species.</p>

In addition to identifying the individual values that contribute to the OUV of the GBRWHA, the more holistic consideration of integrity is also critical to the overall outstanding universal value. Integrity is defined in the operational guidelines as a *measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes* (UNESCO July 2012, paragraph 88).

The operational guidelines note that: examining the conditions of integrity therefore requires assessing the extent to which the property:

- includes all elements necessary to express its outstanding universal value
- is of adequate size to ensure the complete representation of the features and processes which convey the property's significance
- suffers from adverse effects of development and/or neglect (UNESCO July 2012, paragraph 88).

While located within the GBRWHA, Boathaven Bay does not include any elements that directly contribute to the OUV of the GBRWHA. However as with all coastal areas, these waters provide a buffer to the Great Barrier Reef ecosystem and this has been a key consideration the overall size of the GBRWHA (UNESCO July 2012). Functions of this buffer include maintaining water quality in the Great Barrier Reef ecosystem. Controls are in place at Port of Airlie to minimise the effect of marina activities on water quality in the GBRWHA/NHP, including provision of sewage pump out facilities for vessels and stormwater controls.

The construction of Port of Airlie has led to modification of this part of the GBRWHA through introduction of the marina walls and associated structures and modification of the original coastline. Similar modification has also occurred along the adjacent coastline within the urban areas of Airlie Beach and Cannonvale. Similar hard substrate at the nearby Abell Point Marina was observed to provide habitat for a range of marine flora and fauna, with significant colonisation not occurring until these structures have been in place a decade or more (Lavery 2008).

Overall, the waters of Boathaven Bay provide a buffer to the wider Great Barrier Reef ecosystem and this underlines the importance of maintaining water quality in and adjacent to the marina.

Another condition that must be satisfied for a WHA property is that the property has “an adequate protection and management system to ensure its safeguarding” (UNESCO July 2012 paragraph 78).

As this area of the GBRWHA is outside the GBRMP, it is not actively managed through the marine park management provisions. Port of Airlie underwent environmental impact assessment under both Federal and State legislation and approvals included conditions relevant to the operation of the site.

More generally, protection and management of the marine and coastal environment outside the GBRMP is also covered by Queensland legislative requirements which include:

- General requirements not to cause environmental harm, particularly the General Environmental Duty under the Queensland *Environmental Protection Act 1994* (EP Act), and requirements of the EP Act in relation to minimising risk of water contamination occurring.
- Requirements to obtain development permits and/or environmental authorities to undertake works that may impact on the coastal and marine environment, including approvals for dredging and coastal operational works and removal of marine plants.

Legislative requirements and obligations are provided in Section 3 of the OEMP.

6.6.2 Great Barrier Reef Marine Park

Port of Airlie, including the access channel, is located outside the Great Barrier Reef Marine Park (GBRMP), with the nearest boundary being approximately 1.5 km to the north (see Figure 6-9). At this location, the GBRMP is zoned as habitat protection zone (yellow), with the general use zone (light blue) to the north. Table 6-4 sets out the allowed, permissible and prohibited uses in each of these zones.

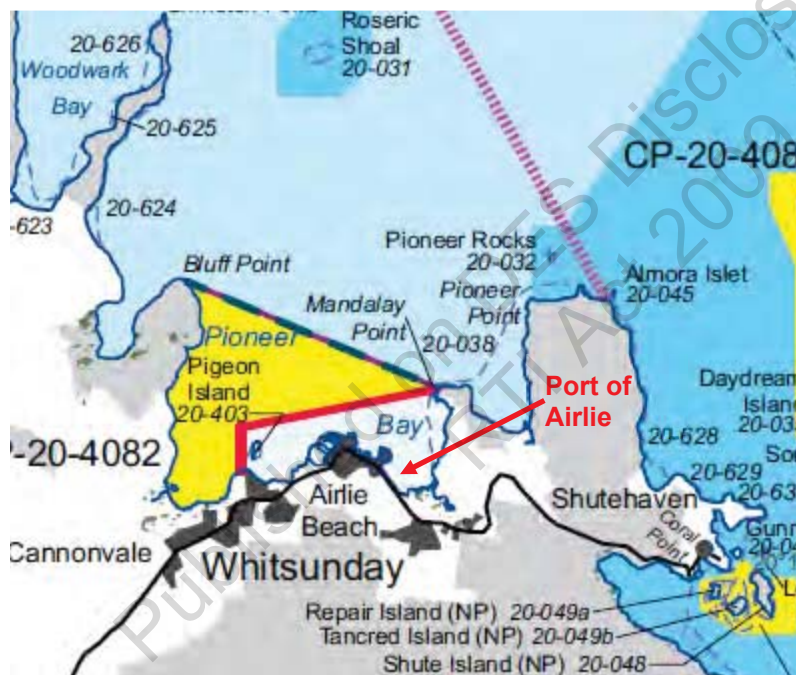


Figure 6-9 – Great Barrier Reef Marine Park Boundary and Zoning

Table 6-4 – GBRMP – Allowed Uses

Zone	Allowed Uses	Uses Allowed with Permit	Prohibited Uses
General Use Zone	<ul style="list-style-type: none"> ▪ Bait netting ▪ Boating, diving and photography ▪ Crabbing ▪ Limited collecting (by 	<ul style="list-style-type: none"> ▪ Aquaculture ▪ Harvest fishing for aquarium fish, coral and beachworm 	<ul style="list-style-type: none"> ▪ Mining activities, including prospecting and exploration activities

Zone	Allowed Uses	Uses Allowed with Permit	Prohibited Uses
	<ul style="list-style-type: none"> hand, up to five of a species) Limited spearfishing (snorkel only) Line fishing and trolling (3 lines/6 hooks per person) Netting other than bait netting Shipping Traditional use of marine resources Trawling 	<ul style="list-style-type: none"> Harvest fishing for sea cucumber, trochus and rock lobster Research (other than limited impact research) Shipping Tourism program Placement of any structure 	
Habitat Protection Zone	<ul style="list-style-type: none"> Bait netting Boating, diving and photography Crabbing Limited collecting (by hand, up to five of a species) Limited spearfishing (snorkel only) Line fishing and trolling (3 lines/6 hooks per person) Netting other than bait netting Traditional use of marine resources 	<ul style="list-style-type: none"> Aquaculture Harvest fishing for aquarium fish, coral and beachworm Harvest fishing for sea cucumber, trochus and rock lobster Research (other than limited impact research) Shipping Tourism program Placement of any structure 	<ul style="list-style-type: none"> Mining activities, including prospecting and exploration activities Trawling

While Port of Airlie is located outside the GBRMP, both commercial and private vessels use Port of Airlie as an access point for visiting the GBRMP.

6.6.3 Threatened Species

Threatened species potentially occurring at or near to APM were identified through:

- A search of the SEWPC Species Profile and Threats Database
- A search of the Queensland Government Wildlife Online database
- SKM 2002, Port of Airlie Supplementary Environmental Impact Statement.

An analysis of the likelihood of threatened species to occur in and adjacent to Port of Airlie is provided in Table 6-5. Terrestrial ecological communities and terrestrial plants have been omitted as there is no native habitat for plants and animals within the land components of Port of Airlie. Terrestrial fauna species have been included where there is potential for the animal to overfly the marina, or the animal is known to occur in urban areas. Information is taken from the SEWPC Species Profile and Threats Database (<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>) unless otherwise acknowledged.

Table 6-5 – Threatened Species – Likelihood of Occurrence

Species	Key Habitat	Likelihood of Occurrence
<i>Calidris ferruginea</i> Curlew Sandpiper EPBC Act: critically endangered, migratory NC Act: Not listed	Forages on intertidal mudflats in sheltered areas. Roosts on bare dry shingle, shell or sand beaches, sandspits and islets.	Identified in EPBC Act Protected Matters Report. Not identified in surveys. Feeding habitat is present in Boathaven Bay, however there is limited suitable roosting habitat. Unlikely to occur.
<i>Erythroriorchis radiates</i> Red goshawk EPBC Act: Vulnerable NC Act: Endangered	Forages across large areas of intact woodland and focusses on riparian areas. Preferred areas feature permanent water and fertile soils supporting relatively rich bird populations, conditions which are not met at APM (DERM 2012). Red goshawk usually nests within 1 km of permanent freshwater, and typically adjacent to the watercourse (DERM 2012).	Identified in EPBC Act Protected Matters Report. Habitat requirements are not present at or near Port of Airlie. Very unlikely to occur.
<i>Limosa lapponica</i> Bar-tailed godwit EPBC Act: ssp grallaria and baueri – vulnerable, ssp menzbiej – critically endangered NC Act: Not listed	Widespread in coastal areas, utilising coastal large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. Whitsunday Region not identified as a site of international importance. Observed on intertidal mudflats in Boathaven Bay 1.5km east of APM (SKM 2002). More than 10 species observed (subspecies not specified).	May feed on mudflats in the vicinity of Port of Airlie.
<i>Numenius madagascariensis</i> Eastern curlew EPBC Act: Critically endangered, migratory Nc Act: vulnerable	Inhabits sheltered coasts, estuaries and bays. Forages on intertidal sand flats and mud flats. Feeds on crustaceans, molluscs and insects. Easily disturbed. Observed on intertidal mudflats in Boathaven Bay (SKM 2002). Less than 10 species observed.	May feed on mudflats near Port of Airlie.

Species	Key Habitat	Likelihood of Occurrence
<p><i>Fregetta grallaria grallaria</i> White-bellied storm-petrel (Tasman Sea), Whitebellied Storm-Petrel (Australasian) EPBC Act: Vulnerable NC Act: Least concern</p>	<p>A largely pelagic species that breeds on offshore islands including islands in the Lord Howe Island group.</p>	<p>Identified in EPBC Act Protected Matters Report. Habitat requirements are not present at or near Port of Airlie Very unlikely to occur</p>
<p><i>Macronectes giganteus</i> Southern giant-petrel EPBC Act: Endangered, migratory NC Act: Least concern</p>	<p>A pelagic species that breeds on subantarctic and Antarctic islands in Australian territory.</p>	<p>Identified in EPBC Act Protected Matters Report. Habitat requirements are not present at or near Port of Airlie Very unlikely to occur</p>
<p><i>Pterodroma neglecta neglecta</i> Kermadec petrel (western) EPBC Act: Vulnerable NC Act: Common</p>	<p>Pelagic seabird that occurs in tropical, subtropical and temperate waters of the Pacific Ocean Breeds on islands of the Lord Howe Island and Norfolk Island groups.</p>	<p>Identified in EPBC Act Protected Matters Report. Habitat requirements are not present at or near Port of Airlie Very unlikely to occur</p>
<p><i>Rostratula australis</i> Australian painted snipe EPBC Act: Endangered NC Act: Vulnerable</p>	<p>Typically inhabits shallow inland wetlands including fresh and brackish wetlands and is not generally considered a coastal species. Is known to utilise artificial water bodies such as irrigation drains and sewage treatment farms. Feed on invertebrates taken from the water's edge and mudflats and nests in reed-like vegetation near the water's edge (Australian Government 2003).</p>	<p>Identified in EPBC Act Protected Matters Report. May overfly the area but suitable habitat is not present at or near Port of Airlie.</p>
<p><i>Tyto novaehollandiae kimberli</i> Masked owl (northern) EPBC Act: Vulnerable NC Act: Vulnerable</p>	<p>In northern Australia, the Masked Owl has been recorded from riparian forest, rainforest, open forest, <i>Melaleuca</i> swamps and the edges of mangroves, as well as along the margins of sugar cane fields. Main populations are known from Cape York, Northern Territory and the Kimberleys. Suitable habitat is available in areas surrounding Port of Airlie and bioclimatic modelling indicates possible occurrence, however Airlie Beach is well outside the main known population areas.</p>	<p>Identified in EPBC Act Protected Matters Report. Unlikely to occur</p>

Species	Key Habitat	Likelihood of Occurrence
<p><i>Dasyurus hallucatus</i> Northern Quoll EPBC Act: Endangered NC Act: Least concern</p>	<p>Northern Quoll records from around Proserpine, Midge Point, Eungella and Cape Upstart in 2008.</p> <p>Inhabits rocky forested or wooded areas, but is known from coastal areas except where subject to tidal inundation. Unlikely to be found in urban areas.</p> <p>No suitable habitat at or immediately adjacent to Port of Airlie.</p>	<p>Identified in EPBC Act Protected Matters Report</p> <p>Suitable habitat within several kilometres, but very unlikely to be present at or near Port of Airlie due to barriers caused by roads and urban development.</p>
<p><i>Megaptera novaeangliae</i> Humpback whale EPBC Act: Vulnerable, Migratory NC Act: Vulnerable</p>	<p>On the east coast of Australia, breeding and calving is considered to take place along the length of the GBR from 14oS to 27oS.</p> <p>The Whitsundays are one of several resting places for mothers and calves during migration and are also an aggregation area.</p> <p>Humpback whales do not travel close to the mainland shore in the Whitsunday region.</p>	<p>Identified in EPBC Act Protected Matters Report.</p> <p>Humpback whales are known to utilise the Whitsunday region, but are unlikely to move inshore in close proximity to Port of Airlie.</p> <p>Very unlikely to occur</p>
<p><i>Petrogale persephone</i> Proserpine Rock Wallaby EPBC Act: Endangered NC Act: Endangered</p>	<p>Known from rainforest habitat in Conway National Park but very unlikely to traverse urban areas and Shute Harbour Road to access Port of Airlie.</p>	<p>Identified in EPBC Act Protected Matters Report.</p> <p>Suitable habitat within several kilometres, but very unlikely to be present at or near Port of Airlie due to barriers caused by roads and urban development.</p>
<p><i>Phascolarctos cinereus</i> Koala EPBC Act: Vulnerable NC Act: Special least concern</p>	<p>Koalas naturally inhabit a range of temperate, sub-tropical and tropical forest, woodland and semi-arid communities dominated by species from the genus, <i>Eucalyptus</i>.</p> <p>Koala are known to utilise urban and semi-urban areas where there are significant remnant <i>Eucalyptus</i> but would be very unlikely to occur within or near the marina due to lack of suitable trees.</p>	<p>Identified in EPBC Act Protected Matters Report.</p> <p>Unlikely to be present at or near APM due to lack of <i>Eucalyptus</i> trees.</p> <p>Shute Harbour Road would also form a barrier to koala movements from inland areas.</p> <p>Very unlikely to occur</p>

Species	Key Habitat	Likelihood of Occurrence
<p><i>Rhinolophus philippinensis</i> (large form)</p> <p>Greater large-eared horseshoe bat</p> <p>EPBC Act: Endangered</p> <p>NC Act: Endangered</p>	<p>Foraging habitat consists of lowland rainforest, along gallery forest-lined creeks within open eucalypt forest, <i>Melaleuca</i> forest with rainforest understorey, open savannah woodland and tall riparian woodland of <i>Melaleuca</i>, Forest Red Gum (<i>E. tereticornis</i>) and Moreton Bay Ash (<i>E. tessellaris</i>).</p> <p>Roosting occurs in caves and abandoned mines</p> <p>No known colonies in the vicinity of Airlie Beach.</p>	<p>Identified in EPBC Act Protected Matters Report.</p> <p>Foraging range is unknown, but it is unlikely that this species would overfly Port of Airlie while foraging as there is no suitable foraging or roosting habitat on or in proximity to Port of Airlie.</p> <p>Very unlikely to occur</p>
<p><i>Taphozous australis</i></p> <p>Coastal sheath-tail bat</p> <p>EPBC Act: Not listed</p> <p>NC Act: Vulnerable</p>	<p>All habitats within a few kilometres of coast, e.g. dune mesophyll/sclerophyll scrub, mangroves (<i>Rhizophora</i>, <i>Bruguiera</i>), heath, open forest/woodland, rainforest/monsoon forest and <i>Melaleuca</i>/sedge swamp, rocky escarpments ± low shrubfield.</p>	<p>Essential habitat mapping correlated with Conway National Park/State Forest</p> <p>May overfly Port of Airlie while foraging, however no suitable foraging or roosting habitat on or in close proximity to Port of Airlie.</p>
<p><i>Macroderma gigas</i></p> <p>Ghost bat</p> <p>EPBC Act: vulnerable</p> <p>NC Act: Vulnerable</p>	<p>Prey on insects, birds and small mammals, foraging across a wide range of forest and woodland habitats. Roost in caves or mineshafts.</p>	<p>Suitable habitat in adjacent areas including Conway National Park/State Forest</p> <p>May overfly Port of Airlie while foraging, however no suitable foraging or roosting habitat on or in close proximity to Port of Airlie.</p>
<p><i>Xeromys myoides</i></p> <p>Water mouse, false water rat</p> <p>EPBC Act: vulnerable</p> <p>NC Act: Vulnerable</p>	<p>Inhabits mangroves, foraging in intertidal areas and nesting at the upper edge of the tidal limit. Suitable habitat exists near Port of Airlie, particularly in mangroves along Campbells Creek. A colony is known from near the Cannonvale Wastewater Treatment Plant.</p> <p>Trapping in mangroves at Port of Airlie in 2003, but no animals were identified.</p>	<p>Identified in EPBC Act Protected Matters Report.</p> <p>Potentially occurring in mangroves near Port of Airlie</p>
<p><i>Caretta caretta</i></p> <p>Loggerhead turtle</p> <p>EPBC Act: Endangered, migratory</p> <p>NC Act: Endangered</p>	<p>Adults feed on benthic invertebrates, foraging over coral and rocky reefs, seagrass beds and muddy bays. Juveniles are pelagic.</p> <p>Nests on sandy beaches. No nesting sites known in the Whitsunday area.</p>	<p>Identified in EPBC Act Protected Matters Report.</p> <p>Foraging may occur on soft substrate and seagrass beds near Port of Airlie. Nesting habitat is not present.</p> <p>Observed in the region, potentially occurring in Pioneer Bay (FRC in PPK 1999, SKM 2002)</p>

Species	Key Habitat	Likelihood of Occurrence
<i>Chelonia mydas</i> Green turtle EPBC Act: Vulnerable, migratory NC Act: Vulnerable	Juveniles are pelagic while adults forage in shallow benthic habitats including coral, rocky reef, seagrass beds and algal mats. Adults feed on seagrass and algae. No known major or minor nesting or interesting sites in Pioneer Bay (Limpus 2008)	Identified in EPBC Act Protected Matters Report. Observed in waters of Pioneer Bay (FRC in PPK 1999, SKM 2002)
<i>Dermochelys coriacea</i> Leatherback turtle EPBC Act: Endangered, migratory NC Act: Endangered	Largely a pelagic species, coming inshore to nest on sandy beaches. No known nesting sites in Pioneer Bay. No significant nesting sites in Queensland, but some nesting occurs near Bundaberg.	Identified in EPBC Act Protected Matters Report. Not likely to occur based on lack of suitable habitat.
<i>Eretmochelys imbricate</i> Hawksbill turtle EPBC Act: Vulnerable, migratory NC Act: Vulnerable	Juveniles are pelagic. Adults forage in tropical tidal and sub-tidal coral and rocky reef habitat and to a lesser extent, seagrass habitat. Nesting takes place on sandy beaches. No known nesting sites in Pioneer Bay.	Identified in EPBC Act Protected Matters Report. May occur intermittently on seagrass beds west of APM, but these are not considered core or preferred habitat. Observed in the region, potentially occurring in Pioneer Bay (FRC in PPK 1999, SKM 2002)
<i>Lepidochelys olivacea</i> Olive Ridley turtle, Pacific Ridley turtle EPBC Act: Endangered, migratory NC Act: Endangered	Forage over shallow benthic habitats and also deeper habitats and pelagic habitats but does not generally utilise seagrass or coral habitats. Mainly carnivorous but may also eat algae. No nesting sites in Queensland.	Identified in EPBC Act Protected Matters Report. Not recorded in Whitsunday region (SKM 2002) Not likely to occur
<i>Natator depressus</i> Flatback turtle EPBC Act: vulnerable, migratory NC Act: Vulnerable	Carnivorous, foraging on soft bottom habitats, typically in water depths of 10-40m. Nests on sandy beaches. No major or minor nesting sites in Whitsunday region (Limpus 2007).	Identified in EPBC Act Protected Matters Report. Observed in waters of Pioneer Bay including Boathaven Bay, (SKM 2002).
<i>Pristis zijsron</i> Green Sawfish, Dindagubba, Narrowsnout Sawfish EPBC Act: Vulnerable NC Act: Least concern	Inhabits shallow waters with muddy substrate. Suitable habitat exists in Boathaven Bay including in and adjacent to Port of Airlie. Feed on shoaling fish, molluscs and crustaceans.	Identified in EPBC Act Protected Matters Report. No formal surveys for this animal have been identified for the Whitsunday Region. May be present based on suitable habitat.

Species	Key Habitat	Likelihood of Occurrence
<i>Rhincodon typus</i> Whale shark EPBC Act: Vulnerable, migratory NC Act: least concern	This species inhabits open ocean and coastal waters and are known to congregate at Ningaloo Reef, Christmas Island and Coral Sea. Whale shark are filter feeders, eating plankton and small schooling fish.	Identified in EPBC Act Protected Matters Report. May occasionally occur in Pioneer Bay but not likely to be core or preferred habitat.
<i>Carcharodon carcharias</i> Great white shark EPBC Act: vulnerable, migratory NC Act: not listed	Inhabits open ocean and coastal waters around Australia, but generally not found in the Whitsundays.	Identified in EPBC Act Protected Matters Report. Unlikely to be present except as a transient visitor.
<i>Dugong Dugon</i> Dugong EPBC Act: Migratory NC Act: Vulnerable	Forage on intertidal and subtidal seagrasses. Most important locations for dugong are Shoalwater Bay, Cleveland Bay, Hinchinbrook, Great Sandy Straits and Moreton Bay. Whitsunday region is not identified as supporting a major dugong population but dugong are known to occur in Boathaven Bay and Pioneer Bay (SKM 2002, SKM 2003).	Known to occur (SKM 2002, Wildlife Online)
<i>Esacus magnirostris</i> Beach stone curlew EPBC Act: Not listed (marine) NC Act: Vulnerable	Usually found on open, undisturbed beaches, islands, reefs, and estuarine intertidal sand and mudflats, preferring beaches with estuaries or mangroves nearby.	Wildlife Online database sighting within 1km. Suitable habitat in mouth of Campbell's Creek and nearby mudflats.
<i>Crocodylus porosus</i> Saltwater crocodile EPBC Act: Migratory NC Act: Vulnerable	Inhabits reef, coastal and inland waterways. Known from Proserpine River and known to occupy coastal areas and move along coastal areas when migrating.	Identified in EPBC Act Protected Matters Report. Identified from Wildlife Online within 1 km Not sighted during marine surveys but may occasionally visit areas near APM.

6.6.4 Migratory Species

The protected matters search tool indicated a range of migratory species that may be present in and around the Port of Airlie. A review of the likelihood of occurrence of the species identified by the search tool is provided in Table 6-6. Additional migratory species that were not listed in the Protected Matters Search but were identified in surveys undertaken for the Port of Airlie EIS (SKM 2002) have also been included.

Migratory species that are also listed as threatened are covered in Table 6-5.

Table 6-6 – Migratory Species – Likelihood of Occurrence

Species	Key Habitat	Likelihood of Occurrence
<i>Apus pacificus</i> Fork-tailed swift	Widespread but scattered in coastal areas, more common west of the Great Divide. Low flying, almost exclusively aerial, mostly over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh but known in urban and rural areas. Insectivorous.	Identified in EPBC Act Protected Matters Report May occur in urban areas adjacent to Port of Airlie.
<i>Puffinus carneipes</i> Flesh-footed shearwater	Nests on islands, mostly found over the continental shelf and slopes, not common in inshore areas.	Identified in EPBC Act Protected Matters Report Not likely to be present
<i>Sterna albiglans</i> Little tern	Utilises sheltered coastal and estuarine habitats, often with a sandbank or sand-spit nearby. Nest on sandy beaches. Feed on small fish, crustaceans, insects, annelids and molluscs.	Identified in EPBC Act Protected Matters Report No suitable nesting habitat. May be occasional visitors.
<i>Balaenoptera edeni</i> Bryde's whale	Largely pelagic species.	Identified in EPBC Act Protected Matters Report Not likely to be present in shallow inshore waters
<i>Lamna nasus</i> Porbeagle, mackerel shark	Utilises deeper waters of the continental shelf and shelf edge, occasionally coming inshore (http://www.marinebiodiversity.ca/shark/english/porbeagle.htm). Prefers cooler waters.	Identified in EPBC Act Protected Matters Report Not likely to occur in shallow, inshore waters.
<i>Orcaella brevirostris</i> <i>Orcaella heinsohni</i> Australian snubfin dolphin (formerly Irrawaddy dolphin)	Inhabits shallow coastal waters, especially in close vicinity to river mouths. Not known from the Whitsundays but Cleveland Bay populations considered to be highly mobile.	Identified in EPBC Act Protected Matters Report May occur, dolphins (species not identified) have been seen in Pioneer Bay, however there are no known populations of snubfin dolphin in Whitsunday region and this dolphin is not known to make large migratory movements.
<i>Orcinus orca</i> Killer whale	Largely occurring in deeper waters towards the edge of the continental shelf, but may occasionally occur in shallower waters.	Identified in EPBC Act Protected Matters Report Unlikely to be present in such shallow waters
<i>Sousa chinensis</i> Indo-Pacific humpback dolphin	Inhabit shallow coastal, estuarine, and occasionally riverine habitats. Whitsundays not identified as a "hot spot" but likely to occur	Identified in EPBC Act Protected Matters Report May occur, dolphins (species not identified) have been seen in the marina basin

Species	Key Habitat	Likelihood of Occurrence
<i>Halieetus leucogaster</i> White bellied sea eagle	Widely distributed through coastal and inland areas, including urban areas. Forage over area of up to 100km ² feeding on fish, birds, reptiles, mammals and crustaceans, may eat carrion and offal, and will eat both introduced and native species. Concern that population may be declining in southern states. Observed in mangrove forest to south of Boathaven Bay (SKM 2002)	Identified in EPBC Act Protected Matters Report Suitable habitat present and likely to occasionally utilise coastal area near Port of Airlie.
<i>Hirundo rustica</i> Barn swallow	Present in Australia over southern summer distributed across coastal areas of northern Australia from Brisbane to Exmouth. Feed on insects, with almost exclusive aerial foraging. Feeds over open country in coastal lowlands, often near towns and cities, also freshwater wetlands, shrub thickets and grasslands. Perches on overhead wires and bare branches.	Identified in EPBC Act Protected Matters Report Limited suitable foraging habitat present in and around Port of Airlie.
<i>Merops ornatus</i> Rainbow bee-eater	Distributed across mainland Australia, Breeds in Australia, from August to January. Nests in burrows. Forages on insects across open forests, woodlands and shrublands, also in cleared and semi-cleared habitats including farmland and urban areas, usually in close proximity to permanent water. Foraging is usually aerial, with some ground foraging. Prey is taken back to a perch to eat. Perches in bare trees and also artificial structures.	Identified in EPBC Act Protected Matters Report Utilises urban and rural areas areas so suitable habitat may be present near Port of Airlie. Not likely to nest in close proximity to Port of Airlie.
<i>Monarcha melanopsis</i> Black-faced monarch	Distribution along east coast of Australia from Cape York to western Victoria. Insectivorous, foraging over a wide range of habitats including urban areas.	Identified in EPBC Act Protected Matters Report Forages in urban areas so suitable habitat is present near Port of Airlie.
<i>Monarcha trivirgatus</i> Spectacled monarch	Usually found in moist lowland or mangrove forests.	Identified in EPBC Act Protected Matters Report Unlikely to be present, limited suitable habitat present at or near Port of Airlie.
<i>Myiagra cyanoleuca</i> Satin flycatcher	Ranges across eastern and south-eastern Australia in coastal and inland areas, inhabits eucalypt forests, rarely found in regrowth forests. Insectivorous, mostly foraging within trees, picking insects from branches and leaves. May occasionally eat seeds.	Identified in EPBC Act Protected Matters Report Unlikely to be present due to lack of suitable habitat

Species	Key Habitat	Likelihood of Occurrence
<i>Ardea alba</i> Great egret	Widespread throughout Australia utilising wetlands including coastal wetlands. Feeds on fish, insects, crustaceans, molluscs, frogs, lizards, snakes and small birds and mammals. Observed on intertidal mudflats in Boathaven Bay 1.5km east of APM (SKM 2002).	Not identified in EPBC Act Protected Matters Report but known from local area. May feed in the vicinity of Port of Airlie.
<i>Numenius phaeopus</i> Whimbrel	Found throughout the Queensland coast, typically on intertidal mudflats of sheltered coasts. Sites of international importance in Queensland are Cairns foreshore, Great Sandy Strait, Shoalwater Bay and South-East Gulf of Carpentaria. Observed on intertidal mudflats in Boathaven Bay (SKM 2002). More than 10 species observed.	Not identified in EPBC Act Protected Matters Report but known in the local area. Known to feed on mudflats near Port of Airlie.
<i>Numenius minutus</i> Little curlew	Forages in grassy areas, and roosts near tidal channels and other waterbodies. Roebuck Bay is the only site of international importance in Queensland. Observed on intertidal mudflats in Boathaven Bay (SKM 2002). Less than 10 species observed.	Not identified in EPBC Act Protected Matters Report but known to occur in the local area. Known to feed on mudflats near Port of Airlie.
<i>Rhipidura rufifrons</i> Rufous fantail	Widespread across coastal and inland Queensland, mainly in wet sclerophyll forests but was observed in mangroves at Boathaven Bay. Observed in mangroves in south of Boathaven Bay (SKM 2002).	Not identified in EPBC Act Protected Matters Report but known from local area

6.6.5 National Parks and Conservation Areas

The Conway National Park and State Forest occurs in close proximity to Port of Airlie (see Figure 6-10 Conway National Park and State Forest).



© Commonwealth of Australia (Geoscience Australia) 2013, © PSMA Australia Limited 2013

Map produced using the Environmental Reporting Tool of the Department of Environment
© Commonwealth Government of Australia (Geoscience Australia)
© PSMA 2010

Figure 6-10 Conway National Park and State Forest

CONTROLLED DOCUMENT

Contact CTPI 49 ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 85

6.7 Marine and Coastal Habitat Values

6.7.1 Seagrasses

The intertidal and subtidal areas of Boathaven Bay feature seagrass beds. Survey data for these seagrass beds is available from 1987. The EIS (SKM 2002) includes mapping from surveys undertaken by Sinclair Knight Merz (1987), University of Queensland (1995), WBM (1998) and Department of Primary Industries (2000) and FRC (2002). Since 2004, regular seagrass monitoring has been undertaken with the most recent survey being undertaken by FRC in 2015. Results of the FRC 2015 survey are shown in Figure 6-11.

The species of seagrass, depth distribution and percent cover has varied over time, with both inter-annual and intra-annual variability. However, there has been relatively persistent seagrass cover on the outer edge of the intertidal mudflats to depths of about 0.5m below LAT. Excluding the area under the footprint of the Port, there was more moderate to dense seagrass in the inshore and intertidal areas in 2015 than in 2004, with beds dominated by *Zostera muelleri* extending further inshore in 2015 than in 2004. In November 2015 *Z. muelleri* was the dominant species in the intertidal and shallow subtidal in both bays, with *Halodule uninervis* in deeper water, and *Halophila ovalis* at most depths in varying densities.

6.7.2 Mangroves

The estuary of Campbell's Creek contains a largely intact mangrove community, albeit with some disturbance from development within the estuary and around the edges (see Figure 6-1 and Figure 6-14). The mangrove community is described as:

- Mixed open to closed forest adjacent to Shute Harbour Road, dominated by *Rhizophora stylosa* and *Avicennia marina* with *Aegiceras corniculatum*, *Bruguiera gymnorhiza*, *Excoecaria agallocha*, *Lumnitzera* sp and *Osbornia octodonta*
- Tall *Rhizophora* closed forest adjoining Campbell's Creek, dominated by *Rhizophora stylosa*, associated species include *Bruguiera gymnorhiza*, *Xylocarpus granatum*, *Excoecaria agallocha* and *Heritiera littoralis*.
- Low *Rhizophora* open fringing forest, dominated by *Rhizophora stylosa* 8-15m high, associated species include *Ceriops tagal*
- Low *Ceriops* forest (landward margins of Campbells Creek associations), *Ceriops tagal* up to 6-7m high
- *Ceriops* scrub mangroves between 0.5 and 2.0m high, associated mangroves include *Lumnitzera racemosa* and *Excoecaria agallocha*; and
- Mixed mangrove closed forest, dominated by *Xylocarpus granatum*, *Heritiera littoralis*, *Excoecaria agallocha* and *Bruguiera gymnorhiza*.

The nearest mangrove community to Port of Airlie is a patch of closed *Rhizophora* forest located at the south-east corner (see Figure 6-1 and Figure 6-14). This patch is disconnected from the main Campbell's Creek mangrove community by the former landfill and current sporting fields.

Aerial photography from 2000 onwards indicates minimal change to the footprint of mangrove communities.

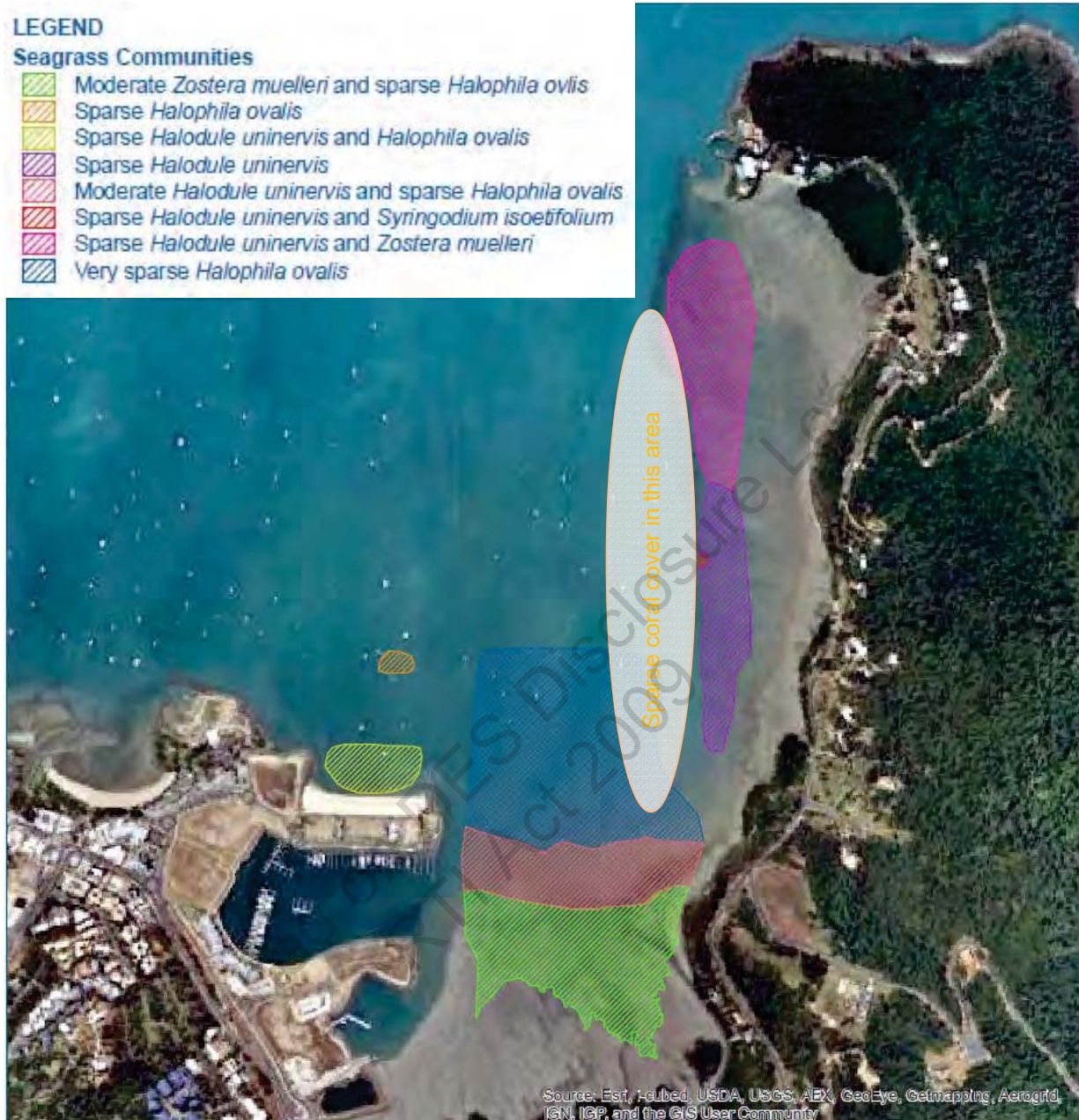


Figure 6-11 – Seagrass Distribution Boathaven Bay November 2015 (FRC 2016) and Coral Location

6.7.3 Coral Reefs

There is some sparse coral cover on the rocky shelves west of Mandalay Point with the location shown on Figure 6-11.

6.7.4 Terrestrial Habitat Values

Regulated vegetation mapping indicates that there is a small patch of remnant vegetation immediately adjacent to the south-east corner of Port of Airlie, consisting of regional ecosystem 8.1.1 (Mangrove closed forest of marine clay plains and estuaries) (Figure 6-12). This vegetation type is listed as of least concern and also occurs in the mouth of Campbells Creek and along the east shore of Boathaven Bay. This vegetation is also mapped as essential habitat for the water mouse.

CONTROLLED DOCUMENT

Contact CTPI 4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 87

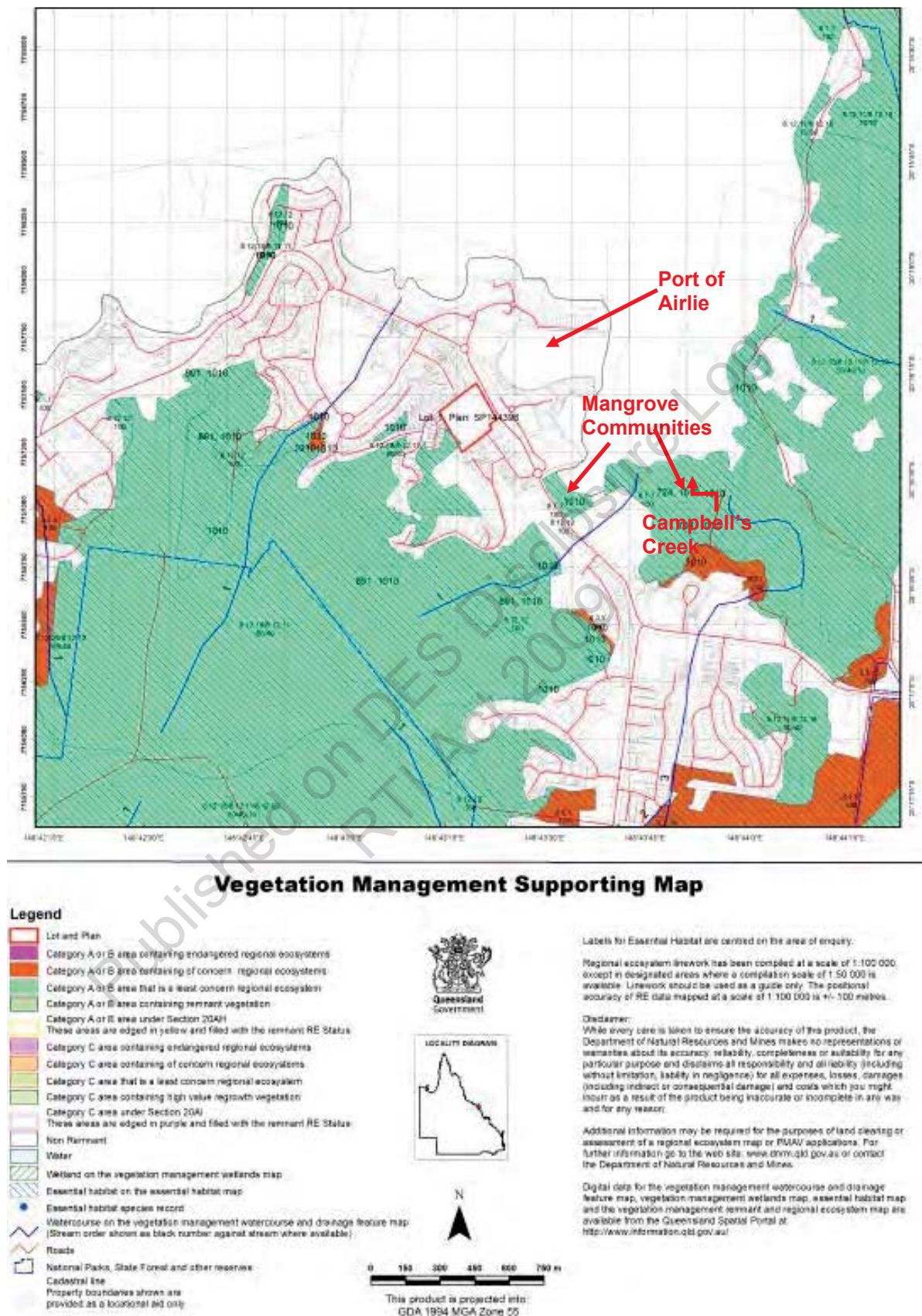


Figure 6-12 – Remnant Vegetation Mapping (Map generated 29 November 2016)

CONTROLLED DOCUMENT

Contact CTPJ4@ashenv.com to check date of latest version

C:\Users\CTPJ49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 88

The next nearest mapped remnant vegetation is associated with Conway National Park. Vegetation in close proximity to Port of Airlie is mapped as least concern, and also mapped as essential habitat for the Proserpine rock wallaby and coastal sheath-tail bat. Campbell's Creek and other minor vegetated watercourses provide some connectivity between Conway National Park and the coastline, however the species potentially occurring in the forest habitat of Conway National Park are unlikely to make migratory or foraging movements to coastal habitats. Similarly, species potentially occurring in the mangrove habitat of Campbell's Creek and Boathaven Bay are generally not likely to make migratory or foraging movements into Conway National Park.

6.8 Surface Water Quality

6.8.1 Water Quality Values

Environmental values in relation to waters of the Port of Airlie marina basin are as follows:

- The biological integrity of an aquatic ecosystem that is adversely affected by human activity to a relatively small but measureable degree
- The suitability of the water for secondary recreational use
- The cultural and spiritual values of the water.

Environmental values in relation to waters of Boathaven Bay are as follows:

- The biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators but slightly modified physical, chemical or other indicators
- The suitability of the water for primary, secondary and visual recreational use
- The cultural and spiritual values of the water.

6.8.2 Water Quality Guidelines

For the operation phase of Port of Airlie, water quality guidelines and limits are taken from the Queensland Water Quality Guidelines, modified as appropriate to reflect local conditions. These apply on a day to day basis.

Relevant water quality limits set in the environmental authority and development approvals are discussed in Section 9.2.6. These apply when undertaking dredging activities and/or if a release is made from the dredge material disposal pond.

For the purpose of setting water quality guidelines, waters of the marina basin are considered to be "mid-estuarine and tidal canals, constructed estuaries, marinas and boatharbours" while Boathaven Bay is considered to be enclosed coastal waters. Waters in the marina basin and the balance of Boathaven Bay are classified as slightly to moderately disturbed ecosystems.

Ambient water quality guidelines for the marina basin and Boathaven Bay are set out in Table 6-7. It must be noted that these are guidelines that indicate water quality levels appropriate for the healthy functioning of aquatic ecosystems. Water quality will not necessarily meet these levels at all times, particularly in shallow, muddy substrate inshore areas which are subject to influences for catchment runoff and wave re-suspension of sediment.

Commentary is provided in relation to turbidity as baseline monitoring has indicated that the guideline levels for turbidity are not always met.

Table 6-7 Queensland Water Quality Guidelines

Parameter	Marina Basin Guidelines	Boathaven Bay Guidelines	Comments
pH	Upper: 8.4 Lower: 7.0	Upper: 8.4 Lower: 8.0	Baseline monitoring has indicated pH generally in this range, with the lowest pH recorded being 6.88
Turbidity	8 NTU (QWQG)	6 NTU	Baseline monitoring has identified significant variations in turbidity. Median turbidity at inshore monitoring locations (1, 2, 3, and 4) typically exceeds 6 NTU due to shallow intertidal mudflats. Average for inshore locations is approximately 17 NTU Turbidity at offshore locations (locations 5 and 6) generally meets 6 NTU guideline value
Dissolved oxygen	Lower: 85 %sat Upper: 100 %sat	Lower: 90 %sat Upper: 100 %sat	Baseline data generally within this range, however some exceedences recorded
Ammonia – N	10 µg/L	8 µg/L	Baseline data generally within guideline levels
NOx – N	10 µg/L	3 µg/L	Baseline data generally within guideline levels
Total N	300 µg/L	200 µg/L	Baseline data generally within guideline levels
Filterable Reactive P	8 µg/L	6 µg/L	Baseline data generally within guideline levels
Total P	25 µg/L	20 µg/L	Baseline data generally within guideline levels
Suspended Solids	20 mg/L	15 mg/L	Baseline data generally within guideline levels

6.8.3 Current Influences on Water Quality

Current influences on surface waters of Boathaven Bay include:

- Stormwater flows. Figure 6-15 shows the configuration of stormwater drain outlets for Port of Airlie:
 - o Stormwater flows from Shute Harbour Road and residential and tourism accommodation development south-west of Port of Airlie is collected in a diversion drain that runs along the rear of Port of Airlie, with discharge points at the south-east corner of Port of Airlie.
 - o Stormwater flows from part of the town centre of Airlie Beach, the public carpark north of Coconut Grove and flows from the Beacons and the central part of Port of Airlie are discharged through a stormwater outlet at Canal Street into the marina basin
 - o Stormwater flows from the southern part of Port of Airlie flow to an outlet in the north-west corner of the ferry terminal basin.
- Flows from Campbell's Creek, which include stormwater flows from urban and commercial development of Jubilee Pocket and a boat repair yard located in the mouth of Campbell's Creek.
- Possible leachate from a former landfill on which the recreation centre has been constructed.
- Occasional overflows from sewage pump stations.

Treated effluent from the Jubilee Pocket STP was discharged from an outfall at the north of the Sailing Club headland, however this practice ceased in about 2000.

CONTROLLED DOCUMENT

Contact CTPL4@ashenv.com to check date of latest version

C:\Users\CTPL49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 90

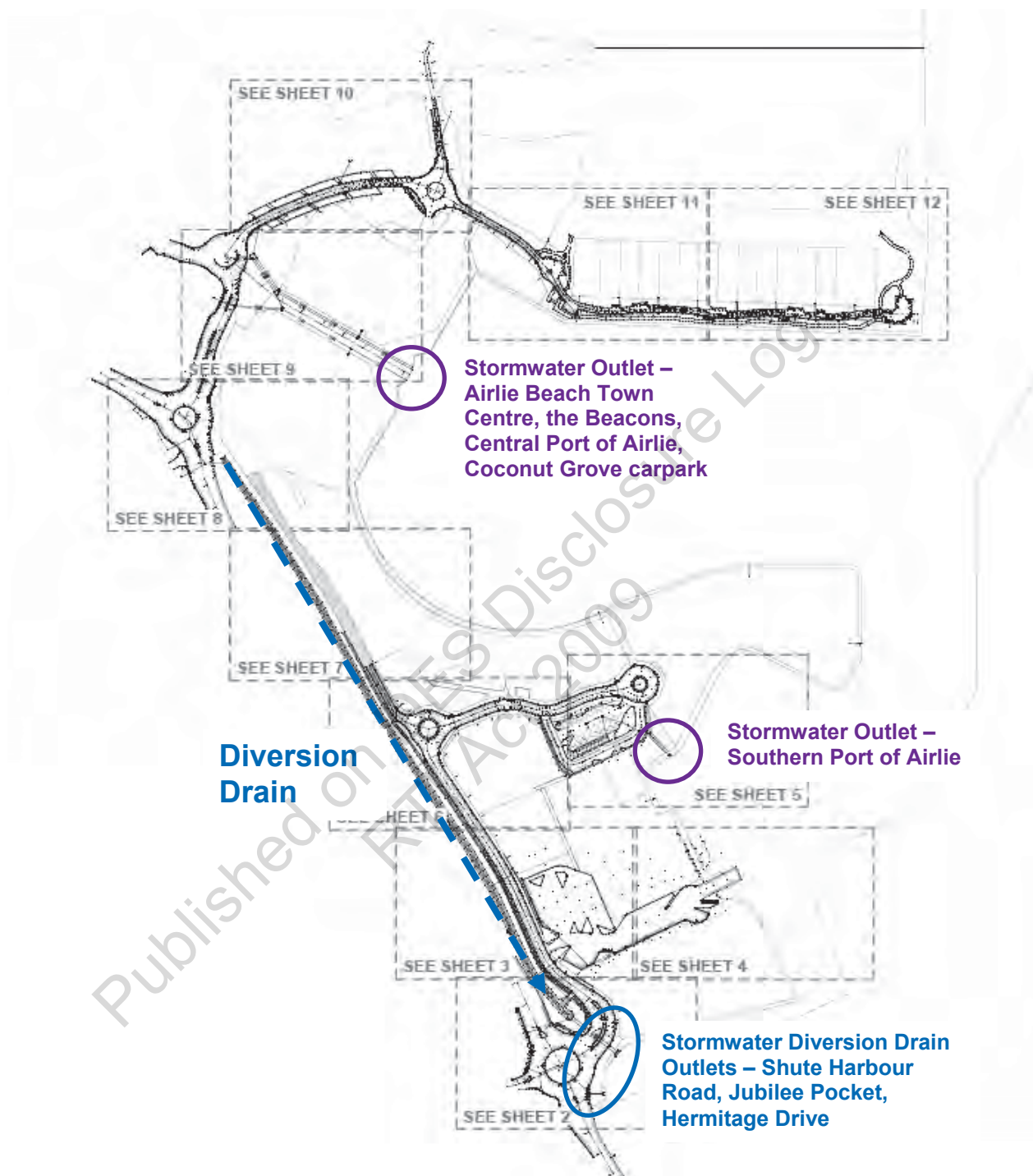


Figure 6-13 – Excerpt from As Constructed Stormwater Plan (RPS Drawing 110420-3 ASCON-01)

6.8.4 Previous Water Quality Studies

Previous studies of water quality have been undertaken over the past two decades including:

- ▶ DEH (now Queensland EPA) 1989-90
- ▶ University of Queensland 1995
- ▶ WBM (in Burchill) 1998
- ▶ FRC Environmental 1998-2001

Summarised results of these studies are provided in Appendix F of the EIS (SKM 2002).

The water quality of Boathaven Bay is generally good and shows seasonal variations in ambient water quality. Across the bay there is little significant difference, except for some inshore sites.

The water quality of Boathaven Bay is similar to that of Pioneer Bay, (although turbidity may be higher in Boathaven Bay) with higher than average suspended solids concentrations. Levels of nutrients in offshore areas of Pioneer Bay commonly exceed those in Boathaven Bay. This has become even more marked following the diversion of half the flows from Jubilee Pocket WWTP to Cannonvale WWTP in 1999. It is likely that catchment runoff significantly contributes to the nutrient and suspended solids loads to Boathaven, Pioneer and Charlies Bays (FRC, 2002).

The following comments are made from the historical water quality data and also from comparison of historical water quality data with the more recent sampling data described in Section 6.8.5:

- ▶ **Salinity Levels** are typical for marine inshore areas.
- ▶ **Dissolved Oxygen** levels remain above 6 mg/L and have been recorded up to 9.6 mg/L based on monitoring data of WBM, DEH and UQ. ANZECC (2000) guidelines provide a recommended trigger level of DO above 6 mg/L. From previous monitoring carried out over spring and neap tides it was found that there was minimal difference between the tidal states and that there is only a minor oxygen sag over night.
- ▶ **pH** levels typically range from approximately 7.9 to 8.7 for Boathaven, Pioneer and Charles Bays. ANZECC (2000) recommends a range of 8.0 to 8.4 for marine waters.
- ▶ **Turbidity** levels in Boathaven Bay are low, although typically higher than Pioneer bay due to its more inshore position and hence likely to experience higher tidal resuspension and catchment loads.
- ▶ **Total Suspended Solids** levels in Boathaven Bay have an average level of 10.4 mg/L based on data taken in 1989-1990 (DEH data reported in Burchill, 1998). Suspended solids tend to be higher in the wet season presumably from catchment inflows.
- ▶ **Total Nitrogen** levels in Boathaven Bay have been extensively monitored by FRC Environmental and commonly exceed ANZECC (2000) guideline levels, both before and after the diversion of half the discharge volume from Jubilee Pocket WWTP to Cannonvale WWTP in 1999. Pioneer Bay and Charlies Bay also commonly exceed the guideline level, but given that there is no WWTP outfall in Charlies Bay, it seems that factors other than the WWTP, (e.g. catchment runoff) may contribute to the exceedances.
- ▶ **Nitrate levels** (reported as $\text{NO}_x = \text{NO}_2 + \text{NO}_3$) are temporarily (not necessarily seasonally) variable in both Boathaven Bay and the general region. Assuming that the nitrous oxides are all nitrate, then the levels are typically higher than the guideline levels, often by several factors. However, Ullman & Nolan (2004) contradicted these previous findings with all monitoring samples being below the limit of detection (0.05 mg/L)

- **Ammonia** (NH₄) levels are similarly variable in Boathaven, Pioneer and Charlies Bays, but exceed the ANZECC (2000) Guidelines less frequently as for nitrate or total nitrogen. All Ullman & Nolan monitoring results were again below the limit of detection of 0.05 mg/L.
- **Total Phosphorus** levels in Boathaven, Pioneer and Charlies Bays have been extensively monitored by FRC Environmental since 1998. They were found to be temporarily variable (not necessarily seasonally) and commonly exceed ANZECC (2000) guideline levels. They generally follow similar patterns to the total nitrogen concentrations. Exceedances remain common in Boathaven Bay following the partial diversion of Jubilee Pocket WWTP, so catchment contributions are the likely contributor.
- **Chlorophyll-a** levels have been extensively surveyed by FRC Environmental since 1998. Levels are typically low in all the bays, with levels below the ANZECC (2000) guideline level and limits of detection.
- **Heavy Metals** and **pesticides** levels were analysed from Boathaven Bay in the original IAS (WBM in Burchill, 1998). No significant levels were detected in their study.
- **Sediment Chemistry** contained high levels of fines (<75µm), ranging from 55% to 99%. Total and fines corrected concentrations of metals were below the *National Ocean Disposal Guidelines for Dredged Material* (Environment Australia, 2002).

6.8.5 2004 and 2012 Monitoring Events

Baseline water quality data was collected between October and December 2004 over a range of weather conditions. A further round of water quality monitoring was undertaken on 14th June 2012, under still weather conditions. Water quality monitoring locations for these events are shown in Section 9.2.5.

The results of these monitoring events correlated well with the earlier results summarised in Section 6.8.4.

Turbidity results for the 2004 and 2012 are summarised in Table 6-8 and Table 6-9. As expected, turbidity levels are higher in near shore areas and highest in Campbell's Creek. Turbidity levels were generally higher in windy weather. Rain also affected turbidity with the highest values typically following rainfall events. There was no particular trend or correlation between depth and turbidity levels.

Table 6-8 Turbidity (0.2 m) (NTU)

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
2004:						
Average	16.2	56.2	41.5	11.3	8.2	3.6
Max	42.1	308	174	24.3	28.5	11.1
Min	3.5	5.8	4.2	3.3	2.6	2.1
Median	12.6	23.4	12.1	7.4	3.9	2.4
2012:						
Outgoing tide	7.6	18.1	23.3	10.1	6.8	12.3
Incoming tide	8.6	15.5	13.3	5.8	3.4	7.4

Table 6-9 Turbidity (1.0 m) (NTU)

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
Average	16.0	61.2	31.7	8.9	7.9	3.7
Max	46.7	318	94.4	21.3	26.8	10.7
Min	3.3	6.7	4.7	3.1	2.6	2.0
Median	5.5	10.0	8.2	5.9	3.9	2.7
2012:						
Outgoing tide	7.9	17.9	23.5	11.2	9.3	12
Incoming tide	8.9	18.8	13.5	6.7	5.9	6.3

pH was in the range of 7.5 to 9.0 for almost all readings. The lowest pH recorded was 6.88.

Dissolved oxygen was generally within ANZECC guideline levels for all locations. Results are summarised in Table 6-10 and Table 6-11.

The 2004 data showed a trend towards lower dissolved oxygen in inshore waters, while the single set of data from 2012 showed slightly depleted dissolved oxygen in offshore areas, although levels were generally not low enough to cause particular concern in terms of effects on aquatic organisms.

Table 6-10 Dissolved Oxygen (0.2 m) (%)

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
2004:						
Average	88.41	88.95	92.21	94.97	94.92	92.29
Max	102.5	94.8	99	104.7	101.5	101.3
Min	64.6	82.1	83.6	83.6	89.6	84.6
2012:						
Outgoing tide	82.8	103.1	109.4	73.3	75.5	77.7
Incoming tide	102.1	105.1	86.6	70.3	69.9	70.4
ANZECC upper limit ⁽¹⁾	110	110	110	110	110	110
ANZECC lower limit ⁽¹⁾	90	80 ⁽¹⁾	90	90	90	90

(1) Estuarine waters

Table 6-11 Dissolved Oxygen (1.0 m) (%)

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
Average	91.94	88.35	91.63	91.95	95.19	93.77
Max	103.1	95.5	101.3	107.5	102.5	98.1
Min	84	78.7	78.8	81.9	88.6	85.7

CONTROLLED DOCUMENT

Contact CTPI 49 ashenv.com to check date of latest version

C:\User\CTPI 49-Sch4\Documents\Projects\Port_of_Airliie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 94

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
2012:						
Outgoing tide	87.5	108.6	105.9	74.4	80.3	99.1
Incoming tide	102.6	96.7	76.6	64.3	76.6	82.0
ANZECC upper limit ⁽¹⁾	110	110	110	110	110	110
ANZECC lower limit ⁽¹⁾	90	80 ⁽¹⁾	90	90	90	90

(1) Estuarine waters

Electrical conductivity and salinity were within expected ranges for seawater.

Further laboratory analysis was undertaken on three sets of samples from 2004 and is shown in Table 6-12. Sample dates are 25 October (Sample 1), 27 October 2004 (Sample 2) and 19 December 2004 (Sample 3).

Table 6-12 Other Data (mg/L)

Sample	Parameter	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
1	Suspended Solids	42	41	46	4	12	20
2	Suspended Solids	28	26	NA	22	22	9
3	Suspended Solids	36	42	24	10	18	14
1	Ammonia as N	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2	Ammonia as N	<0.05	<0.05	NA	<0.05	<0.05	<0.05
3	Ammonia as N	<0.010	<0.010	<0.010	0.021	<0.010	<0.010
1	NOx as N	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2	NOx as N	<0.05	<0.05	NA	<0.05	<0.05	<0.05
3	NOx as N	<0.010	0.017	<0.010	<0.010	<0.010	<0.010
1	TKN as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2	TKN as N	0.2	0.2	NA	0.1	0.2	0.1
3	TKN as N	<0.1	0.2	<0.1	0.1	<0.1	0.1
1	Total N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2	Total N	0.2	0.2	NA	0.1	0.2	0.1
3	Total N	<0.1	0.2	<0.1	0.1	<0.1	0.1
1	Reactive P	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2	Reactive P	<0.05	<0.05	NA	<0.05	<0.05	<0.05

CONTROLLED DOCUMENT

Contact CTPI 41 ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airli\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 95

Sample	Parameter	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
3	Reactive P	0.015	0.023	0.015	0.016	0.016	0.016
1	Total P	0.09	0.18	NA	0.17	0.18	0.15
3	Total P	0.14	0.10	0.35	0.28	0.15	0.12

6.9 Geology and Sediment Characteristics

6.9.1 Local and Regional Geology

A number of geotechnical investigations have been undertaken in the Permit to Occupy in Boathaven Bay since the 1980s. The most recent of these was undertaken by Ullman and Nolan in 2004.

The 1:250,000 Geological Series of Maps of Proserpine shows the site to be located predominantly in an area of mud and silts of Quaternary Age. This recent marine mud overlies basement rock of Lower Permian Age. These rocks are part of a regional scale suite known as the Whitsunday Volcanics. Predominated by acid to intermediate volcanoclastic sediments such as ignimbrites and tuffs, the sequence is also known for lava flows and small scale igneous bodies.

The structure of the area is dominated by NE-SW trending faults that form the valleys, inlets and channels between the offshore islands. Jointing and cleavage often become intense close to these large faults. Primary bedding structures are not that common because of the chaotic origin and often disturbed rock forming processes in the area.

The site currently comprises intertidal mud flats and the fringing narrow foreshore strip bordering Shute Harbour Road and Coconut Grove. It is dominated by the comparatively recent eustatic (sea and land level) change that caused the land mass to submerge and the sea level to 'flood' the coast line.

There is no significant wave cut platform. The steep hill slopes to the west simply plunge below sea level. This drowned geomorphology has caused the large protected area of Boathaven Bay to become a depositional site. The underlying rock along the Shute Harbour Road is a moderate to high strength basic igneous rock. This rock is exposed as a resistant pavement along much of the road boundary (within the mangroves) and around the existing Yacht Club peninsula.

6.9.2 Sediment Characteristics

The sediments deposited here are principally fine grained, with the exception of storm deposited coral debris along the beach. The proximity to the Great Barrier Reef and islands means that the sediments in the site have a high level of carbonates. The low velocity, depositional model that characterises the site means there are marine muds mixed in with the carbonate particles.

The marine sediments comprise grey sandy silts and sandy clays of Holocene (10,000 years to present) and lower Pleistocene (1.6 million to 10,000 years) age. The sediments occur in near horizontal lenses and layers that have been subject to secondary reworking during storm and flood events. While soft surface clays occur within and around the perimeter mangroves, further into the bay a medium dense silty sand exists over much of the site. In the lower tidal area, the surface sediments become finer grained.

The thickness of the mud increases gradually into the centre of the bay, reflecting the drowned valley geomorphology.

The interface between the marine mud and the rock is usually occupied by a residual soil that originates from the weathering process of the bedrock. This unit is absent in erosion areas such as the intertidal zone.

CONTROLLED DOCUMENT

Contact CTPI 4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 96

The residual soil is not derived from a depositional event but from a weathering process. Lithologically the residual soils are commonly sandy clays or silty clays with variable amounts of gravel. The thickness of this unit varies from zero, where it has been eroded, to around 8.0 m. The unit's lower interface with the weathered rock is often very gradational, being primarily dependent on the intensity of structure of the rock (which increases the depth of weathering), and therefore the thickness of this layer is subject to considerable local variation.

6.9.3 Settlement Rates

When suspended in the water column, sediments settle relatively quickly. Ullman and Nolan undertook analysis of settlement rates for four samples of marine sediments in October 2004. The tests involved mixing samples with water in measuring cylinders and then allowing the samples to settle over time. The rate of settlement from suspension was measured using the gradations on the measuring cylinders. The locations from where each of the samples were taken are shown in Ullman and Nolan geotechnical investigation (2004). Results are shown in Table 6-13.

Table 6-13 Sediment Settlement Tests (Ullman and Nolan 2004)

Date	Time (24h)	Sediment level (mL):			
		A49 (0.0 - 0.5m)	A50 (0.5 - 1.0m)	A51 (1.5 - 2.0m)	A52 (1.0 - 1.5m)
10/25/04	10:40	750	730	770	780
10/25/04	10:50	670	550	710	730
10/25/04	11:00	560	405	630	660
10/25/04	11:30	395	320	470	525
10/25/04	12:00	360	300	425	435
10/25/04	12:30	350	290	410	415
10/25/04	13:00	340	283	395	402
10/25/04	14:00	323	270	378	383
10/25/04	15:00	312	267	365	370
10/25/04	16:00	307	260	358	360
10/26/04	6:00	280	248	312	310
10/26/04	8:00	278	248	311	308
10/26/04	15:30	275	248	308	300
10/27/04	4:30	271	245	300	291
10/28/04	8:00	270	242	300	290

The results show that the sediments settled quickly with the majority of settlement occurring within the first five hours of the test. Settlement rates for the period 1040hrs to 1600 hrs on Day 1 of the test are shown on Figure 6-16.

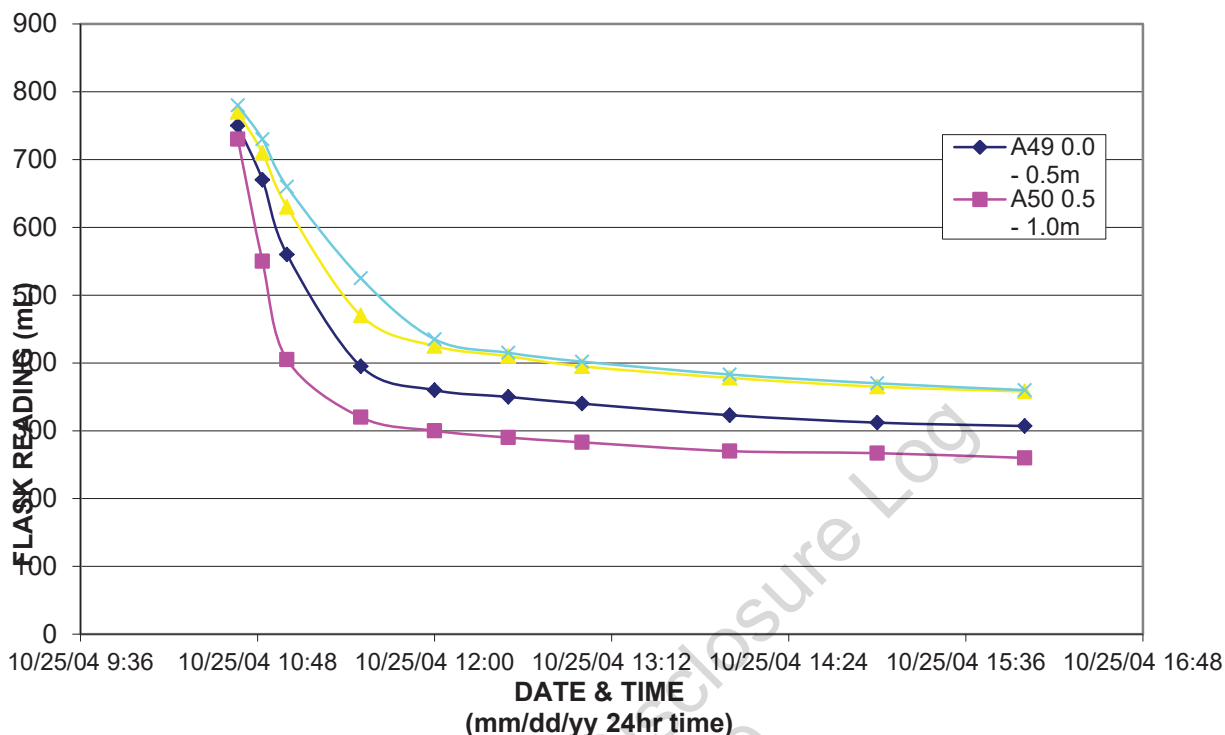


Figure 6-14 – Marine Sediment Settlement Rates – Day 1 1040hrs to 1600hrs

The test results indicate that marine sediments will settle relatively quickly, with the majority of the sediment removed from the water column in five to six hours in still conditions. In the natural environment, energy from waves and currents may work to keep suspended solids suspended in the water column for longer periods of time, although this will also be relative to background turbidity levels. Background turbidity levels are increased by wave action and, to a lesser extent, current movements.

Settlement tests have not been undertaken for the residual material, however the nature of this material is such that it would be expected to settle as quickly, or more quickly than the marine sediments.

6.9.4 Post-Construction Characteristics

During construction of the Port of Airlie the softer depositional marine sediments were removed and then the deeper residual soils were excavated for use in construction of the land component. Some of the softer sediments were replaced in the marina basin, as were the soft marine sediments from the navigation access channel dredging. These sediments were allowed to settle before the sheet pile wall enclosing the marina basin was removed. Over-excavation of the marina basin to obtain the residual material for land reclamation left several deeper voids in the marina basin.

6.9.5 Acid Sulfate Soils

A QASSIT Soil Technical Manual compliant Acid Sulfate Soils (ASS) investigation has been undertaken prior to construction. This indicated that marine muds have potential for acid generation under oxidising conditions, but that in most cases these sediments also have a relatively high acid neutralising capacity. The natural buffering derives from particles of calcium carbonate in the marine muds derived from reef debris and shell growth. Buffering capacities were typically at least twice what is required to neutralise potential acid generation.

The investigation also identified that at the interface of the marine muds and the residual soils, the relative proportion of calcium carbonate is less. While much of the mud/residual interface has sufficient buffering, in some areas it is not sufficient to adequately buffer the potential acid generation. These areas are considered to be Potential Acid Sulfate Soils (PASS). This non-neutralising (NN) PASS layer is uneven across the site with a thickness up to 0.5 m.

During construction, field oxidation tests were carried out during excavation of materials in the non-neutralising zone and materials identified as NNPASS were removed and strategically reburied under Lot 112 on SP232106 and lot 113 on SP260211. The location of predicted and actual NNPASS and the strategic reburial location is shown on Figure 6-17.

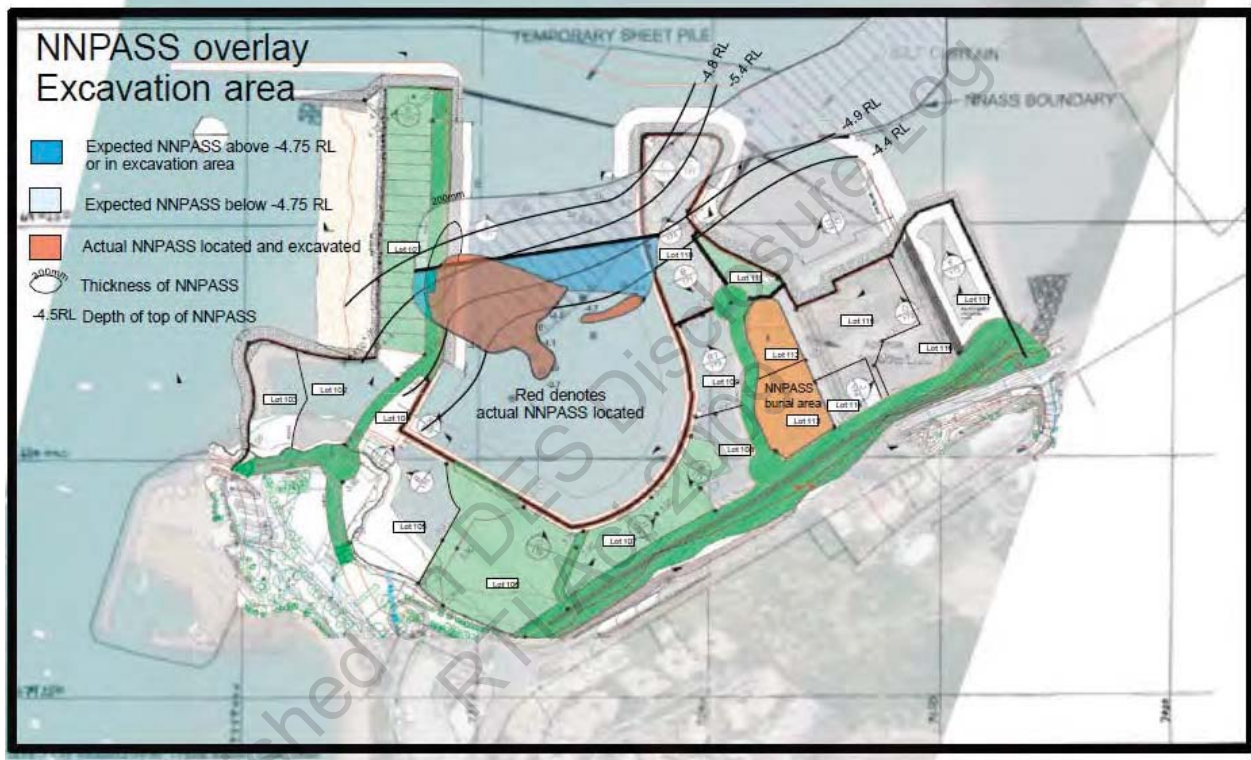


Figure 6-15 – NNPASS Management

It is unlikely that further NNPASS will be encountered during operational and maintenance dredging. If NNPASS were encountered, this would be indicated by a drop in pH in surrounding waters. Contingency procedures have been built into water quality monitoring in the event that water quality monitoring identifies a drop in pH which may be indicative of oxidation of NNPASS. ECP-7 provides guidance in relation to testing and management of acid sulphate soils.

6.9.6 Sediment Contamination

Investigations undertaken for the EIS (SKM 2002) indicated some contamination of sediments in the construction footprint. This was further investigated prior to commencement of construction (Ullman and Nolan 2004).

Of contaminants tested for, only tributyltin (TBT) was found in levels above ANZECC 2000 guidelines for sediment. High levels of TBT were identified near Coconut Grove where hull scraping activities have been carried out. Sediment with TBT levels exceeding 70 µ/kg was removed from the marina footprint and placed in a specially designed encapsulation cell beneath the carpark in the south-east quadrant of Port of

Airlie, being Lot 116 on SP260211. Completion of removal, encapsulation and validation was reported in the March 2008 Internal Audit Report (GHD March 2008).

Since March 2008, there would not appear to have been any significant sources of sediment contamination. A boat yard operates in the mouth of Campbell's Creek, but it is assumed that this yard operates in accordance with the requirements of an Environmental Authority. A former landfill is located on the coastline to the south-east of Port of Airlie however sediment contamination testing in 2004 and 2007 did not identify contaminants potentially sourced from this landfill. Stormwater drains from adjacent urban areas discharge into the marine basin and southern end of Boathaven Bay, however activities in the catchment are not likely to give rise to significant levels of contamination (see also Section 6.8.1).

6.10 Noise

6.10.1 Acoustic Environmental Values

The acoustic environmental values relevant for Port of Airlie are maintaining an acoustic environment that is appropriate for:

- Individuals to be able to sleep at hotel and apartment accommodation within and adjacent to Port of Airlie. As most occupants are tourists, this environmental value is relevant for the night time period
- Individuals to be able to enjoy indoor and outdoor dining at hotels and cafes in and adjacent to Port of Airlie.
- Individuals to be able to relax and enjoy Port of Airlie and the surroundings, both indoors and outside, including being able to carry out a conversation, concentrate on reading and similar activities, watch television and listen to radio broadcasts.

6.10.2 Acoustic Quality Objectives

Acoustic quality objectives for various sensitive receptor types are set in Schedule 1 of the Environmental Protection (Noise) Policy 2008. Relevant acoustic quality objectives are provided in Table 6-14. Note that the noise levels are the noise level at the location of the receptor. Note also that these objectives do not necessarily apply to noise from construction activities.

Table 6-14 – Relevant Acoustic Quality Objectives

Receptor Type	Time of day	LAeq,adj,1hr	LA10,adj,1hr	LA1,adj,1hr	Environmental Value to be Protected
Dwelling – outdoors	Daytime and evening	50	55	65	Health and wellbeing
Dwelling – indoors	Daytime and evening	35	40	45	Health and wellbeing
Dwelling – indoors	Night-time	30	35	40	health and wellbeing, in relation to the ability to sleep
Commercial and retail activity (indoors) ⁽¹⁾	Opening hours	45			health and wellbeing, in relation to the ability to converse
Park or garden that is open to the	Any time	the level of noise that preserves the amenity of the existing park or garden			Community amenity

CONTROLLED DOCUMENT

Contact CTPI 4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 100

Receptor Type	Time of day	LAeq,adj,1hr	LA10,adj,1hr	LA1,adj,1hr	Environmental Value to be Protected
public					

(1) For Port of Airlie and Airlie Beach, consideration should also be given to outdoor dining

6.10.3 Baseline Noise Data

Baseline noise data collected from Portside hotel, on Shute Harbour Road adjacent to Port of Airlie in 2004 is presented in Table 6-15. Noise levels were influenced by traffic on Shute Harbour Road. No further baseline noise data is available. It can be expected that noise levels have increased, or at least remained stable, as traffic volumes have increased and there is additional hotel, resort and residential development along Shute Harbour Road.

Table 6-15 – 2004 Median Background Noise Data

L ₉₀ (dB(A))			L _{eq} (dB(A))			L ₁₀ (dB(A))		
Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
46.3	41.5	36.7	65.2	61.6	58.3	68.2	64.1	55.7

7. Environmental Control Procedures

Day to day management of environmental aspects and impacts of operation activities are to be managed through Environmental Control Procedures (ECPs). The ECPs in Table 7-1 have been developed for Meridien's activities at Port of Airlie. Additional ECPs may be developed from time to time where an audit, environmental assessment (OEMP Section 2), incident investigation (OEMP Section 11) or other corrective action identifies the need for additional controls to be in place.

Table 7-1 Environmental Control Procedures

ECP Number	Title
ECP-1	Dredge Management Plan
ECP-2	Dredge Material Handling Area Management Plan
ECP-3	Noise Management Plan
ECP-4	Dust Management Plan
ECP-5	Protected Species Management Plan
ECP-6	Environmental Management of Contractors
ECP-7	Acid Sulfate Soils
ECP-8	Waste, Energy, Materials Management Plan
ECP-9	Prevention of Water Contamination Management Plan
ECP-10	Blank
ECP-11	Cultural Heritage Management Plan
ECP-12	Weed and Pest Management

The procedure for amending or adding an ECP is set out in CAP-2 OEMP Amendment, Section 10. Note that any changes to ECPs must be accepted by the Commonwealth Department of the Environment.

ECP-1A - Dredge Management Plan (Channel, Ferry Basin)

ECP-1A	Dredge Management Plan – Channel, Ferry Basin	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Operational phase dredging is required from time to time to maintain a minimum depth of 2.5m below LAT in the ferry terminal basin and access channel.</p> <p>ECP-1A – Dredge Management Plan relates to all dredging activities and also to disposal of dredge material within the marina footprint. In some cases dredged material will be disposed of to the dredge material handling area. Management of this area is covered in ECP-2 – Dredge Material Handling Area Management.</p> <p>This version of ECP-1A has been developed specifically for proposed operational dredging in 2014 but is also generally relevant to all operational dredging requirements. An assessment of the impacts of this dredging has been undertaken using the procedures set out in Section 2 (Aspects and Impacts) of the OEMP and control measures reflect the measures identified in this assessment.</p>			
<p>Legislative Requirements:</p> <p>Legal and other obligations are set out in Section 3 of the OEMP. In summary, the following requirements apply to the dredging activity:</p> <ul style="list-style-type: none"> • Approval conditions under EPBC Act approval 2001/298 • The general environmental duty under the <i>Environmental Protection Act 1994</i> • Section 440ZG of the <i>Environmental Protection Act 1994</i> – prohibition on depositing contaminants in waters • Approval conditions of SPD-0714-009929 – development approval for tidal works • Approval conditions of EPPR00332613 – environmental authority • Harbour Master's concurrence requirements • Conditions of the Coordinator-General's Report for Port of Airlie • Requirements of the Code for Self-Assessable Development – maintenance works on existing lawful structures (MPO2). <p><u>Notes regarding approval requirements for dredge material disposal</u></p> <p>Options available for management and disposal of dredged material include:</p> <ul style="list-style-type: none"> • Pumping of material into the existing voids in the marina basin • Placement of material in the dredge material handling area. Once placed in this area, the material and supernatant must be managed in accordance with ECP-2 (dredge material handling area management plan). The material may be left in situ or, once dried, may be removed for disposal at an authorised location. • Removal of the material from Port of Airlie by truck or barge for disposal at an authorised location off-site. Off-site disposal of dredge spoil may occur at an existing commercial landfill or other authorised waste disposal facility that is authorised to accept dredge spoil. Authorisation may also be sought to place the material at another land disposal site. This would be subject to development approval under the relevant planning scheme and authorisation under the <i>Environmental Protection Act 1994</i>. At present, there are no off-site locations authorised for disposal of dredge spoil from Port of Airlie. 			

ECP-1A Dredge Management Plan – Channel, Ferry Basin		Revision 03	Issued: Dec 2016
Performance Criteria/Outcome: <ul style="list-style-type: none"> Dredging activities do not cause degradation of water quality and the associated environmental values in Boathaven Bay. Compliance with the water quality limits set in the environmental authority is considered to protect water quality and associated environmental values. Dredging activities do not cause harm to marine megafauna Dredging activities cause minimal disturbance and disruption to marina users, patrons of restaurants and cafes and guests and residents in hotels and apartments in and adjacent to Port of Airlie. 			
Management Actions:		Responsibility:	Timing:
1	Only undertake dredging between April and August	Asset Operations Manager	Prior to and during dredging
2	Confirm that potential acid sulphate soils (non-neutralising) will not be disturbed (see also ECP-07)	Asset Operations Manager	Prior to dredging
3	Confirm that: <ul style="list-style-type: none"> a dredge material disposal option is in place that adequate capacity is available at the disposal location for the quantity of the material to be removed, taking into account bulking factors and water content that all necessary environmental and planning approvals are in place in relation to dredge material disposal 	Asset Operations Manager	Prior to dredging
4	Review catchment activities, including any major incidents involving fuels or chemicals, and evaluate whether sediment contamination may have occurred. Refer Section 4.2.1 of the National Assessment Guidelines for Dredging (http://www.environment.gov.au/system/files/resources/8776675b-4d5b-4ce7-b81e-1959649203a6/files/guidelines09.pdf) for guidance. In the event that sediment contamination is considered likely, consider whether the proposed dredging or disposal method is likely to result in release of contaminants to the environment and undertaking sediment testing as required to evaluate this risk. Refer to Section 4.2 of the National Assessment Guidelines for Dredging for guidance on testing requirements. Review test results against relevant guidelines: <ul style="list-style-type: none"> If any kind of disposal in the marine or coastal environment is proposed, check that test results are below guidelines in Appendix A of the National Assessment Guidelines for Dredging If land disposal is proposed, check contaminant levels against current version of Queensland contaminated soil guidelines If disposal in the dredge material handling area is proposed, review whether contaminants may be mobilised to the marine environment in concentrations above the Queensland Water Quality Guidelines/ANZECC 2000 guidelines for toxicants. If landfill disposal is proposed, check with landfill operator. 	Asset Operations Manager	Prior to dredging

ECP-1A Dredge Management Plan – Channel, Ferry Basin		Revision 03	Issued: Dec 2016
	<p>If testing indicates contamination above acceptable levels for the proposed disposal method, review disposal methods and identify a method that provides adequate containment of contaminants.</p> <p>Document results of this assessment in environmental monitoring and reporting records.</p>		
5	If a cutter suction, pneumatic dredge or other hydraulic dredge is to be used, ensure the dredge is fitted with turtle exclusion devices (this may not be required for small dredges, depending on the size of the inlet). If turtle exclusion devices are not fitted, full time visual monitoring of a minimum 20m radius of the dredge head is required.	Dredging contractor	Prior to commencement of dredging
6	Notify Mackay Harbour Master of dredging program, including timing, locations to be dredged, equipment to be used and any access restrictions or hazards to vessels using the navigation access channel and marina. [this is to allow a Notice to Mariners to be issued]	Dredge contract superintendent	Two weeks prior to dredging
7	Notify Mackay Harbour Master of completion of the dredging program	Dredge contract superintendent	As soon as possible after dredging
8	Notify Fisheries Queensland of proposed works if marine plants are to be disturbed and the works are eligible to be carried out under the Self Assessable Code - maintenance works on existing lawful structures (MPO2).	Dredge contract superintendent	No more than 20 days before commencing, and at least 5 days before commencing
9	Place signage as required in Items 5.7 to 5.9 of Queensland Fisheries Self Assessable Code - maintenance works on existing lawful structures (MPO2).	Dredge contract superintendent	At all times while dredging is underway
10	Inform marina and boat ramp users of any dredging program including locations to be dredged, equipment to be used and any access restrictions or hazards to vessels using the navigation access channel and marina.	Dredge contract superintendent	One week prior to dredging and throughout dredging
11	Ensure that dredging equipment and associated vessels comply with requirements of the <i>Transport Operations (Marine Safety) Act 1994</i> and subordinate legislation.	Dredging contractor	During dredging
12	Ensure that access to the marina is maintained throughout the dredging program.	Dredging contractor	During dredging
13	Ensure that pipelines and other floating, partially submerged or fully submerged components are marked so as to be clearly visible to all boat operators. If left in place at night, ensure that warning lights are used.	Dredging contractor	During dredging
14	<p>Ensure that there are no discharges apart from bilge water from dredging equipment and associated vessels. Discharge of bilgewater to comply with <i>Transport Operations (Marine Pollution) Act 1995</i>.</p> <p>Ensure that there are no sewage discharges within the marina or access channel or inshore waters of Boathaven Bay.</p>	Dredging contractor	During dredging
15	Ensure that the dredge and any associated vessels have VHF radio and that full time monitoring of VHF Channel 16 (or other channel in local use) is maintained.	Dredging contractor	During dredging

ECP-1A Dredge Management Plan – Channel, Ferry Basin		Revision 03	Issued: Dec 2016
16	Ensure that hydrocarbons, litter and other wastes are fully contained on all barges and vessels associated with dredging. Remove waste materials from barges and vessels each day, and only keep the minimum required amount of hydrocarbons on board	Dredging contractor	During dredging
17	Do not carry any chemicals on barges or vessels associated with dredging. Only carry fuel and oils contained within equipment.	Dredging contractor	During dredging
18	Do not wash down decks of barges or vessels unless all wash down water is fully contained on the barge.	Dredging contractor	During dredging
19	Carry a spill kit suitable for small to medium (up to 100L) spills. Refer IRP-3 for details on spill response.	Dredging contractor	During dredging
20	Undertake a hydrographic survey in accordance with Condition 49 of SPD-0714-009929 (see also OEMP Section 3). Forward results to Department of Environment and Heritage Protection Mackay Regional Office. Hydrographic survey to meet Maritime Safety Queensland requirements (currently “Standards for Hydrographic Surveys in Queensland Waters”).	Asset Operations Manager	Prior to commencement of dredging
21	Confirm that all dredging will take place within the originally approved footprint for the marina basin and navigation access channel. If dredging outside this area is required, seek additional approvals.	Asset Operations Manager	Prior to commencement of dredging
22	Clearly delineate area to be dredged and review with dredging contractor. Provided written advice to dredging contractor on dredging area.	Dredge contract superintendent	Prior to commencement of dredging
23	Dredge only in delineated areas	Dredging contractor	During dredging
24	If night works are undertaken, lighting is not to spill onto mudflats adjacent to the works area.	Dredging contractor	During dredging
25	Undertake a hydrographic survey in accordance with Condition 50 of SPD-0714-009929 (see OEMP Section 3). Forward results to DEHP Mackay Regional Office and Mackay Regional Harbour Master. Hydrographic survey to meet Maritime Safety Queensland requirements (currently “Standards for Hydrographic Surveys in Queensland Waters”).	Asset Operations Manager	Within 6 months of completion of dredging
26	Check that all pump and hose connections are secure and that the transfer pipeline is secured in place and not exposed to potential damage	Dredging contractor	Daily during dredging
27	<p>Check for turtles, dugong, dolphins and wader birds. Do not commence dredging if:</p> <ul style="list-style-type: none"> There are dugong or turtle within 150m of the dredging area There are wader birds within 25m of the dredging area There are any other marine megafauna (for example dolphins, whales) within 50m of the dredging area <p>Wait for the animal to move away before commencing dredging.</p> <p>Report the sighting to Dredge contract superintendent</p>	Dredging contractor	Each time dredging activity is started

ECP-1A Dredge Management Plan – Channel, Ferry Basin		Revision 03	Issued: Dec 2016
28	Ensure that silt curtains are available for deployment if required.	Dredging contractor	Prior to commencement of dredging
29	Check water quality monitoring results for any non-compliance with the water quality triggers or guidelines. Initiate corrective action as required to address any non-compliance or trends towards triggers.	Dredge contract superintendent	Daily during dredging
30	If corrective actions are required, record in corrective action register	Dredge contract superintendent	As required
31	Remove signage required under the marine plants Self Assessable Code - maintenance works on existing lawful structures (MPO2).	Dredge contract superintendent	No more than 48 hours after completion of dredging
<p>Monitoring:</p> <p>Water Quality</p> <p>Requirements for water quality monitoring are set out in Section 9.2.7.</p> <p>Marina Megafauna (Refer ECP-5 for more detail)</p> <p>Visually check for marine megafauna within 150m of dredging area and migratory wader birds within 25m of the dredging area.</p> <p>If turtle exclusion devices are not fitted to cutter suction or pneumatic dredges, full time scrutiny of the dredging area for turtles will be required.</p> <p>Corrective Action:</p> <p>If <u>up-current water quality</u> is outside guideline levels (pH less than 6.5, turbidity greater than 22.5 NTU, dissolved oxygen less than 90%):</p> <ul style="list-style-type: none"> Check that water quality is not affected by underwater placement of dredge material in the marina basin Cease dredging/placement if underwater placement appears to be affecting water quality outside the marina basin and investigate cause Do not recommence dredging/placement until cause is identified and corrective actions developed. <p>If <u>turbidity levels</u> 100m down-current of the dredging location exceeds 22.5NTU or 110% of turbidity at the up-current location (whichever is higher), then:</p> <ul style="list-style-type: none"> Cease dredging Implement <u>level 1</u> response: <ul style="list-style-type: none"> Deploy silt curtains around the dredging location Recommence dredging Monitor 100m down-current of the dredging area and 50m up-current every two hours (on the outgoing tide) until compliance is achieved on three consecutive occasions <p>If <u>turbidity levels</u> 100m down-current of the dredging location continue to exceed 22.5NTU or 110% of turbidity at the up-current location (whichever is higher):</p> <ul style="list-style-type: none"> Cease dredging Implement <u>level 2</u> response: <ul style="list-style-type: none"> Cease dredging on the outgoing tide until the next tidal cycle. For the next outgoing tidal cycle, continue dredging as normal and monitor hourly. If trigger levels are reached, reduce dredging rate until compliance is achieved 			

ECP-1A	Dredge Management Plan – Channel, Ferry Basin	Revision 03	Issued: Dec 2016
	<ul style="list-style-type: none"> o If compliance cannot be achieved, cease dredging on the outgoing tide. o Dredging may be carried out on the first hour after slack tide if compliance can be demonstrated. Similarly, dredging may recommence on the last hour of the outgoing tide if compliance can be demonstrated. <p>If there is a <u>visible plume</u> extending from the disposal location more than 50m outside the marina basin, then:</p> <ul style="list-style-type: none"> o Check that the pipeline discharge point is at the seabed (level 1 response) o Continue to monitor <p>If the <u>visible plume</u> continues then:</p> <ul style="list-style-type: none"> o Slow the pumping rate on the outgoing tide (level 2 response) o Continue to monitor <p>If the <u>visible plume</u> continues then:</p> <ul style="list-style-type: none"> o Cease placement of dredge material within the marina basin on outgoing tides (level 3 response) <p>If <u>pH</u> measured 100m down-current of dredging activity drops below 6.5:</p> <ul style="list-style-type: none"> o Cease dredging o Check pH at a background location unaffected by dredging. <ul style="list-style-type: none"> o If pH at this location is no more than 0.2pH units different to that measured at 100m down-current of the dredging: <ul style="list-style-type: none"> ▪ Recommence dredging ▪ Continue to monitor pH at two hourly intervals until pH at location 100m down-current of dredge and at background location are above 6.5 ▪ Notify DEHP pollution hotline of the event o If pH at the background location is above 6.5: <ul style="list-style-type: none"> ▪ investigate potential cause of acidification from dredging. Most likely cause is disturbance of non-neutralising potential acid sulphate soils. See ECP-07 for further information. ▪ Do not recommence dredging until potential acid sulphate soils have been ruled out, or if present, a management plan has been prepared. <p>If <u>dissolved oxygen</u> falls below 90% at the location 100m down-current of the dredge location:</p> <ul style="list-style-type: none"> o Cease dredging o Investigate potential cause of oxygen depletion o Check dissolved oxygen at a background location unaffected by dredging o Recommence dredging when dissolved oxygen levels in the vicinity of the dredging activity recover. <p>If laboratory results for <u>suspended solids</u> show that suspended solids at the impact site are more than 110% of the background site review turbidity readings for the days before and after the sample was taken and check whether any corrective action was required. Note that as laboratory results will be delayed, immediate corrective action cannot be taken.</p> <p>If any <u>dredge material is accidentally deposited outside the works area</u>, eg due to failure of protective works, remove material promptly.</p> <p>If <u>turtles, dugong or other marine megafauna</u> are observed within 150m of the dredging area and pipeline:</p>		

ECP-1A	Dredge Management Plan – Channel, Ferry Basin	Revision 03	Issued: Dec 2016
<ul style="list-style-type: none"> • Cease dredging • Wait until animal moves away from the area before recommencing dredging • Do not deliberately chase the animal away • Report the sighting to dredge contract superintendent. <p>If <u>migratory wader birds</u> are observed within 25m of the dredging area and pipeline:</p> <ul style="list-style-type: none"> • Cease dredging • Wait until animal moves away from the area before recommencing dredging • Do not deliberately chase the animal away • Report the sighting to contract superintendent (for inclusion in the daily checklist). <p>(see also ECP 05 (Protected Species Management Plan))</p>			
<p><u>Reporting:</u></p> <ul style="list-style-type: none"> • Monitoring records to be kept on file (monitoring). • Incident report and corrective action request for any instance where trigger levels are exceeded, for more than 24 hours; in accordance with the Incident Response Procedure (IRP-1, Section 11) and Corrective Action Procedure (CAP-1, Section 10). • See Section 12 for requirements in relation to incident reporting. • Non-compliances with approval conditions or legislative requirements must be reported to DEHP. See Section 12 in relation to external reporting. 			
<p><u>Cross References:</u></p> <ul style="list-style-type: none"> • Section 9.2. • ECP-02 – Dredge Material Handling Area Management Plan. • ECP-05 – Protected Species Management Plan • ECP-07 – Acid Sulphate Soils • ECP-03 – Noise • ECP-11 Hazardous Substances Management Plan. 			

ECP-1B - Dredge Management Plan (Marina Basin)

ECP-1B Dredge Management Plan – Marina Basin	Revision 03	Issued: November 2016
<p><u>Overview:</u></p> <p>Operational phase dredging is required from time to time to maintain a minimum depth of 2.5m below LAT in the marina basin.</p> <p>ECP-1B – Dredge Management Plan relates to all dredging activities within the marina basin and also to disposal of dredge material within the marina footprint. In some cases dredged material will be disposed of to the dredge material handling area. Management of this area is covered in ECP-2 – Dredge Material Handling Area Management.</p> <p><u>Legislative Requirements:</u></p> <p>Legal and other obligations are set out in Section 3 of the OEMP. In summary, the following requirements apply to the dredging activity:</p> <ul style="list-style-type: none"> • Approval conditions under EPBC Act approval 2001/298 • The general environmental duty under the <i>Environmental Protection Act 1994</i> • Section 440ZG of the <i>Environmental Protection Act 1994</i> – prohibition on depositing contaminants in waters • Approval conditions of SPD-0714-009929 – development approval for tidal works • Approval conditions of EPPR00332613 – environmental authority • Harbour Master's concurrence requirements • Conditions of the Coordinator-General's Report for Port of Airlie • Requirements of the Code for Self-Assessable Development – maintenance works on existing lawful structures (MPO2). <p><u>Notes regarding approval requirements for dredge material disposal</u></p> <p>Options available for management and disposal of dredged material include:</p> <ul style="list-style-type: none"> • Pumping of material into the existing voids in the marina basin • Placement of material in the dredge material handling area. Once placed in this area, the material and supernatant must be managed in accordance with ECP-2 (dredge material handling area management plan). The material may be left in situ or, once dried, may be removed for disposal at an authorised location. • Removal of the material from Port of Airlie by truck or barge for disposal at an authorised location off-site. Off-site disposal of dredge spoil may occur at an existing commercial landfill or other authorised waste disposal facility that is authorised to accept dredge spoil. Authorisation may also be sought to place the material at another land disposal site. This would be subject to development approval under the relevant planning scheme and authorisation under the <i>Environmental Protection Act 1994</i>. At present, there are no off-site locations authorised for disposal of dredge spoil from Port of Airlie. <p><u>Performance Criteria/Outcome:</u></p> <ul style="list-style-type: none"> • Dredging activities do not cause degradation of water quality and the associated environmental values in Boathaven Bay. Compliance with the water quality limits set in the environmental authority is considered to 		

ECP-1B Dredge Management Plan – Marina Basin		Revision 03	Issued: November 2016
<p>protect water quality and associated environmental values.</p> <ul style="list-style-type: none"> Dredging activities do not cause harm to marine megafauna Dredging activities cause minimal disturbance and disruption to marina users, patrons of restaurants and cafes and guests and residents in hotels and apartments in and adjacent to Port of Airlie. 			
Management Actions:		Responsibility:	Timing:
1	Only undertake dredging between April and August	Asset Operations Manager	Prior to and during dredging
2	Confirm that potential acid sulphate soils (non-neutralising) will not be disturbed (see also ECP-07)	Asset Operations Manager	Prior to dredging
3	<p>Confirm that:</p> <ul style="list-style-type: none"> a dredge material disposal option is in place that adequate capacity is available at the disposal location for the quantity of the material to be removed, taking into account bulking factors and water content that all necessary environmental and planning approvals are in place in relation to dredge material disposal 	Asset Operations Manager	Prior to dredging
4	<p>Review catchment activities, including any major incidents involving fuels or chemicals, and evaluate whether sediment contamination may have occurred. Refer Section 4.2.1 of the National Assessment Guidelines for Dredging (http://www.environment.gov.au/system/files/resources/8776675b-4d5b-4ce7-b81e-1959649203a6/files/guidelines09.pdf) for guidance.</p> <p>In the event that sediment contamination is considered likely, consider whether the proposed dredging or disposal method is likely to result in release of contaminants to the environment and undertaking sediment testing as required to evaluate this risk. Refer to Section 4.2 of the National Assessment Guidelines for Dredging for guidance on testing requirements.</p> <p>Review test results against relevant guidelines:</p> <ul style="list-style-type: none"> If any kind of disposal in the marine or coastal environment is proposed, check that test results are below guidelines in Appendix A of the National Assessment Guidelines for Dredging If land disposal is proposed, check contaminant levels against current version of Queensland contaminated soil guidelines If disposal in the dredge material handling area is proposed, review whether contaminants may be mobilised to the marine environment in concentrations above the Queensland Water Quality Guidelines/ANZECC 2000 guidelines for toxicants. If landfill disposal is proposed, check with landfill operator. <p>If testing indicates contamination above acceptable levels for the proposed disposal method, review disposal methods and identify a method that provides adequate containment of contaminants.</p> <p>Document results of this assessment in environmental monitoring</p>	Asset Operations Manager	Prior to dredging

ECP-1B Dredge Management Plan – Marina Basin		Revision 03	Issued: November 2016
	and reporting records.		
5	If a cutter suction, pneumatic dredge or other hydraulic dredge is to be used, ensure the dredge is fitted with turtle exclusion devices (this may not be required for small dredges, depending on the size of the inlet). If turtle exclusion devices are not fitted, full time visual monitoring of a minimum 20m radius of the dredge head is required.	Dredging contractor	Prior to commencement of dredging
6	Notify Mackay Harbour Master of dredging program, including timing, locations to be dredged, equipment to be used and any access restrictions or hazards to vessels using the navigation access channel and marina. [this is to allow a Notice to Mariners to be issued]	Dredge contract superintendent	Two weeks prior to dredging
7	Notify Mackay Harbour Master of completion of the dredging program	Dredge contract superintendent	As soon as possible after dredging
8	Notify Fisheries Queensland of proposed works if marine plants are to be disturbed and the works are eligible to be carried out under the Self Assessable Code - maintenance works on existing lawful structures (MPO2).	Dredge contract superintendent	No more than 20 days before commencing, and at least 5 days before commencing
9	Place signage as required in Items 5.7 to 5.9 of Queensland Fisheries Self Assessable Code - maintenance works on existing lawful structures (MPO2).	Dredge contract superintendent	At all times while dredging is underway
10	Inform marina users of any dredging program including locations to be dredged, equipment to be used and any access restrictions or hazards to vessels using the navigation access channel and marina.	Dredge contract superintendent	One week prior to dredging and throughout dredging
11	Ensure that dredging equipment and associated vessels comply with requirements of the <i>Transport Operations (Marine Safety) Act 1994</i> and subordinate legislation.	Dredging contractor	During dredging
12	Ensure that access to the marina is maintained throughout the dredging program.	Dredging contractor	During dredging
13	Ensure that pipelines and other floating, partially submerged or fully submerged components are marked so as to be clearly visible to all boat operators. If left in place at night, ensure that warning lights are used.	Dredging contractor	During dredging
14	Ensure that there are no discharges apart from bilge water from dredging equipment and associated vessels. Discharge of bilgewater to comply with <i>Transport Operations (Marine Pollution) Act 1995</i> . Ensure that there are no sewage discharges within the marina or access channel or inshore waters of Boathaven Bay.	Dredging contractor	During dredging
15	Ensure that the dredge and any associated vessels have VHF radio and that full time monitoring of VHF Channel 16 (or other channel in local use) is maintained.	Dredging contractor	During dredging
16	Ensure that hydrocarbons, litter and other wastes are fully contained on all barges and vessels associated with dredging. Remove waste materials from barges and vessels each day, and only keep the minimum required amount of hydrocarbons on board	Dredging contractor	During dredging

ECP-1B Dredge Management Plan – Marina Basin		Revision 03	Issued: November 2016
17	Do not carry any chemicals on barges or vessels associated with dredging. Only carry fuel and oils contained within equipment.	Dredging contractor	During dredging
18	Do not wash down decks of barges or vessels unless all wash down water is fully contained on the barge.	Dredging contractor	During dredging
19	Carry a spill kit suitable for small to medium (up to 100L) spills. Refer IRP-3 for details on spill response.	Dredging contractor	During dredging
22	Clearly delineate area to be dredged and review with dredging contractor. Provided written advice to dredging contractor on dredging area.	Dredge contract superintendent	Prior to commencement of dredging
23	Dredge only in delineated areas	Dredging contractor	During dredging
24	If night works are undertaken, lighting is not to spill onto mudflats adjacent to the works area.	Dredging contractor	During dredging
26	Check that all pump and hose connections are secure and that the transfer pipeline is secured in place and not exposed to potential damage	Dredging contractor	Daily during dredging
27	<p>Check for turtles, dugong and dolphins. Do not commence dredging if:</p> <ul style="list-style-type: none"> There are dugong or turtle within 150m of the dredging area There are any other marine megafauna (for example dolphins, whales) within 50m of the dredging area <p>Wait for the animal to move away before commencing dredging.</p> <p>Report the sighting to Dredge contract superintendent</p>	Dredging contractor	Each time dredging activity is started
28	Ensure that silt curtains are available for deployment if required.	Dredging contractor	Prior to commencement of dredging
29	Check water quality monitoring results for any non-compliance with the water quality triggers or guidelines. Initiate corrective action as required to address any non-compliance or trends towards triggers.	Dredge contract superintendent	Daily during dredging
30	If corrective actions are required, record in corrective action register	Dredge contract superintendent	As required
31	Remove signage required under the marine plants Self Assessable Code - maintenance works on existing lawful structures (MPO2).	Dredge contract superintendent	No more than 48 hours after completion of dredging
<p>Monitoring:</p> <p>Water Quality</p> <p>Requirements for water quality monitoring are set out in Section 9.2.7.</p> <p>Marina Megafauna (Refer ECP-5 for more detail)</p> <p>Visually check for marine megafauna within 150m of dredging area and migratory wader birds within 25m of the dredging area.</p> <p>If turtle exclusion devices are not fitted to cutter suction or pneumatic dredges, full time scrutiny of the dredging area for turtles will be required.</p>			

ECP-1B Dredge Management Plan – Marina Basin	Revision 03	Issued: November 2016
<p><u>Corrective Action:</u></p> <p>If <u>water quality</u> at the marina entrance is outside guideline levels (pH less than 6.5, turbidity greater than 22.5 NTU, dissolved oxygen less than 90%):</p> <ul style="list-style-type: none"> • Cease dredging/underwater placement and investigate cause • Do not recommence dredging/placement until cause is identified and corrective actions developed • If exceedences continue, dredge and place only on incoming tide. <p>If there is a <u>visible plume</u> extending from the disposal location more than 50m outside the marina basin, then:</p> <ul style="list-style-type: none"> o Check that the pipeline discharge point is at the seabed (level 1 response) o Continue to monitor <p>If the <u>visible plume</u> continues then:</p> <ul style="list-style-type: none"> o Slow the pumping rate on the outgoing tide (level 2 response) o Continue to monitor <p>If the <u>visible plume</u> continues then:</p> <ul style="list-style-type: none"> o Cease placement of dredge material within the marina basin on outgoing tides (level 3 response) <p>If <u>turtles, dugong or other marine megafauna</u> are observed within 150m of the dredging area and pipeline:</p> <ul style="list-style-type: none"> • Cease dredging • Wait until animal moves away from the area before recommencing dredging • Do not deliberately chase the animal away • Report the sighting to dredge contract superintendent. <p>(see also ECP 05 (Protected Species Management Plan))</p>		
<p><u>Reporting:</u></p> <ul style="list-style-type: none"> • Monitoring records to be kept on file (monitoring). • Incident report and corrective action request for any instance where trigger levels are exceeded, for more than 24 hours; in accordance with the Incident Response Procedure (IRP-1, Section 11) and Corrective Action Procedure (CAP-1, Section 10). • See Section 12 for requirements in relation to incident reporting. • Non-compliances with approval conditions or legislative requirements must be reported to DEHP. See Section 12 in relation to external reporting. 		
<p><u>Cross References:</u></p> <ul style="list-style-type: none"> • Section 9.2. • ECP-02 – Dredge Material Handling Area Management Plan. • ECP-05 – Protected Species Management Plan • ECP-07 – Acid Sulphate Soils • ECP-03 – Noise • ECP-11 Hazardous Substances Management Plan. 		

ECP-2 - Dredge Material Handling Area Management Plan

ECP-2 Dredge Material Handling Area	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>During the construction phase of Port of Airlie, a dredge material handling area was created at the south-east end of the development footprint. During construction, this was used to manage tailwater and supernatant generated from works within the enclosed marina basin and land reclamation areas and also some material from dredging outside the enclosed area was directed to this basin.</p> <p>The dredge material handling area has been left open for ongoing operational dredging requirements. This allows for containment of dredged material and supernatant generated as the material settles.</p> <p>A discharge system allows for supernatant and incident rainfall to be discharged from an authorised discharge point D1 subject to meeting criteria in the environmental authority for turbidity, dissolved oxygen, pH, suspended solids and aluminium and iron.</p> <p>Note that EPPR00332613 refers to an additional discharge location, D2. This was a temporary discharge location established during construction and is no longer relevant.</p>		
<p>Legislative Requirements:</p> <p>Legal and other obligations are set out in Section 3 of the OEMP. In summary, the following requirements apply to the management of supernatant and to the dredge material handling area generally:</p> <ul style="list-style-type: none"> • The general environmental duty under the <i>Environmental Protection Act 1994</i> • Approval conditions of SPD-0714-009929 – development approval for tidal works • Approval conditions of EPPR00332613 – environmental authority • Conditions of the Coordinator-General's Report for Port of Airlie. <p><u>Notes regarding approval requirements for dredge material disposal</u></p> <p>Options available for management and disposal of dredged material include:</p> <ul style="list-style-type: none"> • Pumping of material into the existing voids in the marina basin • Placement of material in the dredge material handling area. Once placed in this dredge material handling area, the material and supernatant must be managed in accordance with this ECP. The material may be left in situ or, once dried, may be removed for disposal at an authorised location. • Removal of the material from Port of Airlie by truck or barge for disposal at an authorised location off-site. Off-site disposal of dredge spoil may occur at an existing commercial landfill or other authorised waste disposal facility that is authorised to accept dredge spoil. Authorisation may also be sought to place the material at another land disposal site. This would be subject to development approval under the relevant planning scheme and authorisation under the <i>Environmental Protection Act 1994</i>. At present, there are no off-site locations authorised for disposal of dredge spoil from Port of Airlie. 		
<p>Performance Criteria/Outcome:</p> <p>Performance objectives</p> <ul style="list-style-type: none"> • Release of supernatant from the dredge material handling area does not cause degradation of water quality and 		

ECP-2 Dredge Material Handling Area		Revision 03	Issued: Dec 2016
<p>the associated environmental values in Boathaven Bay. Compliance with the discharge quality limits set in the environmental authority is considered to protect water quality and associated environmental values.</p> <ul style="list-style-type: none"> Uncontrolled releases do not occur from the dredge material handling area. 			
Management Actions:		Responsibility:	Timing:
1.	Discharge of the supernatant water is only to occur from designated discharge point, D1	Dredging Contract Superintendent	At all times
2.	Discharge of supernatant should generally only occur when there is water covering the scour pad at the base of the discharge point. Where discharge is to occur when there is no water covering the scour pad, the velocity and quantity of discharge must be such that no erosion of the surface surrounding the scour pad occurs.	Dredging Contract Superintendent	Whenever discharge occurs
3.	Equipment for continuous monitoring of turbidity, pH and dissolved oxygen in the discharge must be in place at D1. The equipment must have notification alarms.	Dredging Contract Superintendent	Prior to commencing discharge
4.	Walls of the dredge material handling area must be secure and stable, with no leaks, cracks, damage or seepage.	Dredging Contract Superintendent	Prior to placement of dredge material in dredge material handling area
5.	Maintain freeboard as follows (measured from the lowest point (D1)): <ul style="list-style-type: none"> 0.5m in dry season (April to October) 1.0m in wet season (November-March) 	Dredging Contract Superintendent Asset Operations Manager	At all times while placing material in the dredge material handling area
6	Retain the dredge material handling area as a dedicated area for the placement and rehandling of dredge material	Asset Operations Manager	Ongoing
<p>Monitoring:</p> <p>Water Quality</p> <p>Requirements for water quality monitoring are set out in Section 9.2.7.</p> <p>Notification alarms are to be set as follows:</p> <ul style="list-style-type: none"> pH: below 6.8 Turbidity: above 20 NTU Dissolved Oxygen: 90%. 			
<p>Corrective Action:</p> <p>Where pH, DO (%) and turbidity exceed notification alarms:</p> <ul style="list-style-type: none"> Stand by to shut off discharge if levels exceed discharge limits (pH 6.5 (lower limit), turbidity 22.5, DO 90%). <p>Where pH, DO (%) and turbidity exceed discharge limits:</p> <ul style="list-style-type: none"> Cease the discharge Inspect the dredge material handling area and material to determine cause of non-compliance If pH is below 6.5: <ul style="list-style-type: none"> Undertake field oxidation tests for acid sulphate soils (see ECP-7 and OEMP Section 9.7) Do not recommence discharge until potential acid sulphate soils have been ruled out, or if present, a management plan has been prepared 			

ECP-2 Dredge Material Handling Area	Revision 03	Issued: Dec 2016
<ul style="list-style-type: none"> If turbidity is above 22.5: <ul style="list-style-type: none"> Additional settling time is likely to be required Wait 24 hours and then test supernatant. Recommence discharge if turbidity is below 22.5 NTU If sediments do not settle out, investigate the use of flocculants to aid with settlement If dissolved oxygen is below 90%: <ul style="list-style-type: none"> Recommence discharge and measure dissolved oxygen in the receiving environment immediately below the discharge point If dissolved oxygen in the receiving environment is below 90%: <ul style="list-style-type: none"> Cease discharge Arrange for mechanical or physical aeration at discharge point Recommence discharge and monitor effectiveness. <p>Where laboratory results indicate that suspended solids, tributyl tin, aluminium or iron has been exceeded:</p> <ul style="list-style-type: none"> Cease discharge (if still discharging) Conduct further testing of supernatant in dredge material handling area If contaminant levels in supernatant exceed discharge limits for tributyl tin, aluminium or iron, identify a treatment or alternative disposal method for supernatant. These might include: <ul style="list-style-type: none"> Disposal to an authorised wastewater treatment plant. For aluminium and iron, It may also be possible to treat by oxidation induced precipitation (using aerators or an oxidising agent). For tributyl tin it may be possible to treat with allum or ferric sulphate to precipitate tributyl tin Once lab results indicate that contaminant levels in supernatant are below discharge limits for tributyl tin, aluminium or iron, discharge can recommence Note that if tributyl tin contamination is detected sediments are likely also contaminated. A sediment testing program should be carried out that meets the requirements of the current contaminated land guidelines issued by the Queensland DEHP. A management or remediation plan will need to be developed if levels exceed criteria in the contaminated land guidelines. If suspended solids level is exceeded in the supernatant, corrective actions as for turbidity. 		
<p><u>Data and Reporting:</u></p> <ul style="list-style-type: none"> Data logger records for D1 kept on monitoring file . Report discharge quality data to owner's environmental advisor weekly when discharging Incident report and corrective action request for any instance where trigger levels are exceeded, for more than 24 hours; in accordance with the Incident Response Procedure IRP-1(Section 11) and Corrective Action Request Procedure CAP-1(Section 10). Report non-compliance to EPA as per Section 12 		
<p><u>Cross References:</u></p> <ul style="list-style-type: none"> Section 9-2. ECP-1A/B Dredge Management Plans; ECP-8 Sediment Contamination Management Plan; ECP-7 Acid Sulfate Soils Management Plan. Section 10 – Corrective Action Procedure. Section 11- Incident Reporting Procedure. 		

ECP-3 - Noise Management

ECP-3	Noise Management	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Key issues in relation to noise management that are relevant to operational activities at Port of Airlie:</p> <ul style="list-style-type: none"> When carrying out dredging and related works, noise limits set in the environmental authority EPPR00332613 apply When carrying out other building and construction work, the requirements of Section 440R of the EP Act apply, in relation to the times when noise from building and construction work must not be audible at a sensitive receiver The EP Act also contains various requirements in relation to noise from air conditioners, pumps (including pool pumps), music and nuisance generally. <p>Acoustic environmental values and acoustic quality objectives for Port of Airlie are shown in Section 6.10.2.</p> <p>Note that this plan relates only to community related noise impacts and not worker health and safety issues. Impact of noise on marine animals is addressed in ECP-1A/B (dredging) and ECP-5 (protected species).</p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> Environmental Protection Act 1994. Environmental Protection (Noise) Policy 2008. Environmental Protection Regulation 2008. Environmental Authority EPPR00332613 AS 2436-1981 Guide to Noise Control on Construction and Demolition sites. 			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> No non-compliances with requirements of environmental authority or the EP Act in relation to building and construction works, including dredging and related activities All valid noise complaints resolved in accordance with requirements of EP Act. 			
Management Actions:		Responsibility:	Timing:
1.	Ensure that building contractors are aware of noise requirements in the EP Act, including requirement for no audible noise from 6:30 pm to 6:30 am Monday-Saturday and all day on Sunday and public holidays.	Contract superintendent	In each contract
2.	<p>Ensure that dredging contractors and pile driving works comply with noise limits in environmental authority EPPR00332613:</p> <p>Noise from any site activities including pile driving must not exceed the following level in habitable rooms of noise affected premises:</p> <ul style="list-style-type: none"> Monday – Saturday 7 am to 6 am – 75dB(A) (L_{A10adj} 15 min) All other times – no audible noise 	Contract superintendent	In each relevant contract
3.	<p>No percussion pile driving is to occur:</p> <ul style="list-style-type: none"> On Sundays or public holidays Monday to Saturday before 8 am and after 5 pm 	Contract superintendent	In each relevant contract
4.	Include noise specifications in design specifications for any potentially noise items, with reference to compliance with relevant requirements of EP Act.	Asset Manager	In each contract

ECP-3	Noise Management	Revision 03	Issued: Dec 2016
5	Notify Port of Airlie tenants of any upcoming noisy activities that might give rise to annoyance. Provide information on the duration of the activity.	Asset Operations Manager	As required
<p><u>Monitoring and Auditing:</u></p> <ul style="list-style-type: none"> If a complaint is received, investigate the complaint by: <ul style="list-style-type: none"> Checking for potential noise sources Undertaking noise monitoring using hand held noise level meters If required, installing noise loggers for a period of seven days. <p>Noise monitoring should be undertaken by a suitably qualified person.</p> <p>Monitoring should be undertaken in accordance with the latest version of the Queensland Department of Environment and Heritage Protections <i>Noise Measurement Manual</i> http://www.ehp.qld.gov.au/licences-permits/pdf/noise-measurement-manual-em1107.pdf.</p> <p><u>Corrective Action:</u></p> <p>Corrective actions to be identified following investigation of the complaint. Corrective actions may include:</p> <ul style="list-style-type: none"> Restricting hours of activity/operation Undertaking maintenance of noisy equipment Moving noisy items away from sensitive receptors Providing acoustic shielding. <p>A suitably qualified specialist should assist with developing corrective actions except where only very simple actions are required.</p> <p><u>Reporting and Documentation:</u></p> <p>Report non-compliance to DEHP as per OEMP Section 12</p> <p>Investigation of noise complaints shall be documented and reported in accordance with the EPA's Noise Measurement Manual and records and reports kept on the complaints/incidents file.</p> <p><u>Cross References:</u></p> <ul style="list-style-type: none"> Section 6.10 – Background Noise Levels. CRP-3 – Complaints Procedure, Section 12. Corrective Action Procedure, Section 10. 			

ECP-4 Dust Management Plan

ECP-4	Dust Management Plan	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Dust may be generated in the following circumstances:</p> <ul style="list-style-type: none"> From the dredge material handling area, if the pond dries out and dredge material is exposed to wind (wind erosion) From undeveloped areas of Port of Airlie if dry soil is exposed to wind (wind erosion) Due to vehicle movements across exposed dirt Due to earthworks. <p>Dust clouds can be visually intrusive and can create traffic hazards on and off-site if clouds drift across roadways. If dust settles on adjacent properties, this also causes nuisance to landholders and tenants. While dust deposition on vegetation and in surface waters can also cause environmental impacts, it is unlikely that either the quantity or duration of dust that might be generated from activities at Port of Airlie would cause these sorts of impacts.</p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> Environmental Protection Act 1994. Environmental Protection (Air) Policy 2008 Environmental Authority EPPR00332613 			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> No visible deposition of dust outside immediate work areas No visible dust plumes leaving Port of Airlie boundary All valid dust-related complaints resolved in accordance with requirements of EP Act. A complaint regarding dust may be considered justified if: <ul style="list-style-type: none"> Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991; or A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the site. 			
Management Actions:		Responsibility:	Timing:
1	Cover undeveloped areas through grass, mulching or other means to protect these areas from wind erosion. Prevent vehicle access to these areas to maintain cover.	Asset Operations Manager	At all times
2	Do not allow vehicle access to undeveloped areas.	Asset Operations Manager	At all times
3	Ensure that dust control requirements are inserted into any contracts involving earthworks (see also ECP-6 – Environmental Management of Contractors)	Asset Operations Manager	When issuing contracts
4	Ensure that sediments in the dredge material management area are not dry enough to generate dust plumes.	Asset Operations Manager	At all times (weekly checks)
5	In the event of a complaint in relation to dust, the complaints procedure (CRP-1) is to be followed.	Asset Operations Manager	As required

ECP-4	Dust Management Plan	Revision 03	Issued: Dec 2016
<p><u>Monitoring and Auditing:</u></p> <ul style="list-style-type: none"> Weekly checklist. Monitoring of dust levels as per requirements of EPPR00332613 if required to address complaints or directed to undertake monitoring by Department of Environment and Heritage Protection (DEHP). Requirements are as follows: <ul style="list-style-type: none"> <i>in accordance with: Australian Standard AS 3580.9.6 'Ambient air - Particulate matter – Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method'; or any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.</i> 			
<p><u>Corrective Action:</u></p> <ul style="list-style-type: none"> In the event that dust plumes are generated from the dredge material handling area: <ul style="list-style-type: none"> Utilise seawater or other available water to spray over the area Avoid using water from reticulated water supply unless urgent response is required and there is no other water available Consider long term stabilisation of surface using hydromulch or similar. In the event that contractors create dust plumes, contractors are to correct the issue to meet contract requirements. Contractors may use seawater for dust suppression. Dust suppression should not cause surface runoff. 			
<p><u>Reporting and Documentation:</u></p> <ul style="list-style-type: none"> Weekly checklist. As per complaints procedure If monitoring is required in response to a complaint or direction of DEHP, results must be reported to DEHP 			
<p><u>Cross References:</u></p> <ul style="list-style-type: none"> Complaints procedure, CRP-1. Weekly checklist, Form 1. 			

ECP-5 - Protected Species Management Plan

ECP-5	Protected Species Management Plan	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Species of conservation significance occurring in Boathaven Bay and adjacent environs are discussed in Section 6.6.3 (threatened species) and 6.6.4 (migratory species).</p> <p>During operations, there is very limited potential for protected species to be impacted. Work boats may strike animals foraging on shallow seagrass beds or transiting across the navigation channel.</p> <p>Requirements for protection of protected species during operation dredging and related activities are also included in ECP-1A/B. Although unlikely to occur at Port of Airlie, a serious spill of fuel or oils may harm protected species. This is covered in ECP-9 and OEMP Section 11.</p> <p>It is a requirement of the EPBC Approval that measures be in place to protect water mouse (false water rat), however the operation of Port of Airlie does not pose any threats to these animals or their habitat and hence, there are no control measures required. Water mouse may potentially occur in mangrove systems in Campbell's Creek, to the east of Port of Airlie, and it is possible that water mouse would forage in mangroves adjacent to the dredge management pond at Port of Airlie. Trapping was undertaken in 2002, however no water mouse were captured and it was concluded that water mouse were unlikely to occur (see also Section 6). However, some suitable habitat is present.</p> <p>Operation of Port of Airlie will not cause any direct impacts on water mouse habitat. Indirect impacts may occur if water quality degradation is severe enough to impact on crustaceans and other macroinvertebrates in intertidal muddy substrates as these provide the main food source for water mouse. The 2002 EIS concluded that during the operational phase, the only potential for significant degradation of water quality in waters adjacent to Port of Airlie would arise from a significant oil or fuel spill (SKM 2002, Section 8.3.2). However, as only small quantities of oils and fuels are stored (or proposed to be stored) at Port of Airlie and any storages would be required to be in accordance with Australian Standard AS1940 (storage and handling of flammable and combustible liquids) the likelihood of a large oil or fuel spill was negligible. This is still the case.</p> <p>Sediment plumes from operational dredging will not cause any impact on benthic habitats that support food for water mouse as these are shallow muddy substrates that tolerate high levels of turbidity. In any case, strict turbidity requirements will be met during dredging (in order to protect more sensitive seagrass habitats). In the event that significant quantities of potential or actual acid sulphate soils were disturbed, and no management measures were in place, it is possible that acidification of waters in the Campbell's Creek estuary could occur and this in turn might impact food sources for water mouse. However, a detailed survey of acid sulphate soils was undertaken in 2004 and it is not expected that any potential or actual acid sulphate soils will be encountered during operational dredging. Further, water quality monitoring requirements include monitoring of pH in the vicinity of the dredging activity, and this would quickly detect any drop in pH that would indicate that acid sulphate soils had been disturbed. ECP-1A/B and ECP-2 contain contingency measures in the event that a drop in pH is detected that are sufficient to protect habitats such as the Campbell's Creek estuary from impacts.</p> <p>Relevant Legislation:</p> <ul style="list-style-type: none"> • <i>Nature Conservation Act 1993.</i> • <i>Environmental Protection and Biodiversity Conservation Act 1999</i> • EPBC Act approval 2001/298 • Coordinator-General's Report 			

ECP-5 Protected Species Management Plan		Revision 03	Issued: Dec 2016
Performance Criteria/Outcome: <ul style="list-style-type: none"> No death or injury to protected species caused by marina activities 			
Management Actions:		Responsibility:	Timing:
1	When operating workboats, maintain speed limit of 6 knots or slower in marina and navigation channel and waters where there is less than 1m from the boat's keel/propeller to the sea bed.	All staff and contractors	At all times
2	Dredging, pile driving and other activities with potential for direct conflict with turtles and dugongs, or generating significant underwater noise must not be carried out when dugong or turtle are within 150m of the activity. An observer should check for presence of dugong and turtle prior to commencement of such activities, at each "Start-up" period and at regular intervals during the activity.	All staff and contractors	At all times when such work is carried out
3	Noisy construction activities are not to commence if migratory birds or shorebirds are within 25m of the works.	All contractors	When undertaking construction works
4	Lighting for construction and maintenance activities must not cause illumination of any intertidal mudflats.	All staff and contractors	At all times when such work is carried out
5	If crocodiles are sighted in the marina and adjacent area, report to Department of Environment and Heritage Protection on 1300 130 372.	All staff and contractors	As required
Monitoring and Auditing: <ul style="list-style-type: none"> Record any incidents associated with protected species (OEMP Form 6) 			
Corrective Action: In the event that a dead or injured animal is found (regardless of whether the injury was caused by marina activities works), report to RSPCA Qld 1300 ANIMAL (1300 264 625). Take actions as directed by RSPCA. Complete incident reporting OEMP Form 6 In the event that dugong or turtle are within 150m of high impact activities, cease the activity (or do not commence the activity) until the animal moves away. Note that it is not allowed to chase the animal away. In the event that migratory birds are within 25m of high impact construction activities, cease the activity (or do not commence the activity) until the animal moves away. Note that it is not allowed to chase the animal away.			
Reporting and Recording: <ul style="list-style-type: none"> Report any incidents involving protected species to RSPCA. 			
Cross References: <ul style="list-style-type: none"> ECP-1A/B – Dredging ECP-9 – hazardous species management OEMP Section 11 – Incidents OEMP Section 12 - Reporting 			

ECP-6 - Environmental Management of Contractors

ECP-06 Environmental Management of Contractors		Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Contractors undertake a range of activities at Port of Airlie on behalf of Meridien, from routine maintenance to construction and major maintenance activities. Activities undertaken by contractors may have environmental impacts (See also Section 2 – Aspects and Impacts) and may also trigger compliance requirements. Higher risk activities include dredging, major earthworks and marine construction and maintenance activities.</p> <p>This ECP is intended to guide management of contracts, by including relevant environmental protection requirements in contract documents. It is not intended to be an exhaustive list of potential requirements, but may be used to prompt more detailed consideration.</p> <p>Note also that contractors must comply with all regulatory requirements and conditions of approval for Port of Airlie.</p>			
<p>Relevant Legislation:</p> <p>See Section 3.</p>			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> Contractors comply with all legislative requirements and relevant conditions of approval Contractors meet relevant requirements of the OEMP 			
Management Actions:		Responsibility:	Timing:
1	Potential environmental impacts and risks of activities to be undertaken by contractors are to be reviewed and appropriate contract conditions developed where necessary. Consult with the Owner's Environmental Advisor and/or legal advisors and/or planning advisors if assistance is required.	Asset Operations Manager	When preparing a contract
2	<p>All contracts should contain the following requirements:</p> <ul style="list-style-type: none"> The contractor is responsible for compliance with all legal requirements. Contractors are reminded of the General Environmental Duty under the <i>Environmental Protection Act 1994</i> as well as requirements of that Act in relation to contamination of waters, noise emissions, waste management and environmental harm reporting requirements. The contractor is responsible for checking that all appropriate approvals and permits are in place in relation to the works and activities to be undertaken. The contractor must not commence works until all relevant approvals and permits are in place. Meridien is not liable for any delay costs associated with delays in obtaining permits and approvals. Works must be carried out in compliance with all relevant Whitsunday Regional Council policies, local laws and planning scheme requirements and codes. The contractor is responsible for identifying relevant requirements and ensuring compliance at the tendering stage. Any imported fill material or other material must be clean and free of pests and weeds. Fill material shall be considered clean if contaminant levels are below the minimum levels proscribed under the Queensland Environmental Protection Act 1994. Currently, these standards are as referenced in the <i>Guideline for contaminated land professionals</i> (EHP 2012). Wastes generated by the activity must be securely stored within 	Asset Operations Manager	When preparing a contract

ECP-06	Environmental Management of Contractors	Revision 03	Issued: Dec 2016
	<p>the authorised works area.</p> <ul style="list-style-type: none"> The contractor must ensure removal of all waste from the site on a regular basis, such that waste does not become unsightly or odorous or provide habitat for vermin. Waste removal, transport and disposal must be carried out by operators authorised under the <i>Environmental Protection Act 1994</i> The contractor will maintain the works area and any access points in a clean and tidy condition The contractor will ensure that vehicles and equipment brought to Port of Airlie is clean and free of weed propagules and other pests. The current standard is that set by the Queensland Department of Agriculture Forestry and Fisheries Weed Hygiene Declaration process. The contractor will prevent infestation with weeds and proliferation of weeds The contractor must ensure that dust plumes are not generated during construction works. Any dust plume must be suppressed within 15 minutes. The quantity of fuels, chemicals and other environmentally hazardous substances held at the site is to be minimised Fuels, chemicals and other environmentally hazardous substances are to be stored in a secure manner and in compliance with the requirements of relevant Australian Standards Fuels, chemicals and other environmentally hazardous substances are to be transported in accordance with the latest version of the Australian Code for the Transport of Dangerous Goods by Road & Rail Australian Dangerous Goods Code. Any environmental monitoring records, regulated waste transport records and records of complaints or incidents must be provided to the Principal and retained by the contractor for a minimum of seven years The Principal is to be advised of any incident involving actual or potential environmental harm and/or actual or potential non-compliance with approval requirements immediately that the contractor becomes aware of such incidents The Principal is to be advised immediately of any complaints received. The contractor is not to discuss complaints with the complainant beyond identifying complainant's contact details and the nature of the complaint. 		
3	<p>For building and other construction contracts:</p> <ul style="list-style-type: none"> Noise emissions from building activities and equipment must be in accordance with Chapter 8, Part 3B of the <i>Environmental Protection Act 1994</i>, and any other relevant legal requirements 	Asset Operations Manager	When preparing a contract
4	<p>For any contract involving landscaping works or bringing soil, fill, plants or other organic matter to the site:</p> <ul style="list-style-type: none"> All soil, fill, plant matter and other organic matter must be accompanied by a Weed Hygiene Declaration The contractor shall meet all requirements of the <i>Land Protection (Pest and Stock Route Management) Act 2002</i> 	Asset Operations Manager	When preparing a contract
5	<p>For dredging works, other marine-based activities and higher risk activities :</p> <ul style="list-style-type: none"> The contractor must supply suitable monitoring equipment as 	Asset Operations Manager	When preparing a contract

ECP-06	Environmental Management of Contractors	Revision 03	Issued: Dec 2016
	<p>required to monitor compliance with environmental approval requirements. The equipment must be calibrated and calibration records provided for review.</p> <ul style="list-style-type: none"> • All staff must undergo a one hour environmental awareness induction • The contractor must either comply with environmental control procedures developed for Port of Airlie, or provide equivalent environmental management procedures that achieve compliance with regulatory and approval requirements. Where the contractor elects to utilise Port of Airlie environmental control procedures, the contractor must satisfy itself that these procedures are adequate to achieve compliance with regulatory and approval requirements and indemnifies Meridien for non-compliance. • All vessels and water based equipment must comply with the requirements of <i>Transport Operations (Marine Safety) Act 1994</i> and subordinate legislation • Discharges from vessels and other equipment must comply with <i>Transport Operations (Marine Pollution) Act 1995</i> • At least four weeks in advance of commencement of works, a plan must be submitted to the Principal that demonstrates how navigational safety will be achieved, and how disruption of access to the boat ramp, marina generally and marina berths will be minimised. The contractor is informed that at least two weeks' notice of any navigational hazards and access restrictions must be provided to the Regional Harbour Master and Whitsunday Regional Council and the Principal is not responsible for any delays incurred due to the inadequacy of information provided by the contractor. • Any equipment deployed from outside Australian waters must have been cleared by the Australian Quarantine and Immigration Service. • Vessels and other water-based equipment must have VHF radio communications fitted • Fuels, chemicals and other environmentally hazardous materials are not to be stored on any marine based equipment except for quantities required for the immediate works. • Vessels must carry spill response equipment appropriate for the types of fuels, chemicals or other environmentally hazardous materials contained within the vessels • Wash down water from washing of decks or other components of water based equipment must not be allowed to cause release of hydrocarbons, litter or other contaminants to waters • Works are not to be carried out if dugong or turtle are within 150m of the works area, wader birds are within 25m of the works area or dolphins within 50m of the works area. • Equipment such as silt curtains, monitoring equipment and other items that may be required for compliance with permit and approval conditions or general minimisation of environmental harm must be available at the site in good working order prior to commencement of works 		

ECP-06 Environmental Management of Contractors		Revision 03	Issued: Dec 2016
	<p>For waste management contracts:</p> <ul style="list-style-type: none"> Contractors must demonstrate that appropriate authorisation is held under the <i>Environmental Protection Act 1994</i>. For contracts exceeding 12 months, on the anniversary of the contract, Contractors must provide evidence that appropriate authorisation under the <i>Environmental Protection Act 1994</i> has been renewed Contractors must comply with waste tracking requirements and retain waste tracking certificates for the period specified in the <i>Environmental Protection Act 1994</i> and associated regulations. 	Asset Operations Manager	When preparing a contract
6	Where earthworks are required on Lot 112 on SP232106 and lot 113 on SP260211 – refer ECP-6 (Acid sulphate soils)	Asset Operations Manager	When preparing a contract
7	<p>Where earthworks are required on Lot 116 on SP260211:</p> <ul style="list-style-type: none"> The contractor is responsible for confirming the location of tributyl-tin contaminated sediments. If these sediments are to be disturbed or removed, the contractor is responsible for complying with all relevant requirements of the <i>Environmental Protection Act 1994</i>, and generally avoiding environmental harm 	Asset Operations Manager	When preparing a contract
8	Relevant components of the OEMP and environmental and planning permits and approvals shall be identified and attached to contracts	Asset Operations Manager	When preparing a contract
<p>Monitoring and Auditing:</p> <ul style="list-style-type: none"> Check that contracts contain appropriate environmental conditions in environmental audits 			
<p>Corrective Action:</p> <ul style="list-style-type: none"> Not applicable 			
<p>Reporting and Documentation:</p> <ul style="list-style-type: none"> Relevant contract files to contain contractual requirements and also any evidence required to be provided by contractors Training register (environmental awareness training) Waste transport certificates for waste contracts Monitoring records retained on monitoring files as required 			
<p>Cross References:</p> <ul style="list-style-type: none"> OEMP 3 – Legal and other obligations 			

ECP-7 - Acid Sulfate Soils Management Plan

ECP-7	Acid Sulfate Soils Management Plan	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Acid Sulfate Soils can occur in coastal areas. When exposed to air, oxidation of sulphides in the soils/sediments gives rise to acidic runoff, which can affect water quality and aquatic ecosystems. With proper management, Acid Sulfate Soils can be managed without impact on the surrounding environment.</p> <p>Marine muds at Port of Airlie have acid sulfate potential but most of the marine muds also have significant buffering capacity due to the presence of particles of calcium carbonate and are hence self neutralising PASS (SNPASS).</p> <p>A small quantity of non-neutralising PASS (NNPASS) was excavated during construction and reburied under Lot 112 on SP232106 and lot 113 on SP260211. The material was buried below LAT. This is discussed in Section 6.10.5.</p> <p>This ECP provides direction in the event that:</p> <ul style="list-style-type: none"> Water quality testing identifies a drop in pH that might indicate oxidation of acid sulphate soils Excavation is required in Lot 112 on SP232106 and lot 113 on SP260211 There is other evidence that NNPASS may have oxidised. 			
<p>Legislative Requirements:</p> <p>Legal and other obligations are set out in Section 3 of the OEMP. In summary, the following requirements apply to the dredging activity:</p> <ul style="list-style-type: none"> Approval conditions under EPBC Act approval 2001/298 The general environmental duty under the <i>Environmental Protection Act 1994</i> Approval conditions of SPD-0714-009929 – development approval for tidal works Approval conditions of EPPR00332613 – environmental authority Acid Sulfate Soils Laboratory Methods Guidelines, June 2004, Department of Natural Resources and Water. Instructions for Treatment and Management of Acid Sulfate Soils (Queensland Government 2001) 			
<p>Performance Criteria/Outcome:</p> <p>No adverse impacts on environmental values or non-compliance with approval conditions due to acid sulphate soils and sediments</p> <p>Acid Sulfate Soils are managed in accordance with the latest version of the Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines and Laboratory Methods Guidelines.</p>			
Management Actions and Responses:		Responsibility:	Timing:
1.	<p>Review acid sulphate soil reports (Ullman and Nolan August 2004, Report on Acid Sulfate Soils Investigation, Proposed Marine Dredging, Boathaven Bay, Airlie Beach) and information in OEMP Section 6.10.5 prior to undertaking any activity that might disturb marine sediments.</p> <p>If disturbance in an area of suspected NNPASS is planned, develop a detailed acid sulphate soil testing and management plan in accordance with the Queensland Acid Sulfate Soil Technical Manual (refer also ECP-7 in the CEMP).</p> <p>Ensure that the acid sulphate soil management plan ensures compliance with development approval and environmental authority conditions in relation to water quality.</p>	Asset Operations Manager	Prior to disturbing any soil or sediment.

ECP-7	Acid Sulfate Soils Management Plan	Revision 03	Issued: Dec 2016
2	If excavation is required on Lot 112 on SP232106 and lot 113 on SP260211, undertake acid sulphate soil testing to 1m below excavation depth and 10m laterally of the excavation area prior to commencement, to check that strategically reburied NNPASS will not be disturbed. Testing methods to comply with the Queensland Acid Sulfate Soil Technical Manual.	Asset Operations Manager	Prior to any works on Lot 112 on SP232106 and lot 113 on SP260211,
3	If excavation on Lot 112 on SP232106 and lot 113 on SP260211 is likely to extend to within 1m vertically, or 10m laterally of buried NNPASS, develop a detailed acid sulphate soil testing and management plan in accordance with the Queensland Acid Sulfate Soil Technical Manual (refer also ECP-7 in the CEMP). Ensure that the acid sulphate soil management plan achieves compliance with development approval (SPD-0714-009929) and environmental authority (EPPR00332613) conditions in relation to water quality.	Asset Operations Manager	As required
4	If excavation is required on Lot 112 on SP232106 and lot 113 on SP260211, any water in the excavation is not to be discharged unless pH>6.5 (noting also requirements of the EP Act and EPPR00332613 in relation to discharging water to the marina basin).	Asset Operations Manager	As required
<p>Monitoring and Auditing: As per the latest edition of the Queensland Acid Sulfate Soil Technical Manual</p> <p>Corrective Action: (see also Management of Contingencies above)</p> <p>If water quality results indicate pH less than 6.5, and any soil or sediment material has been recently disturbed, carry out field testing of the soils or sediments. The field test procedure for acid sulphate soils is set out in Section H of Ahern CR, McElnea AE, Sullivan LA (2004). <i>Acid Sulfate Soils Laboratory Methods Guidelines</i>. Queensland Department of Natural Resources, Mines and Energy, Indooroopilly, Queensland, Australia. A suitably qualified soil scientist must carry out the field testing.</p> <p>Actual or potential acid sulphate soils may be present if field testing of suspect material returns any of the following conditions:</p> <ul style="list-style-type: none"> pH is less than 4 OR pH_{FOX} is less than 3 OR there is a lot of fizzing (strong reaction) with peroxide OR the difference between pH_F and pH_{FOX} is more than 3 pH units. <p>In this case:</p> <ul style="list-style-type: none"> Contact a suitably qualified soil scientist Request an acid sulphate soils investigation in accordance with the latest edition of the Queensland Acid Sulfate Soil Technical Manual If the investigation indicates presence of actual or potential acid sulphate soils, request a suitably qualified soil scientist to prepare an acid sulphate soil management plan in accordance with the latest edition of the Queensland Acid Sulfate Soil Technical Manual Implement the plan. 			

ECP-7	Acid Sulfate Soils Management Plan	Revision 03	Issued: Dec 2016
<p><u>Reporting and Record Keeping:</u></p> <ul style="list-style-type: none"> • Maintain records of any field acid sulphate soil tests • Note reporting requirements for non-compliance with environmental authority conditions and/or environmental incidents in Section 12 of OEMP 			
<p><u>Cross References:</u></p> <ul style="list-style-type: none"> • Ullman and Nolan August 2004, Report on Acid Sulfate Soils Investigation, Proposed Marine Dredging, Boathaven Bay, Airlie Beach, unpublished report • Dredge Management Plan ECP-1A/B • Dredge Material Handling Area Management Plan ECP-2. • Incident Response Plan IRP-1. 			

ECP-8 - Waste and Resource Management Plan

ECP-08	Waste and Resource Management Plan	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>A range of resources are utilised by Meridien in operating Port of Airlie as follows:</p> <ul style="list-style-type: none"> Electrical energy is used for a range of uses including lighting, air conditioning, computers and other office equipment, refrigeration and hot water Electricity is also supplied to marina berths Diesel, petrol and outboard fuel are used to power vehicles and vessels Water is used for kitchens and bathrooms as well as for cleaning and watering pf plants and landscaped areas. Water is also supplied to marina berths. Office activities utilise paper, office furniture and other resources A wide range of materials are also used in construction and maintenance of buildings and facilities. <p>Consumption of energy, water and other materials creates an environmental impact as the extraction of these resources from the environment causes environmental impacts, and there are emissions associated with electricity generation, water treatment and manufacturing of materials. As energy, water and materials must also be paid for, there is both a financial and environmental incentive to minimise consumption.</p> <p>A range of wastes are also generated, including wastes from consumption of water and materials. Only small quantities of regulated waste are generated and Port of Airlie is connected to the Whitsunday Regional Council sewerage system. A preliminary waste register has been prepared subject to finalisation after a waste audit (see Section 9.8.2 of OEMP). Wastes represent resources that have been lost, and hence, any reduction in waste generation has benefits in terms of reducing environmental impacts for supply of fresh resources. Improper management and disposal of waste also causes environmental impacts.</p> <p>Note the generally accepted waste management hierarchy as follows:</p> <ul style="list-style-type: none"> Avoid waste generation altogether or reduce the amount of waste being generated Reuse wastes (with no or minimal reprocessing) Recycle wastes by reprocessing them into a new product Treat wastes so as to reduce their impact on the environment Dispose of wastes to a safe disposal site such as a landfill. <p style="text-align: right;">  Most preferred Least preferred </p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> <i>Environmental Protection Act 1994</i> <i>Environmental Protection (Waste Management) Regulations 2000.</i> <i>Environmental Protection Regulation 2008.</i> Schedule 1E of the Development Permit. 			
<p>Performance Criteria/Outcome:</p> <p>Performance criteria and outcomes will be set following the first energy and materials audit. In the interim, the following general criteria are relevant:</p> <ul style="list-style-type: none"> Waste generation is minimised and managed in accordance with the Waste Management Hierarchy Energy consumption is minimised Consideration is given to minimising wastage when ordering materials. 			

ECP-08 Waste and Resource Management Plan		Revision 03	Issued: Dec 2016
Management Actions:		Responsibility:	Timing:
Waste			
1	<p>Current waste management arrangements are as follows:</p> <ul style="list-style-type: none"> General waste disposal bins and recycled waste bins are provided for vessels at each marina arm. These are emptied three times per week by a waste contractor (JJ Richards in 2014). Office waste is removed by cleaning contractors. Recyclables are not segregated. Two refuse rooms are provided in The Boathouse complex for retail and commercial premises. Waste is segregated into recyclable and non-recyclable components and placed in bins provided by the waste contractor. These are emptied three times per week by a waste contractor (JJ Richards in 2014) A residential refuse room is provided for residents of The Boathouse. Waste is placed in secure bins which are emptied three times per week by a waste contractor (JJ Richards in 2014). Retail/commercial refuse rooms and the residential waste rooms drain into an internal drain which is connected to the sewer If any unusual wastes are generated, there is adequate storage space within the retail/commercial refuse rooms for these wastes to be temporarily stored prior to removal. Where waste is generated by contractors undertaking any form of construction or maintenance works, contract conditions require these wastes to be securely stored at the works area and promptly removed by the contractor. Bins are provided in public areas but are managed by Whitsunday Regional Council. Grease trap wastes (commercial kitchen wastes) are managed by the waste generators. 	<p>Marina Operations Manager</p> <p>Property Operations Manager</p>	Prior to issue of a waste contract
2	<p>When planning new activities or developments, identify likely types and quantities of wastes to be generated and ensure that:</p> <ul style="list-style-type: none"> An appropriate storage area has been provided for A suitable waste management contract is in place Waste minimisation, reuse and recycling opportunities have been maximised (see for example http://www.ehp.qld.gov.au/waste/business/business_waste.html). 	Asset Operations Manager	When planning new activities or development

ECP-08	Waste and Resource Management Plan	Revision 03	Issued: Dec 2016
3	<p>In the event that regulated wastes are generated, contact a waste contractor to arrange removal. Regulated wastes may include:</p> <ul style="list-style-type: none"> Waste oil, oily wastes, for example as generated from maintenance activities Hydrocarbon wastes and materials contaminated with hydrocarbons, for example as generated from cleaning up a spill or leak Sewage, sewage sludge, grease trap wastes and other wastewater contaminated with human or food waste Saline wastes, salt contaminated wastes Tyres. <p>For a full list of trackable wastes, see Schedule 1 of the EP (Waste Management) Regulation 2000 https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/E/EnvProtWaMR00.pdf</p> <p>Ensure waste tracking form is completed for all regulated wastes (see http://www.ehp.qld.gov.au/waste/pdf/managing-wt-qld-overview.pdf for further instructions). The Contractor is to provide the tracking form and the waste generator must:</p> <ul style="list-style-type: none"> Complete parts 1 and 2 Retain the <u>green</u> copy on file for five years (OEMP waste management file) Send the <u>pink</u> copy to DEHP within seven days <p>Further information on waste tracking is available at: http://www.ehp.qld.gov.au/waste/guidelines-information.html</p>	Marina Operations Manager	As required
4	<p>If any unusual, non-routine wastes are generated:</p> <ul style="list-style-type: none"> Check if the waste is regulated/trackable (See item 3 above) Place in a secure, sealed container (a bucket with a lid, heavy duty or double layered plastic bags would be appropriate for small quantities) Clearly label the container with the type of waste contained inside and the date (Contact a waste contractor if advice is required on suitable containment/storage) Provided the waste does not pose a health and safety risk (eg human wastes, bacteria containing wastes, toxic chemicals), place the container in the commercial/retail refuse room If the waste poses a health and safety risk, place the waste in a secure location and prevent access Contact waste contractor and arrange for prompt removal Retain invoice from waste contractor on OEMP waste files. 	Marina Operations Manager Property Operations Manager	As required

ECP-08	Waste and Resource Management Plan	Revision 03	Issued: Dec 2016
5	Retain invoices from waste contractors on OEMP file (Waste management) as a record of waste generation quantities	Marina Operations Manager, Property Operations Manager	As required
Energy, water and material consumption			
6	<p>When selecting new office equipment or other equipment and appliances:</p> <ul style="list-style-type: none"> Only replace equipment and appliances when the item cannot be repaired Select the smallest equipment/appliance for the job (allowing for future growth if necessary) Select a low energy consumption model (http://reg.energyrating.gov.au/comparator/product_types/) For items using water, select a low water consumption mode Purchase from local manufacturers if possible to minimise transport emissions Refer http://www.ccigecobiz.com.au/ for more information 	Asset Operations Manager Property managers	Ongoing
7	<p>The following day to day energy, water and material saving measures are to be adopted:</p> <ul style="list-style-type: none"> Turn off computer screens when away from desks Turn off computers overnight, and if away from desk for more than four hours Turn off lights when leaving rooms empty or where there is sufficient natural light Keep doors and windows closed when air conditioning is on Set air conditioning thermostat at 24°C Discourage printing and maximise use of electronic filing and circulation of documents by email rather than paper files and printed copies Print double sided Do not run dishwashers or washing machines unless full Do not leave taps running while cleaning and dishwashing Turn off TV screens and other display screens when not in use Do not activate irrigation systems if rain has fallen in the past 48 hours and/or soil remains moist See http://www.ccigecobiz.com.au/, http://eex.gov.au/industry-sectors/other-sectors/commercial-and-services/ for additional information 	All staff	At all times

ECP-08	Waste and Resource Management Plan	Revision 03	Issued: Dec 2016
<u>Monitoring and Auditing:</u> <ul style="list-style-type: none"> Weekly checklist (appropriate storage, adequate capacity, prompt removal of wastes, leaking taps/water pipelines) 			
<u>Corrective Action:</u> <ul style="list-style-type: none"> If wastes have been placed outside designated waste storage areas, remove wastes to designated storage areas immediately Update management actions after energy/water/waste audit has been undertaken Fix leaking taps, pipes, hoses. 			
<u>Reporting and Documentation:</u> <ul style="list-style-type: none"> Retain waste tracking forms and waste generation records for 5 years. 			

ECP-9 - Prevention of Water Contamination

ECP-09	Prevention of Water Contamination Management Plan	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Section 2 (Aspects and Impacts) of the OEMP identifies a number of aspects that may lead to water pollution in the marina basin and Boathaven Bay:</p> <ul style="list-style-type: none"> Bilge water discharges from vessels using the marina and boat ramp may contain hydrocarbons (oils and fuel). Note that it is illegal to discharge oily bilge water. Note that management of bilgewater from vessels coming from international locations is discussed in ECP 12 (weed and pest management). Sewage discharges from vessels. Note that it is illegal to discharge treated or untreated sewage from vessels in a marina or enclosed waters Other discharges from vessels using the marina and boat ramp. Note that it is illegal to discharge any pollutants from a vessel. Overland stormwater flow across land within the marina may mobilise contaminants including sediments, litter and oil and grease into stormwater systems and into the marina basin. Note that it is illegal to release contaminants to waters, or to place potential contaminants in a location where the contaminant may reasonably be expected to wash into stormwater drains or waterbodies. Building and infrastructure construction works will require some materials to be stored and used on the site that may be hazardous to the environment. Quantities will be small in most cases. These may include: <ul style="list-style-type: none"> Fuels for refuelling mobile and stationary plant. Lubricating oils, hydraulic oils, solvents, degreasers, detergents for use in maintaining stationary plant and large mobile equipment. <p>Note that this Environmental Control Procedure is intended to manage environmental impacts risks only. It does not address health and safety issues associated with management of hazardous materials.</p> <p>This environmental control procedure focusses on minimising risk associated with release of pollutants. The management approach is based on:</p> <ul style="list-style-type: none"> Reducing the likelihood of releases of contaminants by ensuring that preventative measures are in place Reducing the consequence in the event of a contaminant release by minimising the quantity and toxicity of potential contaminants that might be released. <p>This environmental control procedure does not address water quality impacts from dredging and handling of dredge material. This is addressed in ECP-1A/B and ECP-2.</p> <p>Fuel storage and refuelling activities at Port of Airlie will be the responsibility of Cruise Whitsunday.</p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> <i>Environmental Protection Act 1994.</i> <i>Environmental Protection Regulation 1998.</i> <i>Environmental Protection (Water) Policy 2009</i> <i>Transport Operations (Marine Pollution) Act 1995</i> Australian Standard 1940:2004 The storage and handling of flammable and combustible liquids. 			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> Maintenance of water quality consistent with WQOs for a slightly to moderately disturbed ecosystem (See Table 6.7 in OEMP Section 6) 			

ECP-09 Prevention of Water Contamination Management Plan		Revision 03	Issued: Dec 2016
Management Actions:		Responsibility:	Timing:
1	Ensure that contracts contain conditions in relation to erosion and sediment control, management of hazardous substances and other aspects of water quality protection.	Asset Operations Manager	When issuing contracts
2	Store minimum quantities of hazardous substances necessary on site, for example only store enough fuel for 1-2 days refuelling.	Asset Operations Manager	At all times
3	Hazardous materials to be stored securely so as to avoid tampering or accidental damage or release. Secure storage may consist of location inside a lockable building or compound.	Marina Operations Manager	At all times
4	Ensure that undeveloped areas are stabilised to prevent erosion from overland flow (and wind erosion)	marina Operations Manager	At all times
5	Make every effort to inform vessels using the marina of requirements in relation to release of pollutants from vessels.	Marina Operations Manager	At all times
6	If hazardous materials are present in sufficient quantities, Material Safety Data Sheet (MSDS) to be kept on site for these materials. Check with supplier whether threshold for requiring MSDS has been exceeded. Sign showing location of MSDSs to be posted at storage areas.	Marina Operations Manager	At all times
7	If refuelling is required, refuelling equipment to include: <ul style="list-style-type: none"> Automatic cut off when recipient tank is full. Manual operation only (ie operator must depress handle to pour fuel). 	Marina Operations Manager	At all times
8	Spill response kits to be available at: <ul style="list-style-type: none"> Marina arms Locations where liquid hazardous materials are stored. Locations where refuelling and equipment maintenance taking place. Spill response kits to be suitable for oil/fuel spills to land and water.	Marina Operations Manager	At all times
9	Refuelling procedure (land areas) <ul style="list-style-type: none"> Ensure that well clear of any water bodies and drainage lines. Ensure that spill kit is on hand and contains all necessary items. Place nozzle in tank and commence filling (do not commence filling until nozzle is placed in tank). Monitor filling and stop before tank overflows. In the event of a spill, refer to IRP 3. 	Refuelling operator	At all times when refuelling

ECP-09	Prevention of Water Contamination Management Plan	Revision 03	Issued: Dec 2016
10	<p>Refuelling procedure (over water)</p> <ul style="list-style-type: none"> Only undertake refuelling of barge of dredge in calm conditions. Ensure that spill kit is on hand and contains all necessary items. Ensure that filling point is located over a solid surface (i.e. deck), not over water. Place nozzle in tank and commence filling (do not commence filling until nozzle is placed in tank). Monitor filling and stop before tank overflows. In the event of a spill, refer to IRP 3. 	Refuelling operator	At all times when refuelling
11	Cover hazardous material management topics in toolbox talks as appropriate.	Marina Operations Manager	During Construction
12	Dispose of waste packaging, spilt material, waste oil and any other wastes potentially contaminated with hazardous materials in accordance with ECP-8 (Waste Management).	Marina Operations Manager	During Construction
<p>Monitoring and Auditing:</p> <ul style="list-style-type: none"> Weekly check of hazardous material and waste storage areas and handling procedures (Weekly Checklist, OEMP Form 2) Note that routine water quality monitoring of water in the marina basin and Boathaven Bay is not proposed due to the low risk and significance of water quality impacts If water quality monitoring is required, methods are to follow the latest version of the Queensland Department of Environment and Heritage Protection monitoring and sampling manual http://www.ehp.qld.gov.au/water/monitoring/monitoring_and_sampling_manual.html 			
<p>Corrective Action:</p> <ul style="list-style-type: none"> As identified in weekly checklists and audits. As per incident response procedure (OEMP Section 11) in the event of an incident or suspected incident. 			
<p>Reporting:</p> <ul style="list-style-type: none"> Weekly checklists and audits. Reporting of water quality related incidents as per OEMP Section 12. 			
<p>Cross References:</p> <ul style="list-style-type: none"> ECP 10 Waste management Plan. Section 11 – Incident Response. 			

ECP-11 Cultural Heritage Management Plan

ECP-11 Cultural Heritage Management Plan		Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Port of Airlie lies in the area administered the Gudjura Reference Group (http://www.gudjuda.com/). The Ngaru and Gia people traditionally occupied the area. The Native Title tribunal does not show any native title claim or determination over Port of Airlie.</p> <p>Previous site investigations have not revealed any archaeological evidence for indigenous or non-indigenous cultural heritage issues of any significance within the site or in Boathaven Bay. Prior to construction of Port of Airlie, the coastline had already been extensively modified for road development and other infrastructure.</p> <p>Note that a formal cultural heritage management plan was not prepared for Port of Airlie as the EIS process was initiated before the <i>Aboriginal Cultural Heritage Act 2003</i> was introduced. Under the Duty of Care guidelines, and on the basis of previous surveys and the level of modification of the coastline, it was judged that there was a low likelihood of identifying any items of cultural heritage significance.</p>			
<p>Relevant Legislation:</p> <p><i>Aboriginal Cultural Heritage Act 2003</i> <i>Queensland Heritage Act 1992</i></p>			
<p>Performance Criteria/Outcome:</p> <p>There are no performance indicators in relation to cultural heritage</p>			
Management Actions:		Responsibility:	Timing:
1	In the event that a suspected artefact of Aboriginal or non-indigenous cultural heritage significance is identified, cease activity and isolate the area and contact the Asset Manager	All staff	Ongoing
2	If the item is likely to be non-indigenous, contact Department of Environment and Heritage Protection archaeology@ehp.qld.gov.au or telephone 13 74 68. If the item is likely to be indigenous, contact Gudjuda Reference Group.	Asset Operations Manager	Ongoing.
<p>Monitoring and Auditing:</p> <ul style="list-style-type: none"> None required 			
<p>Corrective Action:</p> <ul style="list-style-type: none"> In the event of a suspected find, take actions as directed by Department of Environment and Heritage Protection and/or Gudjuda reference group. 			
<p>Reporting:</p> <ul style="list-style-type: none"> Depending in the nature of any finds, an incident report may be required. For non-indigenous finds, a reporting form is available here: https://www.ehp.qld.gov.au/heritage/documents/ap-ch-form-reporting-discovery-artefact.doc 			

ECP-12 - Pest Management Plan

ECP-12	Pest Management Plan	Revision 03	Issued: Dec 2016
Overview: Pests may be introduced to Port of Airlie and the surrounding environment through: <ul style="list-style-type: none"> Marine pests in bilge water from vessels entering the marina. The risk is higher for vessels that have come from overseas and Torres Strait, however quarantine requirements should provide an adequate level of control for this risk. Weed seeds and insects such as ants adhered to construction vehicles and equipment Import of fill material or soils that contains pests. 			
Relevant Legislation: Commonwealth <i>Quarantine Act 1908</i> Queensland <i>Land Protection (Pest and Stock Route Management) Act 2002</i>			
Performance Criteria/Outcome: <ul style="list-style-type: none"> No incidents of aquatic pests introduced at Port of Airlie No incidents of new terrestrial weed species at Port of Airlie Weeds in undeveloped areas or landscape areas are removed within one month Rats, mice or feral animals within Port of Airlie are removed within one week 			
Management Actions:		Responsibility:	Timing:
Aquatic Pests			
1	Do not accept international vessels into the marina unless the master can demonstrate clearance by Australian Quarantine and Immigration Service (AQIS). More information on requirements is available at http://www.daff.gov.au/biosecurity/avm/vessels/commercial-vessels/guidelines-under25#7	Marina Operations Manager	On arrival of a new vessel
2	Do not allow international vessels or vessels travelling from the Torres Strait to dispose of wastes in marina waste disposal facilities unless the vessel has been cleared by AQIS.	Marina Operations Manager	On arrival of a new vessel
3	Do not allow international vessels or vessels travelling from Torres Strait to discharge ballast or bilge water unless the vessel has been cleared by AQIS.	Marina Operations Manager	On arrival of a new vessel
4	Do not allow vessels to remove biofouling in the marina (vessels should be slipped so that biofouling can be removed in controlled circumstances)	Marina Operations Manager	On arrival of a new vessel
5	Do not allow heavily biofouled vessels to utilise the marina. If vessels moored at the marina become heavily biofouled, request boat owner to remove biofouling (using a suitable shipyard facility)	Marina Operations Manager	On arrival of a new vessel

ECP-12	Pest Management Plan	Revision 03	Issued: Dec 2016
6	Discourage boats from scraping down hulls or otherwise removing biofouling at the boat ramp	Marina Operations Manager (in conjunction with Whitsunday Regional Council)	On arrival of a new vessel
Terrestrial Pests			
7	Construction plant and equipment entering site to be clean and free of dirt, plant matter or other contaminant sources.	Asset Operations Manager	At all times
8	All soils, fill, landscaping materials and plants brought to Port of Airlie must be certified as free of weeds and pests. A Weed Hygiene Declaration must be provided with any such material brought to site. (http://www.daff.qld.gov.au/plants/weeds-pest-animals-ants/weeds/preventing-weed-spread/legal-requirements/weed-hygiene-declaration)	Marina Operations Manager	At all times
9	Undeveloped areas are to be planted with grass, mulched or otherwise stabilised to prevent weed proliferation	Marina Operations Manager	For any areas to be left bare for more than 3 months
Monitoring and Auditing: <ul style="list-style-type: none"> Weekly checklists For weed identification, see http://www.business.qld.gov.au/industry/agriculture/land-management/health-pests-weeds-diseases/weeds-and-diseases/weed-identification-tool 			
Corrective Action: <ul style="list-style-type: none"> If aquatic pests are suspected or observed: Note circumstances, including vessels that may have introduced the pests Take photos if possible Contact Department of Agriculture, Forestry and Fisheries 13 25 23 as soon as possible If necessary, complete incident investigation (OEMP Form 6, see Section 11). If terrestrial weeds are observed and/or appear to be proliferating: Implement suitable controls, depending on the weed and location. Information on weed control is available here: http://www.business.qld.gov.au/industry/agriculture/land-management/health-pests-weeds-diseases/weeds-and-diseases/controlling-weeds-property. If chemical weed control methods are used, plan carefully to ensure that chemicals do not enter the water or stormwater drains and there are no chemical residues that might be washed off by stormwater Ensure that all parts of weeds are suitably disposed of. Generally, this will involve placing the weeds in a plastic bag and removing to landfill. Weeds must not be mulched or composted. If construction or other contractor plant and equipment is dirty, refer contractor to http://www.daff.qld.gov.au/plants/weeds-pest-animals-ants/weeds/preventing-weed-spread/cleandown 			
Reporting and Documentation: <ul style="list-style-type: none"> Retain copies of weed hygiene declarations for five years (OEMP file - environmental control procedures) Retain details of weed management contracts and outcomes 			

8. Training and Awareness

8.1 General Site Induction

Employees and certain long term contractors of Meridien must undergo an environmental awareness induction within one month of commencement of employment, with refresher training as follows:

- Every two years
- More frequently if there is a significant change to the OEMP.

The environmental awareness induction will take approximately half to one hour and be delivered by the Owner's Environmental Advisor or suitably trained delegate. Delivery by teleconference is acceptable as a training method.

Matters to be covered in the general environmental awareness induction include:

- Introduction to the site
- Project environmental objectives and targets.
- Environmental and community values and sensitivities, including:
 - o The GBRWHA
 - o Protected flora and fauna likely to occur
 - o Seagrass and mangrove habitat;
 - o Surrounding land uses.
- Legal requirements including:
 - o The general environmental duty
 - o Legal requirements in relation to water pollution, noise emissions, notification of environmental harm
 - o Conditions of approvals and permits
- Roles and responsibilities
- Preventing contamination of water
- Waste management
- Incident response and reporting
- Complaint reporting and resolution
- Record keeping and document control.

8.2 Management Training

The Asset Manager, contract superintendents and other nominated senior management will undergo more detailed training covering:

- Requirements of environmental approvals and development permits
- Other legal obligations
- The requirements of the OEMP.

8.3 Contract Specific Environmental Induction - Operational Dredging

Personnel, including staff of Meridien and all contractors will undergo environmental awareness in relation to operational dredging. The environmental awareness training will take 1-2 hours and will be delivered by the Owner's Environmental Advisor.

The training will cover:

- Environmental values and sensitivities including
 - o The GBRWHA
 - o Protected flora and fauna likely to occur
 - o Seagrass and mangrove habitat;
 - o Surrounding land uses.
- Legal requirements including:
 - o The general environmental duty
 - o Conditions of approvals and permits
 - o Legal requirements in relation to water pollution, noise emissions, notification of environmental harm
- The environmental impacts of dredging
- Environmental controls required during the dredging activity including:
 - o Protecting water quality
 - o Water quality monitoring requirements and contingency measures
 - o Management of litter and general housekeeping
 - o Minimisation of noise.
 - o Refuelling procedures and requirements
 - o Waste management
- Access and safety of other vessels using the marina and boat ramp
- Incident prevention and response, including contingencies when monitoring results show non-compliance.
- Complaints.

8.4 Training Register and Records

Copies of training materials must be retained on the OEMP file (training).

Training shall be recorded using OEMP Form 8 or by an email confirming who was trained, and who delivered the training. All training records will be retained on the OEMP file (training).

[illegible]

9. Monitoring and Auditing Requirements

9.1 Summary

Activity	Scope	Frequency	Reference
Water Quality Monitoring	See Table 9-3		
Discharge Monitoring	Tailwater discharge	Continual	Section 9.2
Seagrasses	Seagrass beds adjacent to channel	November 2014 November 2015	Section 9.3
Noise Monitoring	Nearest sensitive receiver	Complaints driven (valid complaint)	Section 9.4 and ECP-3
OEMP Form 1 – Dredging and dredge material handling checklist	All activities specified	Daily when dredging	Section 9.6
OEMP Form 2 - Weekly Site Inspection	All activities specified	Weekly	Section 9.6
OEMP Form 3 – pre-wet season site inspection	All activities specified	November each year	Section 9.6
OEMP Form 4 – post-severe weather event site inspection	All activities specified	As soon as safe to do so after a severe weather event	Section 9.6
OEMP Audit	All active components of OEMP	Every two years (commencing June 2015)	Section 9.8

9.2 Water Quality Monitoring

9.2.1 Potential Impacts

There are no ongoing discharges from Port of Airlie to the marina basin or Boathaven Bay.

Potential sources of pollutant releases to the marina basin and Boathaven Bay during operation of the Port of Airlie are:

- Stormwater discharges during and after rain events, as described in Section 6.8.3.
- Sediment plumes from operational dredging
- Where dredge material is disposed of in the marina basin, sediment plumes from placement of dredge material underwater
- Water discharges from the dredge material disposal pond (D1)
- Hydrocarbons from refuelling areas at the ferry terminal and from fuel stored on vessels using the marina
- Overflows from sewage pump stations in the event of power outages or high levels of wet weather flow.
- Possible leachate from a former landfill on which the recreation centre has been constructed.

The key contaminants of concern in relation to operational management are:

- Turbidity/suspended solids from disturbance of muds and sediment

- Hydrocarbons from fuel storage areas and vessels boats.

It is not expected that non-neutralising potential acid sulphate soils or contaminated sediments will be encountered during the operation phase. However, the environmental authority still contains requirements in relation to testing tailwater for aluminium, iron and tributyl tin.

Sewage discharges from vessels are also not expected as it is illegal to discharge sewage to a marina.

9.2.2 Objectives

The objectives of this monitoring program are to:

- Confirm that water quality management actions are effective in maintaining water quality in the marina basin and Boathaven Bay
- Detect and manage compliance with environmental authority and development approval conditions during activities such as dredging.

9.2.3 Approach

During day to day operations there is no requirement to undertake routine water quality monitoring.

During operational dredging, or significant development works with potential to mobilise sediments to the marine environment, water quality monitoring should be undertaken to check compliance with development approval and environmental authority conditions.

9.2.4 Baseline Data

Baseline water quality is discussed in Section 6.8.

9.2.5 Water Quality Sampling Locations

Water quality sampling locations for dredging and dredge material management impacts are shown in Table 9-1 and on Figure 9-1. Note that location SW1 shown on Figure 9-1 is no longer used as it was within the footprint of reclaimed land and location D2 refers to a temporary discharge location that was used during construction only.

Table 9-1 Water Quality Monitoring Locations

Reference	Description	Key Habitat	Coordinates (approx) Zone 55
SW2	Campbell's Creek estuary	Possible water mouse (upper tidal limits of estuary)	E 680899 N 7757549
SW3	Edge of intertidal mudflats near mouth of Campbell's Creek (east side of bay)	Seagrass	E 680685 N 7757851
SW4	Off Mandalay Point	Rocky and coral reefs	E 680975 N 7758517
SW5	Along the proposed access channel (~500 m from shore)	Seagrass	E 680442 N 7758510
SW6	1,000 m from shore in line with the	Seagrass	E 680438

Reference	Description	Key Habitat	Coordinates (approx) Zone 55
	access channel		N 7759009
D1	Dredge material handling area – outlet point Grab samples to be taken from just inside the pond, adjacent to the outlet point	All	E 680223 N 7757318
NA	100 metres down-current on the outgoing tide of any works or release area when dredging or disposing of dredge material in open waters	All	As per dredging location
Marina entrance	The entrance to the marina basin	All	NA – can be established visually



Figure 9-1 – Water Quality Monitoring Locations

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 148

9.2.6 Water Quality Limits

9.2.6.1 Receiving Water Quality Limits – Dredging and Other Marine Based Activities

During dredging activities and other marine based activities with potential to disturb the sea bed, water quality limits are set in the environmental authority EPPR00332613. This includes dumping of dredge material in the marina basin.

For each of the limits set:

- The impact site is 100m down-current of the dredging activity, dredge material disposal location or other activity that might be causing a sediment plume or, when dredging or placing spoil in the marina basin, at the entrance to the marina
- The background location is:
 - o When dredging in the channel or ferry basin 50m up-current of the dredging activity, dredge material disposal location or other activity that might be causing a sediment plume.
 - o When dredging or placing spoil in the marina basin, location SW5.
- No more than 30 minutes can elapse between monitoring at the impact and background locations
- Monitoring should be undertaken on an outgoing tide.

Reference should be made to Schedule 1C of the Environmental Authority.

Turbidity

The following limits apply to a location 100m down-current of any dredging works in the channel or ferry basin on the outgoing tide:

- When dredging north of the end of the breakwater (northing 7758066 (Zone 55)), turbidity is not to exceed 5NTU greater than a background value taken 50m up-current
- When dredging adjacent to and south of the breakwater ((northing 7758066 (Zone 55))), turbidity is not to exceed the greater of:
 - 22.5 NTU
 - 110% of a background value.

When dredging in the marina basin, turbidity is not to exceed the greater of:

- 22.5 NTU
- 110% of a background value.

Measurements must be taken on the outgoing tide, with no more than 30 minutes between the up-current and background measurements.

In addition, when dredging or placing material in the marina basin, there must be no visible plume exiting the marina basin.

Suspended Solids

Must not exceed 10% greater than a background value.

Dissolved Oxygen

Dissolved oxygen limits at the impact site are:

- Upper 110%.
- Lower 90%.
- While these limits are not set relative to a background level, baseline monitoring indicates that dissolved oxygen can fall below 90%, and hence, background conditions will also be considered when monitoring compliance with these limits.

pH

pH limits at the impact site are set as:

- Within the range of 6.5 to 9.0 when background pH is also within this range
- Within 0.2 pH units of the background level if pH at the background location is outside the range of 6.5 to 9.0.

Note that if the pH at the impact site there is no need to compare to the background pH if the monitored water pH is within the range of 6.5 to 9.0.

9.2.6.2 Limits for Discharge Water Quality (D1)

When discharging from the dredge material handling area (designated as D1 in the environmental authority), the environmental authority sets absolute limits for the quality of the discharge water but also allows some variation if background water levels are outside the normal ranges.

Continuous monitoring of discharges for turbidity, pH and dissolved oxygen is required. Weekly sampling for suspended solids and metals is required.

Turbidity

- Turbidity must not exceed 22.5 NTU
- When turbidity reaches 20 NTU, preparations must be made to cease discharge if levels rise to 22.5 NTU

Dissolved Oxygen

- Dissolved oxygen must remain in the range of 90% to 110%

Suspended Solids

Must not exceed 10% greater than a background value from SW2 or SW3.

pH

pH of the discharge must remain:

- Within the range of 6.5 to 9.0 when background pH is also within this range
- Within 0.2 pH units of the background level if pH at the background location is outside the range of 6.5 to 9.0.

Metals

Table 9-2 Trigger and Limit Levels

Parameter	pH range	Limit
Aluminium	Less than 6.5	5 µg/L
Aluminium	Greater than 6.5	100 µg/L
Total iron (Fe ²⁺ , Fe ³⁺)	Any	1,000 µg/L
Ferrous iron (Fe ²⁺)	Any	300 µg/L
Tributyl Tin	0.008	0.008 µg/L

9.2.7 Monitoring Schedule

Monitoring schedule for each of the locations is set out in Table 9-3. Monitoring is only required in relation to dredging and releases from the dredge material handling area.

Table 9-3 – Monitoring Schedule – Water Quality

Location ⁴	Parameters	Method ⁵	Frequency
D1 – discharge point from dredge material handling area	pH Turbidity Dissolved oxygen Electrical conductivity	Permanent water quality meter with data logger and notification alarms	Continuous 24 hour monitoring while discharging
D1 – discharge point from dredge material handling area	Suspended solids Aluminium Total iron Ferrous iron Tributyl tin	Grab sample from inside the pond at the discharge point– laboratory supplied containers	Weekly when discharge has occurred in the past week
50m up-current of dredging activity 100m down-current of dredging activity	pH Turbidity Dissolved oxygen Electrical conductivity	Hand held water quality meters No more than 30 minutes between up-current and down-current samples	Daily, on outgoing tide when dredging
50m up-current of dredging activity 100m down-current of dredging activity	Suspended solids	Grab sample – laboratory supplied containers No more than 30 minutes between up-current and down-current samples	Weekly when dredging
Locations, SW3, SW4, SW5, SW6 ⁶	pH Turbidity	Hand held water quality meters	Daily when dredging or discharging from the dredge spoil disposal

⁴ See Table 9-1 and Figure 9-1

⁵ See section 9.2.8 for details on monitoring methods

Location ⁴	Parameters	Method ⁵	Frequency
(see Figure 9-1).	Dissolved oxygen		pond
	Electrical conductivity		
	Suspended Solids	Grab sample – laboratory supplied containers	Daily ⁷ when dredging or discharging from the dredge spoil disposal pond
Site-wide (during dredging)	Estimated rainfall in previous 24 hours	Written observations (record on daily checklist)	For each monitoring event
	Wind direction and speed (Beaufort scale)		
	Wave height		
	Cloud cover		

9.2.8 Monitoring Methods

Sampling to be carried out in accordance with the protocols provided in the latest edition of the Queensland Department of Environment and Heritage protection Monitoring and Sampling Manual. In 2014, the latest edition is <http://www.ehp.qld.gov.au/water/pdf/monitoring-man-2009-v2.pdf>.

For physico-chemical sampling up and down current of the dredging activity, and at SW3, SW4, SW5, SW6:

- Refer Section 3.6.1 and 3.6.2 of the DEHP Monitoring and Sampling Manual
- The probe should be lowered until it is completely covered by water, with 20-30cm of water over the top of the probe
- The bottom of the probe should be at least 50cm from the bottom
- In waters less than 1m deep, the base of the probe should be midway between the surface and the bottom.

For physico- chemical sampling of discharges at D1:

- The probes should be fixed in position such that the entire probe is immersed in the water at or immediately prior to the discharge location.
- In very low flows, a clean bucket may be used to collect samples for testing from the flows, however note that environmental authority conditions also require continuous monitoring of any discharge.

For collection of samples for laboratory testing, particular reference should be made to the following sections of the DEHP Monitoring and Sampling Manual:

- Section 3.1.1 in relation to using intermediate containers to collect samples for decanting into sample bottles
- Section 3.1.3 in relation to field filtration (if required)
- Section 3.2 in relation to labelling

⁶ Access to locations SW5 and SW6 dependent on weather conditions. Health and safety requirements should prevail in poor weather conditions.

⁷ This appears to be an error in the EA EPPR00332613, however until the EA is amended, daily sampling must continue

- Section 3.5.1 in relation to collection and labelling of samples (note also chain of custody requirements; laboratory should supply a chain of custody form)
- Appendix C8 in relation to sample preservation (seek advice from laboratory as well).

Note also safety requirements in relation to laboratory supplied sample bottles containing nitric acid. Gloves and safety glasses should be worn when handling these bottles.

9.2.9 Calibration

Calibration of water quality monitoring equipment is to be carried out weekly or otherwise as per manufacturer's instructions. The date, time and result of calibration must be recorded.

9.2.10 Data Recording and Review

Daily water quality monitoring data is to be recorded on OEMP Form 12 – daily water quality monitoring data record sheet and then entered into an excel spreadsheet database or similar. Laboratory results are also to be entered into the excel spreadsheet. The original water quality data sheets are to be scanned and retained on site electronic files in perpetuity.

Calibration records are also to be retained in Port of Airlie OEMP file (monitoring).

The daily checklist for Dredging and Dredge Material Handling (OEMP Form 1) includes weather observations and checking of compliance against performance criteria in ECP-1A/B (dredging) and ECP-2 (dredge material management pond) and will trigger review of monitoring results by the environmental advisor or delegate.

In addition, data should be reviewed by the owner's environmental advisor on a weekly basis to check for any trends.

Where non-compliance is detected, corrective actions are set out in ECP-1A/B, ECP2 and Section 10. Reporting requirements are set out in Section 12.1.1.

OEMP Form 12		Daily Water Quality Monitoring Data Record Sheet			
Name: _____		Date: ____/____/____		High tide: _____ Low Tide: _____	
Wave height (inside marina) _____m			Wave height (outside marina) _____m		
Approximate rainfall in past 24 hours _____mm				Wind direction: _____	
Dredge material disposal: Underwater Disposal / Dredge Material Handling Area (delete as applicable)					
Dredging location: Within marina basin / Ferry terminal basin / inner channel / outer channel (delete as applicable)					
WATER QUALITY MONITORING RESULTS:					
Location	GPS Waypoint	Time	Turbidity (NTU)	pH	Dissolved Oxygen (% sat)
SW2					

OEMP Form 12		Daily Water Quality Monitoring Data Record Sheet			
SW3					
SW4					
SW5					
SW6					
50m up-current					
100m down-current					
Marina entrance					
<p>Is the down-current reading in compliance? YES/NO</p> <ul style="list-style-type: none"> Dissolved oxygen is between 90% and 110% Turbidity is no more than 110% of up-current reading (eg, if up-current reading = 5 NTU, down-current reading is no more than 5.5 NTU) pH is no more than 9.0 and no less than 6.5 <p>If NO, refer to contract superintendent or environmental advisor immediately</p>					
Visible plume exiting marina? YES/NO					
<p>Silt curtain inspected for trapped animals? YES/NO</p> <p>If YES, contact RSPCA Qld 1300 ANIMAL (1300 264 625), see also ECP 5.</p>					
<p>Equipment used (make and model): _____</p> <p>Date of last calibration: ____/____/____</p>					
<p>Water samples taken for laboratory testing? (refer Table 9-3 for requirements) YES/NO</p> <p>Chain of Custody form on file: YES/NO</p> <p>Courier reference (Name, number) _____</p>					
<p>Observations:</p>					

OEMP Form 12		Daily Water Quality Monitoring Data Record Sheet	
<p>(Was this monitoring undertaken as a follow up for any non-compliant results? Record any unusual activities or incidents in the vicinity of the marina, marine fauna sightings, additional weather information, whether safety considerations prevented monitoring at any location)</p>			
<p>Results entered into water quality monitoring spreadsheet YES/NO</p>			
<p>Further action required:</p>			
<p>Completed By:</p> <p>Name:</p> <p>Position:</p> <p>Signature:</p>		<p>Date:</p> <p>Distribution:</p> <p>Original → Contract Superintendent → scan to OEMP file (monitoring)</p> <p>Copy 1 → Owner's Environmental Adviser (Daily)</p>	
<p>Approved by:</p> <p>Name:</p> <p>Position:</p> <p>Signature:</p>		<p>Date:</p> <p>This form can only be completed by a suitably qualified person nominated in writing by the environmental advisor</p> <p>This form can only be approved by the environmental advisor or other suitably qualified person nominated in writing by the environmental advisor</p>	

9.3 Seagrass Monitoring Program

Note that the final seagrass monitoring event was completed in November 2015 and as no adverse impacts relating to construction had been observed, no further monitoring is required. The following information has been retained for information and to record previous monitoring events.

9.3.1 Background

The objectives of the seagrass monitoring program are to:

- To provide a means to detect changes in seagrass distribution and characteristics and whether these may be attributable to the Port of Airlie construction program.
- To identify the need for corrective actions in the event that adverse impacts on seagrasses are observed and appear attributable in whole or part to Port of Airlie construction activities.

- To generate data that may be of assistance to resource managers and decision makers in better understanding both short and long term impacts of dredging and coastal development projects on seagrass ecosystems.

9.3.2 Potential Impacts

During operation, seagrasses may be impacted indirectly through water quality changes, and particularly where suspended solids are generated which may in turn reduce light penetration to seagrasses or settle on seagrasses causing smothering. During normal marina operations, there is very little potential for sediment plumes to be generated. Operational dredging and management of dredge spoil may result in generation of sediment laden plumes.

Other factors influencing seagrass health in Boathaven Bay that are likely to be ongoing during operation, including:

- Existing and proposed urban and commercial development in the catchment, with stormwater discharges to Boathaven Bay via Campbell's Creek and directly via stormwater drains (see Section 6.8.3).
- Disturbance to seagrass beds by mooring chains of boats moored in the mouth of Boathaven Bay.
- Wave action may resuspend sediments in shallow inshore areas. In severe storms, sediments may be significantly reworked and this may directly affect shallow and intertidal seagrass beds
- High rainfall (and hence freshwater inputs) and high temperatures may impact on seagrass distribution and health.

These factors may need to be taken into consideration when interpreting impacts of Port of Airlie on Boathaven Bay. These or other activities with potential to impact on seagrass distribution and health in Boathaven Bay will be recorded at the time of each monitoring event to ensure that such additional impacts are taken into consideration when reviewing monitoring data.

9.3.3 Baseline Data

Baseline data collected prior to commencement of construction of Port of Airlie is as follows:

- Seagrass mapping in the Whitsunday's undertaken by DPI&F in 1987 and 1999/2000.
- Assessments undertaken for EIS's on previous developments proposed in Boathaven Bay in 1988 and 1998.
- Monitoring activities of effects of sewage outfalls on seagrass distribution undertaken by FRC Environmental on behalf of Whitsunday Shire Council from 1998 onwards.
- Seagrass assessment undertaken in August/September 2002 for the SEIS (SKM, November 2004).
- Seagrass mapping of Boathaven Bay undertaken by FRC Environmental in August 2003.
- A further detailed baseline study was also undertaken in November 2004 by GHD.

9.3.4 Monitoring Program

The seagrass monitoring program was developed in conjunction with the then Department of Primary Industries and Fisheries (Queensland) and the then Commonwealth Department of the Environment and Heritage to address monitoring of construction related impacts on seagrass beds in Boathaven Bay. The program focusses on four monitoring methods:

- Depth distribution transects which record the upper and lower depth limit of each species and changes in community composition and morphology with depth. This can be used to identify whether any changes in light availability that may occur during construction or dredging correlate with any changes in seagrass distribution. Transect locations are shown on Figure 9-2.
- Impact gradient transects established perpendicular to the navigation access channel, roughly following depth contours. These transects focus specifically on impacts of channel dredging by allowing identification of changes in seagrass composition, morphology and biomass that may correspond to impacts associated with channel dredging. Transect locations are shown on Figure 9-2.
- Mapping of seagrass throughout Boathaven Bay to identify overall changes in the area and location of seagrass in Boathaven Bay.
- Video footage of some transects where visibility allows.



Figure 9-2 Transect Locations

As seagrass cover and distribution can vary significantly on a seasonal and inter-annual basis, it is necessary to incorporate controls into any monitoring program. The depth distribution transects and impact gradient transects within Boathaven Bay allow direct comparison of seagrass adjacent to and distant from the impact zone. In addition, a control site was selected in Charlies Bay (Figure 9-3).

Further information on monitoring methods is provided below.



Figure 9-3 Seagrass Monitoring Impact Site and Control Site

Depth Distribution Transects

In Boathaven Bay three seagrass depth distribution transects have been established parallel to the navigation access channel, stretching from the most inshore seagrass to the most offshore. In Charlies Bay similar transects will also be established. The position of each transect and its bearing will be recorded using GPS.

Along these transects the depth distribution of seagrass will be recorded. The sampling along the depth distribution transects is essentially a continuous record with data points collected each time a change of more than 20% in species abundance or composition is observed.

Depth range monitoring will be undertaken in accordance with ANZECC/ARMCANZ Guidelines (ANZECC & ARMCANZ 2000). The inshore position of each site will be recorded using GPS. The bearing across the seagrass bed will then also be recorded. The upper and lower depth limit of each species, and marked changes in community composition/morphology will be recorded. Densities below 1 shoot per 4 m² will be used to define the edge of seagrass beds. At each position the time, secchi depth, species composition, over all percent cover, percent cover of each species, epiphyte cover and overall biomass will also be recorded. Depth will be recorded using a leadline or staff and converted to standard datum.

Impact Gradient Transects

In addition, three impact gradient transects will be established approximately perpendicular to the navigation access channel, following depth contours. These transects are divided into zones, with two 25 m long zones

immediately adjacent to the proposed channel alignment, two 50 m zones further out (east and west of the channel), and two 50 m zones distant from the potential impact (again, east and west of the channel). The positions of each transect and its bearing, and the position of the zones will be recorded using GPS. There are no impact gradient transects in Charlies Bay.

Each zone is randomly sampled with community composition, leaf morphology and biomass recorded within 0.25 m² quadrats and for the bed overall at that point. Biomass is estimated with a modified version of the 'Mellor's method'. At least 5 seagrass dry weight samples will be collected from each community type, each day the estimates are taken. Community type will be based on species composition and morphology. The Mellor's method will be modified so that rather than using a single scale to estimate the biomass of all species, the seagrasses encountered are characterised by species morphotype and a separate scale applied to each. This modification improves the accuracy of the results obtained.

In the initial surveys, data will be recorded from 20 quadrats within each zone. Power analysis will then be undertaken to determine how many quadrats are needed for an agreed effect size and power. Power of 0.8 with a 20% effect size is desirable, however if this level of effect size is too time consuming and expensive a compromise level may be appropriate.

Samples will also be collected from at least two locations for each community type in the control bay and analysed in the same way as along the 'impact-gradient' transects in Boathaven Bay.

Data will be analysed using Analysis of Variance comparing parameters between zones on each transect and with the control bays.

Mapping

The distribution of seagrass in the bay will be remapped each year to determine if the area of seagrass has moved or the total area changed. Natural movement in the bed location may appear as a loss of seagrass if only a fixed transect monitoring method is used. The distribution of seagrass in the bay was mapped in August 2003 using GPS, diver tows, spot dives and walking over the intertidal area at low tide (FRC Environmental August 2003). The area of seagrass in the bay is remapped every year in late spring using the same methods. The mapping will be of both dense and sparse (<10% cover) beds important to dugong.

Mapping will include presence and absence of seagrass and, where present, species abundance and biomass will be recorded.

The aerial extent of seagrass mapping will be the whole width of Boathaven Bay (up to 1,000 m) and extending seawards for approximately 2,000 m or until shoot densities show less than 1% cover, whichever is the lesser.

Video Footage

Ideally, video footage will be collected for 50% of all transects, although this may not be possible in poor visibility conditions. The same sections of each transect will be videotaped each monitoring event.

Video footage will be referenced by date and GPS coordinates and submitted to DPI&F with each monitoring report.

9.3.5 Monitoring Schedule

Seagrass monitoring events are shown in Table 9-4.

Table 9-4 – Seagrass Monitoring Events

Event	Timing	Type	Scope – Boathaven Bay	Scope – Charlies Bay
1	August 2003	Baseline	Mapping	None
2	November 2004 (FRC Environmental)	Baseline	Mapping Depth Distribution Impact Gradient Video	Depth Distribution Biomass
3	November 2005 (GHD)	Follow up – Prior to Construction works	Mapping Depth Distribution Impact Gradient Video	Depth Distribution Biomass
4	November 2007 GHD, 2008a. Report for Port of Airlie, Seagrass Monitoring, Pre-Dredge Survey- November 2007. Author: CTPI 49-5 GHD, Mackay.	Annual following construction start Pre-dredging	Depth distribution Impact gradient	Depth Distribution Biomass
5	June 2008 GHD, 2008b. Report for Port of Airlie, Seagrass Monitoring, Dredging Survey-June 2008. Author: CTPI 49-5 GHD, Mackay.	Dredging	Depth distribution Impact gradient	Depth Distribution Biomass
6	November 2008 GHD, 2008c. Report for Port of Airlie, Seagrass Monitoring, Post-Dredge Survey- November 2008. Author: CTPI 49-5 GHD, Mackay.	Post-dredging Annual	Mapping Depth distribution Impact gradient Video	Depth distribution Biomass
7	July 2012 Biosis Research (2012). Port of Airlie Seagrass Monitoring, Post-Dredge Survey, July 2012. Report for Risk Strategies. Author: CTPI 49-Sch4 Biosis Research Pty. Ltd., Melbourne.	Post construction	Mapping Depth Distribution Impact gradient if dredging related impacts continue post-dredging Video	Depth distribution Biomass if impact gradient is being undertaken
8	November 2014 FRC Environmental, March 2015, Port of Airlie 2014 Seagrass Monitoring Report N	Post construction II	Mapping Depth Distribution Impact gradient if dredging related impacts continue post-dredging Video	Depth distribution Biomass if impact gradient is being undertaken
9	November 2015 FRC Environmental, February 2016, Port of Airlie 2015 Seagrass	Post construction III	Mapping Depth Distribution Impact gradient if dredging	Depth distribution Biomass if impact gradient is being undertaken

Event	Timing	Type	Scope – Boathaven Bay	Scope – Charlies Bay
	Monitoring Report		related impacts continue post-dredging	
			Video	

9.3.6 Other Requirements

Seagrass monitoring is to be undertaken under the direct supervision of individual(s) with the following characteristics:

- Tertiary level qualifications in marine biology.
- Significant professional experience in seagrass monitoring, research and reporting, preferably in tropical Australian conditions.

A permit must be obtained from DPI&F for monitoring events and monitoring must be in accordance with this permit.

In addition, any persons undertaking diving in relation to this work must have appropriate commercial dive certification and first aid certificates and work in accordance with a dive operations safety plan.

9.3.7 Data Review and Reporting

Monitoring reports are to be reviewed by Owner's Environmental Advisor and approved by the Asset Manager. Where adverse impacts have been detected and are attributable to Port of Airlie, corrective action may be required (see Section 9.3.8).

Reports and data are also to be forwarded to Department of Primary Industries, Fisheries (Northern Fisheries Centre) and Federal Department of the Environment.

Reports, correspondence and other relevant records are to be kept on the OEMP file (monitoring).

9.3.8 Corrective Action

Due to the significant natural variation in seagrass distribution, abundance and other characteristics, it is not possible to set actual trigger levels for corrective action. Corrective action should be triggered where, in the professional opinion of the scientific team undertaking the monitoring, adverse impacts appear reasonably likely to have occurred as a result of construction activities at Port of Airlie. Where doubt exists, a suitably qualified and experienced third party reviewer may be called in to assist with interpretation of data.

In the event that a reduction in seagrass distribution or adverse impacts on seagrass health are observed, the following matters will be considered to assist in interpreting the results and identifying whether they are directly attributable to Port of Airlie activities:

- Establish whether the effects are likely to be the result of natural variations in seagrass distribution and characteristics by comparison with results from control site (Charlies Bay), control sites with Boathaven Bay, Seagrass Watch data and meteorological data.
- Review other factors that may be affecting seagrass distribution and characteristics in Boathaven Bay, including unusually wet weather, hot temperatures or activities in the catchment that may have led to increased turbidity in the waters of Boathaven Bay.
- Review activities that have been carried out at Port of Airlie to identify whether any activities could have caused impacts on seagrasses. If dredging or handling of dredge material has been undertaken, review water quality monitoring results.

- Review incident records to determine if any incidents have occurred at Port of Airlie that may have impacted on seagrasses

Seagrass ecosystems are naturally resilient and can typically recover from disturbance within a season, provided that rootstock is not significantly disturbed and that the overall physical and chemical habitat conditions are not significantly altered in the long term. In the event that reduced distribution of seagrasses or other changes in seagrass characteristics appear to be linked to activities or incidents at Port of Airlie the following levels of action will be implemented:

- Schedule follow up monitoring within 2-3 months to identify whether impacts are continuing or whether seagrasses are recovering naturally. Note that seasonal changes may occur in this time period, affecting the ability to compare results, however the use of control sites should assist with detecting whether recovery has occurred or not.
- Review and amend OEMP to increase the level of control if there is a link between activities, incidents and seagrass health.
- In the longer term, seagrass restoration programs may be considered if post construction monitoring events indicate that seagrasses are not recovering naturally within three years of construction, and that this is not due to natural conditions (for example very wet weather) or ongoing catchment based impacts.

9.3.9 References

CTPI 49-Sch4 1994, 'Physiological and morphological responses of the seagrass *Zostera capricorni* Aschers. to light intensity', *Journal of Experimental Marine Biology and Ecology*, 178:113-29.

ANZECC & ARMCANZ 2000, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, National Water Quality Management Strategy, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand.

Biosis Research (2012). *Port of Airlie Seagrass Monitoring, Post-Dredge Survey, July 2012*. Report for Risk Strategies. Author: CTPI 49-Sch4 Biosis Research Pty. Ltd., Melbourne.

CTPI 49-Sch4 2002, *Seagrass Resources in the Whitsunday Region 1999 and 2000*, Information Series Q102043, Queensland Department of Primary Industries, Brisbane.

CTPI 49-Sch4 1987, Seagrass beds and juvenile prawn nursery grounds between Bowen and Water Park Point, Q187021, Information series, Queensland Department of Primary Industry.

CTPI 49-Sch4 1995a, A preliminary assessment of water quality and marine benthic flora in the region of Pioneer Bay, Airlie Beach, February 1995, A report to Sinclair Knight Merz.

CTPI 49-Sch4 1995b, An assessment of nutrient bioindicators using marine plants in the region of Pioneer Bay, Airlie Beach, May 1995, A report to Sinclair Knight Merz.

CTPI 49-Sch4 1995c, Using marine plants as nutrient bioindicators in the region of Pioneer Bay, Airlie Beach, Queensland, Dry season sampling September, 1995, A report to Sinclair Knight Merz.

CTPI 49-Sch4 1996, A report on water quality and the impact of effluent discharge into the region of Pioneer Bay, Airlie Beach, Queensland, Summary and recommendations, A report to Sinclair Knight Merz.

CTPI 49-Sch4

CTPI 1998, Task BFND: Benthic flora nutrient dynamics, Phase II Final Report, Report prepared for the Brisbane River & Moreton Bay Wastewater Management Study, (BR&MBWMS), and Marine Botany, The University of Queensland, and Southern Cross University.

FRC Environmental 2003a, *Distribution of Seagrass within Boathaven Bay, August 2003*, unpublished report to Windward AB Pty Ltd.

FRC Environmental 2003b, *Pioneer Bay Environmental Monitoring Program Tenth Monitoring Event April 2003*.

GHD, 2008a. *Report for Port of Airlie, Seagrass Monitoring, Pre-Dredge Survey- November 2007*. Author: CTPI 49-S, GHD, Mackay.

GHD, 2008b. *Report for Port of Airlie, Seagrass Monitoring, Dredging Survey-June 2008*. Author: CTPI 49-S, GHD, Mackay.

GHD, 2008c. *Report for Port of Airlie, Seagrass Monitoring, Post-Dredge Survey- November 2008*. Author: CTPI 49-S, GHD, Mackay.

9.4 Noise Monitoring

9.4.1 Overview

Operational activities that have potential to generate noise are identified in Section 2 – Aspects and Impacts. Day to day noise controls are not required, however certain development activities may require noise control. This is covered in ECP-3.

9.4.2 Noise Limits and Guidelines

Noise limits set out in the environmental authority for construction related activity are as follows:

- Allowable noise level ($L_{Aeq, 15 \text{ Min}}$) 75 dB.

While these limits were strictly developed to apply to the marina construction phase, the limits may be considered to apply to building construction works, operational dredging and other development works. The limit set is relatively high and every effort should be made to keep noise to a minimum.

- The environmental authority also limits construction hours to Monday to Saturday 7 am to 6 pm.
- Other acoustic quality values and limits are set out in Section 6.11.

9.4.3 Complaints Monitoring

In the event of a noise-related complaint, it may be necessary to conduct an investigation into the complaint, and undertake noise monitoring. In the event of a valid noise complaint, noise monitoring shall performed at the location of the complaint (or a representative location) in order to assist with the investigation and resolution of noise issues and in the development of appropriate control measures.

Monitoring in relation to complaints shall include:

- $L_{AMAX, \text{adj}, 15 \text{ min}}$

- L_{Aeq} adj, 15 min
- L_{AMAX} peak, 15 min
- L_{A10} , 15 min
- L_{A90} , 15 min

Monitoring in relation to complaints may consist of:

- Visual inspection of Port of Airlie and surrounding areas to ascertain what activities may be being undertaken
- Discussion with Meridien staff and Port of Airlie tenants regarding whether any unusual or non-routine activities were being carried out at the time of the complaint.
- Unattended monitoring for a minimum period of one day, during which time, noise generating activities shall continue as normal.
- Attended monitoring at the representative monitoring site throughout the monitoring period in order to assist with the identification of the main noise sources potentially requiring additional controls or management to minimise emissions.
- Recording of weather conditions, including wind speed and direction, cloud cover
- Obtaining a relevant background sound level. As recent baseline noise data is not available, it may be necessary to select a representative baseline location, having regard to proximity to Shute Harbour Road and the commercial centre of Airlie Beach.

9.4.4 Corrective Actions

In the event that noise levels exceed conditions set out in the environmental authority, or the acoustic quality objectives, corrective actions may include:

- Ceasing the noise generating activity
- Modifying the noise generating activity to reduce noise emissions
- Limiting the time of day that the noise generating activity takes place
- Relocating the noise generating activity further away from sensitive receptors
- Providing an acoustic screen between the noise generating activity and sensitive receptors.

A corrective action request should be used to initiate any of these actions (Section 10, Form 5).

9.5 Environmental Management Plan Audits and Review

9.5.1 General Environmental Management Audits

Environmental audits will be undertaken every two years, or more frequently as required to:

- Confirm that aspects and impacts have been correctly identified
- Assess compliance with legislative requirements, development permits and environmental approvals.
- Identify opportunities for improvement in the identification and management of environmental issues and impacts.
- Confirm the effectiveness of the OEMP in meeting compliance requirements and effectively managing environmental aspects and impacts

- Ensure that recommendations of previous audits are being implemented.

Audits will be conducted by the owner's environmental adviser or other suitably qualified and experienced environmental professional.

Audits will rank performance as follows:

- Major non-compliance:
 - o Non compliance with any legislative requirement
 - o Non-compliance with condition of approval or other statutory obligation which is likely to attract a fine or other penalty under relevant legislation
- Minor non-compliance:
 - o Non-compliance with approval condition that is of a procedural nature and where it is unlikely that a fine or other penalty would be imposed
 - o Non-compliance with any relevant aspect of this OEMP
- Improvement opportunity:
 - o Opportunities for improvement in environmental performance
 - o Opportunities to reduce environmental impact or risk of impact.

General audits will be undertaken every second year as a minimum. More frequent audits may be undertaken in the following circumstances:

- Where serious incidents or non-compliance occurs
- If large numbers of incidents, near misses, corrective actions or complaints have been occurred.
- As required to meet due diligence requirements of site managers.

Audit reports will be prepared within 2 weeks of completion of the audit and will include recommendations for improvement, which are prioritised according to the level of risk identified. Audit reports will be distributed to:

- Receivers and managers
- Asset manager.

All non-compliances and improvement opportunities will be entered onto the corrective action register (see OEMP Section 10).

9.5.2 Annual Review

The OEMP is to be reviewed annually. The procedure for annual review is set out in corrective action procedure CAP-2 (OEMP Section 10.5).

9.6 General Checklists

The following checklists are used to monitor and record environmental performance, including checking that preventative measures are in place and detecting potential issues and incidents before any environmental harm occurs.

Checklists have been developed as follows:

- A daily checklist to be used while undertaking operational dredging and/or management and disposal of dredge spoil (OEMP Form 1)
- A weekly checklist for general marina management (OEMP Form 2)
- A pre-wet season checklist to be used to check preparedness for each oncoming wet season (OEMP Form 3)
- A post severe weather event checklist (OEMP Form 4).

Where actions arising from the inspection can be addressed within 24 hours, close out of actions can be recorded on the checklist. Where actions cannot be immediately resolved, the correction action procedure in Section 10 will need to be implemented.

Responsibilities for completion of checklists are as follows:

- OEMP Form 1 - dredging contract superintendent
- OEMP Form 2, 3 and 4 – Asset Operations Manager, Marina Operations Manager

Responsibilities may be delegated. Delegation must be recorded in writing on the OEMP file (roles and responsibilities).

Completed checklists should be scanned and filed electronically.

9.6.1 Daily checklist – Dredging and Dredge Material Handling

OEMP Form 1	Daily Checklist – Dredging and Dredge Material Handling				
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
Pumping equipment and lines	<ul style="list-style-type: none"> Pumping equipment and pipes are securely fastened For discharge to the marina basin, the outlet is flush with the seabed 				
Water quality down-current of any dredging or dumping activity	<ul style="list-style-type: none"> Water quality limits in Section 9.2.6 of OEMP are met (refer also to ECP-1A/B) Silt curtains are available and ready for deployment 				
Tailwater discharge from D1	<ul style="list-style-type: none"> Turbidity and pH metre operating continuously, and alarms set and operational If discharges have occurred, discharges are compliant with discharge limits in 9.2.6.4 (refer also to ECP-2) No scouring at discharge point At least 0.5m freeboard in pond No visible oil, scum or litter Weekly sample taken 				
WQ data	<ul style="list-style-type: none"> Data recorded in excel spreadsheet 				
Integrity of dredge material disposal pond	<ul style="list-style-type: none"> No obvious leaks No obvious damage No incidents involving equipment that 				

CONTROLLED DOCUMENT

Contact CTPI 49@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 167

OEMP Form 1	Daily Checklist – Dredging and Dredge Material Handling				
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
	might have damaged walls				
Navigational access	<ul style="list-style-type: none"> Dredging equipment is not blocking passage along the navigational access channel or entry into the marina 				
Waste and litter	<ul style="list-style-type: none"> No litter observed on land or water Any waste generated has been removed to the waste storage area or taken away by an authorised contractor 				
Hydrocarbons	<ul style="list-style-type: none"> No fuel or oil stored on vessels No fuel or oil leaks or staining 				
Silt curtain	<ul style="list-style-type: none"> Silt curtain properly deployed and secured Visual inspection confirms no turtles or other animals entangled in net 				
Protected Species (see also ECP-5)	<ul style="list-style-type: none"> No turtles within 25 m from any dredging works. No dugongs and dolphins within 150 m from any dredging works. No migratory birds foraging or roosting within 25 m of dredging activity. <p>(note any observations of turtles, dugong and dolphins)</p>				
Complaints	<ul style="list-style-type: none"> Any complaints have been responded to as per CRP-3 				

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 168

OEMP Form 1		Daily Checklist – Dredging and Dredge Material Handling			
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
Corrective actions	<ul style="list-style-type: none"> All actions from the previous day's checklist have been closed out (otherwise a correct action request must be raised) 				
Incidents	<ul style="list-style-type: none"> Any incidents have been investigated and resolved as per IRP-1 				
Additional notes and observations:				Weather:	
				Wind direction:	
				Wind Speed (Beaufort scale):	
				Rain in past 24 hours	
				Wave height:	

CONTROLLED DOCUMENT

Contact CTPI49@ashenv.com to check date of latest version

C:\Users\CTPI49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 169

OEMP Form 1		Daily Checklist – Dredging and Dredge Material Handling			
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
Completed By: Name: _____ Position: _____ Signature: _____		Date: ____/____/____ This form can only be completed by a suitably qualified person nominated in writing by the environmental advisor		Distribution: Original → Scan to OEMP file (monitoring) Copy 1 → Asset Manager (compiled weekly) Copy 2 → Owner's Environmental Adviser (compiled weekly) Additional copies to those responsible for actions.	
Approved by: Name: _____ Position: _____ Signature: _____		Date: ____/____/____ This form can only be approved by the environmental advisor or other suitably qualified person nominated in writing by the environmental advisor			

9.6.2 Weekly Checklist – General Site Inspection

OEMP Form 2		Weekly Checklist			Completed By:		Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out		
New or amended activities	<ul style="list-style-type: none"> No new activities or significant changes to activities occur unless EAP-1 has been followed 						
Hazardous material storage (see also ECP-9)	<ul style="list-style-type: none"> All pesticides, oils, fuel containers and other hazardous materials are stored in designated location Fuel storage and dispensing areas in good condition with no signs of spills, leaks or 						

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI_49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 170

OEMP Form 2	Weekly Checklist	Completed By:			Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
	damage to equipment <ul style="list-style-type: none"> • All fuels and chemicals stored in accordance with Australian standards. • Quantities minimised • Spill response equipment available at ferry terminal • Only necessary hazardous materials kept on site • No risk of release to the environment 				
Waste Management (see also ECP-08)	<ul style="list-style-type: none"> • All wastes are stored in designated areas • Truck access to waste storage areas is open • All wastes are stored in secure, labelled containers • Bins and storage containers are not overflowing • Waste streams have been segregated for recycling • No unpleasant odours outside designated storage areas • No rats, mice or other vermin 				
Litter	<ul style="list-style-type: none"> • No litter in marina basin or land areas 				
Sewage	<ul style="list-style-type: none"> • No sign of sewage release into the marina basin • If sewage pump out facilities are operational, facilities in good order with no obvious leaks or damage. 				

CONTROLLED DOCUMENT

Contact CTPI49@ashenv.com to check date of latest version

C:\Users\CTPI49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 171

OEMP Form 2	Weekly Checklist	Completed By:			Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
Exposed soils	<ul style="list-style-type: none"> Erosion and sediment control in place for any areas of exposed dirt (such that soils cannot be mobilised to water/stormwater) Dust plumes are not being generated (including in dredge material handling area) Vehicle access is prevented except where required for construction activities 				
Marine megafauna	<ul style="list-style-type: none"> Note any incidents involving marine megafauna 				
Stormwater	<ul style="list-style-type: none"> No ponding of rainwater about the site Stormwater drains including diversion drain along Shute Harbour Road are clear and unobstructed (wet season) 				
Berths	<ul style="list-style-type: none"> No leaking taps/hoses No waste or other materials placed on berths/pontoons No oil sheen on water 				
Public and landscaped areas	<ul style="list-style-type: none"> Public areas are neat and tidy, no vandalism Toilets are clean Bins are available and not overflowing No leaking taps Landscaped areas neat and tidy Signage is in place and clearly visible Trees are secure, with no dangerous branches, coconuts or other hazards 				

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 172

OEMP Form 2		Weekly Checklist		Completed By:		Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out	
Irrigation systems	<ul style="list-style-type: none"> Systems are installed such that water does not spray onto hardstand areas No leaks or drips 					
Taps	<ul style="list-style-type: none"> No leaks or drips 					
Complaints, Corrective Actions	<ul style="list-style-type: none"> All actions arising from last week's checklist are closed out (otherwise, a corrective action request must be raised) 					
Completed By: Name: Position: Signature:		Date:		Distribution: Original → OEMP File (monitoring) Copy 1 → Owners environmental advisor (compiled monthly) Additional copies to those responsible for actions		

9.6.3 Pre-Wet Season Checklist

OEMP Form 3		Pre-Wet Season Checklist		Completed By:		Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out	
Erosion	<ul style="list-style-type: none"> Bare areas are minimised Bare areas sown with grass where possible Erosion and sediment control in place for any areas of exposed dirt (such that soils cannot be mobilised to water/stormwater) 					

OEMP Form 3	Pre-Wet Season Checklist	Completed By:			Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
Beach	<ul style="list-style-type: none"> No erosion Smooth profile No debris on beach 				
Walls, bunds	<ul style="list-style-type: none"> All walls and bunds appear secure No visible leaks, seepage, breaches or damage No debris lodged against walls and bunds No recorded incidents involving equipment or vessels impacting on any walls or bunds 				
Dredge material disposal pond	<ul style="list-style-type: none"> At least 1m freeboard available (measured from the overflow weir) Overflow weir is in working order, not blocked or damaged Water quality monitoring equipment is available No scouring at the base of the wall at the discharge point 				
Marina berths	<ul style="list-style-type: none"> Pontoons and berths are secure with no modifications or damage Hoses for water supply and sewage are secure and not rubbing against berths Vessels are of an appropriate size for berths 				

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\User\CTPI49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 174

OEMP Form 3	Pre-Wet Season Checklist	Completed By:			Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
	<ul style="list-style-type: none"> No debris in marina basin 				
Storm preparedness	<ul style="list-style-type: none"> Emergency response plans and procedures are up to date 				
Stormwater Drainage	<ul style="list-style-type: none"> All drains clear and free of obstruction No obstructions to overland flow 				
Completed By: Name: Position: Signature:		Date:			Distribution: Original → OEMP File (monitoring) Copy 1 → Owners environmental advisor Additional copies to those responsible for actions

9.6.4 Post Severe Weather Event Checklist

OEMP Form 4	Post Severe Weather Event Checklist	Completed By:			Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
Dredge Material Disposal Pond	<ul style="list-style-type: none"> Adequate freeboard and capacity Discharges and overflows occurred in accordance with water quality limits (see Section 9.2.6.4 and ECP-2) 				
Exposed soil	<ul style="list-style-type: none"> No sheet erosion or runnels 				
Stormwater systems	<ul style="list-style-type: none"> System operated effectively to convey rainfall from site without overflows or ponding 				
Beach	<ul style="list-style-type: none"> No erosion 				

CONTROLLED DOCUMENT

Contact CTPL4@ashenv.com to check date of latest version

C:\Users\CTPL40-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 175

OEMP Form 4	Post Severe Weather Event Checklist	Completed By:			Date:
Item	Performance Criteria	OK	Not OK	Comments/Actions Arising	Close Out
	<ul style="list-style-type: none"> Smooth profile No debris on beach 				
Walls, bunds	<ul style="list-style-type: none"> No visible breaches or damage No debris lodged against walls and bunds No collision of vessels or equipment with walls or bunds 				
Marina berths	<ul style="list-style-type: none"> Pontoons and berths are secure with no damage Hoses for water supply and sewage are secure with no damage No debris in marina basin 				
Landscaped areas	<ul style="list-style-type: none"> No damaged trees No trees with destabilised roots 				
Completed By: Name: Position: Signature:		Date:			Distribution: Original → OEMP File (monitoring) Copy 1 → Owners environmental advisor Additional copies to those responsible for actions

9.7 Field Oxidation Test Procedure (Acid Sulfate Soils)

The field test procedure for acid sulphate soils is set out in Section H of Ahern CR, McElnea AE, Sullivan LA (2004). *Acid Sulfate Soils Laboratory Methods Guidelines*. Queensland Department of Natural Resources, Mines and Energy, Indooroopilly, Queensland, Australia.

Action criteria are as follows:

- pH is less than 4 OR
- pH_{FOX} is less than 3 OR
- there is a lot of fizzing (strong reaction) with peroxide OR
- the difference between pH_{F} and pH_{FOX} is more than 3 pH units.

Published on DES Disclosure Log
RTI Act 2009

10. Continuous Improvement

10.1 The Continuous Improvement Cycle

Continual improvement requires a cycle of:

- **Commitment and Policy:** Meridien has developed an environmental policy and is committed to achieving the policy
- **Planning:** This OEMP represents the planning stage of the continuous improvement cycle. This OEMP identifies the environmental impacts and risks arising from the activities undertaken at Port of Airlie, and in relation to those activities managed by Meridien, sets environmental objectives and targets and contains procedures to achieve these.
- **Implementation:** This stage is achieved by implementation of this OEMP
- **Evaluation:** The various monitoring, checking and auditing requirements of Section 9 of this OEMP provide an opportunity to evaluate the performance of the OEMP. Outcomes from investigations of incidents and near misses will also serve as evaluation of the effectiveness of the OEMP in minimising risk of environmental incidents.
- **Review:** This section of the OEMP contains procedures for regular review of the OEMP and additional review where evaluation indicates that performance is not adequate.

The cycle is shown diagrammatically in Figure 10-1.

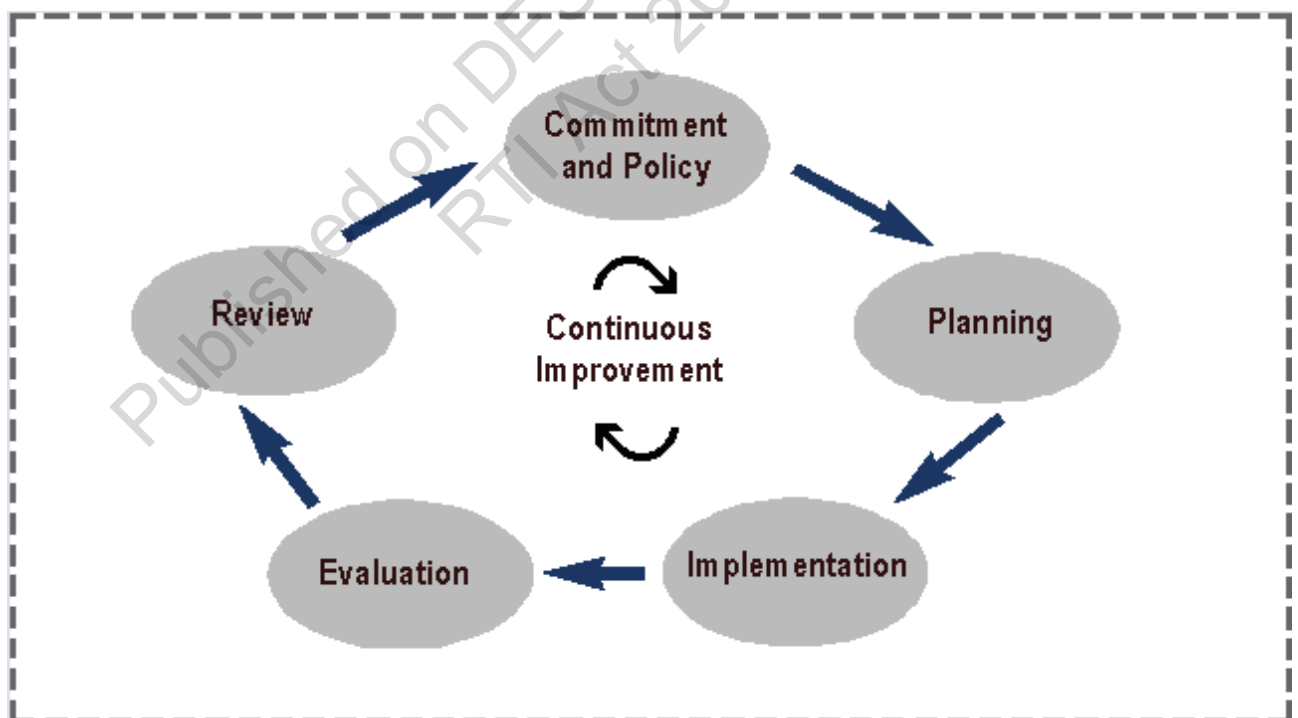


Figure 10-1 – Continuous Improvement Cycle

10.2 Summary of Evaluation and Review Processes

Systematic evaluation of the OEMP and overall performance in management of environmental impacts and risks is conducted through:

- Water quality, seagrass and other monitoring programs set out in Section 9 of the OEMP.
- Activity specific checklists. At present the only activity specific checklist is in relation to dredging and dredge material handling (see OEMP Section 9.6)
- General performance checklists, being the weekly checklist, pre-wet season checklist and post-severe weather event checklist (see OEMP Section 9.6)
- Routine and non-routine audits (see OEMP Section 9.5)
- Incident investigation (See OEMP Section 11.4)
- Statutory reporting requirements (see OEMP Section 12.1).

An assessment of the environmental impacts of a new or changed activity as per the Environmental Assessment Procedure (Section 2) may also identify the need for amendment to the OEMP or an environmental management program.

This section provides the procedures for tracking implementation of actions identified through these various evaluation tasks. This OEMP utilises four main categories of actions that may arise from the various evaluation activities:

- Checklist items (OEMP Section 9.6): Where the activity specific or general performance checklists identify items that can be promptly addressed, these items can be noted on the checklist as closed out with no further requirements.
- Daily maintenance log (OEMP Section 10.3): where actions cannot be completed immediately, and require a coordinated response, the daily maintenance log can be used to record and track progress.
-
- Corrective actions (OEMP Section 10.3): For more complex actions that may require a coordinated response over a longer time period, the corrective action form can be used.
- Environmental Management Program (OEMP Section 10.4): Larger projects or work programs that may be carried out over a period of time to bring about improvement in environmental performance can be entered into the environmental management program. Some examples of the types of projects that might be included in the Environmental Management Program might include:
 - o Upgrading stormwater systems to reduce contaminants in stormwater releases
 - o Increasing energy efficiency.
- Amendment of the OEMP (OEMP Section 10.5): Where evaluation identifies that the procedures and controls in the OEMP are not effective, or otherwise require updating, the OEMP will be amended.

10.3 Corrective Actions

10.3.1 Corrective Action Procedure

CAP-1	Corrective Action	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Corrective action is the core outcome of the OEMP and allows continuous improvement of environmental management performance.</p> <p>Corrective actions may be required in the event that:</p> <ul style="list-style-type: none"> Any aspect of the OEMP is not being complied with Non-compliance with approvals has been identified An incident or complaint has occurred and requires a complex response Completion of a checklist (OEMP Forms 1, 2, 3, 4) indicates that additional actions are required beyond any that can be closed out within day-to-day management activities An audit indicates non-compliance or identifies improvement opportunities. <p>In some cases, corrective actions will require amendment to the OEMP. A separate procedure, CAP-2 has been developed to manage changes to the OEMP.</p>			
<p>Relevant Legislation:</p> <p>NA (continuous improvement is a requirement of the environmental authority)</p>			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> Continuous improvement is demonstrated through the identification and timely completion of corrective actions 			
Management Actions:		Responsibility:	Timing:
1	Review outcomes of internal and external audits. Identify corrective actions and Environmental Management Programs arising from audit recommendations.	Owners environmental advisor	Within 1 week of receiving report
2	If corrective actions arise from OEMP forms 1, 2, 3 and 4: <ul style="list-style-type: none"> For minor issues that can be resolved promptly, complete the action and sign off on the form For issues requiring maintenance action, enter into site daily inspection log and inform those responsible for undertaking the action For more complex or compliance related issues, refer to Owner's Environmental Advisor (via email). 	Person completing the form	Weekly
3	Review seagrass monitoring reports and identify whether corrective action is required.	Owners Environmental Advisor	Within one month
4	For complex matters such as non-compliance with approval requirements, OEMP procedures or performance criteria, either: <ul style="list-style-type: none"> Inform the responsible party via email and/or telephone or, Complete the Corrective Action Request (CAR) Form 5 and provide to those responsible for undertaking actions. <p>Consult with those identified as responsible for undertaking corrective actions prior to assigning actions and/or finalising the form.</p>	Asset Operations Manager (in consultation with owner's environmental advisor)	Within 1 week of identifying non-compliance

CAP-1	Corrective Action	Revision 03	Issued: Dec 2016
5	Inform persons with responsibility to undertake corrective actions. Provide copy of form and discuss required action.	Asset Operations Manager	Immediately following completion of CAR
6	Follow up to ensure that corrective actions have been implemented within time frames specified and obtain record for corrective action file (eg action signed off by responsible person).	Asset Operations Manager	Monthly
7	When all actions on the CAR have been satisfactorily completed, close out CAR by signing at bottom of Form 5.	Asset Operations Manager	As required.
8	Where a larger program of works or project is required, complete the Environmental Management Program form (Form 13)	Asset Manager Owner's Environmental Advisor	As required.
9	Include review of corrective actions raised and closed in site environmental audits	Owners environmental advisor	Each audit.
Monitoring and Auditing: <ul style="list-style-type: none"> Review daily inspection log for actions that are not completed Review status of CARs monthly. 			
Corrective Action: <ul style="list-style-type: none"> Ensure implementation of daily inspection log items and CARs within agreed time frames. 			
Reporting: <ul style="list-style-type: none"> CAR on OEMP files (corrective action) CAR update in monthly reports 			
Cross References: <ul style="list-style-type: none"> Complaints procedure CRP-3. Incident Reporting Procedure IRP-1. Section 9 – Monitoring. 			

10.3.2 Corrective Action Form

OEMP Form 5	Corrective Action Record	Date:
Instructions: Where checklists or auditing identify non-compliance with performance standards, this form can be used to initiate and track corrective actions. This form should only be used where the corrective action cannot be tracked via the "daily log repairs" tab of the daily inspection log.		
Purpose: <ul style="list-style-type: none"> Record non-compliances. Identify and document appropriate corrective action. Ensure that corrective actions are implemented. 		
Corrective Action Request Initiator: Name: _____ Position: _____		

OEMP Form 5	Corrective Action Record		Date:
Description of Non-Compliance:			
Evaluation of Environmental Risk:			
Environmental values potentially impacted:			
Magnitude/consequence of impact:			
Likelihood of occurrence:			
Overall risk/Impact:			
(refer OEMP Section 2.4 and 2.5 for guidance)			
Corrective Actions:			
Action:	Responsibility:	Completed (Sign/date)	
Details of Further Action:			Responsibility
Monitoring:			
•			
•			
Training and Awareness:			
•			
•			
Other:			
•			
•			
Distribution:			
Original → OEMP files (continuous improvement)			
Copy 1 → Asset Manager			
Copy 2 → Owner's Environmental Adviser			
Additional copies to those responsible for actions.			
Corrective Action Request Closed:			
<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> <div>_____/_____/20____</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>Name</div> <div>Signature</div> <div>Date</div> </div>			

10.4 Environmental Management Program

Where monitoring, checking, auditing and incident investigation identifies that more complex actions are required to achieve continuous improvement, these will be entered into the Environmental Management Program in the form of a project or program of works.

Note that actions required to address legislative compliance, compliance with conditions of approval or highly significant environmental impacts must be dealt with as corrective actions unless agreement has been reached with relevant regulatory authorities to address the matters in a stage manner through an environmental management program.

OEMP Form 13	Environmental Management Program Record	Date commenced:
Instructions: Where a more detailed project or program of work is required to improve environmental performance, this form can be utilised. This form must not be utilised to address legislative non-compliance or non-compliance with conditions of approval unless the program of works has been agreed to in writing with the relevant statutory authority or regulatory agency.		
Purpose: <ul style="list-style-type: none"> Develop projects or programs of work to improve environmental performance Document progress. Ensure that the project or program of work is implemented. 		
Initiator: Name: _____ Position: _____		
Issues to be addressed in project or program of works: 		
Scope of project or program of works : (cross reference to additional reports or other documents as necessary)		
Actions and Milestones: (may be cross referenced to a project schedule)		
Action/Milestone:	Responsibility:	Completed (Sign/date)
Details of Further Action:		Responsibility
Monitoring: <ul style="list-style-type: none"> 		

OEMP Form 13	Environmental Management Program Record	Date commenced:
<u>Training and Awareness:</u>		
•		
•		
<u>Other:</u>		
•		
•		
Distribution: Original → OEMP file (continuous improvement) Copy 1 → Asset Manager Copy 2 → Owner's Environmental Adviser Additional copies to those responsible for actions.		
Environmental Management Program Closed: <div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> <div>_____/_____/20____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Name</div> <div>Signature</div> <div>Date</div> </div>		

10.5 OEMP Review and Amendment Procedure

CAP-2	OEMP Review and Amendment	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>The OEMP is a dynamic document and must be reviewed and updated to ensure that it continues to be effective in ensuring that performance criteria and outcome can be met and, over-riding this, that environmental harm or nuisance does not occur.</p> <p>Amendment to the OEMP may be required if:</p> <ul style="list-style-type: none"> The procedures in the OEMP are inadequate to prevent environmental harm or risk of environmental harm. This may be indicated in the outcome of an incident or complaint investigation as well as through an audit There are changes to the way that Port of Airlie is operated and maintained, or new activities are introduced (this may be identified through an audit, or the undertaking of an environmental assessment as per Environmental Assessment Procedure (EAP) (OEMP Section 2). There are changes to legislation and policy requirements in relation to environmental management of Port of Airlie There are improvements in accepted environmental management standards and techniques. <p>Regardless of the origin of an amendment, amendments to the OEMP are to be initiated via a Corrective Action Form (Form 5) or identified in the annual review process.</p> <p>For routine amendments to the OEMP, amendments will be undertaken annually as part of the annual review process. For urgent matters, the amendment can be completed immediately that the CAR form is issued to the owner's environmental advisor. Alternatively, a temporary Environmental Control Procedure can be prepared to cover new requirements until the next update of the OEMP.</p> <p>The OEMP is a requirement of the EPBC Act approval (condition 5) and environmental authority (condition 1A-5). Conditions 5, 7, 8 and 9 of the EPBC Act approval require any changes to the OEMP to be submitted to the Commonwealth Department of the Environment for approval, and any comments made by Department of the Environment to be incorporated. There is no requirement for changes to the OEMP to be submitted to the Queensland Department of Environment and Heritage Protection, however the OEMP cannot contravene any condition of the environmental authority.</p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> EPBC Act approval 2001/298 conditions 5, 7, 8 and 9 Environmental authority EPPR00332613 <i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Environmental Protection Act 1994</i> 			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> The OEMP remains up to date and adequate to prevent environmental harm from occurring as a result of operations. The OEMP is updated in response to corrective actions identified. 			
Management Actions:		Responsibility:	Timing:
1.	Review Corrective Action Request and identify appropriate changes to the OEMP. Discuss with Asset Manager and others as appropriate.	Owners Environmental Advisor	Annually (or sooner where risk is high)
2.	Draft amendments to OEMP. Alternatively, prepare a temporary ECP for use until next annual review of OEMP.	Owner's Environmental Representative	As above

CAP-2	OEMP Review and Amendment	Revision 03	Issued: Dec 2016
3.	Check for compliance with legislative requirements or approval conditions and initiate discussions with relevant approval agency as required to agree changes.	Owners Environmental Advisor	As above
4.	Submit revised OEMP components to Asset Manager for review and comment.	Asset Manager	Within one week
5.	Finalise. Assign next number to revised procedure or section. Record nature of revisions and reason for revision.	Owner's Environmental Advisor	Immediately
6.	Submit to Commonwealth Department of the Environment for formal review and acceptance. Incorporate any comments from Department of the Environment as required.	Owner's Environmental Advisor	As required
7.	Issue revisions to all controlled copy holders.	Owner's Environmental Advisor	As required
8.	Initiate training and awareness raising in revised procedures and requirements as needed.	Owner's Environmental Advisor/Asset Manager	As required
<u>Monitoring and Auditing:</u> <ul style="list-style-type: none"> Completion of document history and status form at the start of each updated section/procedure. Record of each review and rationale for the review (ie copy of the Corrective Action Request Form (Form 5) and related documentation). 			
<u>Corrective Action:</u> <ul style="list-style-type: none"> Ensure updates are made promptly and accepted by internal and external stakeholders. 			

11. Incident Management

11.1 Environmental Hazard Identification

Environmental hazards are identified in Table 11-1. Environmental hazards are identified based on activities undertaken or managed by Meridien or activities relating to users of the marina. Using the methodology set out in Section 2.3, all hazards are considered low risk.

In the event of a sewage or water main leak or an issue with the stormwater drains, contact Whitsunday Regional Council (4945 0200).

Published on DES Disclosure Log
RTI Act 2009

Table 11-1 Qualitative Risk Register: Port of Airlie

Hazard	Description of Hazard Event	Management Measures	Consequence Severity	Likelihood/Frequency	Level of Risk
Fuel use on marine based equipment by contractors, refuelling of marine based equipment	<p>Contractors undertaking dredging or other marine based activities will have equipment containing fuel and oils and may, in some cases, undertake refuelling at sea using refuelling workboats.</p> <p>There is potential for spillage of small to medium quantities (up to ~200L) of fuels to the marine environment as a result of:</p> <ul style="list-style-type: none"> • Loss of control during refuelling • Serious equipment failure • High impact collision. <p>Small quantities of fuel can expect to be removed from the environment by chemical, biodegradation and physical weathering.</p> <p>Provided that volumes are small, and spills relatively infrequent, significant impacts on the environment are not expected.</p>	<p>Contractors to provide a plan for management of fuels and refuelling activities including:</p> <ul style="list-style-type: none"> • Minimising the overall inventory • Ensuring compliance with all aspects of AS 1940 (storage and handling of flammable and combustible liquids) • Training all operators in refuelling procedures • Providing for visual supervision of refuelling activities • Having spill response equipment available on vessels wherever mobile refuelling is to be undertaken. <p>With these measures in place, the likelihood a spill greater than 10-20L is unlikely.</p> <p>Contractors will also be required to have a plan for minimising vessel to vessel interactions. The speed limit imposed within the marina and navigation access channel means that severe impacts that might rupture fuel tanks are unlikely to occur.</p> <p>Spill response procedures are also provided in Section 11.3.</p>	Minor	Unlikely	Low

Hazard	Description of Hazard Event	Management Measures	Consequence Severity	Likelihood/Frequency	Level of Risk
Fuel use on land based equipment by contractors, refuelling of land based equipment	<p>Contractors undertaking land-based construction and maintenance activities will use equipment that contains fuel and oil. Quantities will be low to moderate, up to ~200L.</p> <p>For some types of equipment, refuelling may be via a mobile tanker which comes to the site.</p> <p>There is potential for spillage of small to medium quantities (up to ~200L) of fuels to the land environment as a result of:</p> <ul style="list-style-type: none"> Loss of control during refuelling Serious equipment failure High impact collision. <p>Spills may be mobilised to the marine environment if not addressed promptly, or if spills occur near stormwater drains.</p>	<p>Contractors to provide a plan for management of fuels and refuelling activities including:</p> <ul style="list-style-type: none"> Minimising the overall inventory Ensuring compliance with all aspects of AS 1940 (storage and handling of flammable and combustible liquids) Training all operators in refuelling procedures Providing for visual supervision of refuelling activities Having spill response equipment available on vessels wherever mobile refuelling is to be undertaken. <p>With these measures in place, the likelihood a spill greater than 10-20L is unlikely.</p> <p>Contractors will be required to adhere to on-site speed limits which will minimise likelihood of a high-impact collision.</p> <p>Spill response procedures are also provided in Section 11.3.</p>	Minor	Unlikely	Low

Hazard	Description of Hazard Event	Management Measures	Consequence Severity	Likelihood/Frequency	Level of Risk
Fuel in private vessels and Port of Airlie workboats	<p>Vessels in Port of Airlie will contain fuel tanks. Depending on vessel size, there may be up to several hundred litres of fuel on larger vessels.</p> <p>There are currently no refuelling facilities operated by Port of Airlie, however vessel owners may bring portable fuel tanks or fuel in portable containers, typical volume 10-30L.</p> <p>A spill may occur when transferring fuel from a portable container to the vessels fuel tanks, however this would generally be contained within the vessel.</p> <p>High impact collisions between vessels could also cause rupture of fuel tanks. Fire could also cause release of fuel and oils to the marine environment.</p>	<p>The speed limit imposed in the marina and navigation access channel will prevent high impact collisions.</p> <p>Spill kits are kept on each marina arm for use in containing and soaking up spills to water.</p> <p>Otherwise, no specific management measures are required.</p>	Minor	Unlikely	Low
Fire – Vessel	<p>A vessel fire may be caused by electrical malfunctions or a range of other causes. Fires may result in release of fuel and other contaminants on board the vessel to the marina, as well as sinking of the vessel and release of litter.</p>	<p>Port of Airlie has no direct jurisdiction over vessel owners in relation to maintaining vessels.</p> <p>Marina operations and security staff maintain a 24 hour presence which allows for prompt reporting to Queensland fire brigade and Maritime Safety Queensland. These organisations will provide a response.</p>	Minor	Possible	Medium
Fire – Buildings	<p>Firefighting water from sprinklers or emergency services responding to building fires may wash into adjacent waters. As the main activities at Port of Airlie are tourism, residential and offices, firewater is not likely to contain significant toxic contaminants. Particulate matter may be mobilised, but not in sufficient quantities to cause a significant environmental incident.</p>	<p>Buildings are all fitted with smoke alarms, and fire systems.</p> <p>Marina operations and security staff maintain a 24 hour presence which allows for prompt reporting to Queensland fire brigade.</p>	Minor	Rare	Low

Hazard	Description of Hazard Event	Management Measures	Consequence Severity	Likelihood/Frequency	Level of Risk
Use of other environmentally hazardous chemicals on-site	While the marina operation does not generally require large amounts of hazardous materials, marina managers and contractors may use cleaning products and similar substances from time to time. Quantities will generally be low, in the order of 10-20L.	<p>The weekly site inspection checklist includes a requirement to check for inappropriately stored materials.</p> <p>Section 440Z of the EP Act makes it an offence to deposit contaminants in water, including releasing contaminants to a stormwater drain, or placing contaminants in a location from where it may be reasonably expected that the contaminant could mobilise to waters.</p> <p>Marina employees will be informed of this in induction training.</p> <p>Contractors will be required to safely store and use hazardous materials. Contract specifications will also include compliance with all legal requirements including Section 440Z of the EP Act.</p>	Minor	Unlikely	Low
Extreme weather events resulting in release of contaminants to the environment or physical damage to the environment from Port of Airlie	<p>In extreme weather events, damage may occur to various parts of the marina which may in turn exacerbate damage to the environment. However, in the context of the impact of a severe weather event, additional impacts from Port of Airlie will be insignificant.</p> <p>Human safety is not addressed in this OEMP.</p>	<p>The marina structure was designed to withstand cyclonic conditions.</p> <p>A pre-wet season checklist has been developed to check on various aspects that might be vulnerable to a significant weather event (OEMP Form 3).</p> <p>A post-severe weather event checklist has been developed to guide review of hazards following a significant weather event (OEMP Form 4).</p>	Negligible	Unlikely	Low
Vessel collision with dugong, marine turtles or other marine megafauna	Dugongs and marine turtles feed on seagrass beds near Port of Airlie and may be struck by vessels using the navigation access channel.	<p>Speed limit will reduce likelihood of vessel strike, and also severity of injury.</p> <p>In the event of a vessel strike incident, or other injured wildlife, see ECP-5.</p>	Minor	Unlikely	Low

11.2 Incident Reporting Procedure

IRP- 1	Incident Reporting	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Incidents and near misses may occur during operation could potentially or actually cause environmental harm. Environmental control procedures include procedures for minimising risk of environmental harm occurring.</p> <p>Environmental incidents may not initially be apparent. Therefore, any sign of water pollution (oil slick, discolouration) or dead or injured fish or other marine animals should be treated as an incident until the cause is established.</p>			
<p>Relevant Legislation:</p> <ul style="list-style-type: none"> Environmental Protection Act 1994. 			
<p>Performance Criteria/Outcome:</p> <ul style="list-style-type: none"> All incidents and near misses are reported. Continuous risk reduction is achieved through review of incident report forms and implementation of additional measures as appropriate to reduce the likelihood or impact of actual and potential incidents. 			
Management Actions:		Responsibility:	Timing:
1.	If it is not clear what has caused the incident (ie oil slick, discoloured water, dead fish or other signs of an incident are observed with no immediately apparent cause): <ul style="list-style-type: none"> treat the issue as an incident commence investigating cause undertake reporting requirements as per Section 12.1. 	Those at scene	Immediately on observing signs of an incident
2.	Respond to incident (refer to IRP-2 for assistance with spill of fuel or oil). For near misses, take immediate steps to ensure that potential incident has been avoided.	Those at scene	Immediately on incident occurring
3.	For incidents associated with dredging, contract the dredge contract superintendent	Those at scene	Immediately on incident occurring
4.	For all other incidents and near misses, contact Asset Operations Manager or Marina Operations Manager.	Those at scene	Immediately on incident occurring
5.	Once incident has been controlled, complete Part 1 of the incident report form (Form 6).	Those at scene	Before ending shift
6.	Hand original incident response form (Form 6) to Asset Manager Officer. (person completing the form may keep a copy if desired)	Those at scene	Before ending shift
7.	Contact Owner's Environmental Advisor if assistance is required	Asset Operations Manager, dredge contract superintendent	As required
8.	Refer Section 12.1 for external reporting requirements in the event of a major incident, causing environmental harm (environmental harm is defined in Section 3.1.2, Table 3-1), or other incident including marine pollution, fish kill or dead/injured marine animals	Asset Operations Manager Other staff if Asset Manager is not available	Within 24 hours

IRP- 1	Incident Reporting	Revision 03	Issued: Dec 2016
9.	Complete Part 2 and Part 3 of incident response form (Form 6).	Asset Operations Manager, Marina Operations Manager	Within 24 hours for material or serious environmental harm incident, within 48 hours for minor incident/ near miss
10.	Enter any corrective actions in Corrective Action Register (OEMP Section 10). Implement recommendations and corrective actions on Incident Response Form (Form 6).	Asset Operations Manager, Marina Operations Manager	As required
11.	Provide copy of Incident Response Form (Form 6) to Owner's Environmental Adviser and Project Manager (all incidents) and EPA (major incidents). File original in OEMP files (incidents).	Marina Operations Manager	Following completion
Monitoring and Auditing: <ul style="list-style-type: none"> Review progress of implementation of actions identified in Part 2 of the form (Form 6). 			
Corrective Action: <ul style="list-style-type: none"> Implement recommendations. 			
Reporting: <ul style="list-style-type: none"> Incident Report to Managers and Receivers and Owner's Environmental Adviser (all incidents). Incident Report to EPA (material or serious environmental harm). 			
Cross References: <ul style="list-style-type: none"> Corrective Action – Section 10. Incident Response Procedures IRP-2 for spill of fuel or oil. ECP-5 for incidents involving marine animals 			

11.3 Spill of Fuel or Oil

IRP-2	Spill of Fuel or Oil	Revision 03	Issued: Dec 2016
Overview: Fuels and oils will be contained in land and marine based plant and equipment and refuelling may also occur on-site. If spills or leaks of fuel or oil occur, this could cause environmental harm through soil/sediment or water contamination. Environmental harm would be more severe if spills resulted in release of fuels or oils to the open waters of Boathaven Bay.			
Relevant Legislation: <ul style="list-style-type: none"> <i>Environmental Protection Act 1994.</i> 			
Performance Criteria/Outcome: <ul style="list-style-type: none"> Spills of fuel and oil are contained and cleaned up so that no environmental harm occurs. 			
Management Actions:		Responsibility:	Timing:

IRP-2	Spill of Fuel or Oil	Revision 03	Issued: Dec 2016
1.	<p>Ensure that spill response kits are available at the site suitable for spills to land and water.</p> <p>Spill response kits to be attached to fuel tankers.</p> <p>Marine spill response kits to be available at refuelling of barges or dredge in open waters.</p>	Contractors	While on-site
2.	<p>In the event of a spill on land:</p> <ul style="list-style-type: none"> Identify source of spill/leak and shut down immediately (if safe to do so). If necessary, construct bunds or use containment equipment in spill kit to stop spill from spreading. Use absorbent pads or sand to soak up as much of the spill as possible. Excavate any contaminated soil and store safely on a hardstand or contained area while determining appropriate disposal requirements. Place all contaminated materials in secure containers such as double plastic bags and label to indicate contents, date and contact person. Dispose of contaminated soil by contacting a suitably authorised waste disposal contractor. Note that if large quantities are involved, a disposal permit may be required from DEHP, refer to http://www.ehp.qld.gov.au/licences-permits/contaminated-land/disposal-permits/index.html Dispose of any absorbent material used for clean up to waste oil contractor or other authorised contractor. Complete part 1 of incident report form (Form 6). 	Those at scene	Immediately.
3.	<p>In the event of a spill to water:</p> <ul style="list-style-type: none"> If the spill is the result of fire, follow instructions of emergency services crews. Identify source of spill/leak and shut down immediately (if safe to do so). Use floating absorbent booms in spill kit to contain spill. Contact Asset Manager or dredge contract superintendent who is to inform DEHP immediately (see external reporting requirements in Section 12). Use absorbent booms and skimmers to soak up hydrocarbons until no visible slick. Remove booms on outgoing tide once cleared by DEHP. Place all contaminated materials in secure containers such as double plastic bags and label to indicate contents, date and contact person. Check for any injury or mortality to fish and remove any dead fish. Complete part 1 of incident report form (Form 6). 	Those at scene	Immediately.

IRP-2	Spill of Fuel or Oil	Revision 03	Issued: Dec 2016
4	Undertake incident reporting as per Section 12.1.	Asset Operations Manager, Marina Operations Manager	Immediately
5	If required, additional support may be available from: <ul style="list-style-type: none"> DEHP (contact pollution hotline 1300 130 372) Maritime Safety Queensland (contact 07 4956 3489) Fire brigade (4965 6623 or 000). 		
6	For serious or material environmental harm, or non-compliance with environmental authority conditions, complete the DEHP incident notification form: http://www.ehp.qld.gov.au/management/non-mining/documents/incident-notification.doc Refer Section 12 regarding external communications in the event of an incident.	Asset Operations Manager, Marina Operations Manager	Within 24 hours
7	All spills: complete part 2 of the incident report form OEMP Form 6. (note that this form should be completed regardless of whether the DEHP incident notification form is completed, as OEMP Form 6 records and tracks whether corrective actions are required).	Asset Operations Manager, Marina Operations Manager	As soon as practicable
8.	All spills: Ensure that all oil/hydrocarbon contaminated materials are disposed of appropriately.	Asset Operations Manager, Marina Operations Manager	As soon as practicable
9.	Replace any used items from spill kit.	Marina Operations Manager	As soon as practicable
<u>Monitoring and Auditing:</u> As per incident reporting procedure IRP-1.			
<u>Corrective Action:</u> <ul style="list-style-type: none"> NA 			
<u>Reporting:</u> <ul style="list-style-type: none"> As per Incident report 			
<u>Cross References:</u> <ul style="list-style-type: none"> ECP-9 			

11.4 Incident Report and Investigation Form

Part 1 – INCIDENT DETAILS (to be completed by the observer)

OEMP Form 6		Incident Report Form	
NAME		DATE	TIME
LOCATION ON SITE			
WEATHER CONDITIONS			
CONTACT DETAILS (if an external complaint)			
INCIDENT DESCRIPTION (cause, activity being undertaken at the time, outcome, volume of spill/release, approval condition breached)			
INITIAL ACTION TAKEN			

Part 2 – INVESTIGATION / ACTION REQUIRED (to be completed by the Asset Operations Manager, Marina Operations Manager or contract superintendent)

SERIOUS OR MATERIAL ENVIRONMENTAL HARM (OFF-SITE RELEASE or BREACH OF ENVIRONMENTAL APPROVAL CONDITION)		☐
MINOR INCIDENT (ON-SITE RELEASE, NO ENVIRONMENTAL HARM, EASILY CLEANED UP)		☐
NEAR MISS		☐
LIKELY CAUSE:		
ANALYSIS OF EFFECTIVENESS OF RESPONSE:		
FURTHER ACTIONS REQUIRED:		
RECOMMENDATIONS (GENERAL) :	Responsibility:	
RECOMMENDATIONS (AMENDMENTS TO OEMP):	Responsibility	

RECOMMENDATIONS (AWARENESS RAISING/TRAINING):		Responsibility
NOTIFICATIONS: Who notified: Notification method: Reference number:		
Name:	Signature:	Date:
MEASURES COMPLETED:		
Name:	Signature:	Date:
MEASURES ADDED TO CORRECTIVE ACTION REGISTER:		
Name:	Signature:	Date:
ASSET OPERATION MANAGER SIGNATURE:		
Name:	Signature:	Date:

12. Communications and Reporting

12.1 External Communications

12.1.1 Communications and Reporting Principles

Meridien is committed to open communication and reporting with all external stakeholders in relation to the operation of Port of Airlie. The approach for communications is based on:

- Meeting statutory reporting requirements on environmental matters, including routine and non-routine reports
- Ensuring that stakeholders are provided with accurate, objective information regarding environmental management issues at Port of Airlie on an as needs basis
- Where appropriate, proactively informing stakeholder groups of environmental management issues and requirements
- Maintaining regular communications with key stakeholders
- Providing an opportunity for stakeholders and members of the wider community to provide comments, request information and lodge complaints.

12.1.2 Stakeholder Identification

Key stakeholders in relation to environmental management at Port of Airlie are identified in Table 12-1.

Table 12-1 – Stakeholder Identification

Stakeholder	Role and Activities	Likely Interests and Concerns
Whitsunday Regional Council	Manages (or will manage) public access areas including boat ramp, beach and headland park and key infrastructure including stormwater, sewage, bus terminal and public roads.	<p>Potential disruption to access</p> <p>Satisfactory completion of “on maintenance” periods for infrastructure and facilities</p> <p>Interfaces between facilities and infrastructure managed by WRC and other land/asset managers at Port of Airlie</p> <p>Compliance with legislative requirements and approval conditions with respect to components of Port of Airlie managed by WRC</p> <p>General environmental management requirements and standards</p>
Whitsunday Regional Council	Statutory authority administering the planning scheme and associated development approvals and building approvals.	<p>Compliance and consistency with planning scheme and other statutory requirements</p> <p>Orderly and appropriate development</p> <p>Provision of local government services, including solid/household waste management, sewage and wastewater</p> <p>Noise and other nuisance issues</p>
Whitsunday Sailing Club	<p>Owens berths within the marina</p> <p>Holds an interest in land designated for a future</p>	<p>Access to marina basin and designated berths from sea and land</p> <p>Marina security and amenities</p>

Stakeholder	Role and Activities	Likely Interests and Concerns
	marine academy Represents boating interests in the region Organises racing and social sailing events	Development of the marine academy Point of contact for visiting yachts Compliance with legislative requirements and approval conditions with respect to components of Port of Airlie managed by Whitsunday Sailing Club General environmental management requirements and standards
Cruise Whitsunday	Operates ferry terminal and ferry operations, activities include fuel storage and refuelling	Own an interest in the land on which the ferry terminal is located and hold a sea-bed sublease Access to ferry terminal from sea and land Point of contact for visitors Compliance with legislative requirements and approval conditions with respect to components of Port of Airlie managed by Cruise Whitsunday General environmental management requirements and standards
Mantra	Operates The Boathouse apartment complex as a limited service hotel	General amenity of Port of Airlie, including visual amenity and acoustic environment Availability of public and private facilities for use by residents and guests at The Boathouse Point of contact for visitors to Port of Airlie Compliance with legislative requirements and approval conditions with respect to components of Port of Airlie managed by Outrigger General environmental management requirements and standards
Commercial tenants – retail, food and beverage	Operate retail outlets, food and beverage outlets	General amenity of Port of Airlie, including visual amenity and acoustic environment Point of contact for visitors to Port of Airlie Commercial opportunities and business development/management General environmental management requirements and standards
Residents and apartment/land owners	Residents and owners of apartments at The Boathouse or houses/villas at The Beacons or The Cove	General amenity of Port of Airlie, including visual amenity and acoustic environment Land values Management of public and private access areas, Availability of public and private infrastructure General environmental management requirements and standards
Sub lessees and renters of marina berths	Use berths within the marina on a casual or permanent basis	General amenity of Port of Airlie, including visual amenity and acoustic environment Marina security Access to marina berths from land and sea Marina services including showers/toilets/laundry/water

Stakeholder	Role and Activities	Likely Interests and Concerns
		Avoidance of marine pollution
Near neighbours	Overlook Port of Airlie, located within hearing distance	General amenity of Port of Airlie, including visual amenity and acoustic environment
General community and visitors to Airlie Beach	Utilise public and private facilities at Port of Airlie	General amenity of Port of Airlie, including visual amenity and acoustic environment Access to public and private facilities
Commonwealth Department of the Environment and Heritage (DotE)	Administers the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Compliance with EPBC approval 2001/298 (see OEMP Section 3) Impacts on matters of national environmental significance, including the GBRWHA, listed threatened and migratory species (See OEMP Section 6)
Queensland Department of the Environment and Heritage Protection (DEHP)	Administers the <i>Environmental Protection Act 1994</i> (EP Act), <i>Coastal Protection and Management Act 1995</i> (Coastal Act) and <i>Aboriginal Cultural Heritage Act 2003</i> (ACH Act)	Compliance with SPD-0714-009929 (tidal works) and EPPR00332613 (environmental authority). Compliance with various provisions of EP Act and Coastal Act (See OEMP Section 3)
Queensland Department of Agriculture Forestry and Fisheries – Fisheries Queensland	Administers the <i>Fisheries Act 1994</i> .	Compliance with various provisions of the <i>Fisheries Act 1994</i> in particular in relation to clearing or trimming of marine plants
Department of Transport and Main Roads - Maritime Safety Queensland	Administers the <i>Transport Operations (Marine Safety) Act 1994</i> and <i>Transport Operations (Marine Pollution) Act 1995</i> Maintains navigation safety for the marina navigation access channel	Safe access to the marina basin and boat ramp and along the marina navigation access channel Release of pollutants from vessels Support for oil-spill response

12.1.3 Communication Techniques

Meridien utilises the following techniques for communicating with external stakeholders:

- Reports and notifications are submitted to Federal and State environmental agencies as required. This includes regular, irregular and incident related reports.
- A copy of the OEMP is provided to key stakeholders
- The Port of Airlie website contains the OEMP and other relevant information including links to published information
- Regular meetings are held with key stakeholders. Environmental matters are a topic on the standing agenda for these meetings.
- Any member of the community can contact Meridien with contact details on the website.

Whitsunday Regional Council and Maritime Safety Queensland are also responsible for providing signs with information on requirements for boats using the boat ramp and maritime safety generally.

Table 12-1 provides a matrix matching the communication techniques to the various stakeholders.

12.1.4 External Stakeholder Communication Matrix

The method of communication with external stakeholders is shown in Table 12-2. The Asset Manager is the initial point of contact for each stakeholder and may authorise other team members and contractors to communicate with external stakeholders.

Table 12-2 – Stakeholder Communications Matrix

Stakeholder	Means of Contact
Whitsunday Regional Council (as land and asset manager)	<ul style="list-style-type: none"> Ad hoc meetings as required Copy of OEMP
Whitsunday Regional Council (as statutory authority)	<ul style="list-style-type: none"> Pre-lodgement meetings as required in relation to development approvals Post-lodgement meetings as required in relation to development approvals Copy of OEMP
Whitsunday Sailing Club	<ul style="list-style-type: none"> Ad hoc meetings Website Signage, information to boat-owners using port of Airlie Copy of OEMP
Cruise Whitsunday	<ul style="list-style-type: none"> Ad hoc meetings as required Website Signage
Boathouse Body Corporate	<ul style="list-style-type: none"> Meetings as required Website Signage, information to visitors Copy of OEMP
Commercial tenants – retail, food and beverage	<ul style="list-style-type: none"> Website Signage (including signs provided by WRC and MSQ)
Residents and apartment/land owners	<ul style="list-style-type: none"> Website Signage (including signs provided by WRC and MSQ)
Sub lessees and renters of marina berths	<ul style="list-style-type: none"> Newsletter Website Signage (including signs provided by WRC and MSQ)
Near neighbours	<ul style="list-style-type: none"> Website Signage (including signs provided by WRC and MSQ)

Stakeholder	Means of Contact
General community and visitors to Airlie Beach	<ul style="list-style-type: none"> Website Signage (including signs provided by WRC and MSQ)
Commonwealth Department of the Environment and Heritage (DotE)	<ul style="list-style-type: none"> Annual compliance report (see Section 12.1.7) Copy of OEMP Ad hoc meetings as required in relation to compliance and new activities
Queensland Department of the Environment and Heritage Protection (DEHP)	<ul style="list-style-type: none"> Annual return Copy of OEMP Ad hoc meetings as required in relation to compliance and new activities
Queensland Department of Agriculture Forestry and Fisheries – Fisheries Queensland	<ul style="list-style-type: none"> Seagrass monitoring reports (until completion of the seagrass monitoring program, currently scheduled for 2015) Ad hoc meetings if required in relation to compliance and new activities
Department of Transport and Main Roads - Maritime Safety Queensland	<ul style="list-style-type: none"> Meetings as required in relation to navigation marker, and boating safety Notification in the event of works that would disrupt access along the navigation access channel and to boat ramp

12.1.5 Reporting of Incidents and Emergencies

12.1.5.1 Reporting of non-Compliance and Environmental Harm (EP Act)

Section 320 B and 320C of the EP Act contains notification requirements in the event that material or serious environmental harm occurs. For the purposes of this OEMP, serious or environmental material harm is defined as:

- A non-compliance with any condition of the environmental authority
- Material and serious environmental harm are defined in Section 16 and 17 of the EP Act and might include the following types of incidents:
- Spill of more than 50L of oil, fuel or other hydrocarbons or other chemicals to water or land or any spill that might degrade water quality outside the marina basin
- Any other incident where the clean-up cost is likely to exceed \$5,000.

In the event of material or serious environmental harm occurring (including a non-compliance with the environmental authority) an initial written report must be made to the Department of Environment and Heritage Protection within 24 hours of the incident occurring. The report must be made by:

- The Asset Manager
- The relevant contract superintendent or,
- If neither the Asset Manager or contract superintendent is available, another senior member of the marina administration team who is familiar with what has occurred.

The written report should be made on the DEHP incident notification form available at <http://www.ehp.qld.gov.au/assets/documents/regulation/rs-fm-incident-notification-petroleum-gas.docx>

Note that the Incident Response Form (OEMP Form 6 in Section 11) must also be completed but should not be sent to DEHP.

Details for how to submit the DEHP incident report are provided on the report form. A copy of the report and any related correspondence must be retained on the OEMP incident file.

It may also be appropriate to contact the DEHP pollution hotline on 1300 130 372, particularly if it will be difficult to submit the Incident Response Form within the required 24 hour time frame. Give only brief details over the phone, including name, location, nature of the incident and measures taken to respond and prevent recurrence. Do not discuss cause of the incident until a thorough investigation has been conducted.

If any discussions occur with Department of Environment and Heritage Protection, take careful notes of matters discussed and any requirements for follow up reporting. Avoid discussing the cause of the incident until the incident investigation is completed.

Further investigation of the incident will occur in accordance with the Incident Investigation procedure (Section 11). The final incident investigation report should be completed as quickly as possible, but no more than two weeks after the incident, and the final report submitted to Department of Environment and Heritage Protection.

12.1.5.2 Reporting of Marine Pollution from Vessels

Marine pollution incidents arising from a vessel can be reported to Maritime Safety Queensland using the form: http://www.msq.qld.gov.au/~media/msginternet/msgfiles/home/shipping/ppm/wrd_polrep.doc

Vessel owners or agents must report any marine pollution incident under the requirements of the Transport Operations (Marine Pollution) Act 1995.

This applies to any marine based pollution event, regardless of whether the event caused environmental harm or non-compliance under the EP Act. Reporting of marine pollution events is in addition to reporting of environmental harm or non-compliance. Thus, if a release of pollutants from a vessel has caused environmental harm, the incident must be reported to DEHP and MSQ.

12.1.5.3 Reporting Dead or Injured Marine Animals

In the event of a fish kill, that is, observations of five or more dead fish in the marina basin or nearby:

- Report to Department of Environment and Heritage Protection 1300 130 372
- Note that a fish kill may indicate a chemical, fuel or oil spill within Port of Airlie.

In the event that a dead or injured animal is found (regardless of whether the injury was caused by marina activities or works), report to RSPCA Qld 1300 ANIMAL (1300 264 625) (see also ECP-5).

12.1.6 Other Statutory Reporting Requirements

Other statutory reporting requirements for non-emergencies are identified in Table 12-3. This includes routine compliance reporting.

Table 12-3 – Statutory Reporting Requirements (non-emergency)

Type of Report	Frequency of Submission	Responsibility	Submit To:
Compliance with Coordinator General's	Six monthly	Asset Manager	Department of State Development,

Type of Report	Frequency of Submission	Responsibility	Submit To:
conditions			Infrastructure and Planning
Significant changes in project	As required	Asset Manager	Department of State Development, Infrastructure and Planning
Compliance certificate (Condition 10 of EPBC approval 2001/298)	1 July each year	Asset Manager	Approvals Monitoring North Section Compliance and Enforcement Branch Environment Assessment and Compliance Division Department of the Environment GPO Box 787 Canberra ACT 2601
Updates to OEMP	As required	Asset manager	Department of the Environment (Address above) Other holders of controlled copies
Annual return	June of each year (a notice will be sent by DEHP)	Asset manager	Department of Environment and Heritage Protection
Commencement of works under Self-assessable code for marine plants removal	At least 5 days prior, no more than 20 days prior (See also ECP-1A/B)	Asset manager	Fisheries Queensland
Seagrass monitoring reports	On completion of report	Asset manager	Fisheries Queensland Commonwealth Department of the Environment

12.1.7 Visitor Information

The following links contain information on responsible boating practices:

Topic	Link
Responsible boating practices for people visiting the GBRMP and GBRWHA	http://www.gbrmpa.gov.au/visit-the-reef/responsible-reef-practices
Tips for recreational boats on minimising impacts on turtles and dugong	http://www.ehp.qld.gov.au/wildlife/caring-for-wildlife/what-you-can-do.html#recreational_fishers
Marine park zoning maps show what activities can be carried out at different locations in the GBRMP. Whitsundays is covered by Map 10	http://www.gbrmpa.gov.au/zoning-permits-and-plans/zoning/zoning-maps Whitsundays Map 10: http://www.gbrmpa.gov.au/data/assets/pdf_file/0018/28116/MAP-10.pdf
Details on what activities can be carried out in each zone	http://www.gbrmpa.gov.au/zoning-permits-and-plans/zoning/zoning-guide-to-using-the-marine-park/interpreting-zones
Legal requirements and management approaches for sewage on vessels	http://www.msq.qld.gov.au/~media/msqinternet/msqfiles/home/environment/sewage/pdf_sewleg_compliance_other_than_declared.pdf
Other general information on management of pollutants on vessels	http://www.msq.qld.gov.au/Marine-pollution/Oil-chemical-pollutionhttp://www.marinas.net.au/documents/item/9

Topic	Link
Queensland recreational boating and fishing guide, includes details of fish take as well as responsible fishing practices and boat safety	http://www.msq.qld.gov.au/Safety/Recreational-boating-fishing-guide
Restrictions on recreational fish catch numbers and size – summary	http://www.daff.qld.gov.au/_data/assets/pdf_file/0009/76959/Rec-fishing-tidal-waters-A4.pdf
BoatSafe workbook – safe recreational boating	http://www.msq.qld.gov.au/Publications/Boatsafe-workbook.aspx
Safety requirements for recreational boats	http://www.tmr.qld.gov.au/-/media/busind/accreditations/BoatSafe/boatsafe_wkbk_edition5.pdf
Notices to mariners - information about particular hazards, temporary or permanent access restrictions	http://www.msq.qld.gov.au/Notices-to-Mariners.aspx Whitsundays section: http://www.msq.qld.gov.au/Notices-to-Mariners/Ntm-whitsundays.aspx
Minimising marine pest risk on recreational boats	http://www.marinepests.gov.au/recreational-boating/Pages/default.aspx http://www.marinepests.gov.au/national-system/Documents/biofouling_guidelines_rec.pdf

12.1.8 Complaints Procedure

CRP-1	Complaints and Inquiries Procedure	Revision 03	Issued: Dec 2016
<p>Overview:</p> <p>Prompt and effective responses to any complaints and inquiries is a critical aspect of maintaining positive community and stakeholder relationships.</p> <p>This procedure applies to complaints and inquiries in relation to environmental matters and may include:</p> <ul style="list-style-type: none"> • Water quality and pollution • Noise • Air quality • Other disturbance or disruption • Visual amenity, including of landscaped areas and litter • Access to public areas • Injury or death of a marine turtle or dugong • Comments or suggestions on the OEMP. 			
<p>Relevant Legislation:</p> <p>Conditions 1G-1 and 1G-2 of the environmental authority require a formal complaints procedure to be in place.</p>			
<p>Performance Criteria/Outcome:</p> <p>Complaints and inquiries are responded to promptly and effectively.</p>			
Management Actions:		Responsibility:	Timing:

CRP-1	Complaints and Inquiries Procedure	Revision 03	Issued: Dec 2016
1.	On receipt of a verbal complaint or enquiry in relation to environmental matters, note down: <ul style="list-style-type: none"> The name and contact details of the complainant/person requesting information (if the complainant will not give name and contact details, inform the complainant that it will not be possible to provide a direct response to the complaint) The nature of the complaint or information required. Include as much detail as possible including date, time, location and what was observed or heard. Do not discuss a complaint with the complainant.	All team members All contractors	Ongoing
2.	Complaints and enquiries in relation to environmental matters are to be referred to the Asset Operations Manager or Marina Operations Manager. No other team members or contractors are to discuss any aspect of any complaints with any complainant unless authorised by the Asset Operations Manager.	All team members All contractors	Ongoing
3.	For simple issues, maintain records of correspondence on OEMP files.	Marina Operations Manager	Ongoing
4.	For complex issues, complete CEMP Form 7.	Asset Operations Manager	As required
5.	For complex issues, assess seriousness of complaint and report to Receivers and Managers any complaints that: <ul style="list-style-type: none"> May result in legal action. May constitute non-compliance with any law, permit or approval condition. May result in liability of any type. May require cessation or restriction of any aspect of marina operations. All other complaints to be included in monthly reporting.	Asset Operations Manager	On receipt of a complaint or inquiry
6.	For complex issues, within five business days, the Asset Operations Manager (or delegate) must take initial action in relation to the complaint/inquiry. This may include: <ul style="list-style-type: none"> Provision of requested information. Meeting/further discussion with complainant. Initial investigation of matters relating to the complaint. Reporting to DEHP may also be required if the complaint involves actual or potential environmental harm (see Section 12.1.5) 	Asset Manager	Within 5 business days of receipt of a complaint or inquiry
7.	At the end of five business days, complete the "Agreed Follow Up Actions" section of the form, preferably in consultation with the complainant. Additional pages should be attached as necessary. Follow up actions then become corrective actions as per corrective action procedure CAP-1 (see OEMP Section 10).	Asset Manager	Within 5 business days of receipt of a complaint or inquiry
8.	Complaints/Inquiries form (Form 7) to remain in the Corrective Actions file until agreed actions are resolved.	Asset Manager	As required

CRP-1	Complaints and Inquiries Procedure	Revision 03	Issued: Dec 2016
9.	Resolved Complaints/Inquiries form (Form 7) to be filed in OEMP files – communications.	Marina manager	On resolution of complaint
<u>Monitoring and Auditing:</u> <ul style="list-style-type: none"> Report against complex complaints in quarterly report (Section 12.2.2) 			
<u>Corrective Action:</u> <ul style="list-style-type: none"> Undertake actions as agreed. 			
<u>Reporting:</u> <ul style="list-style-type: none"> Serious complaints reported to Receivers and Managers. 			
<u>Cross References:</u> CAP-1 – corrective actions procedure OEMP Section 11 – incident response			

12.1.9 Complaints/Inquiries Form

CEMP Form 7		Inquiries/Complaints	
Name:			
Contact Details:			
Date:		Time:	
Type of Contact: ☐ Phone ☐ Fax ☐ Email ☐ In Person			
Description of Complaint/Inquiry:			
(Attach additional description/evidence as required)			
Recorded by:			
Referred to:		Date of Referral	
Initial Actions (complete within five business days)			
Agreed Follow Up Actions:			
Action	Date Completed	Signature	

Distribution:		
Original → OEMP files (Communications)		
Copy 1 → Receivers and Managers – if required		
Additional copies to those responsible for actions.		
<div> <div>■ Actions Closed:</div> <div>■</div> <div>■</div> <div> <div>_____</div> <div>_____</div> <div>____/____/20____</div> </div> <div> <div>■ Name</div> <div>Signature</div> <div>Date</div> </div> </div>		

12.2 Internal Communications

12.2.1 Availability of OEMP

The current version of the OEMP shall be available to all personnel on the OEMP filing system and in hard copy at the marina office.

12.2.2 Management Meetings and Reports

Environmental performance is to be a standing item at all management meetings

The Asset Operations Manager, assisted by the Marina Operations Manager is to report quarterly (March, June, September and December), by exception (ie, when there is something to report) to the Receivers and Managers on any of the following matters that may be relevant to the previous quarters' performance:

- any incidents and the outcome
- any compliance issues
- any complaints or community/neighbour/tenant issues
- resourcing
- any other issues, eg dredging works
- Audit activities and results
- Environmental incidents and near misses and the outcome of any investigations or follow up
- Any non-compliance with legislative requirements and approval conditions
- Complaints in relation to environmental matters
- Staff training including inductions, refreshers and toolbox talks
- Any resourcing issues or funding issues in relation to activities required to implement the OEMP and manage environmental issues at Port of Airlie
- Performance against the objectives and targets in Section 5 by exception; that is, where a performance indicator has not been met, this should be reported.

This component of the quarterly report shall be retained on the OEMP file (Communications and Reporting).

12.2.3 Other Internal Meetings

The following matters shall be standing items on the agenda of staff meetings:

- Environmental compliance issues and incidents
- Observations regarding environmental performance
- Actions required in relation to corrective actions.

There is no requirement to minute these meetings.

12.2.4 Contractor Meetings

Contractor meetings are held on a regular basis with frequency depending on the nature of the contract.

Environment will be a standing item on the agenda for these meetings including the following matters as necessary:

- Status of environmental compliance, including whether appropriate approvals are in place, and level of compliance with those approvals
- Review of environmental management controls that are in place and the effectiveness of these
- Environmental performance and outcomes of incident and non-compliance investigations
- Staff training and awareness activities.

13. Document and Records Management

13.1 Filing System

The OEMP filing system will be managed as follows:

- A filing system will be maintained by Meridien based on the structure of the OEMP.
- The filing system may consist of parallel paper and electronic copies, however electronic files shall prevail and all materials received as paper copies shall be scanned and saved in electronic files
- The “properties” tab on electronic files may be used to add notes on any particular document
- Sub folders may be established for the electronic files, with folder names clearly indicating the contents of the folder
- Correspondence is to be filed in the most relevant file, with copies to other files if necessary.
- If reports or other information on a file is copied or distributed to anyone, a record of this should be maintained
- All emails should be saved to the electronic files in the appropriate file
- Paper files should be maintained in date order
- Electronic files will be backed up on a secure server or other secure back up system on a weekly basis.

Table 13-1 – Filing System and Documentation Requirements

File	Contents
OEMP	<ul style="list-style-type: none"> • A complete copy of the current version of the OEMP • Superseded versions
Aspects and Impacts	<ul style="list-style-type: none"> • Copies of Form 11 and supporting information
Legal and other obligations	<ul style="list-style-type: none"> • All environmental approvals (and approvals register) • Correspondence relating to any legal non-compliances (cross referencing to the incident folder may be required in some circumstances) • Correspondence in relation to environmental approval requirements • Correspondence in relation to conditions of approval • Legal advice
Roles and responsibilities	<ul style="list-style-type: none"> • Records of any delegations of responsibilities
Objectives and Targets	<ul style="list-style-type: none"> • Monthly and annual performance reports (including Form 9) • Supporting evidence (or cross reference to supporting evidence)
Environmental values	<ul style="list-style-type: none"> • Baseline survey results (pre-impact surveys) <p>The following reference documents relating to baseline studies and construction environmental management aspects. Note that handover of all reports relating to baseline and construction studies was incomplete.</p> <ul style="list-style-type: none"> • Port of Airlie SEIS (SKM 2002) and Addendum (SKM April 2003)

File	Contents
	<ul style="list-style-type: none"> Port of Airlie Construction Environmental Management Plan Rev D (GHD 2008) Fisheries Resources Monitoring in Boathaven Bay (DEEDI 2010) Geotechnical Investigation – Pre-construction (Ullman and Nolan 2004) Acid Sulfate Soils Investigation (Ullman and Nolan 2004) Tributyl Tin assessment report, including management plan (Ullman and Nolan 2007) Coastal Design Report (Coastal Engineering Solutions 2004)
Environmental Control Procedures	<ul style="list-style-type: none"> Any documentation relating directly to ECPs Weed hygiene declarations Environmental management for vessels, tenants See below for waste management
Waste Management	<ul style="list-style-type: none"> Waste generation record (OEMP Form 10) Regulated waste transport forms Invoices from waste contractors (these record waste volumes and provide data for waste minimisation) Waste contracts including evidence that waste contractors hold appropriate authorisations
Training	<ul style="list-style-type: none"> Training records, including OEMP Form 8 Training materials including presentations
Monitoring	<ul style="list-style-type: none"> Water quality monitoring results including Form 12 Seagrass monitoring reports Activity specific checklists Weekly checklists Pre-wet season and severe weather event checklists Topographic and hydrographic surveys Audit reports Copies of water and electricity bills Any other monitoring data generated
Continuous improvement	<ul style="list-style-type: none"> Corrective action request forms and any supporting information, including OEMP Form 5 Environmental Management Program forms and other details in relation to environmental management, including OEMP Form 13 OEMP amendment requests
Incidents	<ul style="list-style-type: none"> Incident reports and investigations External reporting of incidents Supporting information
Communications and reporting	<ul style="list-style-type: none"> Complaints and enquiries Notifications made to external stakeholders

File	Contents
	<ul style="list-style-type: none"> Other incoming and outgoing correspondence of a general nature in relation to environmental management Statutory reports Records of meetings with external stakeholders Visitor information (note that information relating to reporting of incidents should be filed in the incident file) (note that minutes of internal meetings will be filed elsewhere in the Meridien filing system but can be copied to this file if significant environmental matters were covered in the meeting)

13.2 Document Control

The Owner's Environmental Manager will maintain version control of the OEMP and issue updates to the Asset Manager as required. The revision numbering system for the OEMP is as follows:

- Drafts are numbered using letters, that is, Revision A, Revision B and so on
- Final versions are marked numerically, that is, Revision 0, Revision 02 and so on.
- Revision number and date of issue is marked on each of the OEMP documents.

The Asset Manager is responsible for ensuring that the version of the OEMP utilised at Port of Airlie is the current version and that holders of the OEMP have an up to date version. Outdated versions will be clearly marked as superseded and removed from circulation.

Where draft reports or other documents are placed on file, the draft status shall be clearly indicated either in the file name, or marked on the document.

13.3 Retention of Documents and Records

Table 13-1 sets out the types of documents and records that must be kept in relation to this OEMP.

Electronic versions of all documents and records generated in relation to this OEMP must be retained on a permanent archive.

Monitoring results, baseline survey reports and other information pertaining to environmental conditions should be retained in perpetuity as this information may be relevant over long time frames.

Document history and status

Ashgrove Environmental ACN 164 337 197
5 Glory Street, Ashgrove, 4060

Client: Meridien

Project: Operation Environmental Management Plan

Revision	Status	Issued to	Issue date	Author	Reviewer
Rev A	Draft for discussion with client	Wayne Hann	04/03/2014	CTPI 49-Sch4	CTPI 49-Sch4
Rev 0	For issue	Meridien	31/03/2014	CTPI 49-Sch4	CTPI 49-Sch4
Rev 01	For issue	Meridien	02/06/2014	CTPI 49-Sch4	CTPI 49-Sch4
Rev 02	For issue	Meridien Dept of Environment	17/06/2014	CTPI 49-Sch4	Hopgood Ganim
Rev 03	For Issue	Meridien Dept of Environment	Dec 2016	CTPI 49-Sch4	NA

CONTROLLED DOCUMENT

Contact CTPI4@ashenv.com to check date of latest version

C:\Users\CTPI 49-Sch4\Documents\Projects\Port_of_Airlie\OEMP\Rev_03\OEMP_Rev03_Final.docx

REVISION 03

DATE OF ISSUE: Dec 2016

PAGE 215

APPENDIX C. DREDGE SPECIFICATIONS





Amphibious Dredge Specifications

DREDGE CAPABILITIES

Mechanical Dredging (400l excavator bucket)
Hydraulic Dredging (Cutter Suction Pump – Pump up to 900m without booster)
Weed Rake (Remove heavy weeds and roots)

PREPARED BY

CTPI 49-Sch4

Waterways Engineers – Dredging Maintenance
Yard: Lot 5 Burroway Rd, Homebush Bay NSW 2127
Post: PO Box 96 Pyrmont NSW 2009-08-28
Email: CTPI 49-Sch4 @dredgingsystems.co.au
Ph: 02 9648 3989 Mob: CTPI 49-Sch4
Web: www.dredgingsystems.com.au
Web: www.stormwater.com.au



Phone: 1300 373343 (DREDGE) Fax 02 9648 4630 Email: CTPI 49-Sch4 @dredgingsystems.com.au Web: www.dredgingsystems.com.au Post: PO Box 96 Pyrmont NSW 2009 Yard: Lot 5 Burroway Rd Homebush Bay NSW 2127



Dredging Systems amphibious dredge



Transporting dredge to site

Suction dredging tool Cutter Pump

Cutter pump is the general suction dredging tool for silt, sand, mud and sludge. The dredging pump's output is 500 m³/h (water) against 3 bar head. Total weight 960 kg

- Hydraulically driven cutter Ø 600 mm
- Submersible dredging pump 1 piece
- Biggest grain size 50 mm



Pumping Coal - cutter suction pump

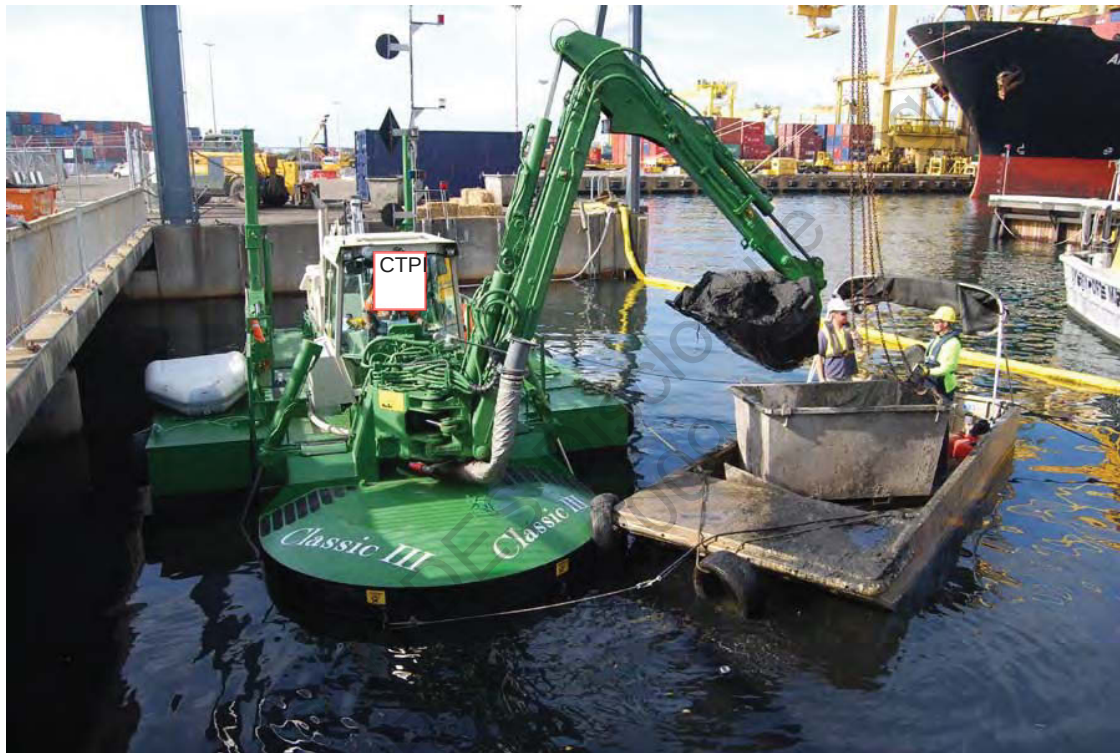


Cutter suction pump

Backhoe dredging tool

400 l bucket

- 400 l bucket is the general tool for backhoe dredging
- Bucket weight 330 kg
- Bucket lip is with teeth



Excavator Bucket

Backhoe dredging tool Rake

The rake is for removing reed, roots and other vegetation. It is also useful for cleaning the bottom from trash excavated solid content remains very high, because free water flows away through the net

- Width 2750 mm
- Height 900 mm
- Weight 250 kg



Weed Rake

Technical specification

Dredging Systems self-propelled dredger Built 2010

- Caterpillar C7 diesel engine, 168 kW
- Hydraulic propulsion system
- Tilting rear stabilizers – 5,0 m
- Front stabilizers with detachable floats 3,6 m
- Mast, signal lights for navigation and dredging
- Electric fuel pump

Service crane

Side pontoons

Spray pipe

Central pressure greasing

Cabin a/c unit

General

The dredge is a pontoon mounted, easy to transport dredge equipped with an excavator arm, versatile stabilizers, and a propulsion system. It can cruise at about 4 knots speed, and move on dry land by using its excavator arm and tilting back stabilizers.

Dimensions

- Transport length (without boom) 10,45 m
- Transport length (with boom) 15,00 m
- Transport width 3,25 m
- Transport height 3,05 m
- Transport weight c. 17 tons
- Max reach 7,45 m
- Max. Reach below water level (cutter pump) 5,3 m
- Max. Reach below water level (hoe bucket) 4.3 m

Engine

- Caterpillar C7, turbo charged, water cooled, 6-cylinder diesel engine
- Flywheel power 168 kW (225hp) at 2000 rpm
- Fuel tank capacity 1200 l
- Electric fuel pump
- Electric system 24 V
- Batteries 2 x 180 Ah

Hydraulics

- One axial piston pump for dredging and propeller maximum operating pressure 320 bar capacity 95 ccm /rev
- One axial piston pump for stabilizers maximum operating pressure 210 bar capacity 100 ccm / rev
- Oil level alarm

Excavator

- Swinging angle 180°
- Break-out force from bucket cylinder 77 kN
- Digging force from arm cylinder 40 kN
- Lifting capacity at max. Reach 16 kN
- Lifting capacity with power lift 19 kN

Stabilizers

- Front detachable floats, max depth 3,6 m
- Rear tilting spuds, max depth 5,0 m

Hull

- One piece hull divided in 7 watertight compartments
- Corrosion resistant painting outside and inside
- Protective sliding rails on bottom
- Slip-safe deck
- Handrails

Cabin

- Deluxe seat with full adjustability
- Three opening side windows
- Heating, ventilation
- Cabin a/c unit
- Complete gauging for hydraulics and engine
- Four working lights
- Radio receiver with CD player

Other equipment

- Service crane with lifting grab and rotator
- Side pontoons (1 x 1 x 4 m) 1 pair
- Spray pipe, length 5,8 m
- Mast, signal lights for navigation and dredging
- Hydraulic propulsion system
- Central pressure greasing

Yours sincerely

CTPI 49-Sch4

CTPI 49-Sch4

Dredging Systems Pty Ltd

APPENDIX D. RAINFALL DATA



Rainfall data are presented to provide the ground for analysis of water quality impact. They also provide a context to seagrass health, distribution and abundance, as heavy rainfall events are associated with seagrass dieback. All data have been sourced from Bureau of Meteorology at the Station 033255 Hamilton Island.

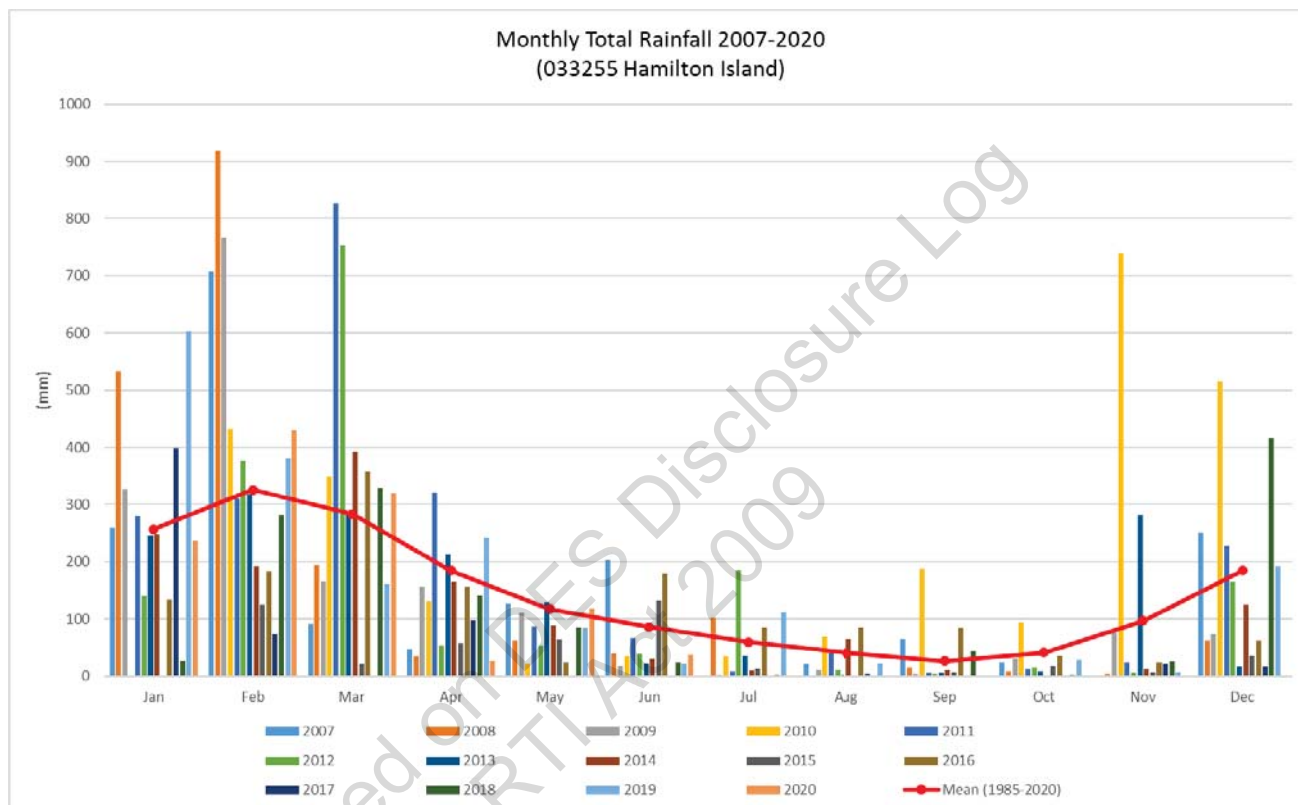
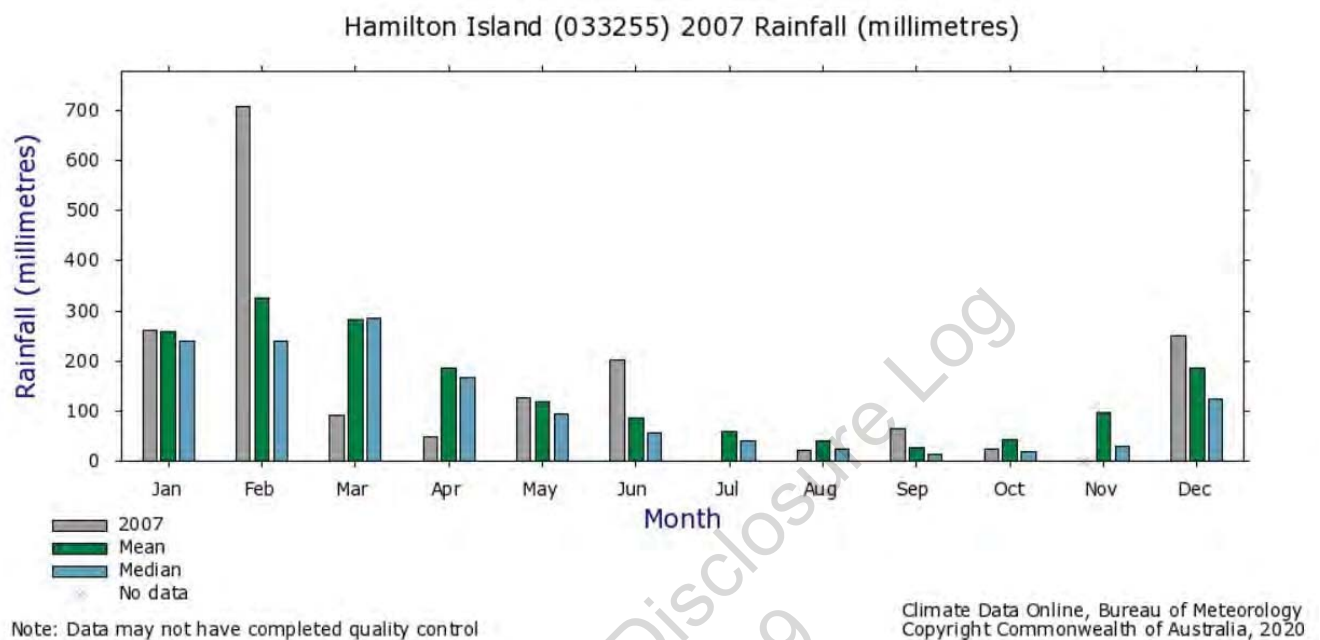
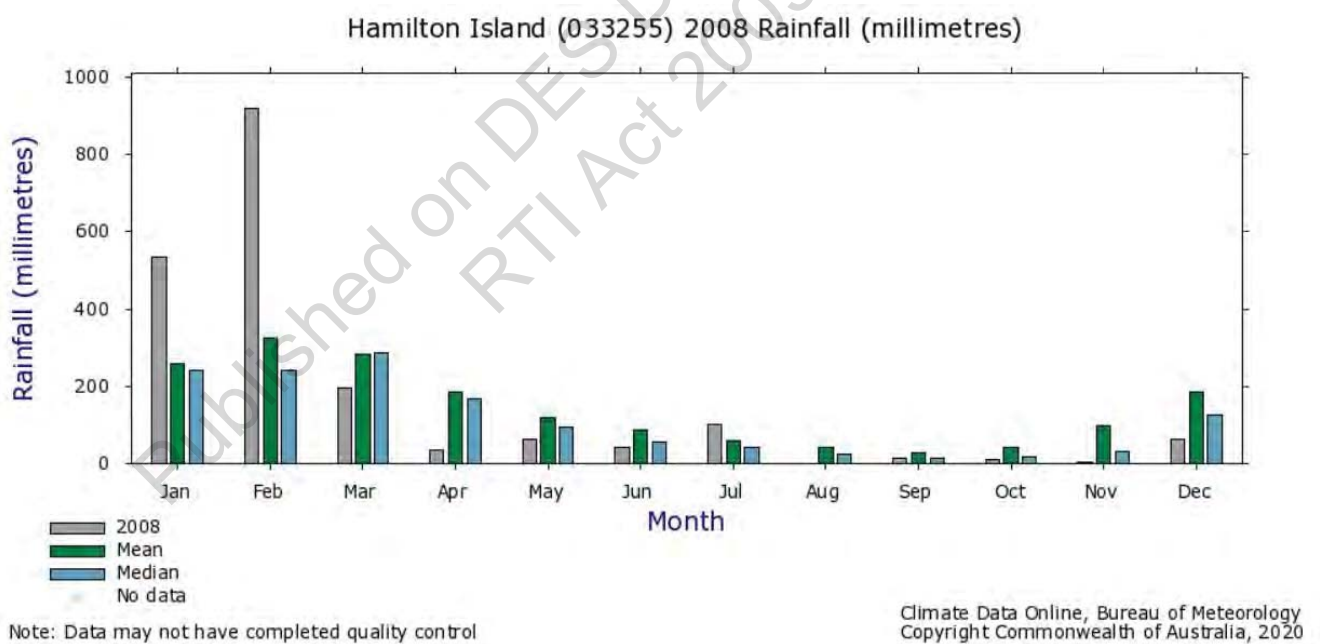
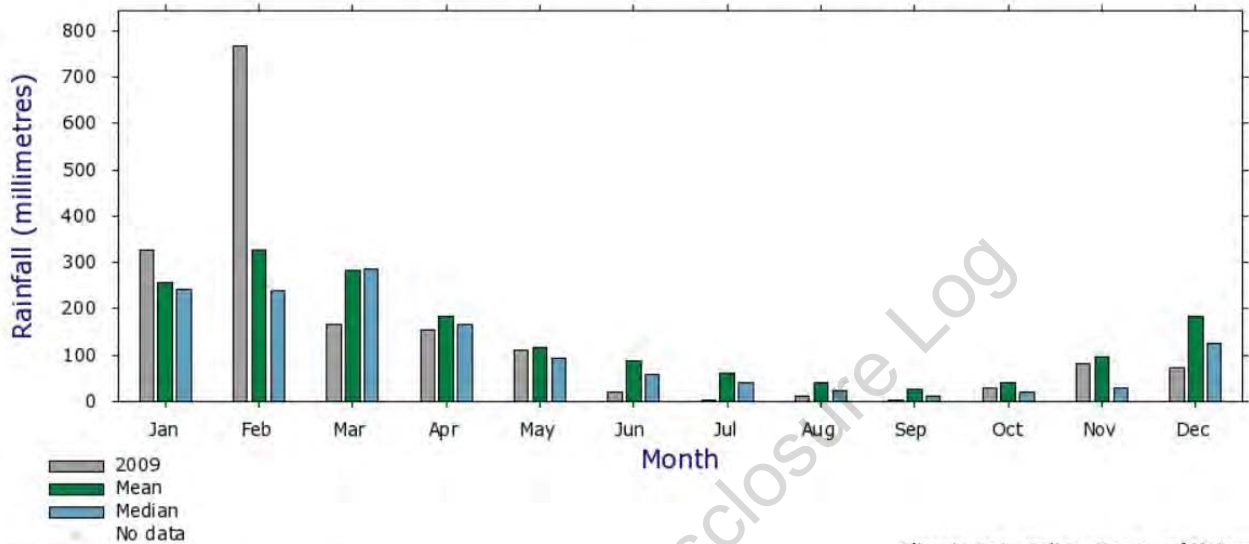


Figure D-1 Summary of monthly rainfall data averaged over the period from 2007 to 2020 at the Station 033255 Hamilton Island

The following figures respectively present the monthly rainfalls covering the years from 2007 to 2020.



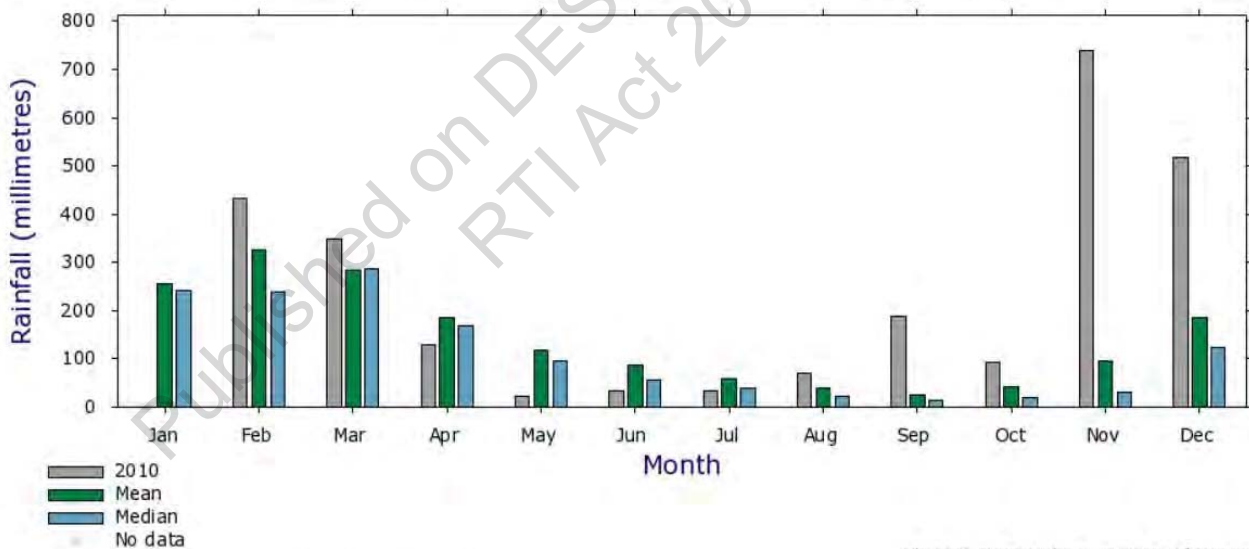
Hamilton Island (033255) 2009 Rainfall (millimetres)



Note: Data may not have completed quality control

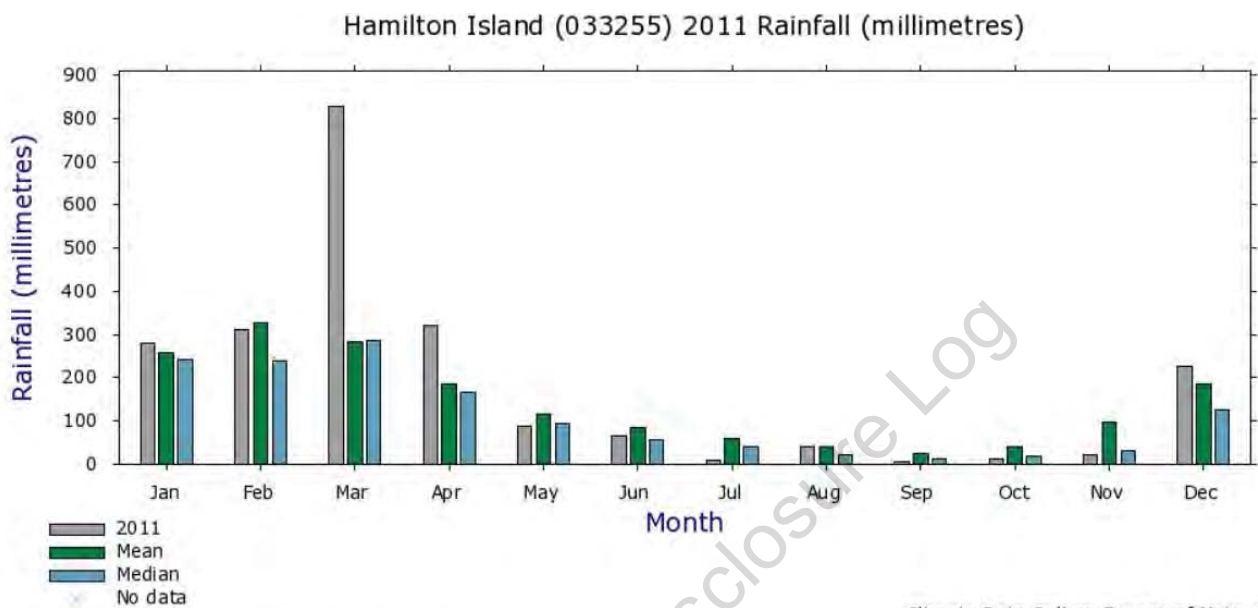
Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020

Hamilton Island (033255) 2010 Rainfall (millimetres)



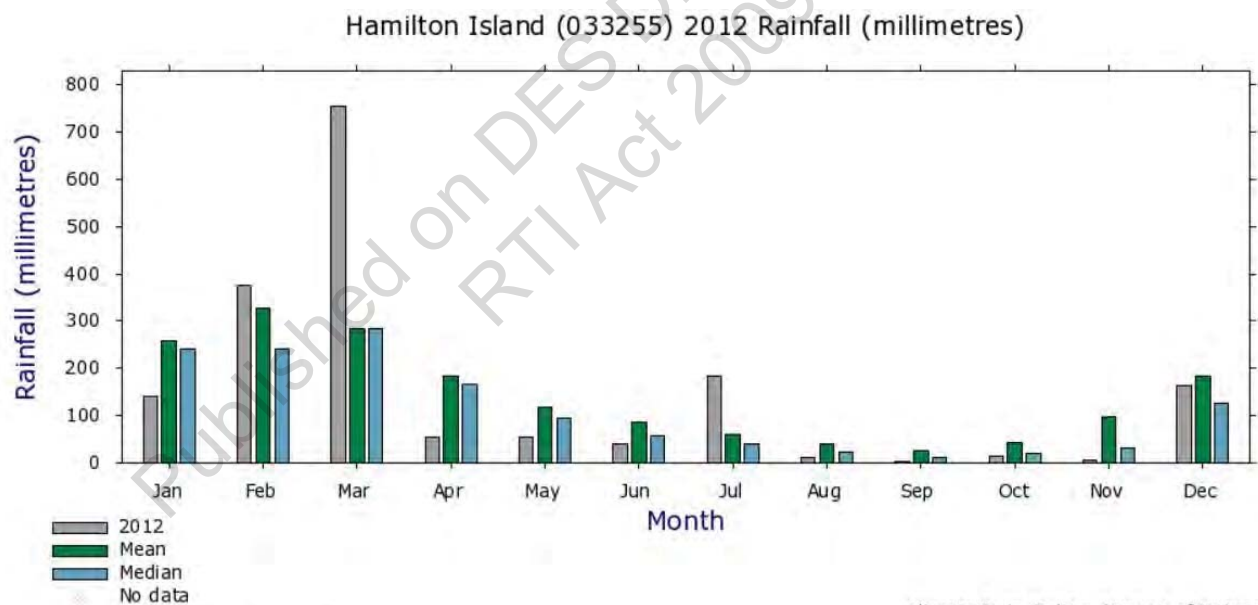
Note: Data may not have completed quality control

Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020



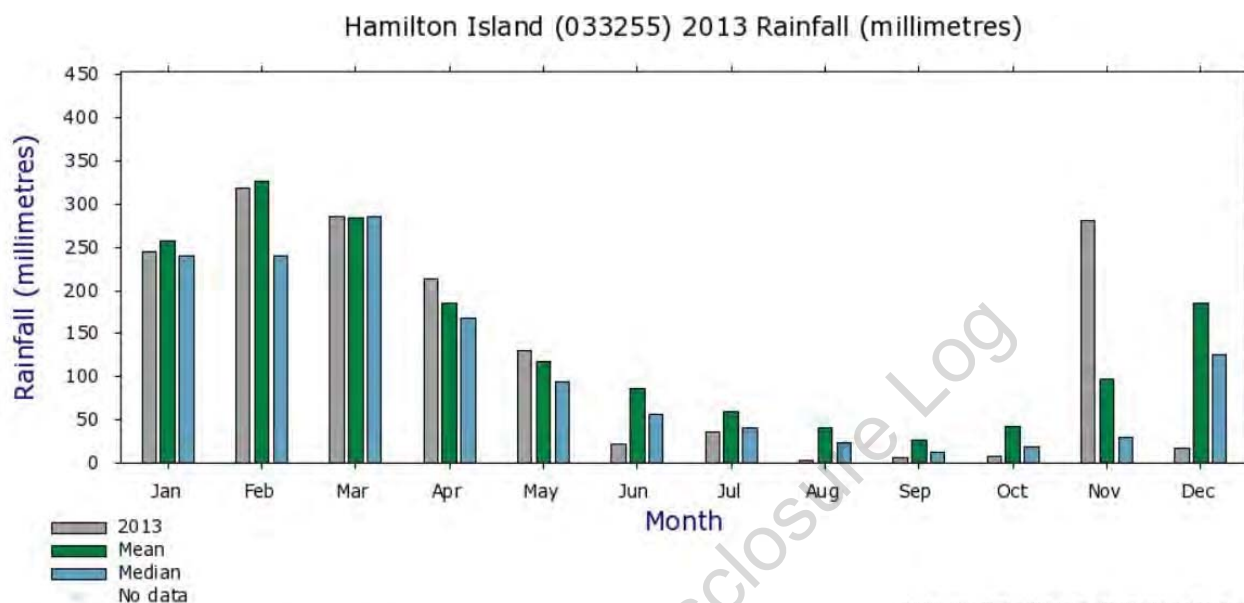
Note: Data may not have completed quality control

Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020



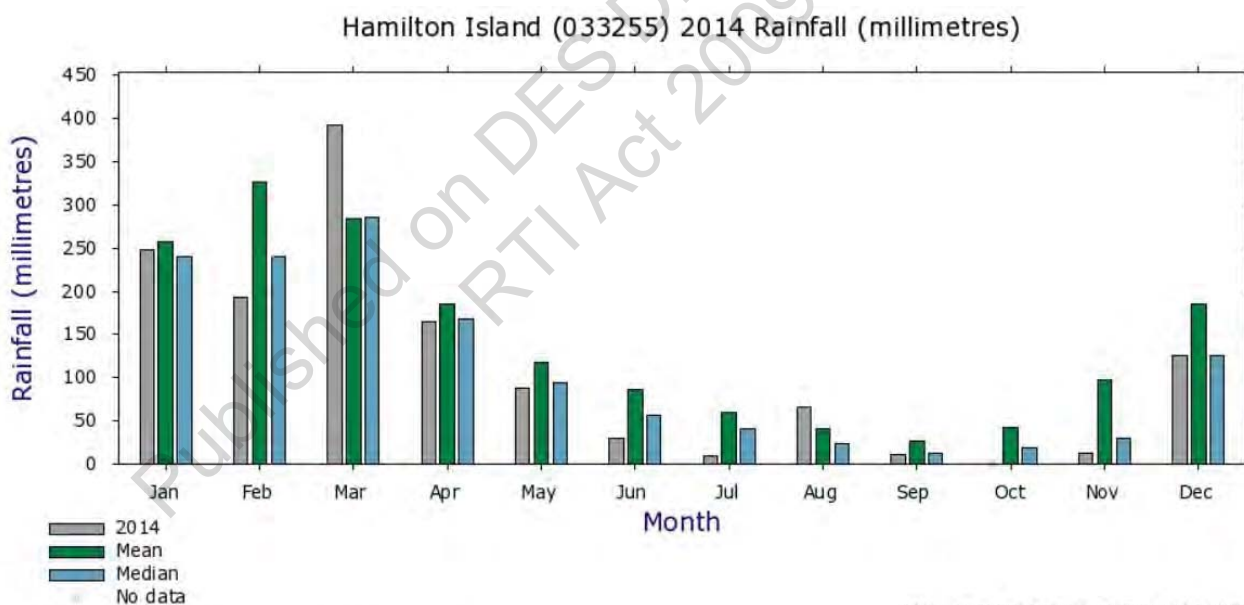
Note: Data may not have completed quality control

Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020



Note: Data may not have completed quality control

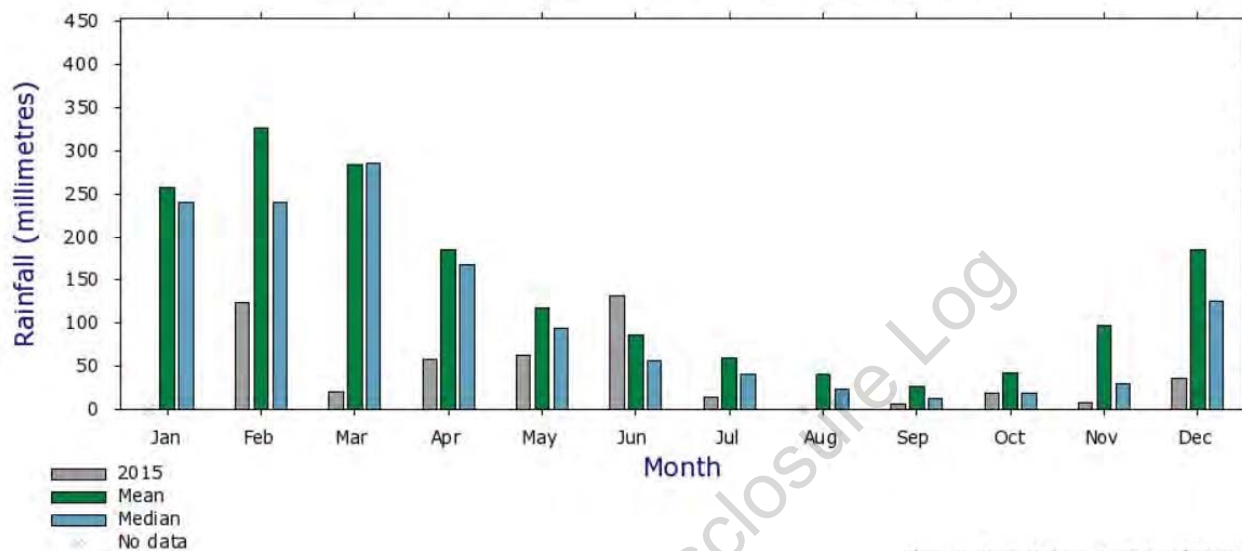
Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020



Note: Data may not have completed quality control

Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020

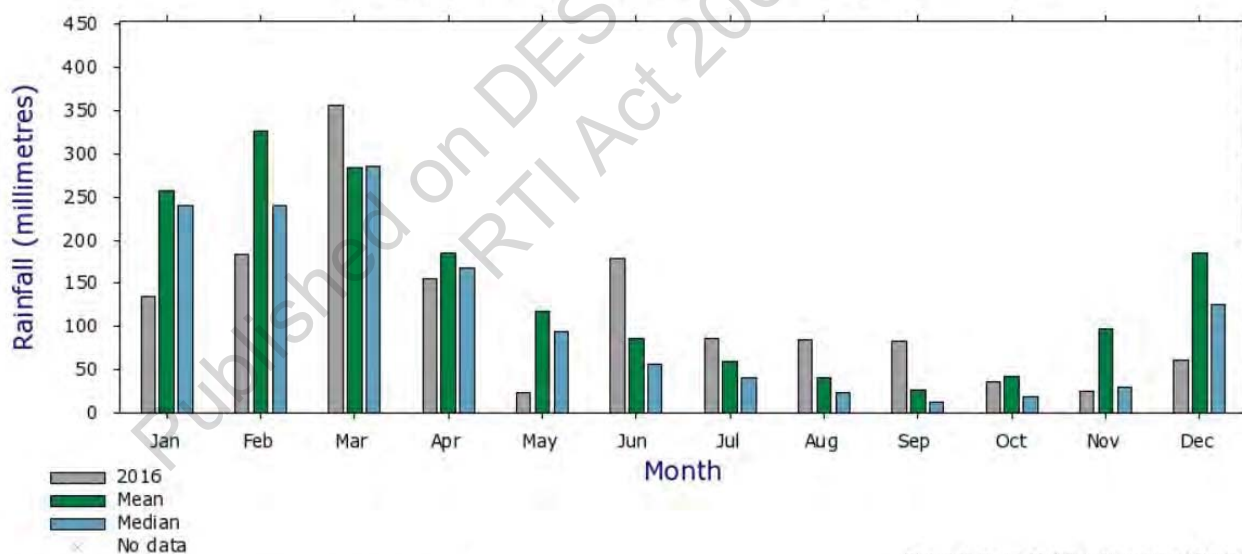
Hamilton Island (033255) 2015 Rainfall (millimetres)



Note: Data may not have completed quality control

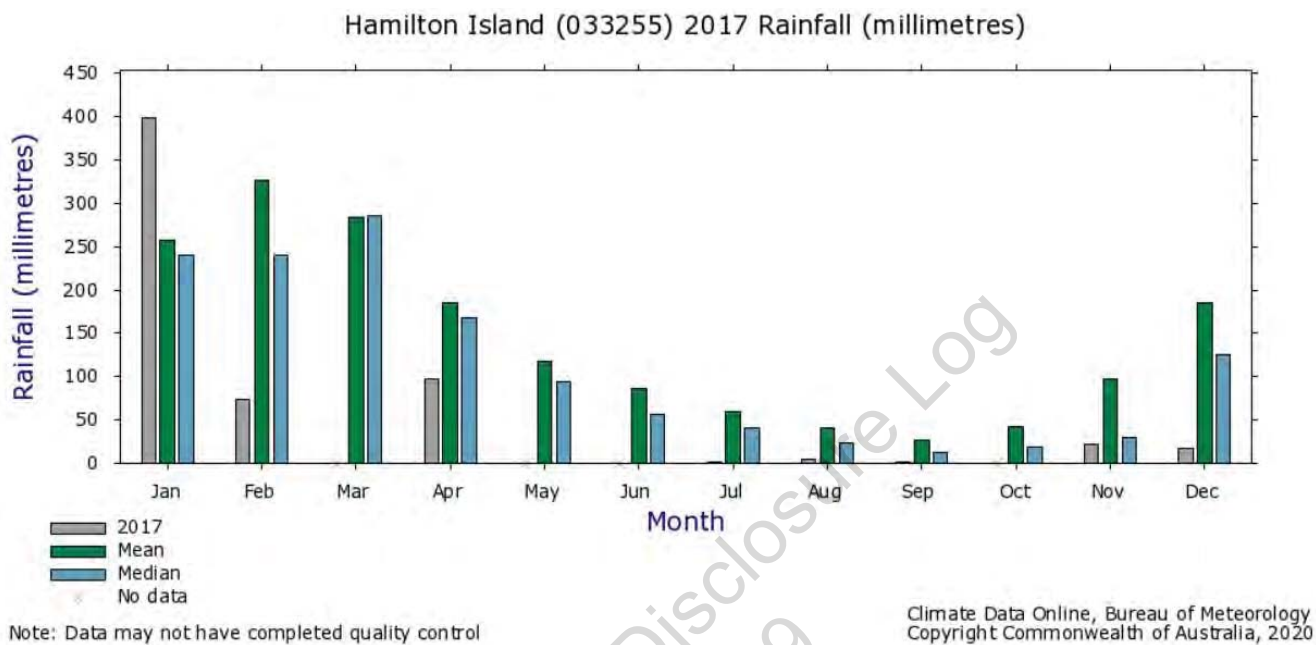
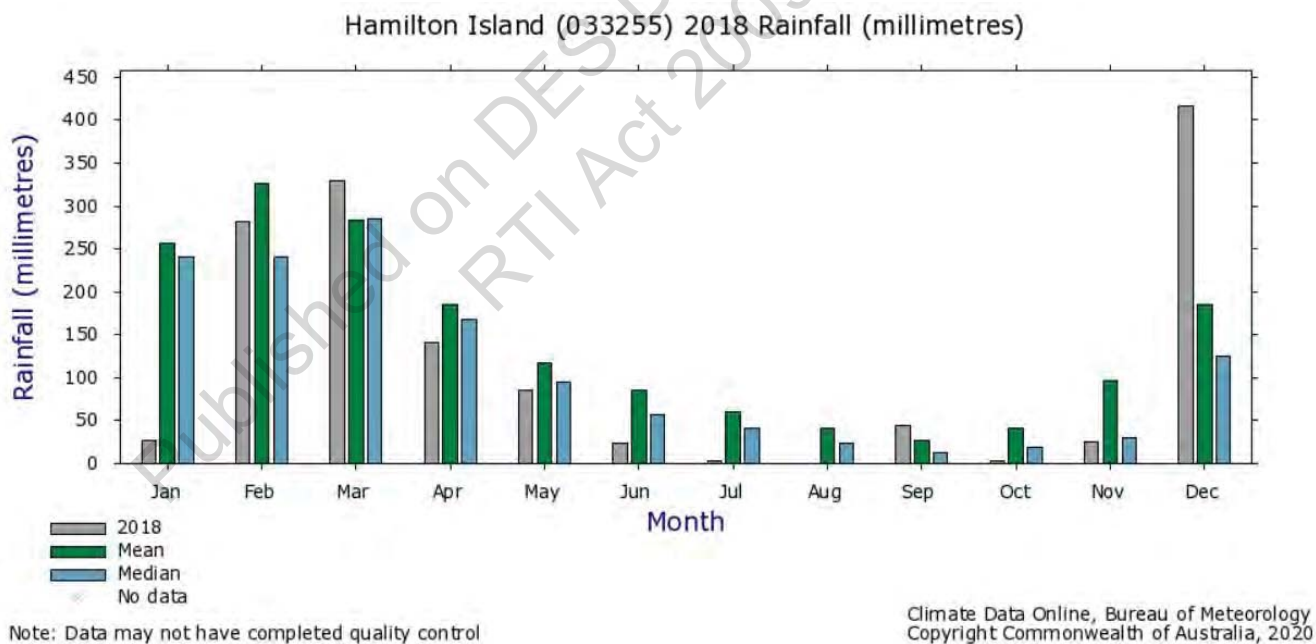
Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020

Hamilton Island (033255) 2016 Rainfall (millimetres)



Note: Data may not have completed quality control

Climate Data Online, Bureau of Meteorology
Copyright Commonwealth of Australia, 2020



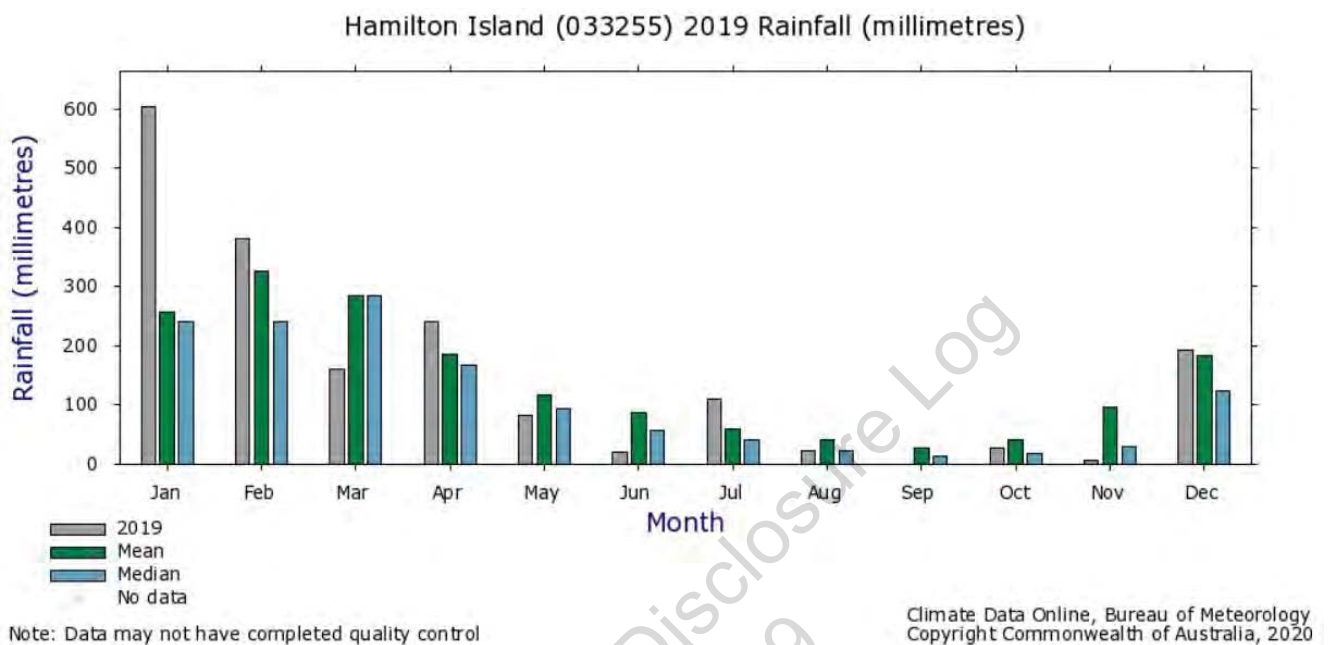
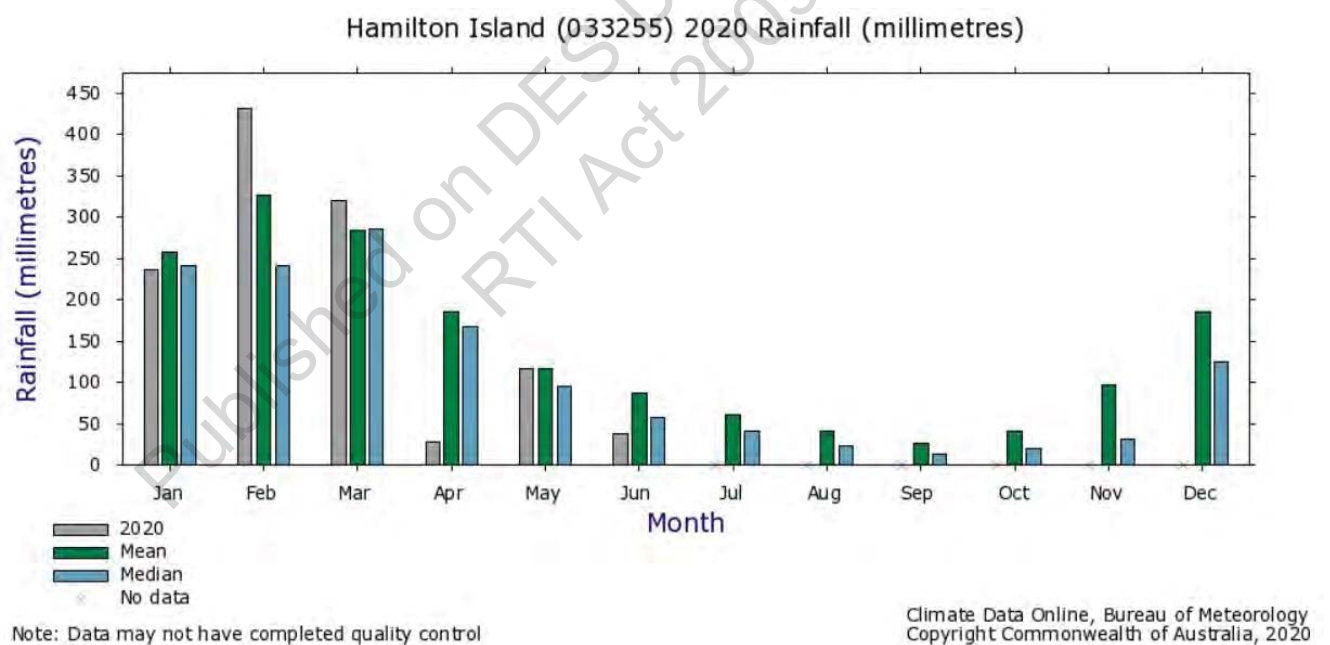


Figure D-2 Monthly rainfall data at the Station 033255 Hamilton Island covering the years from 2007 to 2020

APPENDIX E. WIND SPEED AND DIRECTION



The following figures provide a comparison of wind speed and direction in August, September and October. All data have been sourced from Bureau of Meteorology at the Station 033255 Hamilton Island.

Published on DES Disclosure Log
RTI Act 2009

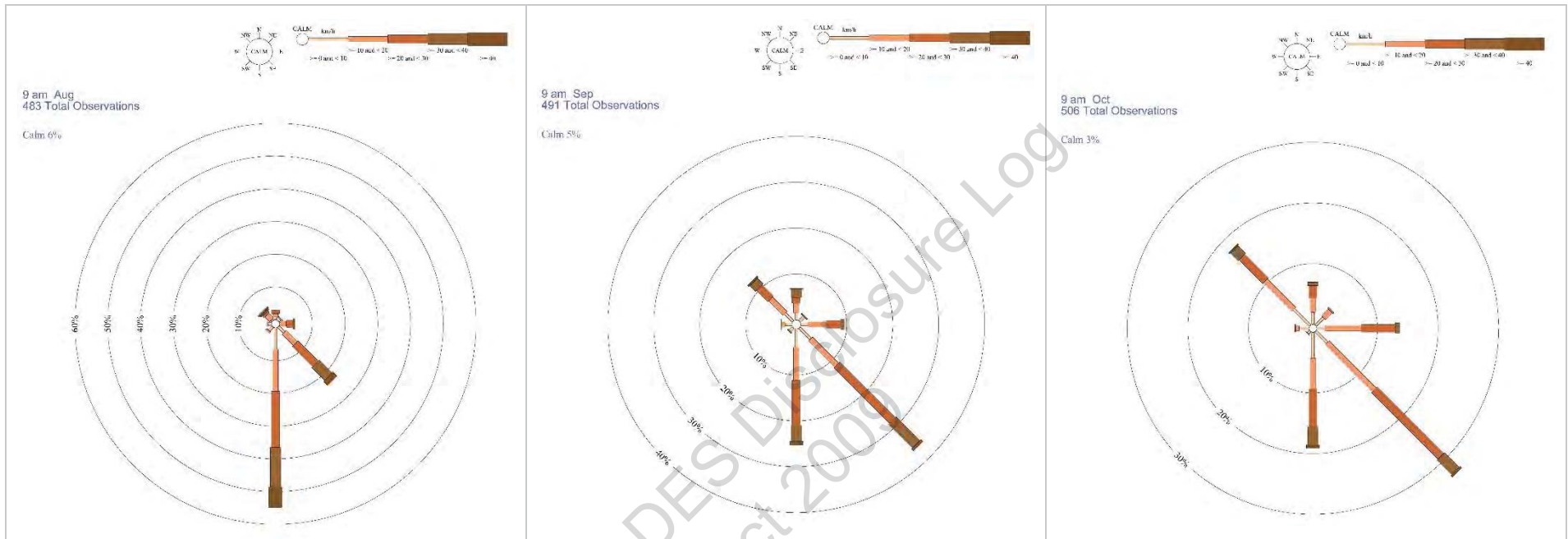


Figure E-1 Wind Speed and Direction at 9am at the Station 033255 Hamilton Island in August (left), September (central) and October (right)

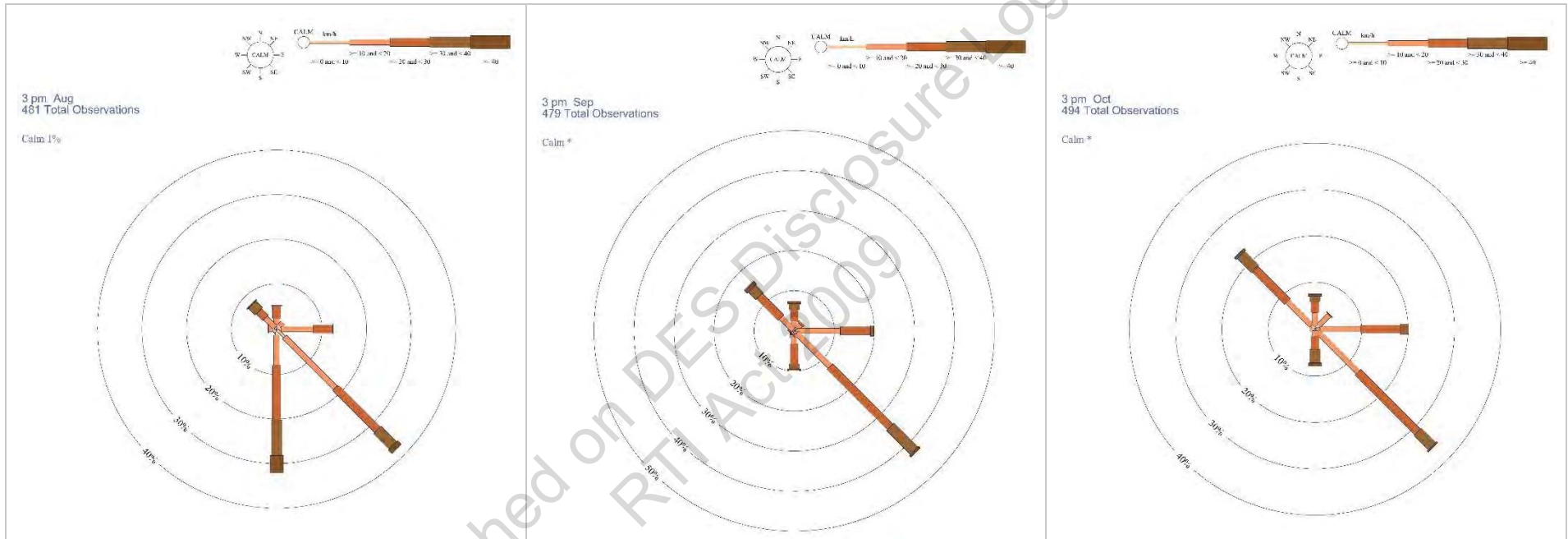


Figure E-2 Wind Speed and Direction at 3pm at the Station 033255 Hamilton Island in August (left), September (central) and October (right)

APPENDIX F. SEDIMENT INPUT FROM 2008 RAIN EVENTS

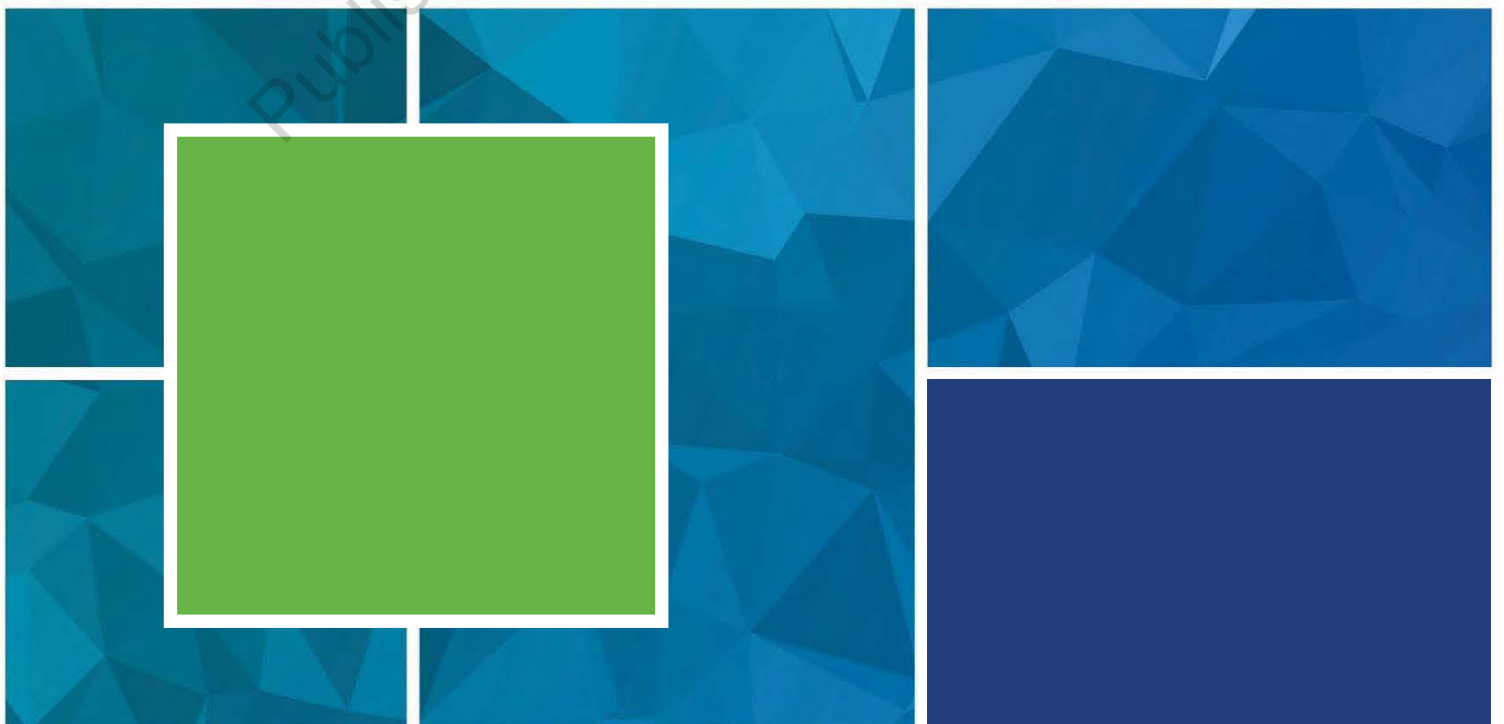


Figure E-1 shows Google Maps imagery on 7th March 2008. At this stage of construction of Port of Airlie, a stormwater diversion drain had been installed which diverted existing stormwater flows from the mainland south-east along Shute Harbour Road, as shown by the blue arrow.



Figure F-1 Google Maps imagery on 7th March 2008 showing a stormwater diversion drain

Figure F-2 is an oblique aerial photograph from a series of photos taken by Meridien. The approximate location of the stormwater diversion drain is also shown in this photo. Note that runoff from Port of Airlie was not allowed to enter this stormwater drain. Work did not take place at Port of Airlie in January and February 2008 due to extreme weather conditions. There was no overflow from water management areas within the construction site.



Figure F-2 Aerial photograph showing a stormwater diversion drain

The following photographs are excerpts from Community Reference Group report (2009) showing the sediment releases from the development on the steep hillslopes immediately to the south-west of Port of Airlie. This hillside drained to Boathven Bay, with a stormwater diversion drain installed between Shute Harbour Road and Port of Airlie to collect the runoff.

Upstream run-off - early 08

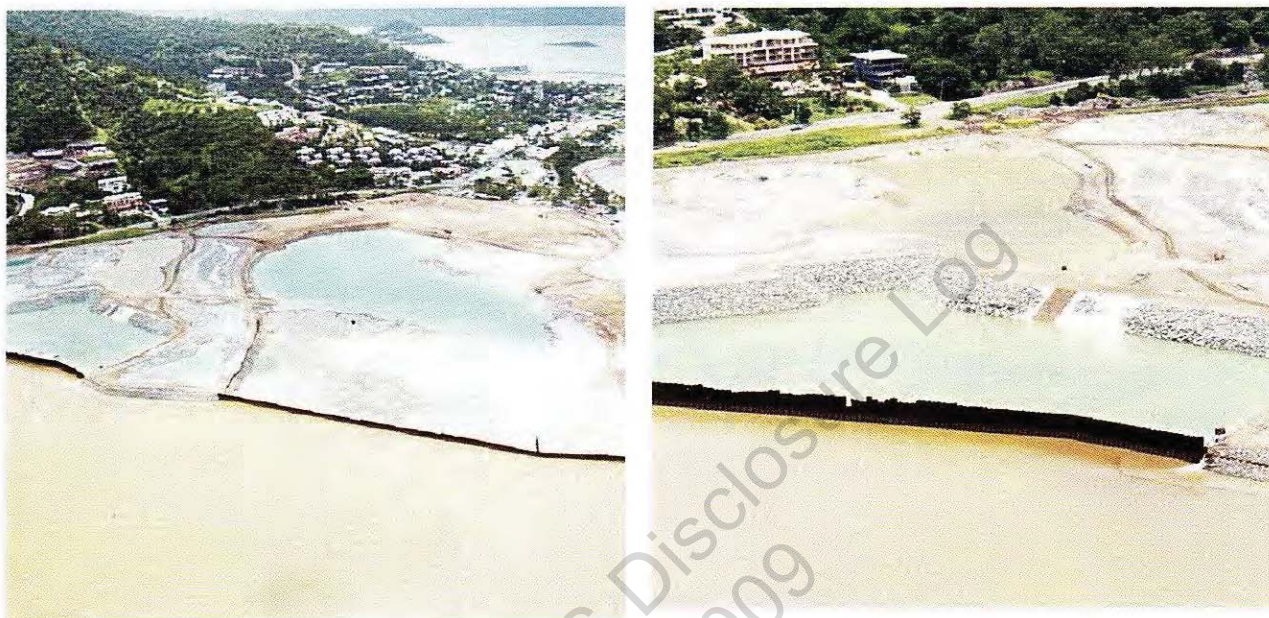


Figure F-3 Aerial photograph showing sediment release into Boathaven Bay in 2008. The Port of Airlie development site was cut off by sheet pile walls

Upstream mud crisis - February 08



Mud headed for site - February 08



Figure F-4 Photograph showing sediment deposition (left) and highly turbid runoff (right) from hillslopes south-west of Boathaven Bay in 2008 after heavy rainfall

APPENDIX G. EVALUATION OF SEAGRASS MONITORING RESULTS



Construction of Port of Airlie commenced late in 2006. Works in the intertidal area commenced early in 2007, with bund construction and sheet piling. By July 2007, the marina basin and much of the reclamation area were fully enclosed by bunds and sheet piles. Dredging of the channel outside the enclosed area commenced in June 2008 and continued until the end of October 2008 (a “once-off” amendment to relevant State and EPBC Act approvals was obtained).

Baseline seagrass monitoring in 2004 and 2005 showed a relatively high abundance and distribution of seagrasses in Boathaven Bay, with 2005 potentially being an unusually high year.

Above average rainfall occurred in the summer of 2006/2007 and also in the summer of 2007/2008, with the latter events being particularly significant. Regional rainfall records for 2007 and 2008 are provided in Appendix D. During the same period that Port of Airlie was under construction, development was also occurring on the steep hillside immediately to the south-west of Port of Airlie. This hillside drained to Boathaven Bay, with a stormwater diversion drain installed between Shute Harbour Road and Port of Airlie to collect the runoff. Photos from early 2008 show significant sediment releases from the development area to Boathaven Bay (Appendix F).

Construction seagrass monitoring events were undertaken in November 2007, June 2008 and November 2008 (GHD February 2008, GHD August 2008, GHD January 2009). Seagrass survey reports were submitted to relevant Federal and State agencies but are available on request if needed. Seagrass monitoring compared species composition, abundance, biomass and depth distribution in Boathaven Bay with pre-construction baseline conditions and with a control site at nearby Charlies Bay. While Charlies Bay had a number of similarities to Boathaven Bay, there is very limited development in the catchment of Charlies Bay and hence, input of sediment and other contaminants during rain events is less significant.

It is a characteristic of seagrass beds that significant fluctuations in species composition and biomass can occur through natural variation, and in response to weather events (for example, in storm events, high wave conditions can redistribute substrate in intertidal and shallow subtidal areas, inputs of fresh water can reduce seagrass growth and stormwater runoff can carry significant sediment loads, even from relatively undisturbed catchments). This can make it difficult to detect anthropogenic influences such as the impacts of catchment development and dredging.

Nevertheless, the use of a control site and the design of the survey to include impact gradients within Boathaven Bay provided the best possible means of identifying construction impacts.

The findings of the November 2007 (pre-dredging) seagrass survey were as follows:

- Species composition on Boathaven Bay and Charlies Bay was similar to previous surveys.
- There had been a reduction in the depth distribution of some species of seagrass at both the impact and control site.
- Deposition of fine sediment was observed in Boathaven Bay and to a lesser extent in Charlies Bay. The monitoring report noted that water being released from Port of Airlie and increased sediment loads in stormwater runoff from the mainland may have led to reduced light availability in Boathaven Bay (note that releases from Port of Airlie were compliant with the environmental authority).
- There was a significant reduction in seagrass biomass in both Boathaven Bay and Charlies Bay, however the reduction was more marked in Boathaven Bay and in particular, there was a more rapid decrease in *Zostera* abundance in Boathaven Bay. *Zostera* species are more vulnerable to reduced light availability and are also slower to recolonise areas after disturbance compared to *Halophila* and *Halodule*.
- Epiphyte cover in both Boathaven Bay and Charlies Bay had increased since the previous survey, however the increase in Boathaven Bay was particularly significant, indicating an increase in

nutrient inputs to Boathaven Bay. The report attributed this to increased nutrient inputs from stormwater runoff, including runoff from nearby construction sites.

- Overall, the report concluded that “it seems likely that adjacent construction activities in the area may have had a negative impact on the Boathaven Bay seagrass communities”. The report did not distinguish between impacts from Port of Airlie construction and other construction activities.

The June 2008 survey was undertaken at a time of the year when seagrasses are usually least abundant. Dredging activities had been underway for 2 weeks prior to commencement of this survey. The findings of the June 2008 seagrass survey were as follows:

- Depth distribution had decreased, with the decrease more marked in Boathaven Bay.
- *Zostera sp* abundance continued to decrease. The more resilient, and faster recovering *Halophila* and *Halodule* species had become more dominant. It should be noted that baseline surveys had indicated that prior to 2004, these were the dominant species in Boathaven Bay.
- Epiphyte cover was very low at both locations, indicating that any nutrient source that may have been present before the November 2007 survey had abated.
- There was extensive deposition of fine sediment in Boathaven Bay. This is unlikely to have been attributable to dredging as dredging had only commenced two weeks before this survey.
- Biomass in Charlies Bay had decreased to 13% of levels observed in 2005, and in Boathaven Bay, biomass was 9% of levels observed in 2005.

The November 2008 survey was conducted 2 weeks after cessation of dredging at Port of Airlie. Findings were as follows:

- Depth distribution of seagrass had partly recovered in Charlies Bay and, to a lesser extent in Boathaven Bay, indicating possible impacts of dredging activities, and also possibly slower recovery from the higher level of impacts from significant storm events over the summer of 2007/2008.
- Biomass in Charlies Bay had recovered to about 30% of 2005 levels while biomass in Boathaven Bay had continued to decrease.
- Epiphyte cover was low at both locations.
- Fine sediment deposition continued to be evident in Boathaven Bay.

Biosis Research undertook a seagrass survey in July 2012. While this is the low-growth season for seagrasses, the results allow seagrass recovery to be examined. Higher than average wet weather events occurred early in 2012. Although these events were not as severe as in 2007/2008, two days of record breaking rainfall occurred in March 2012 and July 2012, shortly prior to the survey. There were however also severe weather events in 2011 (see Appendix D and Appendix F). These severe weather events have been identified as a cause of significant seagrass dieback across the Queensland coast (see, for example, Davies et al., 2013).

The 2012 survey found that:

- Biomass at both Boathaven Bay and Charlies Bay were very low, even compared to the other winter survey in June 2008.
- Depth distribution had increased indicating that light availability was no longer a growth limiting factor.
- Fine sediment deposition was again observed.

The 2012 survey concluded that *“It cannot be categorically ruled out that the construction of Port of Airlie and dredging of the channel may have had an impact on seagrass distribution and biomass in Boathaven Bay. The impacts of storm and flood events since previous assessments appear to have been apparent, however some obvious restoration has occurred and current condition reflect the natural variation in seagrass communities.”*

frc environmental undertook the last two seagrass monitoring activities in November 2014 and in November 2015, respectively. The results of surveys show that:

- For the distribution of seagrass in Boathaven Bay in both November 2014 and November 2015, *Z. muelleri* was the dominant species in the intertidal and shallow subtidal in both Boathaven Bay and Charlies Bay, with *Halodule uninervis* in deeper water, and *Halophila ovalis* at most depths in varying densities.
Although the area of seagrass in Boathaven Bay in 2014 and 2015 was less than in 2004 due to a decrease in the area of sparse and very sparse seagrass in offshore areas, the area in 2015 was slightly more than in 2014 and in particular, the area of sparse to very sparse seagrass had increased. The seagrasses recorded offshore in 2004 were sparse or very sparse and dominated by *Halophila ovalis*, *Halophila spinulosa* and *Halodule uninervis*. These species are frequently ephemeral, rapidly colonising when conditions are suitable.
In contrast, excluding the area under the footprint of the Port, there was more moderate to dense seagrass in the inshore and intertidal areas in 2014 and 2015 than in 2004, with beds dominated by *Zostera muelleri* extending further inshore in 2014 and 2015 than in 2004.
- For the depth distribution, the total depth range of seagrass and the upper and lower limits in November 2014 were similar in Boathaven Bay and Charlies Bay. In both bays, *Z. muelleri* was the dominant species in the intertidal and shallow subtidal, with a greater depth range in Boathaven Bay than in Charlies Bay. The depth range of *Z. muelleri* in Boathaven Bay in November 2014 was greater than in any previous survey, indicating good conditions for this seagrass. It is likely that there have not been any significant disturbances in the intertidal and shallow subtidal area of Boathaven Bay, as *Z. muelleri* has formed a relatively dense bed, and the lower depth limit is lower than previously recorded.
In November 2015, the depth range of *Z. muelleri* was smaller in Boathaven Bay than in 2014, and smaller than in Charlies Bay. This may be the result of ongoing development in Boathaven Bay contributing suspended sediment to the bay while Charlies Bay is relatively undeveloped.
- In terms of the impact gradient transects, 2014 survey found that the biomass of seagrass was significantly higher closer to the dredge channel and the Port of Airlie development than away from it, while the 2015 survey found that there was no significant difference in biomass between the inshore sites on the impact gradient transect in Boathaven Bay, with biomass close to the channel similar to biomass at sites furthest from the channel. That is, the Port of Airlie development has not negatively impacted the seagrass close to it.

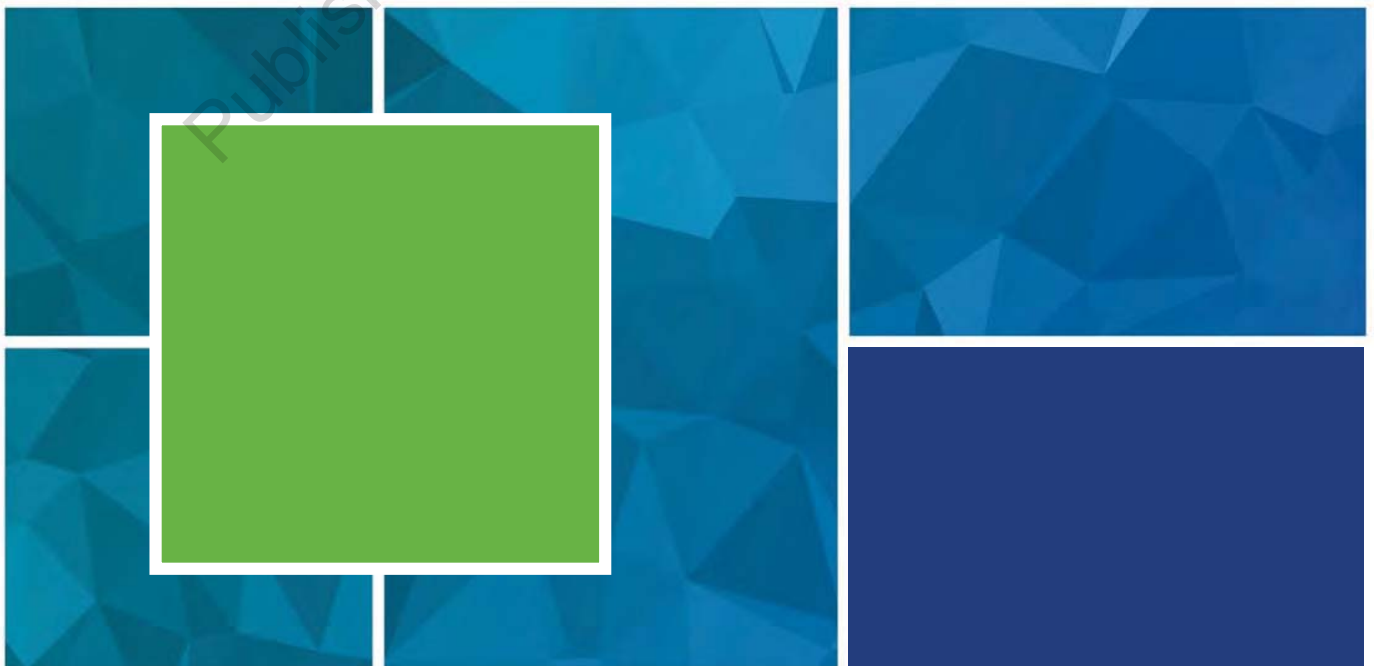
Therefore, based on the last two surveys and comparison with the past surveys, the following conclusions can be drawn.

- The seagrass in Boathaven Bay in November 2014 and November 2015 appeared to be in relatively good condition with the depth range of *Z. muelleri* equal or greater than most previous years. While there were dense epiphytic algae on the seagrass in Boathaven Bay that may negatively impact it, there was also dense epiphytic algae in Charlies Bay, indicating this was unlikely to be a result of the development.
- In 2004 there were large areas of very sparse seagrass, dominated by ephemeral species such as *H. ovalis*, *H. spinulosa* and *H. uninervis*, extending up to 1.8 km offshore. By November 2014, although seagrass did not extend as far offshore as in 2004, a more stable and dense inshore bed dominated by *Z. muelleri* had formed.
- By November 2015, while the inshore edge of *Z. muelleri* had moved seaward, the upper depth limit had not changed. Furthermore, the lower depth limit had significantly decreased. As the biomass of seagrass near the channel was significantly higher than or similar to that further away, it is unlikely that this change is related to an impact from creation of the channel, indicating the

Port of Airlie development does not appear to have negatively impacted seagrass close to it. This pattern of change is consistent with increased sedimentation resulting from development in the catchment increasing the turbidity of the water, and sediment deposition decreasing water depth in the inshore area.

Published on DES Disclosure Log
RTI Act 2009

APPENDIX H. EPBC 2001/298 VARIATION APPROVAL





Australian Government

Department of Agriculture, Water and the Environment

Our reference: 2001/298

CTPI 49-Sch4

Regional Manager – Southeast Asia
Hydrobiology
PO Box 2151
TOOWONG QLD 4066

Dear CTPI 49-Sch4

Port of Airlie Integrated Resort and Marina Development Airlie Beach QLD (EPBC 2001/198)

Thank you for your correspondence of 3 August 2020 on behalf of the approval holder to the Department, requesting a variation to conditions of the approval decision dated 14 July 2004.

Officers of this Department have reviewed the variation request. As delegate of the Minister, I have varied the conditions of EPBC Approval 2001/298 under section 143(1)(c) of the *Environment Protection and Biodiversity Conservation Act 1999* to extend by two months the period during which maintenance dredging may be undertaken in 2020. The maintenance dredging may now be undertaken up until 31 October 2020. The conditions must now be implemented in accordance with the variation notification, which has been attached for your information. I note that the requirements of the approved Operational Environmental Management Plan also apply.

As you are aware, the Department has an active monitoring program which includes monitoring inspections, desk top document reviews and audits. Please ensure that you maintain accurate records of all activities associated with, or relevant to, the conditions of approval so that they can be made available to the Department on request.

Should you require any further information please contact Peter Blackwell, Post Approvals Section, on 03 6208 2927 or by email: post.approvals@environment.gov.au.

Yours sincerely

CTPI 49-Sch4

Declan O'Connor-Cox
Assistant Secretary A/g
Assessments (Vic, Tas) and Post Approvals
Environment Approvals Division

20/8/2020

Att.



VARIATION OF CONDITIONS ATTACHED TO APPROVAL

Port of Airlie Integrated Resort & Marina Development, Airlie Beach, Whitsundays, QLD (EPBC 2001/298)

This decision to vary a condition of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action

Person to whom the approval is granted

Meridien Airlie Beach Pty Ltd and Windward AB Pty Ltd
ABN 43 362 182 360

Approved action

The construction and operation of an integrated tourist resort and marina development on Boathaven Bay at Airlie Beach in the Whitsunday region of Queensland, involving excavating a marine basin, constructing a breakwater, seawalls and an entrance channel to the marina and reclaiming land to develop retail, commercial and residential areas.

Variation

Variation of conditions of approval

The variation is:
Delete condition 6 and replace it with the condition specified below.

Date of effect

This variation has effect on the date the instrument is signed

Expiry Date of approval

This approval has effect until 2103

Person authorised to make decision

Name and position

Declan O'Connor-Cox
Assistant Secretary A/g
Assessments (Vic and Tas) and Post Approvals

Signature

CTPI 49-Sch4

Date of decision

20 August 2020

Annexure 1

6. To manage the impacts on the Great Barrier Reef World Heritage Values, listed threatened species and communities and listed migratory species, the person taking the action must undertake ongoing maintenance dredging activities in the dry season only (during the months of April to August both inclusive). Maintenance dredging may also be undertaken between 1 September 2020 and 31 October 2020.

Published on DES Disclosure Log
RTI Act 2009

Date : 4/05/2021 2:19:11 PM

From : "SIMONUTTI Anna"

To : "WALKER Kenneth"

Subject : FW: Copy of EA please EPPR00332613 - Port of Airlie Marina

Attachment : ENRE00680407.pdf;IPDC00251205D32

IPDE00112605E72.PDF;image001.png;image003.png;image004.png;image006.png;

Hi Kenny. So EPPR00332613 is a combination of Registration Certificate ENRE00680407 and the attached DA (plus change).

Thanks

Anna

From: SIMONUTTI Anna

Sent: Tuesday, 4 May 2021 1:14 PM

To: WALKER Kenneth

Subject: RE: Copy of EA please EPPR00332613 - Port of Airlie Marina

Hi Kenny. This is going to involve some digging. I can see from edocs that EPPR00332613 was on a missing permit list last year. On 1st September 2011 Receivers and Managers were appointed for Meridien Marinas Horizon Shore Pty Ltd.

Going back through Enquirer, this EA was previously ENRE00680407 for ERA16.1© at Port of Airlie Marina and a copy of the Registration Cert is attached.

I think the DA component is IPDC00251205D32 (Ops) and IPDE00112605E72 (ERA) which was granted on 23 June 2005 and changed in 2014 by SPD-0314-005807.

DA is Attachment B in the attached Change application supporting docs.

It is currently Granted in Connect but there is no copy in the Connect Permit Library or Edocs so its likely these are the most recent approvals.

Thanks

Anna

From: WALKER Kenneth <Kenneth.Walker@des.qld.gov.au>

Sent: Tuesday, 4 May 2021 9:19 AM

To: SIMONUTTI Anna

Subject: FW: Copy of EA please EPPR00332613 - Port of Airlie Marina

Can you find this one?

From: ROWLAND Philip <Philip.Rowland@des.qld.gov.au>

Sent: Tuesday, 4 May 2021 8:05 AM

To: WALKER Kenneth

Cc: Jennifer Dobinson

Subject: RE: Copy of EA please EPPR00332613 - Port of Airlie Marina

Kenny

Please see a request below from a colleague in the Office of the Coordinator General. Would you be able to assist?

Regards



Philip Rowland

Manager

Environmental Impact Assessment | Operational Support

Environmental Services and Regulation

Department of Environment and Science

CTPI 49-Sd

Lvl 9, 400 George St Brisbane 4001

GPO Box 2454 Brisbane, Queensland Australia

From: Jennifer Dobinson <Jennifer.Dobinson@coordinatorgeneral.qld.gov.au>

Sent: Tuesday, 4 May 2021 7:10 AM

To: ROWLAND Philip

Subject: Copy of EA please EPPR00332613 - Port of Airlie Marina

Dear Philip,

Would you have access to the full EA decision, plus dredge area map for Port of Airlie please. Your website does not have a copy of it on site, it is only referred to in the Xcel spreadsheet as being granted.

We have had a query from the public regarding fencing around the dredge spoil area, and which agency is responsible for ensuring it is compliant. I have checked the DAWE OEMP, it is not listed in that Plan.

Thanks Philip. I will give you a telephone call soon.

Yours sincerely,



Jennifer Dobinson
Project Evaluation and Facilitation
Office of the Coordinator-General
Department of State Development, Infrastructure, Local
Government and Planning
P 07 3452 7232
Level 17, 1 William Street, Brisbane QLD 4000
PO Box 15009, City East QLD 4002
dsdilgp.qld.gov.au

This email and any attachments may contain confidential or privileged information and may be protected by copyright. You must not use or disclose them other than for the purposes for which they were supplied. The confidentiality and privilege attached to this message and attachment is not waived by reason of mistaken delivery to you. If you are not the intended recipient, you must not use, disclose, retain, forward or reproduce this message or any attachments. If you receive this message in error please notify the sender by return email or telephone, and destroy and delete all copies. The Department does not accept any responsibility for any loss or damage that may result from reliance on, or use of, any information contained in this email and/or attachments.

Published on DES Disclosure Log
RTI Act 2009

Registration certificate

Environmental Protection Act 1994

Certificate of Registration

No: ENRE00680407

This registration certificate is issued by the administering authority and takes effect from: 04-NOV-2009.

The anniversary day for the purposes of the Annual Return remains: 12 June.

This registration certificate is a requirement of section 73F of the *Environmental Protection Act 1994* and authorises the registered operator to undertake the activity listed below at the following place subject to the conditions set out in a development approval attached to the premises, or the relevant code of environmental compliance.

Registered Operator:-

Meridien AB Pty Ltd & Meridien Airlie Beach Pty Ltd

Level 26 Waterfront Place

1 Eagle Street, BRISBANE QLD 4000

Place:-

Lot 1 Plan SP172260

Located at:-

Port of Airlie Marina, Boathaven Bay, AIRLIE BEACH QLD 4802

Registered Activity/ies: -

ERA 16 Extractive and screening activities Threshold 1(c) - dredging, in a year, more than 100000t to 1000000t of material

CTPI 49-Sch4

Delegate

Administering authority

Environmental Protection Act 1994

04-NOV-2009

Notice

Environmental Operations

Notice of Decision - Development Approval

This notice is issued by the Environmental Protection Agency pursuant to Section 3.5.15 of the Integrated Planning Act 1997 to advise of a decision or action.

Windward AB Pty Ltd
C/- SKM
PO Box 246
SPRING HILL QLD 4001

CC: The Chief Executive Officer
Whitsunday Shire Council
PO Box 104
PROSERPINE QLD 4800

CC: Maritime Safety Queensland
Mackay Region
PO Box 10085
MT PLEASANT QLD 4740

CC: Department of Primary Industries and Fisheries
Fisheries & Aquaculture Development
PO Box 5396
CAIRNS QLD 4870

CC: Department of Natural Resources and Mines
PO Box 63
MACKAY QLD 4740

8	
JOB	
RECE	2005
TC	

Your reference: QE09038.300

Our reference: ROK889; PR185513

Attention: CTPI 49-Sch4

Dear Sir/Madam,

Re: Application for a development permit to undertake an environmentally relevant activity and operational works that is tidal works, reclamation, disposal of dredge spoil and works on State coastal land situated at Boathaven Bay, Port of Airlie, Airlie Beach

The Environmental Protection Agency, acting as assessment manager, has assessed the application received on 20 January 2005 and wishes to advise you of the decision on each approval applied for as specified below:

Notice of Decision – Development Approval

Activity	IPA Request type	Decision	Permit Number
Operational Works	Development Permit	Approved with conditions	IPDC00251205D32
Environmentally Relevant Activity 19(c)	Development Permit	Approved with conditions	IPDE00112605E72

Concurrence Agencies for application

Activity	Concurrence Agency	IPA Request type	Decision	Concurrence Agency Number
Operational Works	Queensland Transport – Maritime Safety Queensland (Mackay)	Development Permit	Approved with conditions	Letter dated 10 June 2005
Operational Works	Coordinator General (Coordinator-General's Report and Addendum to the Coordinator-General's Report on the Supplementary Environmental Impact Statement for the Port Of Airlie Marina Development Project)	Development Permit	Approved with conditions	December 2003 and April 2004

For each activity applied for, a corresponding decision is attached that includes any stated conditions applying to the approval or the basis for refusing an application. Please retain this documentation for your records.

Review and appeal processes may be available to the applicant in regard to this decision. An extract from the *Integrated Planning Act 1997* (IPAct) is attached. This attachment details your appeal rights regarding this decision. The applicant should seek independent advice to confirm the procedures available.

This development approval takes effect –

- From the time the decision notice is given, if there is no submitter and the applicant does not appeal the decision to the court; or
- When the submitter's appeal period ends, if there is a submitter and the applicant does not appeal the decision to the court; or
- Subject to the decision of the court, when the appeal is finally decided, if an appeal is made to the court.

[refer to sections 3.5.19 and 3.5.20 of the Integrated Planning Act 1997 for further details]

This approval will lapse unless substantially started within the standard currency periods

R

Notice of Decision – Development App.

stated in section 3.5.21 of the Integrated Planning Act 1997 applying to each aspect of development in this approval.

If you require more information, please contact Mr Steve Elson the Project Manager, on the telephone number listed at the bottom of this notice.

Yours ^{CTP} sincerely

CTPI 49-Sch4

Signature

C

Date

27 June 2005

Jon Womersley

Director Environment (Central Region)

Delegate of Administering Authority

Coastal Protection and Management Act 1995

Environmental Protection Act 1994

Enquiries:

EPA Central Region (Rockhampton)

PO Box 3130

ROCKHAMPTON SHOPPING FAIR QLD 4701

Telephone: (07) 4936 0589

Facsimile: (07) 4936 2212

Published on DES Disc
RTI Act 2009

eco

Permit¹**Environmental Operations***Integrated Planning Act 1997*

Permit number: IPDC00251205D32 and IPDE00112605E72

Decision Date: .

Date Received by EPA: 20 January 2005

Details

Permit Holder	Name	Address
Windward AB Pty Ltd	Principal Holder	Level 26, 1 Eagle Street, Brisbane
Relevant Laws and Policies	Coastal Protection and Management Act 1995 and subordinate legislation. Environmental Protection Act 1994 and subordinate legislation Integrated Planning Act 1997 and subordinate legislation	
Jurisdiction	Integrated Planning Act 1997 <ul style="list-style-type: none"> Schedule 8A, Table 3, Items 1 and 6 Integrated Planning Regulation 1998: <ul style="list-style-type: none"> Schedule 1, Part 3, Table 4, Item 5; and Schedule 1, Part 3, Table 2, Item 1 	
Type of Development	Operational Works - Tidal works, reclaiming land under tidal water, disposing of dredge spoil or other solid waste material in tidal water, and interfering with quarry material on State coastal land above high-water mark. Environmentally Relevant Activity 19(c) Dredging material - Dredging material from the bed of any waters (other than dredging by a port authority of material for which a royalty or similar charge is not payable) using plant or equipment having a design capacity of 100 000 t or more per year.	

Location	Lot and Plan	Development Description
Boathaven Bay, Airlie Beach	Lot 1 on PER206577	Construction of the Port of Airlie Marina Development Project involving: <ul style="list-style-type: none"> dredging of the access channel and marina basin; temporary and permanent sheet piling; reclamation; stormwater drainage outlets; construction of breakwaters and rock revetments; beach nourishment; disposal of dredge spoil; and other related marina infrastructure.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



eco

COSS

Permit¹

Application decision

The Environmental Protection Agency, acting as the assessment manager, decision is that the application is approved with a development permit subject to the conditions as contained in this document.

Reasons for inclusion of development conditions

The Environmental Protection Agency is recognised as the assessment manager under the *Integrated Planning Act 1997* for coastal management and for the protection of the environment.

The conditions are designed to control and limit impacts on the land, surface and ground waters, air environment, and ecological systems that may result from the development activities. They are consistent with information provided in the Coordinator General's Report and Addendum Report on the Supplementary Environmental Impact Statement, and with conditions of the preliminary development approval issued on 1 December 2004.

The description of the development for which this approval is issued is simply a restatement of the development activities as prescribed in the legislation at the time of issuing this approval. Where there is any conflict between the above description of the development for which this approval is issued and the conditions in this approval, then the conditions of this approval prevail to the extent of the inconsistency.

This development approval authorises the activity. It does not authorise environmental harm unless a condition within this approval explicitly authorises that harm. Where there is no condition, or the development approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Referral agencies

Concurrence Agencies: Queensland Transport, Maritime Safety Queensland (Mackay) for operational works.

Additional comments or advice about the application

This permit, assessed under the *Integrated Planning Act 1997* against provisions of the *Coastal Protection and Management Act 1995* and the *Environmental Protection Act 1994*, does not remove the need to obtain any further approval for this development which may be required pursuant to this or other legislation, both State and Commonwealth. Applicants are advised to check with all relevant statutory authorities for such approvals as may be required.

It is a requirement of the *Environmental Protection Act 1994* that if the owner or occupier of this site becomes aware a Notifiable Activity (as defined under Schedule 2 of the *Environmental Protection Act 1994*) is being carried out on this land or that the land has been affected by a hazardous contaminant, they must, within thirty (30) days after becoming aware the activity is being carried out, give notice to the Environmental Protection Agency. A list of Notifiable Activities is provided within Schedule 2 of the *Environmental Protection Act 1994*.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



Conditions of Approval**Assessment Manager conditions**

Agency Interest: Coastal Management (IPDC00251205D32) and Environmental Protection (IPDE00112605E72)

General

1. The holder of this approval must advise the Environmental Protection Agency's Project Manager by written (EPA Central Region (Rockhampton), PO Box 3130, Rockhampton Shopping Fair Qld 4701) or facsimile (07 4936 2212) communication of the date of work commencement of each stage as specified on Drawing Number 5393-010 Revision C, at least ten days prior to that date.

Construction Environmental Management Plan

2. The holder of this approval must implement the Port of Airlie Construction Environmental Management Plan (current revision), other than Environmental Control Procedures 12 and 13, for all activities at the site subject to this approval, except where the Construction Environmental Management Plan is inconsistent with this approval.
- 2a. The holder of this approval must provide any amendments to the Construction Environmental Management Plan to the administering authority at least 28 days prior to the implementation of the proposed amendments, except where amendments must be implemented to prevent environmental harm or to ensure compliance with this approval.
- 2b. If the administering authority gives to the holder of this approval any comment on the proposed amendments (referenced in condition 2a) within 21 days of receiving the document, the holder of this approval must have due regard to those comments when implementing the proposed amendments.

External Audit

3. The holder of this development approval shall engage an appropriately qualified Environmental Auditor, demonstrated to be independent of contractual arrangements for the design and construction of the marina, and acceptable to the Environmental Protection Agency, for the duration of works covered by this development approval.
- 3a. The Environmental Auditor must audit critical stages of the works subject to this approval against the conditions of this development approval, the Port of Airlie Construction Environmental Management Plan, and the general environmental duty.
- 3b. A copy of each Audit Report must be provided to the administering authority within 10 business days of completion of each audit.
- 3c. Audits by the Environmental Auditor are to be carried out at the commencement of the following stages as defined by Drawing Number 5393-010 Revision C, Windward Airlie Beach Construction Study Construction Sequence (Golding Contractors Pty Ltd, 11 April 2005):
 - Stage 6 Commencement of marina basin dredging
 - Stage 7 Commencement of TBT contaminated sediment excavation
 - Stage 8 Commencement of excavation of acid sulphate soils
 - Stage 9 Channel Dredging, Installation of services
 - Stage 12 Practical completion



Financial Assurance

4. Provide to the administering authority, prior to commencement of works and within 60 days of the issue of a lease over the site under the provisions of the *Land Act 1994*, a financial assurance for \$900,000.00 in the form of a bank guarantee (i.e. an irrevocable, unconditional and on demand undertaking by a bank to pay an amount of money in the circumstances stipulated in the financial proforma document in Attachment 1). The guarantee must be provided from a financial institution that is an approved security provider that meets Section 87 of the *Financial Management Standard 1997*.
- 4a The financial assurance is to remain in force until after a Registered Professional Engineer of Queensland certifies that the works (including any other associated works) have been constructed in accordance with the approved drawings and these conditions (refer Condition 46 of this approval).
- 4b Discharge of the financial assurance must not be applied for until it is demonstrated to the administering authority that the site to which this development approval pertains has been remediated/stabilised to the satisfaction of the administering authority.

Agency Interest: Coastal Management (IPDC00251205D32)**General**

5. All works are to be constructed in accordance with the attached approved drawings and the specifications as detailed on these drawings.
6. This development approval does not give any authority whatsoever to the construction of marina berths as stated in Stage 10 of Drawing Number 5393-010 Revision C, or to the queuing pontoon to be located adjacent to the boat ramp.

Protected Species

7. The holder of this approval must implement the current revision of the Environmental Control Procedure 05 "Protected Species Management Plan" of the Port of Airlie Construction Environmental Management Plan, except where the Environmental Control Procedure 05 is inconsistent with this approval.
8. Dredging and pile driving activities must not be carried out while dugongs, turtles, or other marine species of conservation significance, are within 150 metres of the activities.
9. Construction activities must not be carried out while migratory birds are within 25 metres of the construction activity.

Boat Speed Limits

10. Educational signs explaining the importance of adhering to boat speed limits within the marina area and access channel are to be erected and maintained by the holder of this approval. The specific number and location of signs, and information to be displayed on the signs, must be determined in consultation with Maritime Safety Queensland (Department of Transport) and the Environmental Protection Agency.

Stormwater Management

11. Stormwater management systems must be constructed and maintained in accordance with Drawing Numbers SK02 Revision C, SK03 Revision B, SK04 Revision B and SK05 Revision A.

Artificial Beach**Construction**

12. The sand used for construction of the artificial beach must be consistent with the following criteria:
- a fines component of less than 5% (i.e. <0.075mm diameter comprised of silt, clay or organic material);
 - contaminants below the screening level as specified in the National Ocean Disposal Guidelines for Dredged Material (Environment Australia, May 2002);
 - not contain acid sulfate soils (must have existing plus potential acidity less than 18 moles H⁺ per tonne (oven-dry basis) or less than equivalent 0.03% S oxidisable sulfur); and
 - median grain size (D₅₀) between 0.5mm to 0.7mm diameter.
13. If the area for the artificial beach is used as a stilling pond, any settled material must be removed and deposited behind the sheet pile walls prior to construction of the artificial beach.
14. Prior to construction of the artificial beach, the following information must be supplied to the Environmental Protection Agency:
- the source(s) of material;
 - details of quantity of sand to be placed on the beach;
 - confirmation that the material complies with the criteria listed in condition 12.
15. The sand placed on the beach must conform with the quantities, and specifications as shown on the approved Drawing Number SK13 Revision B.
16. Following construction of the artificial beach the following information must be provided to the Environmental Protection Agency within 30 days of completion of the sand nourishment project:
- details of actual quantity of sand placed on the beach;
 - "as constructed" beach profiles at four (4) selected locations along the beach, measured from the crest of the sheet pile to a distance of 20m seaward of the toe of the beach or location of nourishment, whichever is further.

Monitoring

17. For a period of 3 years following construction of the artificial beach, monitoring of the selected four (4) beach profiles in accordance with survey requirements specified in condition 16 must be undertaken annually, and following a significant storm event where directed by the Environmental Protection Agency. The surveys are to be compared with the design standard of the artificial beach, previous surveys and any assessment undertaken on the need for maintenance (i.e. sand nourishment).

Maintenance

18. The sand used for maintenance of the artificial beach must be consistent with the following criteria:
- a fines component of less than 5% (i.e. <0.075mm diameter comprised of silt, clay or organic material);
 - contaminants below the screening level as specified in the National Ocean Disposal Guidelines for Dredged Material (Environment Australia, May 2002);
 - not contain acid sulfate soils (existing plus potential acidity less than 18 moles H⁺ per tonne (oven-dry basis) or less than equivalent 0.03% S oxidisable sulfur); and
 - median grain size diameter (D₅₀) similar to that used for construction of the artificial beach and between 0.5mm to 0.7mm diameter.
19. Prior to sand nourishment the following information must be supplied to the Environmental Protection Agency:
- the source(s) of material;
 - details of quantity of sand to be placed on the beach;



- beach profiles at the selected four (4) locations along the beach, measured from the crest of the sheet pile to a distance of 20m seaward of the toe of the beach or location of proposed nourishment, whichever is further (only required for future sand nourishment works); and
 - confirmation that the material complies with the criteria listed in condition 18.
20. Following sand nourishment the following information must be provided to the Environmental Protection Agency within 30 days of completion of the sand nourishment project:
- details of actual quantity of sand placed on the beach;
 - "as constructed" beach profiles at selected the four (4) locations along the beach, measured from the crest of the sheet pile to a distance of 20m seaward of the toe of the beach or location of nourishment, whichever is further.
21. The artificial beach is to be maintained in a safe condition in accordance with Drawing Number SK13 Revision B.
22. All reasonable and practicable measures must be taken to stabilise the artificial beach against wind erosion.

Reclamation

23. All tidal land to be reclaimed must be reclaimed to a minimum level of 3.7m AHD and conform with the levels shown on Drawing Number SK20 Revision A dated 24 May 2005.
24. All rock, stone, gravel, sand and other material used in the reclamation must be suitable for the purpose having regard to the location of the land to be reclaimed and to the proposed use of the land after reclamation.
25. If material for the reclamation is obtained from outside of Lot 1 on PER206577, the holder of this approval must ensure that contaminants are below the screening level as specified in the National Ocean Disposal Guidelines for Dredged Material (May 2002) prepared by Environment Australia, and that it does not contain acid sulfate soils (existing plus potential acidity less than 18 moles H^+ per tonne (oven-dry basis) or less than equivalent 0.03% S oxidisable sulfur).
26. Any rock, stone, gravel, sand or other material used in the reclamation, that does not comply with condition 25, must be removed from the reclamation area by the holder of this approval and replaced with material which meets these requirements.
27. All rock, stone, gravel, sand or other material that has slipped, or has been deposited, outside the reclamation area must be removed and duly disposed of by the holder of this approval.
28. Excavated material and dredge spoil is only to be disposed of in the areas specified on Drawing Number 5393-010 Revision C. Any excess material or dredge spoil must be disposed of at an approved landfill site to the satisfaction of Whitsunday Shire Council.

Tidal and operational works

29. All temporary works associated with the construction of the proposed works that are not required for future stages, are to be removed from the site at the completion of each stage of the works.
30. During removal of the temporary works, other than temporary works wholly within the sheet piled area and the sheet piles enclosing the marina, silt curtains are to be installed around the site of the works where it is identified that the turbidity of the water may increase as a result of the removal.
31. The temporary sheet piling enclosing the marina basin must only be removed when the water level outside of the marina basin is level or higher than the water inside of the marina basin.

ecoaccess

environmental licences and permits

32. All wastes shall be collected from the site by the holder of this approval and disposed of at an appropriate lawful facility.
33. Should the protection works or silt curtains be damaged, the holder of this approval shall repair and/or remove all debris from tidal lands or tidal waters.
34. The holder of this approval must remove any material that is deposited outside of the alignment of the works shown on the approved drawings or any debris that falls or is deposited on tidal lands or into tidal waters during the construction of the works.
35. Dredging outside of sheet piled areas must only be undertaken by a pneumatic dredge.
36. Any dredging not fully enclosed from tidal waters is only to be undertaken between March and August in any year to minimise impacts on seagrasses and to avoid the cyclone season.
37. The only dredging to be carried out is that associated with the construction of the Port of Airlie Marina and access channel within the boundaries specified on Drawing Number SK01-2, Revision C and SK09-2, Revision C.
38. No blasting is to occur in areas that are not separated from tidal waters by sheet piling.
39. The holder of this approval must ensure that construction works are carried out only by means of suitable plant and equipment and that measures are taken to limit turbidity in tidal waters as a result of the construction.
40. All reasonable and practicable measures must be taken to minimise pollution of tidal waters as a result of silt runoff, and the discharge of other contaminants, such as fuel, oil and hydraulic fluid to tidal waters during construction of the works.
41. The holder of this approval must supply install and maintain, filter fences or other erosion devices to contain sediment contaminated water and prevent contamination of tidal waters.
42. For the western, eastern and southern breakwaters, provide to the Environmental Protection Agency the following:
 - Prior to the commencement of construction, a baseline of existing bed levels adjacent to the location of these structures. At least 3 representative cross sections are to be taken along the length of each of these structures.
 - Following construction, and prior to the removal of the silt curtains surrounding these structures, a survey of bed levels adjacent to these structures.
43. If the cross section comparison detailed in condition 42 shows an unacceptable increase (as determined by the Environmental Protection Agency) in the bed levels as a result of mud displacement, this displaced material (above pre-construction levels) must be removed from tidal waters.
44. The silt curtains surrounding the western, eastern and southern breakwaters are only to be removed following assessment and advice from the Environmental Protection Agency that the cross section comparison is acceptable.
45. If as a result of carrying out the works, or any other cause attributable, any bed or bank is displaced or affected by erosion, the holder of this approval may be required and when directed by the Environmental Protection Agency to restore the bed and bank to its former condition and take such other action as is necessary to ensure the stability of the bed and bank.



46. Following completion of each stage for stages 1 to 11 (as specified on Drawing Number 5393-010 Revision C), the holder of this approval must, within one (1) month of the date of practical completion of that stage of the works, submit to the Environmental Protection Agency a letter from a Registered Professional Engineer of Queensland certifying that the works (including any other associated works) have been constructed in accordance with the approved drawings and these conditions and that the works are structurally adequate for anticipated usage; comply with all relevant codes – including the EPA's operational policy, *Building and engineering standards for tidal works*.
47. Following completion of stage 12 (as specified on Drawing Number 5393-010 Revision C), the holder of this approval must, within three (3) months of the date of practical completion of that stage of the works, submit to the Environmental Protection Agency a letter from a Registered Professional Engineer of Queensland certifying that the works (including any other associated works) have been constructed in accordance with the approved drawings and these conditions and that the works are structurally adequate for anticipated usage; comply with all relevant codes – including the EPA's operational policy, *Building and engineering standards for tidal works*; and that the bed and banks around the site of the works is clear of all debris.
48. As constructed plans signed by a Registered Professional Engineer of Queensland are to be provided for the eastern breakwater stub.

Hydrographic surveys

49. Prior to the start of dredging that is outside of the sheet piled walls, undertake a hydrographic survey of the existing bed levels. The survey must be carried out in accordance with the following:
- Sounding lines shall be spaced at not more than 20 metre centres along the entire survey area.
 - Soundings shall include the area to be dredged that is outside of the sheet piled walls and shall continue beyond the area to be dredged to include:
 - o the adjacent sheet pile wall;
 - o 50m from the edge of area to be dredged or boundary of the lease area; whichever is further.
 - Soundings shall be taken at every change in grade so as to accurately define the profile of the bed and banks along the line.
 - Soundings shall be plotted on a plan to a suitable scale.
 - The datum for levels shall be Australian Height Datum.
 - The plans of the surveys shall clearly identify the location of the batters, access channel, sheet pile wall or other features.
 - The plans of the surveys shall be forwarded in duplicate to the Environmental Protection Agency, within one month of completion of each survey.
50. Following completion of the dredging works (i.e. construction of the access channel and marina basin) undertake a hydrographic survey of the bed levels. The survey must be carried out in accordance with the following:
- Sounding lines shall be spaced at not more than 20 metre centres along the entire survey area.
 - Soundings shall include all areas that were dredged and shall continue beyond that area to include:
 - o the adjacent sheet pile wall;
 - o 50m from the edge of area dredged or boundary of the lease area; whichever is further.
 - Soundings shall be taken at every change in grade so as to accurately define the profile of the bed and banks along the line.
 - Soundings shall be plotted on a plan to a suitable scale.
 - The datum for levels shall be Australian Height Datum.
 - The plans of the surveys shall clearly identify the location of the batters, access channel, sheet pile wall or other features.
 - Representative cross sections of the lines spaced at not more than 40 metre centres detailing the previous and current bed levels.

- The plans of the surveys and cross sections shall be forwarded in duplicate to the Environmental Protection Agency, within one month of completion of each survey.

The 'approved drawings' that apply to this approval include:

SK01-1 Revision B dated 15/12/04	SK12-1 Revision C dated 15/12/04
SK01-2 Revision C dated 15/12/04	SK12-2 Revision B dated 15/12/04
SK02 Revision C dated 15/12/04	SK13 Revision B dated 15/12/04
SK03 Revision B dated 15/12/04	SK14 Revision B dated 15/12/04
SK04 Revision B dated 15/12/04	SK15 Revision B dated 15/12/04
SK05 Revision A dated 15/12/04	SK16 Revision C dated 15/12/04
SK06 Revision C dated 15/12/04	SK17 Revision C dated 15/12/04
SK07 Revision C dated 15/12/04	SK18-1 Revision B dated 15/12/04
SK08 Revision B dated 15/12/04	SK18-2 Revision B dated 15/12/04
SK09-1 Revision B dated 15/12/04	SK19 Revision B dated 15/12/04
SK09-2 Revision C dated 15/12/04	SK20 Revision A dated 15/12/04
SK10 Revision A dated 15/12/04	5393-010 Revision C dated 11/04/05
SK11 Revision A dated 15/12/04	3041-AP-01 Revision B dated 18/04/05

Agency Interest: Environmental Protection (IPDE00112605E72)

This section of the development approval consists of the following schedules of conditions relevant to the environmentally relevant activity of dredging. :

- | | |
|------------|----------------|
| Schedule A | - Activity |
| Schedule B | - Air |
| Schedule C | - Water |
| Schedule D | - Noise |
| Schedule E | - Waste |
| Schedule F | - Land |
| Schedule G | - Community |
| Schedule H | - Definitions |
| Schedule I | - Maps / Plans |



Schedule A - Activity**Prevent and /or minimise likelihood of environmental harm**

- (1A-1) In carrying out the environmentally relevant activities, the holder of the authority must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity (ERA), that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this permit.

NOTE: This permit authorises the ERA. It does not authorise environmental harm unless a condition contained within this permit explicitly authorises that harm. Where there is no condition or the permit is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Maintenance of measures, plant and equipment

- (1A-2) The holder must:
- install all measures, plant and equipment necessary to ensure compliance with the conditions of this development permit; and
 - maintain such measures, plant and equipment in a proper and efficient condition; and
 - operate such measures, plant and equipment in a proper and efficient manner.

Records

- (1A-3) Record, compile and keep all monitoring results required by this document and present this information to the administering authority when requested, in a specified format.

Dredging

- (1A-4) The only form of dredging to be carried out is that associated with the construction of the Port of Airlie Marina and access channel in the site marked in Schedule 11 – Figure 1 of this document.
- (1A-4a) Dredging outside of sheet piled areas must only be undertaken by a pneumatic dredge.

Environmental Management System

- (1A-5) The holder of this permit must, prior to the commencement of activities subject to this approval:
- develop an Environmental Management System (EMS) which provides for the effective management, of the actual and potential environmental impacts resulting from the carrying out of the activities; and
 - implement and maintain the EMS from the commencement of carrying out the activities.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



(1A-5a) The EMS must provide for at least the following functions:

- Training of staff in the awareness of environmental issues related to carrying out the activities, which must include at least:
 - The environmental policy of the holder, so that all persons that carry out the activities are aware of all relevant commitments to environmental management;
 - Any relevant environmental objectives and targets, so that all staff are aware of the relevant performance objectives and can work towards these;
 - Control procedures to be implemented for routine operations for day to day activities to minimise likelihood of environmental harm, however occasioned or caused;
 - Contingency plans and emergency procedures to be implemented for non-routine situations to deal with foreseeable risks and hazards including corrective responses to prevent and mitigate environmental harm (including any necessary site rehabilitation);
 - Organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to manage environmental issues effectively;
 - Effective communication to ensure two-way communication on environmental matters between operational staff and higher management; and
 - Obligations in respect of monitoring, notification and record keeping under the EMS and relevant development permits;
- Monitoring of the release of contaminants into the environment including procedures, methods, record keeping and notification of results;
- Conducting assessment of the environmental impact of any release of contaminants into the environment;
- Waste prevention, treatment and disposal; and
- A program for continuous improvement.

(1A-5b) The holder of this development permit must not implement or amend an EMS (including any environmental management plan) in a manner that contravenes any condition of this development permit.

Acid Sulfate Soils - General

(1A-6) Any soils (regardless of texture) disturbed during works associated with the development that have an existing plus potential acidity of equal to or greater than the action criteria of 18 moles H^+ per tonne (oven-dry basis) (or equivalent 0.03% S oxidisable sulfur) must be treated or managed as Acid Sulfate Soils for the purpose of this development permit.

(1A-7) The holder of this permit must implement the Environmental Control Procedure 07 "Acid Sulfate Soils Management Plan" of the current revision of the Port of Airlie Construction Environmental Management Plan (except where the Environmental Control Procedure 07 is inconsistent with this permit), for all Acid Sulfate Soils that may be directly or indirectly disturbed by activities at the site.

(1A-7a) Any amendments to the Acid Sulfate Soils Management Plan (referenced in condition 1A-7) must be prepared by an experienced and appropriately qualified person, such as a Certified Professional Soil Scientist, and submitted to the administering authority for approval.

(1A-8) Acid Sulfate Soils that have been drained, disturbed or excavated must only be stored and treated in areas that are designed to contain and collect all contaminants and prevent the contamination of surface and ground waters. (Refer Condition 1A-28)

(1A-9) Only material confirmed to be below the action criteria of existing plus potential acidity of equal to or greater 18 moles H^+ per tonne (oven-dry basis) (or equivalent 0.03% S oxidisable sulfur) may be removed from Acid Sulfate Soils treatment areas (material subject to neutralisation techniques), or treated as no longer being Acid Sulfate Soils for the purposes of this document.

(1A-10) Acid Sulfate Soils must not be used in the construction of bunds and other water diversion/retention

devices.

- (1A-11) Bunding, diversion drains and contaminated water treatment impoundments must be used to contain surface run-off from all Acid Sulfate Soils storage and treatment areas.
- (1A-12) The surface area of Acid Sulfate Soils exposed to oxidising conditions and the time exposed must be minimised to the greatest extent possible. An exception is during treatment when Acid Sulfate Soils may be deliberately spread out thinly on a lime pad for drying prior to immediate and complete treatment with neutralising agents (e.g. lime).
- (1A-13) Contaminants must only be released to waters from Acid Sulfate Soil treatment areas at the designated release points, and in compliance with the release limits, listed in Schedule 1C - Table 1. All determinations of the quality of contaminants released must be:
- performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; and
 - made in accordance with methods prescribed in the Environmental Protection Agency Water Quality Sampling Manual, 3rd Edition, December 1999, or more recent additions or supplements to that document as such become available.

Acid Sulfate Soils - treatment by neutralisation techniques

- (1A-14) When neutralisation techniques are used in the treatment of Acid Sulfate Soils, management of Acid Sulfate Soils is to be on suitably constructed dedicated Acid Sulfate Soil treatment areas that incorporate perimeter bunds, leachate collection drains/dams and an acid resistant and impermeable base.
- (1A-15) Neutralisation of acid sourced from Acid Sulfate Soils using seawater is not permitted.
- (1A-16) Surface applications of neutralising agent must be applied to the treatment area/s at a rate capable of neutralising all acid waters that might infiltrate through Acid Sulfate Soils, prior to placing Acid Sulfate Soils in the treatment areas.
- (1A-17) A sufficient quantity of a finely ground neutralising agent must be thoroughly mixed through the Acid Sulfate Soils during neutralising treatment to:
- treat total sulfidic acidity (TSA) and total actual acidity (TAA); (eg. oxidisable sulfur % S + TAA in equivalent units of % S contained in the soil); and
 - additional neutralising agent must be added to provide a safety factor to compensate for impurities in the neutralising agent, non homogenous mixing and its solubility (or lack thereof). A minimum safety factor providing the equivalent neutralising capacity to the use of 1.5 times fine pure agricultural lime is required.
- (1A-18) Verification sampling at a frequency of not less than 1 sample per 1500m³ of soil treated via neutralisation techniques must be implemented to demonstrate (via validated analytical techniques e.g. POCAS) that sufficient neutralising agent has been applied to treat Acid Sulfate Soils to prevent any acidification or leaching of metals.
- (1A-19) Further neutralising treatment (including a further round of verification testing) must be applied to any Acid Sulfate Soils tested under condition 1A-25 and where the soil does not comply with the action criteria of existing plus potential acidity of equal to or greater 18 moles H⁺ per tonne (oven-dry basis) (or equivalent 0.03%S oxidisable sulfur) and a soil pH >5.5.
- (1A-20) A spatial tracking system for soil lots must be implemented to demonstrate that verification testing has been performed as required on soils treated by neutralisation techniques. This must entail (as a



minimum) being able to identify where each lot of soil tested has been located so that it can be correlated with laboratory analysis results to allow further treatment to be applied if necessary. This system must be documented, and the documents retained (including receipts, dockets or other records showing all acquisitions of neutralising agents along with records of how and where this neutralising agent was used on site).

- (1A-21) Neutralising agents must be stored under conditions that will prevent the deterioration of their effectiveness.
- (1A-22) Neutralising agents used on the site (for example along drainage lines and at the base of treatment areas) must be replenished and or replaced regularly to remain effective against loss by wind or water erosion.
- (1A-23) The soil must be managed to achieve a consistency that will allow for thorough mixing. This may entail drying (with associated management of any acid and other contaminants resulting) and mechanical turning and breaking up of the soil.
- (1A-24) Drying of Acid Sulfate Soils must not be undertaken during forecasted wet weather.
- (1A-25) Acid Sulfate Soils must only be spread on a lime pad in treatment or storage areas to a maximum depth of 30cm. Additional layers of soil must not be applied until verification testing has shown that further treatment of the soil is not required. The basal surface or 'treatment pad' must be limed before receiving any untreated material.
- (1A-26) Activities that result in the release, or accumulation and potential future release, of acid from the oxidation of undisturbed PASS must not be undertaken.
- (1A-27) Excavation must be staged to ensure sufficient drying and mixing time can be achieved with the treatment areas available.
- (1A-28) Staging of excavations must ensure that adequate time is available to obtain the results of verification testing before placing further layers of soil in treatment areas. The location and total area required for treatment and/or storage of excavated material must be defined prior to commencement of excavation works.

Acid Sulfate Soils - treatment by strategic reburial techniques

- (1A-29) Strategic reburial or reinterment techniques must only be used for PASS and PASS fines. No AASS may be reburied or reinterred without prior treatment to achieve a soil pH of >5.5.
- (1A-30) PASS or PASS fines that are to be managed by reinterment may only be placed in an anoxic environment that is below mean low water springs at all times following placement.
- (1A-31) Surveyed maps showing the location, depth and volume of any strategically reburied or reinterred PASS fines or reinterred PASS in accordance with condition 1A-30 must be produced and retained as permanent records. Locations must be documented accurately using GPS equipment measuring to 2 to 3 metres accuracy.
- (1A-32) As soon as practicable prior to completion of works subject to this approval, copies of maps and associated documents produced in accordance with condition 1A-31 must be sent to the chief executive officer of the local government authority with written notification of the type of material and its storage requirements.
- (1A-33) Ensure that a stable water level of sufficient height to provide anoxic conditions, can be maintained for the foreseeable future in any location proposed to be used for strategic reburial or reinterment.



Blasting

- (1A-34) If blasting is required for construction, it may only be undertaken after prior consultation with the Environmental Protection Agency.
- (1A-35) No blasting is to occur in areas that are not separated from tidal waters by sheet piling.

TBT Contamination

- (1A-36) The holder of this permit must conduct a site investigation of the area shown in Schedule 11 – Figure 2 to locate the extent and concentration of Tributyl tin (TBT) contamination.
- (1A-37) For the purposes of condition (1A-36), the site investigation must be conducted in accordance with the Environmental Protection Agency's Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland.
- (1A-38) Any sediments containing TBT levels in excess of the median effects screening level (70 µg Sn/kg), as defined in the ANZECC Water Quality Guidelines, 2000, are to be disposed of within the "car park area" (lot 116 shown on Pioneer Surveys Drawing Number 3041-AP-01 Rev B, 18 April 2005).
- (1A-39) Management, monitoring and corrective action in relation to TBT contaminated sediments shall be in accordance with Environmental Control Procedure 08 – Sediment Contamination Management Plan" in the current revision of the "Port of Airlie Construction Environmental Management Plan, (except where Environmental Control Procedure 08 is inconsistent with this permit).
- (1A-39a) Any amendments to the Sediment Contamination Management Plan (referenced in condition 1A-39) must be prepared by an experienced and appropriately qualified person.
- (1A-40) The disposal area for TBT contaminated sediments referred to in Condition 1A-38 must be fully enclosed behind a sheet pile wall and compacted earthen bund with a permeability of not greater than 1×10^{-9} m.
- (1A-41) The TBT contaminated sediments referred to in Condition 1A-38 must be disposed of beneath a non-biodegradable fluorescent mesh and at least 3 meters of uncontaminated capping material. The uncontaminated capping material must consist of 1 metre of clay material with a permeability of not greater than 1×10^{-9} m.
- (1A-42) Validation testing of sediments must be carried out within the area shown in Schedule 11 – Figure 2 and in accordance with the Environmental Protection Agency's Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland. Validation testing of sediments must be capable of ensuring that all sediments with TBT levels in excess of the median effect screening level, as defined in the ANZECC Water Quality Guidelines, 2000, have been removed.

END OF CONDITIONS FOR SCHEDULE 1A.**SCHEDULE 1B - AIR****Nuisance**

- (1B-1) The release of noxious or offensive odours or any other noxious or offensive, airborne contaminants resulting from the activity must not cause a nuisance at any odour sensitive place.

Dust nuisance

- (1B-2) The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any dust sensitive place.
- (1B-3) Exceeding any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition 1B-2:
- Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991; or
 - A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the site, when monitored in accordance with: Australian Standard AS 3580.9.6 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method'; or any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.
- (1B-4) When requested by the Administering Authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include:
- for a complaint alleging dust nuisance, dust deposition; and
 - for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM10) suspended in the atmosphere over a 24hr averaging time.
- (1B-5) If the dust cannot be satisfactorily suppressed, dust generating construction activities will cease until climatic conditions allow recommencement of activities without causing dust nuisance.

END OF CONDITIONS FOR SCHEDULE 1B**SCHEDULE 1C - WATER**

- (1C-1) Contaminants must only be released to waters from the release points and in compliance with the release limits listed in Schedule 1C - Table 1.

Monitoring

- (1C-2) Monitoring must be undertaken at the locations identified in Schedule 1C - Table 1 and records kept of contaminant releases to waters from the discharge location for the parameters and not less frequently than specified in Schedule 1C - Table 1. All determinations of the quality of contaminants released must be:
- performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; and
 - made in accordance with methods prescribed in the latest edition of the Environmental Protection Agency Water Quality Sampling Manual; and
 - carried out on samples that are representative of the discharge.



- (1C-3) The holder of this permit must implement Environmental Control Procedure 02 "Tailwater Management Plan" of the current revision of the Port of Airlie Construction Environmental Management Plan, except where the Environmental Control Procedure 02 is inconsistent with this permit.

Schedule 1C - Table 1

Monitoring Point	Quality Parameters	Release limits		Minimum Monitoring Frequency
		Min	Max	
SURFACE WATERS				
Reference locations* (Zone 55) at the following points or nearest equivalent sampling point: SW3 Easting 680686, Northing 7757851; SW4 Easting 680975, Northing 7758517; SW5 Easting 680442, Northing 7758510; SW6 Easting 680438, Northing 7759009 * Refer SKM Drawing No. QE09038-105 Rev A	• Suspended Solids (mg/L)	-	-	Weekly
	• Turbidity (NTU), • Dissolved Oxygen (% saturation) • Temperature (°C) • pH	-	-	Daily when discharging, dredging the access channel, or when parts of the barrier enclosing the marina are installed or removed (subject to wave conditions allowing sampling without compromising safety of personnel)
SW2 Easting 680899, Northing 7757549 (Zone 55)	• pH	-	-	Daily when handling NNPASS and any time that discharge from D1 or D2 falls below pH 6.5 (subject to wave conditions allowing sampling without compromising safety of personnel)
Release points (Zone 55): D1 Easting 680223 Northing 7757318 D2 Easting 680379 Northing 7757947	pH - where the background pH is less than 6.5 or more than 9.0	0.2 pH units below background	0.2 pH units above the background	Continuous 24 hour monitoring when discharging by autologger
	pH - where the background pH is between 6.5 and 9.0	6.5	9.0	
	Dissolved Oxygen (% saturation)	90%	110%	
	Temperature (°C)	-	-	
	Turbidity (NTU)	-	22.5	Weekly when discharging but on the same tide and with not more than 90 minutes separation from collection of samples from the reference locations
	Suspended Solids (mg/L)	-	Must not exceed 110 percent of the greater value from reference locations SW2 or SW3.	
	Aluminium - If pH is less than or equal to 6.5	-	5µg per litre	
	Aluminium - If pH is greater than 6.5	-	100µg per litre	
	Total Iron (Fe ²⁺ and Fe ³⁺)	-	1,000 µg per litre	
	Ferrous Iron (Fe ²⁺)	-	300 µg per litre	

	Tributyl Tin (TBT)	-	0.006 µg per litre	
Downcurrent (inshore on incoming tide & offshore on outgoing tide) waters within the plume flowpath not more than 100 metres from any works or release area when dredging the access channel and when parts of the barrier enclosing the marina are installed/removed	Suspended Solids (mg/L) when dredging at locations north of Northing 7758066 (Zone 55)	-	Must not exceed 110 percent of the value from the background sample (50 m upcurrent)	Weekly when dredging the access channel but with not more than 30 minutes separation from collection of a background sample from within 50m upcurrent of the dredge head
	Suspended Solids (mg/L) when dredging at locations south of Northing 7758066 (Zone 55) and when parts of the barrier enclosing the marina are installed/removed		Must not exceed 110 percent of the value from the background sample (50 m upcurrent)	and Weekly when parts of the barrier enclosing the marina are installed/removed
	Dissolved Oxygen (% saturation)	90%	110%	Daily when dredging the access channel but with not more than 30 minutes separating from collection of a background sample from within 50m upcurrent of the dredge head
	pH - where the background pH is less than 6.5 or more than 9.0	0.2 pH units below background	0.2 pH units above the background (50 m upcurrent)	and
	pH - where the background pH is between 6.5 and 9.0	6.5	9.0	Daily when parts of the barrier enclosing the marina are installed/removed
	Turbidity (NTU) when dredging at locations south of Northing 7758066 (Zone 55) and when parts of the barrier enclosing the marina are installed/removed	-	22.5 NTU or 110 percent of a background value (50 m upcurrent), whichever is greater	Daily when dredging the access channel but with not more than 30 minutes separating background measurement from within 50m upcurrent of the dredge head
	Turbidity (NTU) when dredging at locations north of Northing 7758066 (Zone 55)	-	Must not exceed 5 NTU greater than a background value (50 m upcurrent).	and Daily when parts of the barrier enclosing the marina are installed/removed
GROUNDWATERS				
Two Groundwater monitoring bores adjacent the sheet pile walls of the ASS strategic reburial location	Groundwater Height	-	-	Weekly
	pH	6.5	9.0	
	Electrical Conductivity	-	-	
	Aluminium - if pH is less than or equal to 6.5	-	5µg per litre	
	Aluminium - if pH is greater than 6.5	-	100µg per litre	Monthly. If weekly pH reading is less than 6.5, then weekly monitoring
	Total Iron (Fe ²⁺ and Fe ³⁺)	-	1,000 µg per litre	
	Ferrous Iron (Fe ²⁺)	-	300 µg per litre	
	Tributyl tin (TBT)		0.008 µg per litre	Quarterly

- (1C-4) Where continuous monitoring is required in Schedule 1C - Table 1 by autologger, the autologger must be fitted with audible and visual alarms to warn of contaminant levels exceeding the relevant release limits listed in Schedule 1C - Table 1. The autologger and alarms must be able to operate without mains power.

Erosion protection measures and sediment controls

- (1C-5) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (1C-6) Prevent the release of sediment to waters or a build up of sediment in any stormwater drain except as provided for in Schedule 1C – Table 1.

Stormwater management

- (1C-7) There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.

END OF CONDITIONS FOR SCHEDULE 1C

SCHEDULE 1D - NOISE

- (1D-1) The holder of this authority must utilise and maintain Best Available Control Technology (BACT) to all potential emitters of noise for the duration of works on the site. Contractors should familiarise themselves with methods of controlling noisy machinery and alternative construction procedures as explained in Australian Standard AS2436-1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*. This document details typical plant and equipment sound power levels, provides advice on project supervision, and gives guidance on noise control and reduction.

Site Noise and Vibration Management Plan

- (1D-2) The holder of this authority must implement ECP 03 Construction Noise Management Plan and ECP 04 Construction Vibration Management Plan in the current revision of the "Port of Airlie Construction Environmental Management Plan", which shall be consistent with the "Supporting information to Construction Noise and Vibration Management Plans" (dated February 2005) when undertaking any activities at the site.
- (1D-2a) Any amendments to ECP 03 Construction Noise Management Plan and ECP 04 Construction Vibration Management Plan must be prepared by an experienced and appropriately qualified person.

Noise nuisance

- (1D-3) All noise from site activities, excluding percussion pile driving, must not exceed the levels specified in Schedule 1D Table 1 outside habitable rooms with doors and windows open or closed at any noise affected premises.

Schedule 1D - Table 1

Noise Guideline Criteria	Project Duration	Consecutive Periods Less than one week
	Monday to Saturday 7 am - 6 pm	Monday to Friday 7 am - 6 pm
L _{A10} Adj. 15 Min Noise Measured at a Noise Sensitive Place	65	70
L _{A10} Adj. 15 Min Noise Measured at a Commercial Place	70	75

- (1D-4) No percussion pile driving is to occur:
- (i) on Sundays or public holidays;
 - (ii) Monday to Saturday
 - (a) before 8 am;
 - (b) between 12 noon and 2 pm; and
 - (c) after 5pm.

Ground Vibration Conditions

- (1D-5) Vibration emitted from activities must not cause a nuisance at any vibration sensitive place.
- (1D-6) Vibration emitted from pile driving activities must not exceed the levels specified in British Standard BS6472:1992 *Guide to Evaluation of Human Exposure to vibration in buildings (1Hz to 80Hz)* or equivalent.

Noise monitoring

- (1D-7) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

END OF CONDITIONS FOR SCHEDULE 1D**SCHEDULE 1E - WASTE****Waste handling**

- (1E-1) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (1E-2) Records must be kept for five years, and must include the following information:
- date of pickup of waste;
 - description of waste;
 - cross reference to relevant waste transport documentation;
 - quantity of waste;
 - origin of the waste;
 - destination of the waste; and
 - intended fate of the waste, for example, type of waste treatment, reprocessing or disposal.

NOTE: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.

END OF CONDITIONS FOR SCHEDULE 1E

SCHEDULE 1F - LAND

Preventing contaminant release to land

- (1F-1) Spillage of all chemicals and fuels must be contained within an on-site containment system, and controlled and cleaned up in a manner that prevents environmental harm.

NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.

- (1F-2) The holder of this permit must ensure that the tenure designation obtained under the *Land Act 1994*, for the marina maintenance area shown in Figure 1 Schedule 1) following the completion of reclamation works, requires the area only to be used/maintained as a 'dredge spoil rehandling area'. Dredge spoil rehandling area is defined as "a purpose built area into which spoil from maintenance dredging of the adjoining marina and associated access channel shall be stored until it is in a consolidated form that enables transportation to a facility that can lawfully accept such material"

END OF CONDITIONS FOR SCHEDULE 1F

SCHEDULE 1G - COMMUNITY

Complaint response

- (1G-1) All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.
- (1G-2) In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically or the industrial estate where the site is located.

END OF CONDITIONS FOR SCHEDULE 1G

SCHEDULE 1H - DEFINITIONS

Words and phrases used throughout this section of the development permit (Schedule A to I) are defined below.

Where a definition for a term used in this section of the permit (Schedule A to I) is sought and the term is not defined within this permit, the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used.

- (1H-1) "annual return" means the return required by the annual notice (under section 316 of the Environment Protection Act, 1994) for the section 86(2) licence that applies to the development approval.
- (1H-2) "Acid Sulfate Soil" means a soil or soil horizon that contains sulfides; or an acid soil horizon affected by oxidation of sulfides (the meaning under the *Environmental Protection (Water) Policy 1997*).

- (1H-3) **"Actual Acid Sulfate Soils"** (AAcid Sulfate Soils) means soils or sediments containing highly acidic soil horizons or layers resulting from the oxidation of soil materials that are rich in iron sulfides such as pyrite (FeS₂). This oxidation produces acid in excess of the soil's capacity to neutralise the acidity, resulting in a pH of 4 or less. The presence of pale yellow acidic mottles and coatings of jarosite or related products confirms an actual acid sulfate soil, but jarosite need not be present. Soils or sediments with pH 4.1 to 5.5 may also contain acid or remnants of iron and aluminium ions from previous oxidation and hence require treatment.
- (1H-4) **"administering authority"** means the Environmental Protection Agency or its successor.
- (1H-5) **"approval"** means 'notice of development application decision' or 'notice of concurrence agency response' under the IPA.
- (1H-6) **"authorised place"** means the place authorised under this authority/approval for the carrying out of the specified environmentally relevant activities.
- (1H-7) **"annual return"** means the return required by the annual notice (under section 316 of the Environment Protection Act, 1994) for the section 86(2) licence that applies to the approval.
- (1H-8) **"Best Available Control Technology (BACT)"** means emission control or production methods, techniques, processes, or practices capable of achieving major noise reductions and which the administering authority determines to be applicable.
- (1H-9) **"commercial place"** means a place used as an office or for business or commercial purposes.
- (1H-10) **"dredge spoil"** means material taken from the bed or banks of waters by using dredging equipment or other equipment designed for use in extraction of earthen material.
- (1H-11) **"dust sensitive place"** means -
- a dwelling, mobile home or caravan park, residential marina or other residential place;
 - a motel, hotel or hostel;
 - a kindergarten, school, university or other educational institution;
 - a medical centre or hospital;
 - a protected area;
 - a park or gardens;
 - a place used as an office or for business or commercial purposes.
- and includes the curtilage of any such place.

(1H-12) "dwelling" means any of the following structures or vehicles that is principally used as a residence-

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

(1H-13) "intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration -

- o is clearly audible to, or can be felt by, an individual; and
- o annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

(1H-14) " $L_{A10, adj, 10 mins}$ " means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

(1H-15) " $L_{A1, adj, 10 mins}$ " means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response

(1H-16) " $L_{A, max adj, T}$ " means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

(1H-17) $L_{AmaxPeak, 15min}$ means the arithmetic average maximum A-weighted sound pressure level measured over an interval of 15 minutes using Peak time-weighting.

(1H-18) $L_{Amax, adj, 15min}$ means the arithmetic average maximum A-weighted sound pressure level measured over an interval of 15 minutes; adjusted for any tonal characteristics or impulsiveness.

(1H-19) "land" in the "land schedule" of this document means land excluding waters and the atmosphere.

(1H-20) "mg/l" means milligrams per litre

(1H-21) "noise affected premises" means a "noise sensitive place" or a "commercial place"

(1H-22) "noise sensitive place" means -

- a dwelling, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a park or gardens.

and includes the curtilage of such place.

(1H-23) "noxious" means harmful or injurious to health or physical well being.

(1H-24) "NTU" means nephelometric turbidity units

(1H-25) "nuisance sensitive place" includes -

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes.

and includes a place within the curtilage of such a place reasonably used by persons at that place.

(1H-26) "odour sensitive place" means

- a dwelling, mobile home or caravan park, residential marina or other residential place;
- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution
- a medical centre or hospital;
- a protected area;
- a park or gardens;
- a place used as an office or for business or commercial purposes

and includes the curtilage of any such place.

(1H-27) "offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

(1H-28) "permanent groundwater table height" means the normal seasonal groundwater table height prior to influence by human activities as evidenced by groundwater monitoring and soil data.

(1H-29) "Pile driving" means sheet pile driving and encased pile driving and includes pile driving using percussive force or vibration.

(1H-30) "Potential Acid Sulfate Soils" (PASS) means soils or sediments containing iron sulfides or sulfidic material, which have not been exposed to air and oxidised. These soils may include both self-neutralising ASS (SNASS) and non-neutralising ASS (NNASS). The field pH of these soils or sediments in their undisturbed state is usually >4 , and may be neutral or slightly alkaline. These soils or sediments are saturated with water in their natural state.

(1H-31) "protected area" means -

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

(1H-32) "site" means the place to which this authority relates or the premises to which this approval relates.

(1H-33) "Total Actual Acidity" (TAA) and "Total Potential Acidity" (TPA) are laboratory analyses determined as outlined in Ahern *et al.*, 1998a or more recent additions or supplements to that document as such become available.

(1H-33) "vibration sensitive place" means a noise sensitive place or a commercial place.

(1H-34) "waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

END OF DEFINITIONS FOR SCHEDULE 1H



Schedule 11 – Maps / Plans

Figure 1. – Shaded area indicates the area authorised for dredging activities.

Published on DES Disclosure Log
RTI Act 2009

Figure 2 – TBT site investigation area

END OF SCHEDULE 11

Published on DES Disclosure Log
RTI Act 2009

ecoaccess

environmental licences and permits

Concurrence Agency Conditions (Refer to Appendix 1):

Refer to Harbour Master, Mackay Region, Maritime Safety Queensland's letter dated 10 June 2005.

Published on DES Disclosure Log
RTI Act 2009



ATTACHMENT 1

Financial Institution's Undertaking

IN RESPECT OF [REDACTED]

TO: The State of Queensland

WHEREAS: [REDACTED] ABN No. [REDACTED] (hereinafter called the "Holder(s)" have been granted a development approval (Number(s) [REDACTED]) over and in respect of the project known as [Project name].

AND WHEREAS pursuant to Section 364 of the *Environmental Protection Act 1994* ("the EP Act") and Section 107 of the *Coastal Protection and Management Act 1995* (CPM Act) the State of Queensland ("the State") may require such Holder(s) to deposit with the State an amount nominated by the State or a bond, guarantee or indemnity in such amount and so conditioned as to be acceptable to the State, to be held by the State for security for:-

- (a) compliance with conditions of the development approval;
- (b) costs or expenses, or likely costs or expenses, where the EPA incurs or might reasonably incur costs or expenses in taking action to -
 - (i) prevent or minimise environmental harm or rehabilitate or restore the environment, in relation to the carrying out of an activity under the development approval for which the financial assurance has been given; or
 - (ii) to secure compliance with conditions of the development approval, for which financial assurance has been given.

AND WHEREAS the State at the request of the Holder(s) is prepared to accept the Bond of the ("the Bank") hereinafter given compliance with the conditions of the development approval and with the requirements of the EP Act, the Bank hereby unconditionally undertakes and agrees as follows:-

1. To pay to the State on demand any sum or sums which may from time to time be demanded by the State to a maximum aggregate sum of \$900,000.00.
2. This Bond is not revocable by notice but will remain in full force and effect until payment by the Bank of the whole of the said sum of \$900,000.00 or until the Bank is notified in writing by the State that the Bond is no longer required, or until this undertaking is returned to the Bank.



3. This Bond is not to be regarded as a contract of surety and the liability of the Bank is a primary liability, and not a secondary obligation, which will remain in effect notwithstanding any event affecting the relationship between the Holder(s) and the Bank.
4. Any payment or payments demanded by the State in accordance with the terms hereof will be paid forthwith without reference to the said Holder(s) or any of them and notwithstanding any notice given by the said Holder(s) or any of them to the Bank not to make such payment or payments.
5. Provided always that the Bank may at any given time without being required to do so pay to the State the said sum less any amounts it may previously have paid under this undertaking or such lesser sum as may be required and specified by the State and thereupon the liability of the Bank hereunder shall immediately cease and determine.
6. Return of the original document to the Bank by the State will constitute a release of the obligations under the Bond.
7. The benefit of this guarantee is not transferable by the State.

DATED at _____ this _____ day of 20 _____

SIGNED SEALED AND DELIVERED for and on behalf of: _____

ADDRESS OF BANK: _____

BANK's ABN _____



Attachment 2Extract from the Integrated Planning Act 1997**Division 8—Appeals to court relating to development applications****Appeals by applicants**

4.1.27 (1) An applicant for a development application may appeal to the court against any of the following -

- (a) the refusal, or the refusal in part, of a development application;
 - (b) a matter stated in a development approval, including any condition applying to the development, and the identification of a code under section 3.1.6;
 - (c) the decision to give a preliminary approval when a development permit was applied for;
 - (d) the length of a currency period;
 - (e) a deemed refusal.
- (2) An appeal under subsection (1)(a) to (d) must be started within 20 business days (the "applicant's appeal period") after the day the decision notice or negotiated decision notice is given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

Appeals by submitters

4.1.28 (1) A submitter for a development application may appeal to the court about -

- (a) the giving of a development approval, including any conditions (or lack of conditions) or other provisions of the approval; or
 - (b) the length of a currency period for the approval.
- (2) The appeal must be started within 20 business days (the "submitter's appeal period") after the day the decision notice or negotiated decision notice is given to the submitter.
- (3) If a person withdraws a submission before the application is decided, the person may not appeal the decision.
- (4) If an application involves both impact assessment and code assessment, appeal rights for submitters are available only for the part of the application involving impact assessment.

Appeals by advice agency submitters

4.1.29 (1) An advice agency may, within the limits of its jurisdiction, appeal to the court about the giving of a development approval for a development application if -

- (a) the development application involves impact assessment; and
 - (b) the advice agency told the applicant and the assessment manager to treat its response to the application as a submission for an appeal.
- (2) The appeal must be started within 20 business days after the day the decision notice or negotiated notice is given to the advice agency as a submitter.

Appeals for matters arising after approval given (co-respondents)

- 4.1.30 (1) For a development approval given for a development application, a person to whom any of the following notices have been given may appeal to the court against the decision in the notice -
- (a) a notice giving a decision on a request for an extension of the currency period for an approval;
 - (b) a notice giving a decision on a request to make a minor change to an approval.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.
- (3) Subsection (1)(a) does not apply if the approval resulted from a development application (superseded planning scheme) that was assessed as if it were an application made under a superseded planning scheme.

Division 9 - Appeals to court about other matters**Appeals for matters arising after approval given (no co-respondents)**

- 4.1.31 (1) A person to whom any of the following notices have been given may appeal to the court against the decision in the notice -
- (a) a notice giving a decision on a request to change or cancel a condition of a development approval;
 - (b) a notice under section 6.1.44 giving a decision to change or cancel a condition of a development approval.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

Appeals against enforcement notices

- 4.1.32 (1) A person who is given an enforcement notice may appeal to the court against the giving of the notice.
- (2) The appeal must be started within 20 business days after the day notice is given to the person.

Stay of operation of enforcement notice

- 4.1.33 (1) The lodging of a notice of appeal about an enforcement notice stays the operation of the enforcement notice until -
- (a) the court, on the application of the entity issuing the notice, decides otherwise; or
 - (b) the appeal is withdrawn; or
 - (c) the appeal is dismissed.
- (2) However, subsection (1) does not apply if the enforcement notice is about -
- (a) a work, if the enforcement notice states the entity believes the work is a danger to persons or a risk to public health; or
 - (b) carrying out development that is the demolition of a work.



Appeals against decisions on compensation claims

- 4.1.34 (1) A person who is dissatisfied with a decision under section 5.4.8 or 5.5.3 for the payment of compensation may appeal to the court against -
- (a) the decision; or
 - (b) a deemed refusal of the claim.
- (2) An appeal under subsection (1)(a) must be started with 20 business days after the day notice of the decision is given to the person.
- (3) An appeal under subsection (1)(b) may be started at any time after the last day a decision on the matter should have been made.

Appeals against decisions on requests to acquire designated land under hardship

- 4.1.35 (1) A person who is dissatisfied with a designator's decision to refuse a request made by the person under section 2.6.19, may appeal to the court against -
- (a) the decision; or
 - (b) a deemed refusal of the request.
- (2) An appeal under subsection (1)(a) must be started within 20 business days after the day notice of the decision is given to the person.
- (3) An appeal under subsection (1)(b) may be started at any time after the last day a decision on the matter should have been made.

Appeals from tribunals

- 4.1.37 (1) A party to a proceeding decided by a tribunal may appeal to the court against the tribunal's decision, but only on the ground -
- (a) of error or mistake in law on the part of the tribunal; or
 - (b) that the tribunal had no jurisdiction to make the decision or exceeded its jurisdiction in making the decision.
- (2) An appeal against a tribunal's decision must be started within 20 business days after the day notice of the tribunal's decision is given to the party.

Court may remit matter to tribunal

- 4.1.38 If an appeal includes a matter within the jurisdiction of a tribunal and the court is satisfied the matter should be dealt with by a tribunal, the court must remit the matter to the tribunal for decision.

Division 10 - Making an appeal to court**How appeals to the court are started**

- 4.1.39 (1) An appeal is started by lodging written notice of appeal with the registrar of the court.
- (2) The notice of appeal must state the grounds of the appeal.
 - (3) The person starting the appeal must also comply with the rules of the court applying to the appeal.
 - (4) However, the court may hear and decide an appeal even if the person has not complied with subsection (3).

Certain appellants must obtain information about submitters

- 4.1.40 (1) If the applicant or a submitter for a development application appeals about the part of the application involving impact assessment, the appellant must ask the assessment manager to give the appellant the name and address of each principal submitter who made a properly made submission about the application and has not withdrawn the submission.
- (2) The assessment manager must give the information requested under subsection (1) as soon as practicable.

Notice of appeal to other parties (div 8)

- 4.1.41 (1) An appellant under division 8 must, within 10 business days after the day the appeal is started (or if information is requested under section 4.1.40, within 10 business days after the day the appellant is given the information) give written notice of the appeal to -
- (a) if the appellant is an applicant - the assessment manager, any concurrence agency, any principal submitter whose submission has not been withdrawn and any advice agency treated as a submitter whose submission has not been withdrawn; or
 - (b) if the appellant is a submitter or an advice agency whose response to the development application is treated as a submission for an appeal - the assessment manager, the applicant and any concurrence agency; or
 - (c) if the appellant is a person to whom a notice mentioned in section 4.1.30 has been given - the assessment manager and any entity that was a concurrence agency for the development application.
- (2) The notice must state -
- (a) the grounds of the appeal; and
 - (b) if the person given the notice is not the respondent or a co-respondent under section 4.1.43 - that the person, within 10 business days after the day the notice is given, may elect to become a co-respondent to the appeal.

Notice of appeal to other parties (div 9)

- 4.1.42 (1) An appellant under division 9 must, within 10 business days after the day the appeal is started give written notice of the appeal to -
- (a) if the appellant is a person to whom a notice mentioned in section 4.1.31⁷³ has been given - the entity that gave the notice; or
 - (b) if the appellant is a person to whom an enforcement notice is given - the entity that gave the notice and if the entity is not the local government, the local government; or
 - (c) if the appellant is a person dissatisfied with a decision about compensation - the local government that decided the claim; or
 - (d) if the appellant is a person dissatisfied with a decision about acquiring designated land - the designator; or
 - (e) if the appellant is a person who is disqualified as a private certifier - the entity disqualifying the person and if the entity disqualifying the person is not the accrediting body, the accrediting body; or
 - (f) if the appellant is a party to a proceeding decided by a tribunal - the other party to the proceeding.
- (2) The notice must state the grounds of the appeal.



Respondent and co-respondents for appeals under div 8

- 4.1.43 (1) This section applies to appeals under division 8 for a development application.
- (2) The assessment manager is the respondent for the appeal.
- (3) If the appeal is started by a submitter, the applicant is a co-respondent for the appeal.
- (4) If the appeal is about a concurrence agency response, the concurrence agency is a co-respondent for the appeal.
- (5) If the appeal is only about a concurrence agency response, the assessment manager may apply to the court to withdraw from the appeal.
- (6) The respondent and any co-respondents for an appeal are entitled to be heard in the appeal as a party to the appeal.
- (7) A person to whom a notice of appeal is required to be given under section 4.1.41 and who is not the respondent or a co-respondent for the appeal may elect to be a co-respondent.

Respondent and co-respondents for appeals under div 9

- 4.1.44 (1) This section applies if an entity is required under section 4.1.42 to be given a notice of an appeal.
- (2) The entity given written notice is the respondent for the appeal.
- (3) However, if under a provision of the section more than 1 entity is required to be given notice, only the first entity mentioned in the provision is the respondent.
- (4) The second entity mentioned in the provision may elect to be a co-respondent.

How a person may elect to be co-respondent

- 4.1.45 (1) An entity elects to be a co-respondent by lodging in the court, within 10 business days after the day the notice of the appeal is given to the entity, a notice of election under the rules of court.
- (2) If a principal submitter is entitled to elect to become a co-respondent, any other submitter for the submission may also elect to become a co-respondent to the appeal.

Minister entitled to be represented in an appeal involving a State interest

- 4.1.46 If the Minister is satisfied that an appeal involves a State interest, the Minister is entitled to be represented in the appeal.

Lodging appeal stops certain actions

- 4.1.47 (1) If an appeal (other than an appeal under section 4.1.30) is started under division 8, the development must not be started until the appeal is decided or withdrawn.
- (2) Despite subsection (1), if the court is satisfied the outcome of the appeal would not be affected if the development or part of the development is started before the appeal is decided, the court may allow the development or part of the development to start before the appeal is decided.

ecoaccess

environmental licences and permits



Signature



Date

Jon Womersley
Director Environment (Central Region)
Delegate of Administering Authority
Coastal Protection and Management Act 1995
Environmental Protection Act 1994

Enquiries:
Steve Elson
EPA Central Region (Rockhampton)
PO Box 3130
ROCKHAMPTON SHOPPING FAIR QLD 4701
Telephone: (07) 4936 0589
Facsimile: (07) 4936 2212



Appendix 1

Referral Agency response

- Harbour Master, Mackay Region, Maritime Safety Queensland's letter dated 10 June 2005.



QE06245.102
App C



**Queensland
Government**

Department of
Primary Industries and Fisheries

Reference: NFC/530/000(655)

16 November 2004

Director/s
Windward AB Pty Ltd and Meridian Airlie Beach Pty Ltd
C/- Sinclair Knight Merz
PO Box 246
Spring Hill Qld 4004

Attention: CTPI 49-Sch4

Dear Sir/Madam

Issue of a Permit under Section 51 of the Fisheries Act 1994 to remove, destroy or damage marine plants

I refer to your application, received on 29 April 2004, for a permit to allow the disturbance of marine plants associated with the proposed Port of Airlie integrated marina development at Boathaven Bay, Airlie Beach.

Your application has been approved and a Marine Plant Permit (No. 2004CA0014) and associated plan (Plan Number 2004CA8657MP0014) to allow works as requested is enclosed.

However, please note that in accordance with Condition 2 of the attached Permit works are only authorised to commence upon receipt of the final and approved Deed of Agreement from the Chief Executive, or a delegate of the Chief Executive, Department of Primary Industries & Fisheries.

A survey fee of \$600.00 is now due and payable to: Department of Primary Industries & Fisheries, PO Box 5396, Cairns Qld 4870.

Please ensure that you, and anyone conducting works under this Permit, read and understand the Schedule of Conditions attached to the Permit. The Permit, or a copy of the Permit, must be available at the works site for inspection at any time by an inspector authorised under the *Fisheries Act 1994*.

As stated in the Schedule of Conditions, this Department must be notified prior to the commencement of works and upon completion of works. This allows the Department to monitor compliance with permit conditions and deal with public enquiries. The enclosed Notification of Works and Post Works Report have been provided to assist you in complying with this requirement.

Mission Vision
Profitable primary
industries for Queensland
Maximise the economic
potential of Queensland
primary industries on a
sustainable basis

Northern Fisheries Centre
38-40 Tingha Street, Portsmith
(PO Box 5396)
Cairns
Queensland 4870 Australia
Call Centre 13 25 23
Website www.dpi.qld.gov.au
ABN 78 342 684 030

It is the responsibility of the Permit holder to be aware of the contents of the *Fisheries Act 1994* and the *Fisheries Regulations 1995* with respect to the issue of Marine Plant Permits. A copy of the legislation is available at Goprint, 371 Vulture Street, Woolloongabba, Qld 4102 (tel: 07 3246 3399) or can be accessed via the Internet at www.qld.gov.au.

This Permit does not grant permission to pass through or enter upon lands and does not infer the issue of any other authority necessary to the proposed purpose. In addition, the Department of Primary Industries and Fisheries reminds you of the obligations pursuant to the *Aboriginal Cultural Heritage Act 2003*, in particular the duty of care and offence provisions contained within Part 3 of that Act. Please contact the Department of Natural Resources and Mines for further information or advice regarding this legislation.

The decision to approve your application was made after considering the written information provided in your application, the requirements of the *Fisheries Act 1994*, departmental policies and other relevant material, including the "Addendum to the Coordinator-General's Report on the Supplementary Environmental Impact Statement for the Port of Airlie Marina Development Project (April 2004)".

If you feel dissatisfied with the decision there is a provision under the *Fisheries Act 1994* to appeal the decision under certain circumstances. For further information contact the Secretary of the Fisheries Tribunal on (07) 3239 6933. A notice of appeal must be lodged within twenty-eight (28) days of receiving notice of the decision. In special circumstances, the Tribunal may extend the period for filing the notice of appeal.

If you require any further information regarding this matter, please do not hesitate to contact Kylie Dodds on telephone 07 4035 0106 or email Kylie.Dodds@dpi.qld.gov.au.

Yours sincerely

CTPI 49-Sch4

Anne Clarke
Regional Manager (North)
Fisheries & Aquaculture Development

Enc: Marine Plant Permit No. 2004CA0014 & Plan No. 2004CA8657MP0014, Notification forms

CC: Ian Yarroll
General Manager, Fisheries & Aquaculture Development Division
Department of Primary Industries & Fisheries
GPO Box 46
BRISBANE QLD 4001
Attention: John Beumer

Paul Wainmley
Regional Director
Department of Primary Industries & Fisheries
PO Box 6014
ROCKHAMPTON QLD 4810

Rob Coles
Senior Principal Scientist (Marine Ecology Group)
Department of Primary Industries & Fisheries
PO Box 5396
CAIRNS QLD 4870

Department of Primary Industries and Fisheries

22-NOV-2004 MON 14:52

NTUADUNGH

David McGill
Fisheries Biologist
Department of Primary Industries & Fisheries
PO Box 568
MACKAY QLD 4741

Rob McDonald
District Officer (Q&FP)
Department of Primary Industries & Fisheries
Office 8, Abel Point Marina
AIRLIE BEACH Qld 4802

Published on DES Disclosure Log
RTI Act 2009

Department of Primary Industries and Fisheries

R

Notice of decision –

Change to an existing approval

RECEIVED

24 APR 2007

This notice is issued by the Environmental Protection Agency pursuant to Section 3.5.33 of the Integrated Planning Act 1997 to advise of a decision or action.

Windward AB Pty Ltd
PO Box 2484
BRISBANE QLD 4001

Our reference: 185513

Dear CTPI 49-Sch4

Re: Application to change or cancel a condition of your development approval

The Environmental Protection Agency (EPA), acting as assessment manager, wishes to advise that your application to change or cancel a condition of your existing development approval IPDC00251205D32 and IPDE00112605E72, received on 16 March 2007, has been assessed, and on 17 April 2007 was granted.

Property/Location:

Street address - Boathaven Bay, Airlie Beach Qld 4802
Lot/Plan - Lot 1 Plan PER206577

Your application requested:

Replacement of condition 35 of IPDC00251205D32 and condition (1A-4a) of IPDE00112605E72 with the following:

"Dredging outside of the enclosed marina site must only be undertaken by a hydraulic dredge."

Inclusion of the following definition with Schedule 1H of IPDE00112605E72:

Enclosed marina and marina services area the area enclosed by rock revetments and sheet piling including the revetment wall along the boundary of Lot 117, sheet piling from A through to G, H, M, N, O, and to P, the revetment wall along the boundary of Lot 103, and the storm water bund as shown on the approved drawing.

Appeal Rights

An attached extract from the Integrated Planning Act 1997 details your appeal rights regarding this decision. You should seek independent advice to confirm all your available avenues.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



Should you require any further information please contact Emma Paull the project manager, on the telephone number listed below.

Yours sincerely

CTPI 49-Sch4

Emma Paull 17/4/07
District Manager
Mackay District Office
Environmental Protection Agency

Enquiries:

Mackay District Office (EPA)
PO Box 623 MACKAY QLD 4740
Phone: (07) 4944 7812
Fax: (07) 4944 7811

Date:

Published on DES Disclosure Log
RTI Act 2009

Notice

Coastal development

Notice of Decision – Request to change an existing development approval

This notice is issued by the Environmental Protection Agency pursuant to Section 3.5.22, 3.5.24 and 3.5.33 of the Integrated Planning Act 1997 to advise of a decision to request to change an existing approval.

Windward AB Pty Ltd
GPO Box 2484
BRISBANE QLD 4001

Your reference:

Our reference: ROK889

Attention: CTPI 49-Sch4

Dear Sir/Madam

Re: Application to request to change an existing approval for operational works that is tidal work, reclamation, disposal of dredge spoil and works on State coastal land situated at Boathaven Bay, Port of Airlie Project, Airlie Beach.

The Environmental Protection Agency (EPA) has assessed the application received on 27 June 2007 and wishes to advise you of the decision on the request to change:

Activity	IPA Request type	Decision	EPA Number
Operational Works	To change or cancel conditions	Granted	IPDC00251205D32

Location	Lot and Plan	Requested change(s)
Boathaven Bay, Airlie Beach	Lot 1 on SP172260	Refinement of construction method.



Notice of Decision – Request to change an existing development approval

Amendment(s)	
Cancellation of condition 23 included in the EPA's development approval dated 23 June 2005 and replacement with the following condition:	
23	All tidal land to be reclaimed must be reclaimed to conform to the levels shown on Drawing Number SK20.

Amendment(s) continued		
Cancellation of the 'approved drawings' included in the EPA's development approval dated 23 June 2005 and replacement with the following:		
The 'approved drawings' that apply to this approval include:		
Drawings	Description	Revision
SK01-1	Marina overall layout	E
SK01-2	Marina overall layout lease area and entrance	E
SK02	Internal stormwater network	E
SK03	Stormwater drainage concept at esplanade	D
SK04	Construction phase drainage paths	D
SK05	Stormwater major flow path	D
SK06	Internal trunk water reticulation	E
SK07	Internal sewerage reticulation	E
SK08	Internal road network	E
SK09-1	Revetment wall location	F
SK09-2	Revetment wall coordinates	G
SK10	Marina sheet pile revetment wall	D
SK11	Sheet pile temporary revetment wall long section	D
SK12-1	Revetment walls sheet 1 of 2	F
SK12-2	Revetment walls sheet 2 of 2	F
SK13	Proposed development profiles	E
SK14	Road network – Typical sections	D
SK15	Proposed development profiles	F
SK16	Boat ramp profile	F
SK17	Western seawall revetment walls	D
SK18-1	Marina entrance & maintenance area details sheet 1 of 2	F
SK18-2	Marina entrance & maintenance area details sheet 2 of 2	D
SK19	Potential acid sulphate soils disposal location	F
SK20	Finished surface levels	F
53932-201-1	Constructivity – revised – methodology program – WAB3	K
3041-AP-01	Plan of areas below high water mark	B
DBUND-01	Drainage / Construction access bund	0

18/3/08

Notice of Decision – Request to change an existing development approval

Please retain this documentation for your records.

If you require more information, please contact the Project Manager, Ian Draper, on the telephone number listed at the bottom of this notice.

Yours sincerely

CTPI 49-Sch4

CTPI 49-Sch4

Signature

Date

18/3/08

Ricci Churchill
District Manager (Mackay)
Environmental Protection Agency
Delegate for the Administering Authority
Coastal Protection and Management Act 1995
Environmental Protection Act 1994

Enquiries:
EPA Central Region (Mackay)
PO Box 623
MACKAY QLD 4740
Telephone. (07) 4944 7841
Facsimile. (07) 4944 7836

Date : 19/10/2018 10:08:43 AM

From : "MIWSARA"

To : "Felicity Laub"

Subject : FW: 1809-7328 SRA - PROPOSED MARINA ARM 'A' - PORT OF AIRLIE MARINA

Attachment : 17.034L - 19.10.18.pdf;image001.jpg;image003.png;

FYA

From: CTPI 49-Sch4 <[redacted]> accesstpc.com.au>

Sent: Friday, 19 October 2018 9:04 AM

To: MIWSARA <MIWSARA@dsdmip.qld.gov.au>

Cc: 'Tony Gatton' <Tony.Gatton@whitsundayrc.qld.gov.au>; 'Doug Mackay' <Doug.Mackay@whitsundayrc.qld.gov.au>

Subject: 1809-7328 SRA - PROPOSED MARINA ARM 'A' - PORT OF AIRLIE MARINA

ATTENTION: FELICITY LAUB

Hi Felicity,

Attached is the applicants' response to the action notice dated 19 September 2018.

You will note that this response confirms that a referral in relation to marine plants is not required in this instance.

Unfortunately, I have been unable to complete the response on MyDAS as it requires the payment of the marine plants referral fee before allowing the submission of the response.

Please let me know if there are any further queries, failing which we look forward to receiving your confirmation notice.

Thanks.

Kind Regards,

CTPI 49-Sch4

Director



ACCESS

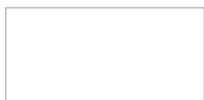
Town Planning Consultants

M: CTPI 49-Sch4

A: PO Box 703, Fortitude Valley, QLD 4006

E: CTP <[redacted]> accesstpc.com.au

W: www.accesstpc.com.au



Published on DES Disclosure Log
RTI Act 2009



ACCESS
Town Planning Consultants

P: CTPI 49-Sch4

E: CTF@accessnpc.com.au

A: PO BOX 703,
Fortitude Valley QLD 4006

Our Ref: 17.034

Your Ref: 1809-7328 SRA

19 October 2018

The Senior Planning Officer
DSDMIP
MIW Regional Office

Attention: Felicity Laub

Electronic Lodgement

Dear Felicity,

**APPLICANT'S RESPONSE TO A REFERRAL ACTION NOTICE
PROPOSED NEW MARINA ARM A, PORT OF AIRLIE MARINA, AIRLIE BEACH**

We act for Meridien Airlie Beach Pty Ltd and Meridien AB Pty Ltd (Both Receivers and Managers Appointed)(Both in Liquidation), applicants for the above-mentioned development application.

This correspondence and attachments provide the applicant's response to your department's action notice dated 19 September 2018.

Attached is a brief report by Hydrobiology confirming that *"the installation of the proposed marina berth pylons as depicted (on the proposed development plans) is not going to result in the removal, damage or destruction (temporary or permanent) of marine vegetation."*

As such, the subject application does not require referral pursuant to Schedule 10, Part 6, Division 3, Subdivision 3, Table 1 of the *Planning Regulation 2017*.

Please direct any queries to the undersigned.

Yours faithfully

ACCESS TOWN PLANNING CONSULTANTS

CTPI 49-Sch4

CTPI 49-Sch4

Director

Meridien Airlie Beach Pty Ltd & Meridien AB Pty Ltd
(Receivers and Manager's Appointed) (Both in
Liquidation)
Trading as Windward Airlie Beach Partnership
PO Box 586
Airlie Beach Q 4802

18 October 2018

CC: CTPI 49-Sch4 (Balmain Asset Management); CTPI 49-
CTPI 49- (Access Town Planning)

PROPOSED MARINA BERTHS – LEASE XA IN LOT 123/SP218220 AND LEASE XB IN LOT 120/SP218220

Dear Sirs,

Hydrobiology was commissioned to undertake a vegetation survey at Airlie Beach within the direct footprint of proposed marina berths. The study sites are located in lease XA (Lot 123) and lease XB (Lot 120) on SP218220 in Boathaven Bay, Airlie Beach (Attachment A). The proposed construction will begin at the bridgehead and involves a stub jetty, ramp, floating pontoon (comprised of individual pods) and mooring piles.

The first survey was conducted on foot at low tide (5:50am, 12 October 2018), and involved a visual assessment of the seawall edge (lease XA) and shallow waters (lease XB). The intertidal section of the seawall as well as adjacent mooring piles were covered in oysters (Figure 1). The substrate was dominated by 95% silt with 5% gravel; despite agitating the sediments there was **no evidence of seagrasses or other stiffer substrate capable of supporting vegetation growth** (Figure 1). A visual observation of a faint oil film on the water was noted.

The second survey was conducted by boat at 9:50am (Figure 3). The high turbidity of the waters precluded any useful footage from the underwater camera (CCTV ¼ Sony CCD Fishing Underwater LED Camera). That is, waters were too cloudy to identify any features (Figure 3). The turbidity was a product of continual resuspension of the silty substrate with the wash generated by the adjacent cruise/ferry terminal and is likely a continual presence as there was no rainfall during the preceding 24 hours.

The presence of high turbidity hinders the photosynthetic abilities of seagrass, rendering their presence unlikely. Previously recorded seagrasses in broader Boathaven Bay (not in the vicinity of the proposed marina berths) include 6 species (*Halophila ovalis*, *H. decipiens*, *H. spinulosa*, *Halodule uninervis*, *Syringodium isoetifolium* and *Zostera muelleri*) (FRC 2015). *H. ovalis* and *H. uninervis* are more commonly found in shallow (<5m) waters. All aforementioned species are sensitive to resuspensions of silt as well as anoxic sediments. **The installation of the proposed marina berth pylons as depicted in Attachment A is not going to result in the removal, damage or destruction (temporary or permanent) of marine vegetation.**



STREET

27 / 43 Lang Parade
Auchenflower 4066
QUEENSLAND



PO Box 2151
Toowong 4066
QUEENSLAND



CONTACT

+61 (0)7 3721 0100 P
info@hydrobiology.biz

During surveys GPS (GDA94) coordinates were recorded (track displayed in Figure 3) as well as any pertinent notes. Photos of the direct surrounding environment were also taken for context.

It is worth noting that adjacent to the proposed construction is lease ZC, which currently operates as a cruise ship terminal and lease YB, operating as a public recreational boat ramp. Further along is Lot 117 which is currently being used as a dredged sediment stockpile (Figure 2). The impacts as a result of activities operating out of these adjacent leases as well as maintenance dredging (minimum depth of 2.5m, running adjacent to lease ZC) indicates that any marine vegetation that manages to colonise the local substrate will have a limited lifespan. Surrounding substrate exposed at low tide, so within the established depth ranges and available light to support growth, showed no signs of seagrass.

If you have any questions or require any clarification, please don't hesitate to contact Hydrobiology on (07) 3721 0100.

CTPI 49-Sch4

CTPI 49-Sch4

Scientist, Ecology and Biodiversity Management

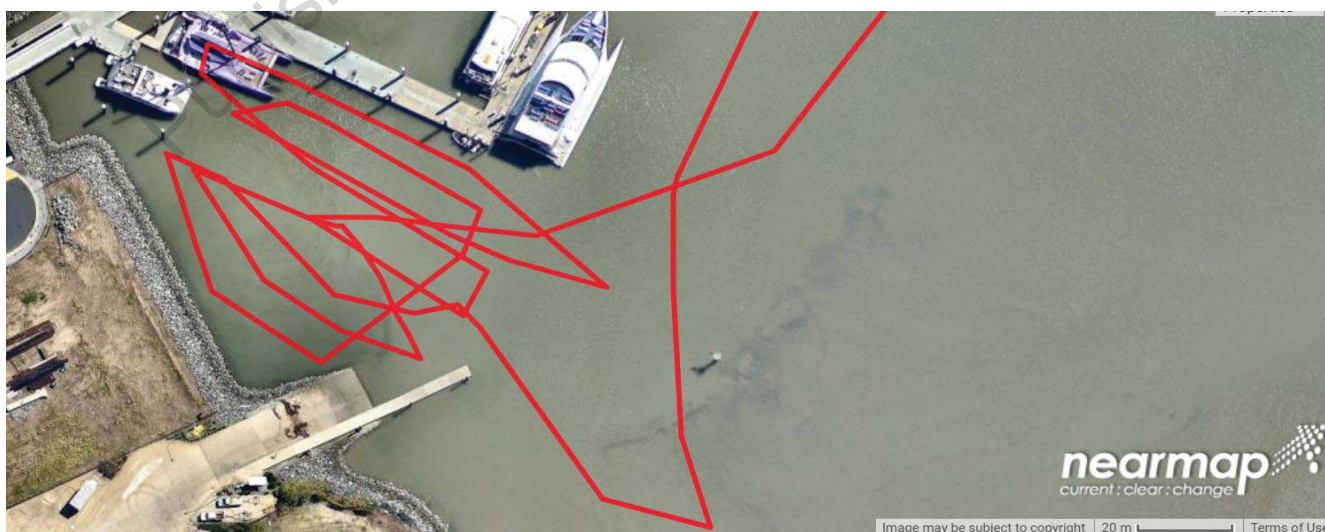
Our Reference: BAM1803_L_1_v1-1.docx



Figure 1: Low tide visual survey. Left: oysters on intertidal seawall. Right: Silt substrate



Figure 2 Adjacent cruise ship moorings and public boat ramp



*Note: GPS tracks are recorded to $\pm 25\text{m}$

Figure 3 Satellite imagery of study area with path taken by boat using drop camera (red)

ATTACHMENT A – SELECTED DEVELOPMENT DRAWINGS

Published on DES Disclosure Log
RTI Act 2009

PROPOSED LOT 123 & LOT 120 IN SP218220

BERTH FACILITIES . AIRLIE BEACH.

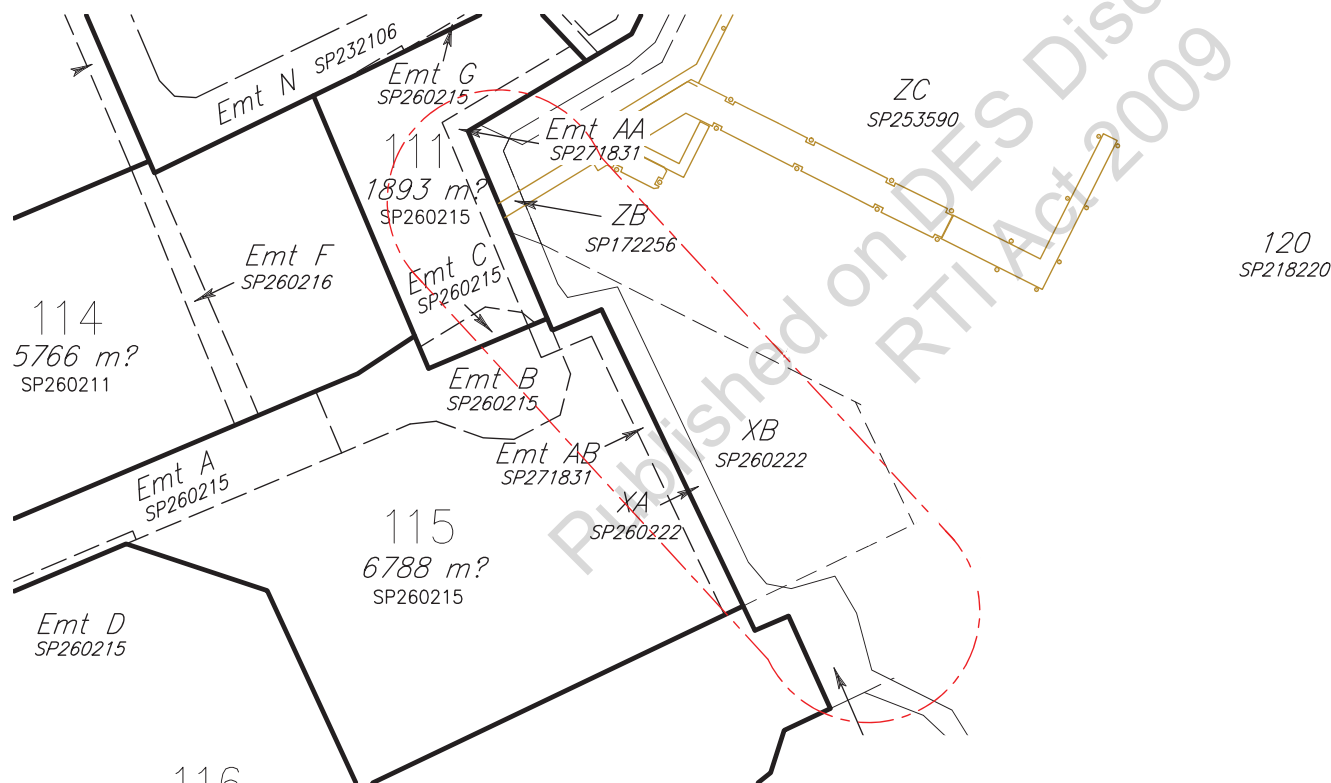
AIRLIE BEACH DRAWING SCHEDULE	
TITLE	SHEET NUMBER
COVER SHEET AND DRAWING SCHEDULE	S.17
PLAN ON PROPOSED COMMERCIAL BERTHS	S.17.1
SECTION 1	S.17.2
SECTION 2	S.17.3
SECTION 3	S.17.4

GENERAL NOTES:

THE DESIGN OF THE STUB JETTY, 18.8m RAMP, FLOATING MARINA SECTIONS, MARINA SUPPORT PILES & ALL MOORING/FENDER PILES IS STRICTLY IN ACCORDANCE WITH ALL CURRENT & RELEVANT AUSTRALIAN CODES & STANDARDS INCLUSIVE OF;

1. AS/NZS 1170.0.
2. AS/NZS 1170.1.
3. AS/NZS 1170.2.
4. AS/NZS 1170.4.
5. AS3962.
6. AS4997.
7. STRICTLY IN ACCORDANCE WITH THE COASTAL PROTECTION & MANAGEMENT ACT 1995.

LIGHTING & VISIBILITY MEASURES TO BE PROVIDED STRICTLY IN ACCORDANCE WITH STATE CODE 7 (MARITIME SAFETY) & AS4282-1997.



FILE No: P:/D/DRM/Airlie Beach Port Of Airlie Marina Arms/Airlie Beach Working Drawing Berths Lease Areas XA & XB.dwg

Copyright this design and drawing are not to be used or reproduced in any part without written permission 21004					DESIGNED		COVER SHEET AND DRAWING LIST File A	 SUIITE 36, 330 WATTLE STREET SYDNEY SYDNEY, NSW, AUSTRALIA 2007 www.australianportsandmarinas.com.au PH: +61 2 9282 9926 M: +61 4 9282 9926 E: info@portsandmarinas.com.au	YOUR MARITIME DEVELOPMENT PARTNER - PRELIMINARY & FEASIBILITY STUDIES - PLANNING & APPROVALS - DESIGN FOR CONSTRUCTION - TENDERING & PROJECT MANAGEMENT	PORT OF AIRLIE – PROPOSED ARM 'A' MARINA BERTHS. LEASE XA IN LOT 123 & LEASE XB IN LOT 120, ON SP218220. FOR: MERIDIAN AIRLIE BEACH PTY LTD AIRLIE BEACH	ISSUE	DRAWING No.
	D	GENERALLY AMENDED – RED HATCHED AREA REMOVED.	CTP	23.08.18	CT	23.10.17					D	2260818
	C	GENERALLY AMENDED – NOTES & TITLES.	CTP	20.08.18	DRAWN							
	B	AMENDED 18814mm RAMP AND STUB JETTY.	CTP	07.08.18	CT	02.08.18						
	A	DRAFT ISSUE FOR CLIENT COMMENT ONLY. NOT FOR CONSTRUCTION	CTP	02.08.18	CHECKED							
	LETTER	DETAILS OF AMENDMENT		BY	DATE	CTP	02.08.18			SHEET No.	S.17	

