Beadon Creek Capital Dredging
Environmental Management Plan – Principal Commitments

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December 2016
Beadon Creek Capital Dredging Environmental Management Plan –
Principal Commitments

Prepared for
Department of Transport and BMT JFA Consultants Pty Ltd

Prepared by
BMT Oceanica Pty Ltd

December 2016

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Review

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Quality Assurance

BMT Oceanica Pty Ltd has prepared this report in accordance with our Health Safety Environment Quality Management System, certified to OHSAS 18001, AS/NZS 4801, ISO 14001 and ISO 9001.

Status

This report is 'Draft' until approved for final release, as indicated below by inclusion of signatures from: (i) the author and (ii) a Director of BMT Oceanica Pty Ltd or their authorised delegate. A Draft report may be issued for review with intent to generate a 'Final' version, but must not be used for any other purpose.

Approved for final release:

Author
Date: 14/12/16

Director (or delegate)
Date: 14/12/16
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Appendix A Onslow Marine Support Base Pty Ltd Socio-economic Management Commitments
1. Introduction

Beadon Creek is a tidal inlet on the eastern side of the town of Onslow, on the north-west coast of Western Australia (Figure 1.1). The Beadon Creek Maritime Facility (hereafter, 'the Facility') provides boating facilities for commercial fishing vessels, charter vessels, tugs, barges and recreational vessels.

![Figure 1.1 Location of Onslow, Western Australia](image)

1.1 Project description

The Department of Transport (DoT; the Principal) is planning to upgrade the existing facility to support the growing demand for land. The development works will be undertaken by Maritime Constructions Pty Ltd (the Contractor) for Onslow Marine Support Base (OMSB; the Leaseholder). These works include capital dredging of a berth pocket and turning basin immediately west of the existing channel. The dredged material will then be used to create an additional land-backed wharf area immediately north of the existing harbour lots (Figure 1.2). The dredging campaign will be completed using hydraulic dredging methods with a provision to complete land-based clean up dredging at the end of the campaign. The dredged slurry will be pumped through a pipeline which will deliver the material directly to the reclamation area. Further details of dredge methodology and sequence of works for the capital dredging campaign are reported within the Dredging and Reclamation Management Plan (DRMP; refer; Maritime Constructions 2016a).

The capital dredging campaign was referred to the Environmental Protection Authority (EPA) under Section 38 of the Environmental Protection Act 1986 on 12 August 2013 (BMT Oceanica 2014a). This referral was supported with a Dredging Environmental Impact Assessment (DEIA; BMT Oceanica 2014a – publicly available on the Principal’s website at http://www.transport.wa.gov.au/imarine/onslow-maritime-facility-project.asp). On 28 April 2014, the EPA set the Level of Assessment for the proposal as "Not Assessed – Public Advice Given".
1.2 Purpose of this document

This document outlines the Principal’s (DoT’s) environmental monitoring and management commitments for the capital dredging campaign, as specified in the DEIA (BMT Oceanica 2014a) and in accordance with DoT’s overarching – Environmental Management Framework (EMF; BMT Oceanica 2016a). The environmental monitoring commitments of the Contractor, Maritime Constructions (MC), are detailed in MC’s Environmental Management Plan (EMP; Maritime Constructions 2016b) and Water Quality Management Plan (WQMP; Maritime Constructions 2016c). The socio-economic management commitments of the Leaseholder are detailed in Appendix A. This report details the Principal’s commitments and complements the EMP and WQMP to provide complete documentation of all environmental management and monitoring commitments required under the approved DEIA (BMT Oceanica 2014a).
Figure 1.2  Beadon Creek capital dredge footprint and reclamation area
2. Key Environmental and Socio-economic Issues

The following sections detail the key environmental and socio-economic issues that require monitoring and/or management by the Principal (DoT) during the dredging campaign as identified in the DEIA (BMT Oceanica 2014a). The EMP and WQMP (Maritime Constructions 2016b,c) should be referred to for requirements of the Contractor (MC), monitoring commitments.

2.1 Increase in water column turbidity

The disturbance of sand and silt caused by dredging, discharge of return water from the reclamation area and the construction of the reclamation area bunds are likely to cause elevated turbidity levels within a localised area of the creek. The risk of environmental issues associated with high turbidity is low for a number of reasons, primarily:

- sediment sampling completed within the proposed dredge footprint in 2014 (BMT Oceanica 2014a) found sediments contained large sand fractions which gives relatively high settling velocities
- the works will occur in an area where there are no known seagrass, macroalgal or coral communities
- the dredge area experiences naturally high turbidity due to diurnal tidal movement in the creek.

As a result, turbidity concerns are more likely to be aesthetic than environmental. Nonetheless, the impacts of turbidity will be actively monitored and managed as outlined in Section 3.2.

2.2 Release of contaminants

Sediment sampling and analysis completed in the 2012 and 2016 (BMT Oceanica 2014a; BMT Oceanica 2016b) identified four areas containing elevated levels of TBT of potential environmental concern for dredging and disposal activities (Figure 2.1). Monitoring and management actions relating to the potential release of TBT are detailed in Section 3.3 and 3.4.
Figure 2.1  Indicative areas of potential TBT contamination in Beadon Creek
3. **Principal Commitments**

The following sections outline the environmental monitoring and management commitments that BMT JFA Consultants Pty Ltd (BMT JFA) and BMT Oceanica Pty Ltd (BMT Oceanica) will implement and/or coordinate on behalf of the Principal (DoT) during the campaign.

### 3.1 Stakeholder consultation

The Leaseholder on behalf of the Principal will consult with non-regulatory stakeholders as detailed Appendix A. These will be verified by the Principal as required via review of the Stakeholder Complaints Register maintained by the Leaseholder.

In addition BMT Oceanica on behalf of the Principal have consulted with the following, regulatory authorities:

- The Western Australian (WA) Office of the Environmental Protection Authority
- The WA Department of Transport (Marine Safety Branch)
- The WA Department of Environment Regulation (DER)
- The WA Department of Parks and Wildlife
- The WA Department of Fisheries (Fish Health and Bio-security Divisions)

Consultation with these organisations by the Principal will continue throughout the campaign, as required:

### 3.2 Turbidity monitoring

#### 3.2.1 Remote imagery

If practical, remote imagery units (RIUs) will be used throughout the campaign for turbidity monitoring purposes. On behalf of the Principal, BMT Oceanica propose to install one RIU on the dredge vessel with a second unit installed onshore by the Principal. These units will monitor turbidity and for detection of other environmental incidents (e.g. oil spills) during dredging as well as the general progress of the works. The RIUs will remotely capture time- and date-stamped images to a resolution of 8–12 megapixels at half-hourly intervals. The units will be retrieved after the completion of the campaign and high-resolution images will be compiled.

#### 3.2.2 Aerial photography

On behalf of the Principal, BMT JFA will coordinate the capture of semi-oblique aerial photography on one occasion while the dredge is operating at full capacity during the campaign. The aerial photography will provide a large-scale visual record of the campaign, the spatial extent of the turbid plume and verification of the plume sketches (provided by the Contractor). Aerial photography will be captured in accordance with the aerial photography procedure detailed in the EMF (BMT Oceanica 2016a).

### 3.3 Tributyltin management

#### 3.3.1 Dredging of the TBT contaminated material

The dredging of the refined TBT contaminated areas in Beadon Creek (Figure 2.1) will require management to ensure that TBT is not released into the creek waters at levels of environmental concern as detailed in the DRMP (Maritime Constructions 2016a).

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1. Via obtainment of a Temporary Notice to Mariners
2. Via obtainment of an oyster translocation permit
The proposed management of the TBT contaminated areas is summarised in Table 3.1. These management actions will be verified by the Principal on a weekly basis via review of the Contractors dredge logs which will contain information regarding the dredge head position (including depth) and the corresponding dredge volume and production rates (to give the % sediment in dredge slurry).

**Table 3.1 Proposed TBT management of contaminated areas**

<table>
<thead>
<tr>
<th>Area</th>
<th>Depth layer</th>
<th>TBT management</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0–0.5 m</td>
<td>Sediments will be dredged and disposed to geotextile bag within a separately bunded area onshore. Supernatant water from the bunded area will be tested and allowed to return to the creek only if it meets the ANZECC and ARMCANZ (2000) 90% species protection levels. Once de-watered, sediment will be moved to the main reclamation area and capped using clean dredge material.</td>
<td>74.56</td>
</tr>
<tr>
<td>B</td>
<td>0–0.5 m</td>
<td>Dredge slurry to contain no more than 5% sediment in water during dredging and disposal. Disposal will be to the main reclamation area.</td>
<td>206.52</td>
</tr>
<tr>
<td>C</td>
<td>0–1.0 m</td>
<td>Dredge slurry to contain no more than 10% sediment in water during dredging and disposal. Disposal will be to the main reclamation area.</td>
<td>117.37</td>
</tr>
<tr>
<td>D</td>
<td>0–1.5 m</td>
<td>Dredge slurry to contain no more than 16% sediment in water during dredging and disposal. Disposal will be to the main reclamation area.</td>
<td>52.25</td>
</tr>
</tbody>
</table>

---

**3.4 Tributyltin monitoring**

A Moderate Ecological Protection Area (MEPA) and High Ecological Protection Area (HEPA) for Beadon Creek have been defined for the purposes of TBT monitoring in the creek waters for this campaign (Figure 3.1). These areas were defined based on the usage of the Beadon Creek wharf facilities and in consultation with the OEPA (BMT Oceanica 2014a).

The defined MEPA area is considered a high maritime usage (moderately disturbed) area in which the ANZECC and ARMCANZ (2000) 90% Species Protection Level is appropriate. The areas upstream and downstream of the MEPA are defined as the HEPAs, where the ANZECC and ARMCANZ (2000) 99% Species Protection Level is appropriate.

TBT monitoring will be completed at four sites within the MEPA and two sites at the HEPA/MEPA boundary (Figure 3.1) for the duration of the dredging works. These sites will be the locations for sentinel oyster deployments and water quality measurements (as detailed in the sections below).
Note:
1. Site HEPA 1 has been conservatively located just inside the Moderate Ecological Protection Area boundary to be adjacent to a Navigational Marker to ensure the safety of the maritime users of Beadon Creek.

Figure 3.1 Proposed water quality sampling/oyster mooring sites and the Moderate Ecological Protection Area (MEPA) and High Ecological Protection Area (HEPA) boundary for Beadon Creek
3.4.1 Baseline tributyltin monitoring

**Water quality**

In accordance with Principal commitments detailed in the DEIA (BMT Oceanica 2014b), baseline TBT monitoring was completed in 2014 prior to dredging to assess the pre-dredging contaminant status of Beadon Creek. Water samples were collected at the four MEPA sites and the two HEPA sites (Figure 3.1). The results of the baseline survey showed no TBT contamination in the creek waters (supplied to the OEPA on 21 August 2014 (BMT Oceanica 2014b)). Additional water quality sampling for TBT, metals and hydrocarbons will be undertaken immediately prior to dredging to characterise the present Beadon Creek water quality conditions prior the capital dredging campaign.

**Sentinel oyster monitoring**

In accordance with the Principal commitments detailed in the DEIA (BMT Oceanica 2104b), a baseline oyster deployment was completed in 2014 to provide an integrated measure of the bioavailable TBT in the creek water prior to the commencement of dredging. The oysters were deployed at the four MEPA sites and the two HEPA sites in Beadon Creek for a 6-week period (Figure 3.1). The results showed baseline TBT concentrations in the oyster tissue were below the limit of reporting (0.05 µg Sn/kg) at all sites (supplied to the OEPA on 21 August 2014 (BMT Oceanica 2014b)).

**Gastropod survey**

The rock wall north of the reclamation area, the mangroves along the creek and the pilings associated with the existing wharf south of the reclamation area were inspected for gastropods in 2014. Live gastropods that may have been of sufficient numbers for analysis (~100 individuals) were found on the rock wall north of the reclamation area, within the MEPA, but the species of gastropod found were not suitable for imposex analysis (Dr P Middelfart, Western Australia Museum, 2014, pers. comm., 11 June). No live gastropods were found in the other areas inspected within the creek. Therefore, it was deemed that post-dredge imposex analysis is not a feasible component of the management and monitoring program for the capital dredging campaign and the OEPA was notified on 21 August 2014 (BMT Oceanica 2014a).

3.4.2 During-dredging tributyltin monitoring

TBT monitoring will be completed during the capital dredging campaign for comparison against the relevant guidelines and baseline data as appropriate. The sections below detail the TBT monitoring to be completed during the campaign.

**Water quality monitoring**

Water quality monitoring of TBT concentrations in the water column will be completed in three discrete sampling areas:

**Supernatant water monitoring**
- The Contractor on behalf of the Principal will collect two return water samples within the reclamation area close to the outflow to the creek (BMT Oceanica 2014a). Upon completion of the dredging of Area A (Figure 2.1), one of these supernatant water samples will be collected from the contained bunded area to the south of the reclamation area.

**Discharge plume monitoring**
- The Contractor on behalf of the Principal will collect four water samples from the return water discharge plume. The location of the four samples will extend from the outflow in the direction of the plume (BMT Oceanica 2014a).
HEPA site monitoring

- The Contractor on behalf of the Principal will collect two water samples from the HEPA site (HEPA1 and HEPA2; Figure 3.1; BMT Oceanica 2014a).

At each monitoring site, the Contractor will collect water samples daily for the first two weeks of dredging in accordance with the DEIA (BMT Oceanica 2014a). If there are no exceedances of the relevant TBT guidelines levels occur within the first two weeks of dredging, sampling frequency will reduce to three times per week for one week and then once per week thereafter.

Upon receipt of analysis results, BMT Oceanica will assess the TBT concentrations for each area against the relevant Species Protection Level values (Table 3.2). If monitoring indicates that the TBT value exceeds the relevant Species Protection Level at any time, contingency measures as outlined in Section 5 will be implemented.

Table 3.2 Water quality monitoring sites for elutriate TBT and respective Species Protection Levels

<table>
<thead>
<tr>
<th>Water quality sites</th>
<th>Number of sites</th>
<th>Species Protection Level for comparison of median value (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supernatant water</td>
<td>2</td>
<td>0.02</td>
</tr>
<tr>
<td>Discharge plume</td>
<td>4</td>
<td>0.02</td>
</tr>
<tr>
<td>HEPA sites</td>
<td>2</td>
<td>0.0004</td>
</tr>
</tbody>
</table>

Note:
1. ANZECC & ARMCANZ (2000) 90% and 99% Species Protection Levels for toxicants in marine waters will be compared against.

Sentinel oyster monitoring

Approximately 1 week prior to the commencement of dredging, sentinel oysters will be deployed in the same configuration as the baseline oyster deployment (at the four MEPA sites and two HEPA sites; Figure 3.1). Each during-dredging oyster deployment will be six weeks in duration (the same duration as the baseline oyster deployment) to allow for direct comparison to baseline data.

At each site, three strings of ten sentinel oysters will be deployed and six oyster flesh samples will be sent from each site for analysis. The samples from each site during dredging will be compared to the corresponding baseline site data. The median impact data will be assessed against the 95th percentile of the baseline data at the MEPA sites, and the 80th percentile of the baseline data at the HEPA sites. In the event of an exceedance, contingency measures as outlined in Section 5 will be implemented.

3.4.3 Post-dredge tributyltin monitoring

Post-dredging monitoring is only required as a contingency in the event of:

- a sustained exceedance (for more than one consecutive sampling event) of TBT concentrations in the creek water against the 99% Species Protection Level (ANZECC & ARMCANZ 2000) at either of the fixed HEPA sites
- an exceedance of the TBT concentration in oyster tissue during dredging relative to the baseline TBT concentrations in oyster tissue (Section 3.4.1).

The steps to be taken in the event of either of these exceedances are outlined in further detail in the sections below. The requirement for post-dredge monitoring shall be reviewed three months after the end of dredging in consultation with the OEPA.
**Water quality monitoring**

In the event of a sustained exceedance of TBT concentrations at one or both of the HEPA sites, water quality will be monitored at all MEPA and HEPA sites (Figure 3.1) fortnightly, until TBT concentrations fall below the ANZECC and ARMCANZ (2000) 90% and 99% Species Protection Levels, respectively. If monitoring indicates creek water TBT concentrations at MEPA and HEPA sites are below their respective Species Protection Levels, post-dredging TBT water quality monitoring will cease. In the event of exceedances at the MEPA and HEPA sites during post-dredging monitoring, contingency measures as outlined in Section 5 will be implemented.

**Sentinel oyster monitoring**

In the event of an exceedance of TBT concentrations in oyster flesh during-dredging monitoring, relative to the baseline results (Section 3.4.2), sentinel oysters will be deployed for six weeks post-dredging at all MEPA and HEPA sites in the same configuration as the baseline and during-dredging oyster deployments. If TBT concentrations within post-dredging sentinel oysters meet the baseline levels, post-dredging sentinel oyster monitoring will cease. If TBT concentrations within post-dredging sentinel oysters are above baseline levels, contingency measures as outlined in Section 5 will be implemented.

### 3.5 Review and reporting

BMT Oceanica will review all dredge logs and environmental data on an as needed basis (weekly as a minimum) during the campaign to assess the potential environmental or socio-economic impacts resulting from the campaign. Contingency measures outlined in Section 5 will be implemented if it is evident that the campaign may cause or may have caused an environmental or socio-economic impact. BMT Oceanica/BMT JFA/the Leaseholder will report any significant environmental incidents/exceedances upon notification from the Contractor to the DER, OEPA and SoA, as appropriate.

BMT Oceanica will complete weekly environmental monitoring checklists for inclusion in the BMT JFA progress report to the Principal. BMT Oceanica will also compile, analyse and interpret all environmental monitoring data in the close-out report upon completion of the campaign. In accordance with the DEIA (BMT Oceanica 2014b), BMT Oceanica will report the results of the monitoring program to the OEPA and DER on completion of each stage of the dredging campaign and the results of all environmental monitoring data shall be made publicly available on the Principal's website.

The Leaseholder will compile all public complaints and issues into a complaints register. The Leaseholder will notify the SoA of any public complaints and the response to each complaint as appropriate and this information will be recorded in the campaign close-out report.
### 4. Monitoring and Management Summary

A summary of the environmental monitoring and management Principal commitments to be implemented during the campaign at Beadon Creek is provided in Table 4.1.

**Table 4.1  Environmental monitoring and management Principal commitments for the 2016 Beadon Creek capital dredging campaign**

<table>
<thead>
<tr>
<th>Monitoring</th>
<th>Location</th>
<th>Timing/frequency</th>
<th>Responsibility</th>
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</thead>
<tbody>
<tr>
<td>Remote imagery capture</td>
<td>Dredge vessel and disposal area</td>
<td>Half-hourly ~1 week before, during and ~1 week after dredging</td>
<td>BMT Oceanica</td>
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<tr>
<td>Aerial photography</td>
<td>Beadon Creek</td>
<td>Once during the campaign</td>
<td>BMT JFA</td>
</tr>
<tr>
<td>TBT monitoring</td>
<td>Baseline</td>
<td>Water quality at MEPA and HEPA sites</td>
<td>BMT Oceanica (completed in 2014)</td>
</tr>
<tr>
<td></td>
<td>During-dredging</td>
<td>Supernatant water</td>
<td>Sampling: Contractor on behalf of Principal Management Analysis: BMT Oceanica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discharge plume</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HEPA sites</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oyster monitoring</td>
<td>MEPA and HEPA sites</td>
<td>BMT Oceanica</td>
</tr>
<tr>
<td></td>
<td>Post-dredging</td>
<td>Water quality monitoring</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEPA and HEPA sites</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After dredging: fortnightly until creek water TBT concentrations fall below relevant guideline levels</td>
<td>BMT Oceanica</td>
</tr>
<tr>
<td>Management</td>
<td>Location</td>
<td>Timing/frequency</td>
<td>Responsibility</td>
</tr>
<tr>
<td>Review of dredge logs and environmental monitoring data</td>
<td>Work site</td>
<td>As required and minimum weekly during the campaign</td>
<td>BMT Oceanica</td>
</tr>
<tr>
<td>Environmental reporting</td>
<td>To DER, OEPA, SoA</td>
<td>During campaign, after any significant environmental incident/ exceedance, and at the end of the campaign, as appropriate</td>
<td>Contactor to BMT JFA</td>
</tr>
</tbody>
</table>
5. Contingency Measures

A number of contingency measures will be implemented in the event of any environmental or socio-economic issues or incidents during the campaign (Table 5.1). The Contractor will notify the Principal immediately of any such environmental incidents. The cause for the incident will be identified and, where possible, rectified immediately under the direction of Principal. If necessary, the campaign will cease until the required contingency measures can be implemented. The DER, OEPA and SoA will be notified of any environmental incidents as appropriate (Table 5.1). It should be noted that the contingency measures outlined in Table 5.1 relate only to the Principal commitments described in the Sections above.

Table 5.1 Contingency measures for the 2016 Beadon Creek capital dredging campaign principal commitments

<table>
<thead>
<tr>
<th>Incident</th>
<th>Contingency measures</th>
</tr>
</thead>
</table>
| Turbidity monitoring indicates continuous and excessive turbidity adjacent to the dredging and reclamation area | • The Contractor/BMT Oceanica will notify the Principal as soon as practical  
• Dredging strategy will be revised in consultation with the OEPA and/or DER  
• If necessary, the Leaseholder will notify SoA |
| Water quality monitoring of supernatant water (not including TBT containment site) indicates exceedances of 90% Species Protection Level (ANZECC & ARMCANZ 2000) for TBT | • Resume/continue daily monitoring at:  
• – supernatant water sites  
• – discharge plume sites  
• – HEPA sites  
• until TBT levels meet the relevant guideline for each site |
| Water quality monitoring in the discharge plume indicates exceedances of 90% Species Protection Level (ANZECC & ARMCANZ 2000) for TBT | • Resume/continue daily monitoring at:  
• – discharge plume sites  
• – HEPA sites  
• until TBT levels meet the relevant guideline for each site |
| Water quality monitoring at HEPA sites indicates exceedances of 99% Species Protection Level (ANZECC & ARMCANZ 2000) for TBT | • Dredging to cease immediately  
• Principal to notify OEPA and DER  
• Resume/continue daily TBT monitoring of supernatant water and at HEPA sites and commence daily monitoring at MEPA sites (Figure 3.1; in absence of discharge plume due to cessation of dredging) until TBT levels meet the relevant guideline for each site  
• If MEPA sites indicate further exceedances:  
• – dredging to recommence only if no overflow can be assured  
• If HEPA sites indicate further exceedances:  
• – dredging to recommence only if no overflow can be assured  
• – post-dredging monitoring will be triggered (Section 3.4.3)  
• – the requirement for on-going post-dredging monitoring will be reviewed by Principal 3 months post-dredging, in consultation with the OEPA |
| During dredging oyster flesh analysis indicates an exceedance of TBT concentrations relative to baseline concentrations | • Principal to notify OEPA and DER  
• If dredging is ongoing, the dredging methods will be reviewed and actions may be taken to minimise or stop overflow, in consultation with the OEPA and DER  
• Post-dredging monitoring will be triggered (Section 3.4.3)  
• The requirement for on-going post-dredging monitoring will be reviewed by Principal 3 months post-dredging, in consultation with the OEPA |
| Post-dredging water quality monitoring indicates TBT exceedances in the creek waters | • Water quality monitoring to continue fortnightly (Section 3.4.3)  
• The requirement for on-going post-dredging monitoring will be reviewed by Principal 3 months post-dredging, in consultation with the OEPA |
<table>
<thead>
<tr>
<th>Incident</th>
<th>Contingency measures</th>
</tr>
</thead>
</table>
| Post-dredging oyster flesh analysis indicates an exceedance of TBT concentrations relative to baseline concentrations | • Sentinel oysters to be deployed for another six-week period  
• The requirement for on-going post-dredging monitoring will be reviewed by Principal 3 months post-dredging, in consultation with the OEPA |
| Public complaints are received (e.g. regarding turbidity, noise, or wind-blown material) or high level of community concern with the capital dredging campaign | • Leaseholder to notify Principal  
• Leaseholder to assess complaints, formulate response, and implement any required actions  
• Leaseholder to notify SoA as appropriate |

Note:
1. TBT = Tributyltin, MEPA = Moderate Ecological Protection Area (see Figure 3.1), HEPA = High Ecological Protection Area (see Figure 3.1), Contractor = Maritime Constructions, Principal = Department of Transport, SoA = Shire of Ashburton, DER = Department of Environment Regulation, OEPA = Office of the Environmental Protection Authority.
6. References


BMT Oceanica (2014b) Summary of the Beadon Creek Capital Dredging Baseline Environmental Monitoring – Memorandum. Prepared for the Department of Transport and the Office of the Environmental Protection Authority, Perth, Western Australia, August 2014


BMT Oceanica (2016b) Memorandum – Proposed environmental monitoring and management during the 2016/2017 capital dredging at Beadon Creek. Prepared for the Department of Transport and BMT JFA Consultants Pty Ltd by BMT Oceanica Pty Ltd, Perth, Western Australia, November 2016


Appendix A

Onslow Marine Support Base Pty Ltd Socio-economic Management Commitments
During the Onslow Maritime Facility capital dredging works, the Leaseholder (Onslow Marine Support Base Pty Ltd [OMSB]) is required to implement socio-economic management and actions outlined in the approved Dredging Environmental Impact Assessment (DEIA; BMT Oceanica & BMT JFA 2014) (further detailed in this memorandum). The Department of Transport (DoT) is the Principal and Maritime Construction Pty Ltd is the Contractor for these works.

1. Stakeholder Consultation

The Leaseholder will consult with non-regulatory stakeholders. Details of this consultation shall be provided to the Principal as it is completed before and during the dredging campaign.

The Leaseholder will consult with local government, business owners and residents regarding the dredging to help manage any public concerns relating to the campaign. Stakeholders will be notified of the commencement of the campaign and consulted throughout as required. Stakeholders that will be consulted include:

- Shire of Ashburton (SoA)
- Representatives of the Buurabalayji Thalanyji Aboriginal Corporation
- Jetwave Marine Services Pty Ltd
- Discovery Parks, Onslow

Consultation with the SoA will include the provision of and obtaining approval for the noise management plan for the dredging works (Section 8.4 of the Environmental Management Plan; Maritime Constructions 2016).

The Leaseholder will maintain a public complaints register. Upon receipt of complaints, the Leaseholder shall notify the Principal immediately. The Leaseholder shall then assess the complaint, formulate a response and implement any required actions as appropriate. If appropriate, the SoA shall be notified of the complaint and associated response. The Principal shall also notify the Department of Parks and Wildlife, the Department of Environment Regulation and/or the Office of the Environmental Protection Authority, if appropriate. Modifications to the dredging and/or construction methods may be made, as appropriate, in consultation with the Contractor.

2. Heritage

The Principal has undertaken Aboriginal ethnographic and archaeological surveys of the Beadon Creek project area. In accordance with recommendations from the surveys, the Leaseholder is required to undertake the following commitments on the behalf of the Principal:
endeavour to minimise ground disturbance within the Beadon Creek Maritime Facility survey area

liaise with Buurabalayji Thalanyji Aboriginal Corporation (BTAC) to engage at least two elders from the native title holding group to visit the proposed development site prior to dredging commencing, and to communicate in language with the Warnamankura, in order to ensure that the serpent is given forewarning of the impending activity and that proper respect is shown to the Warnamankura

engage representatives of the BTAC to monitor any ground disturbing works for sub-surface archaeological material within Beadon Creek Maritime Facility survey area

continue to consult with BTAC about the proposed development, particularly if there are any changes to the plans which may result in impacts to places of importance and special significance in Beadon Creek.

3. References

