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Office of the Environmental Monitor

Report for Channel Deepening Independent Audit

Activity No.1 Audit No.3

Audit of Channel Deepening Project EMP Project Delivery Standards

October 2009

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Executive Summary

The Channel Deepening Project is being implemented by the Port of Melbourne Corporation (PoMC). Its aim is to deepen shipping channels in Port Phillip Bay and the lower reaches of the Yarra River by dredging to enable ships up to 14 m draught to access the Port of Melbourne.

Victorian and Commonwealth Government environmental approvals for the Project set conditions that the PoMC must adhere to. These include arrangements set out in an Environmental Management Plan (EMP). The EMP sets out 58 "Project Delivery Standards", which are rules about where, when and how the Project must be delivered.

The Office of the Environmental Monitor (Office) has appointed Peter Nadebaum of GHD Pty Ltd (the Auditor) to undertake a series of independent audits of the implementation of the Environmental Management Plan for the Channel Deepening Project (CDP). The audits are to meet the requirements of the Office and the Commonwealth for the audit of the Port of Melbourne's annual report on performance.

This report outlines the findings of one of these audits, comprising *an independent audit of the implementation of the EMP and compliance with each of the 58 Project Delivery Standards (PDSs)*. The audit is the third such audit, and covers the period from 1 October 2008 to 1 May 2009.

The Project Delivery Standards

PDSs have been identified for the CDP to address key environmental risks, effects and legal requirements. The PDSs are a collation of the management and mitigation measures, environmental performance monitoring and contingency plans for the project. The CDP PDSs are:

- » Construction management (all activities);
- » Marine-based works (all areas);
- » Land-based works;
- » Dredging and plume;
- » Dredging schedule;
- » Dredged material management;
- » Entrance dredging;
- » Hydrohammer use and marine-based pile driving.

It should be noted that the EMP formally defines 8 PDSs, listed above. Within those 8 standards are 58 environmental rules. However, the general convention through the delivery of the CDP has been to refer to the environmental rules individually as PDSs. This convention is continued in these audits and any reference to the 58 PDSs will by definition include the 58 environmental rules.

Methodology for the Audit

The audit methodology was consistent with ISO 19011 and was implemented to meet the specific requirements of the Office and the Commonwealth.

The audit adopted a graded assessment of compliance, involving Full Compliance, "Critical", "Major" and "Minor" Non-Compliance, Not Applicable and Undetermined.

The audit team included Peter Nadebaum of GHD Pty Ltd (GHD) as the lead auditor, and he was supported by a team of specialist staff from GHD.

Findings

The audit found that PoMC has a well developed system for documenting information relating to the CDP that is relevant to confirming compliance with the EMP and the PDSs.

With respect to meeting the requirements of each of the 58 PDSs, the audit found that:

- » There were 37 PDSs for which the audit concluded full compliance was achieved;
- » There were no major or critical non-compliances;
- » There was one PDS with a partial minor non-compliance, where the audit concluded that the nature of the non-compliance was minor and not likely to give rise to a serious environmental effect;
- » There were 20 PDSs that were not applicable (typically this was because the requirement pertained to a future activity not current in the audit period or to an item that has been fully assessed in a previous audit and is no longer current); and
- » There were no PDSs for which there was insufficient information available at the time of the audit to reach a conclusion regarding compliance.

Overall, the audit concluded that there was a high level of compliance with the requirements, and the non-compliance identified was of a minor nature and was not likely to give rise to a serious adverse environmental effect.

The issue that led to a grading of minor non-compliance related to PDS 24:

- » PDS 24 requires all dredging activities to take place within the construction zone. A review of the Alliance Environmental Incident Report on 21 May 2009, including associated screenshots of draghead tracking and bathymetric survey, indicated that on 19 April 2009 the Queen of the Netherlands, while dredging in South Channel East, dredged outside the construction zone. Both dragheads were not lifted when leaving the dredging zone boundary, with two draghead tracks extending 25 m beyond the construction zone, equating to 1.5 minutes of dredging time.

The Alliance Environmental Incident Report identifies that corrective action was undertaken. This followed PoMC's detection and validation of the non-compliance by bathymetric survey. Steps outlined in EMP Table 6 "Notification and Reporting Requirements" were followed as indicated in email correspondence on 8 May 2009. The Alliance Environmental Incident Report identifies the cause of the partial non-compliance was human error caused by miscommunication between vessel

crew members and identifies remedies to be implemented to prevent a future occurrence. Corrective actions identified in the Alliance Environmental Incident Report have been executed and the incident has been closed-out.

There were some PDS requirements that have not yet fallen due and were not assessed. These requirements include:

- » PDS 5 Energy and greenhouse gases;
- » PDS 23 Sands and adjacent coast and beaches monitoring (to be assessed after the completion of dredging);
- » PDS 34 Dredging material placement (related to the extension bund);
- » PDS 35 PoM DMG – bund (related to the extension bund);
- » PDS 36 PoM DMG – containment of contaminated material (related to the extension bund);
- » PDS 38 PoM DMG maintenance and inspection (to be completed post construction);
- » PDS 39 SE DMG (South Channel requirements).

It can be expected that these will be assessed in subsequent audits, including future independent audits of the implementation of the EMP and compliance with each of the 58 Project Delivery Standards (PDSs). These audits will provide a further check on compliance.

A number of requirements have been assessed in detail during previous audits and found to be fully compliant. Where these requirements do not involve further actions after the previous audit, the requirements have been considered to have been met and have not been reassessed in this audit. These PDSs include:

- » PDS 37 PoM DMG – capping (related to the main bund);
- » PDS 40 Draghead design;
- » PDS 41 Dredging in the Entrance;
- » PDS 42 Clean up in the Entrance;
- » PDS 43 North-west side of Nepean Bank
- » PDS 44 Fish modelling;
- » PDS 45 Pre-construction plateau inspection; and
- » PDS 46 Construction plateau inspection.

No recommendations¹ were made relating to items of non-compliance.

No opportunities for improvement were noted.

¹ In the context of this report, “recommendations” refer to recommendations made by the auditor that relate to items of non-compliance and are intended to assist in avoiding future non-compliance. As such, it might be expected that recommendations will be carried out prior to the next audit.

1. Introduction

The Office of the Environmental Monitor (Office) has appointed Dr Peter Nadebaum of GHD Pty Ltd (the Auditor) to undertake a series of independent audits of the implementation of the Environmental Management Plan for the Channel Deepening Project (Project).

This report outlines the findings of one of these audits:

Activity 1: an independent audit of the implementation of the EMP and compliance with each of the 58 Project Delivery Standards (PDSs).

The audit is the third such Activity 1 audit, and covers the period from 1 October 2008 to 1 May 2009.

1.1 Background

The Office was established by the Victorian Government in December 2007 as a requirement for the CDP.

The Office's objectives are to:

- » Be accessible to all stakeholders and the community;
- » Scrutinise, report and advise on the Project's environmental performance in an independent and transparent way; and
- » Communicate all available information on the Project's environmental performance in a meaningful and timely way to stakeholders and the community.

The Channel Deepening Project (CDP) is being implemented by the Port of Melbourne Corporation (PoMC). Its aim is to deepen shipping channels in Port Phillip Bay and the lower reaches of the Yarra River by dredging to enable ships up to 14 m draught to access the Port of Melbourne. Dredging operations commenced in February 2008. The operational stage of the project, which includes dredging and ancillary works, is scheduled for completion in late 2009. Some of the monitoring programs will continue for a further two years.

Victorian and Commonwealth Government environmental approvals for the Project set conditions that the PoMC must adhere to, including arrangements set out in an Environmental Management Plan (EMP), approved ancillary documents covering Turbidity, Underwater Noise and Airborne Noise detailed designs, approved EMP Work Method Statements, and EMP and Environment Protection and Biodiversity Conservation (EPBC) Act approval requirements for independent and external audits. The principal environmental approvals are approvals under Victoria's Coastal Management Act and the Commonwealth's EPBC Act.

The EMP sets out 58 "Project Delivery Standards", which are rules about where, when and how the Project must be delivered. It established four monitoring mechanisms to inform compliance and performance against these standards. It also sets out quarterly, annual and other reporting obligations for the four-year period 2008 to 2012.

This audit is one of a series of independent audits of the implementation of the Environmental Management Plan, and covers activities over the period from 1 October 2008 to 1 May 2009.

1.2 Scope of the Independent audits - Overview

The independent audits form an element of the Project's governance, in terms of environmental assurance mechanisms and provide an independent and transparent assessment for use by the Office. The audit reports will also form part of the public documentation on PoMC's compliance with the EMP and the environmental performance of the Project. Should the need for an investigation emerge from an audit, the Office will consider the audit findings and determine the need, scope and means by which such an investigation would be conducted.

The purposes of the independent audits are:

- » To undertake an audit(s) that meets the provision for the external audit contained in the EMP and which:
 - independently assesses the implementation of the EMP.
 - independently gathers such information necessary to verify the veracity of information arising from the monitoring program commissioned by PoMC – this may include field verification, sampling and measurement.
- » To advise the Office of any non-conformances with the EMP; and
- » To provide regular reports to the Office.

The audit program is divided into two stages, with audit activities as follows:

1.2.1 Stage 1: Operational Stage – early 2008 to early 2010

Activity 1:

Undertake four (4) independent audits to assess the implementation of the EMP and compliance with each of the 58 Project Delivery Standards (PDSs). It is anticipated that such audits will occur twice annually, with a final audit occurring at completion of the operational stage of the project.

Timing of the audits is to be as follows:

- » 1st audit to commence immediately on signing of the contract.
- » 2nd audit to be completed by 31 January 2009 (this is to comply with Commonwealth reporting requirements), and will focus on an audit of the PoMC annual report.
- » 3rd audit to commence around April/May 2009, but could be subject to change. Timing of this audit to occur within three (3) weeks of the commencement in 2009 of dredging in the South Channel and Port Melbourne Channel.
- » 4th audit to commence in late 2009 or early in 2010 based on completion of operational stage of the project. This audit will include auditing of the 58 PDSs and the PoMC annual report.

Activity 2:

Undertake focussed audits of selected EMP requirements to target significant Project features or processes. Timing of these audits is independent of the audits undertaken in Activity 1, but their results should feed into the analysis and assessment of compliance done for Activity 1 audits.

These audits are to include a detailed analysis of those Project Delivery Standards and monitoring programs relevant to:

1. The Entrance:
 - » The width and depth of dredging
 - » Work methods to reduce rock spill
2. The management of contaminated sediment:
 - » Bund and stub wall construction
 - » Methods to remove and place contaminated sediment
 - » Placement of sand capping
3. South Channel:
 - » Mechanisms to protect seagrass
4. Mechanisms to monitor environmental performance:
 - » Environmental monitoring
 - » Process monitoring and inspections
 - » Management performance monitoring
 - » Bay wide monitoring

It is recognised that work done in the audits for Activity 2 may overlap audits undertaken in Activity 1.

This audit is the third Activity 1 audit of the EMP.

1.2.2 Stage 2: Post Operational Phase – early 2010 to early 2012

A series of independent audits are to be taken in the post operational phase. These are a separately commissioned activity, and will be reported on separately from this series of audits.

1.3 Deliverables

As part of the project the auditor is required to provide:

- » Immediate reports (within 24 h) of any non-conformances that may be identified by the audit;
- » Reports of independent audits of the implementation of the EMP and the 58 Project Delivery Standards;

- » Report on the audit of PoMC's annual report against EMP requirements and Commonwealth project approval conditions; and
- » Reports of focussed audits on selected EMP requirements.

1.4 Reference Documents

In addition to Victorian and Commonwealth approvals, the key reference documents for the project are:

- » **Environmental Management Plan**
<http://www.channelproject.com/environment/management.asp>
- » **EMP Dredging Schedule**
http://www.channelproject.com/schedulelocation/dredging_schedule.asp
- » **Approved ancillary documents covering Turbidity, Underwater Noise and Airborne Noise detailed designs**
http://www.channelproject.com/global/docs/EMON_080205_Turbidity.pdf
http://www.channelproject.com/global/docs/EMON_080205_Monitoring_Underwater_Noise.pdf
http://www.channelproject.com/global/docs/EMON_080205_Monitoring_Airborne_Noise.pdf
- » **Approved EMP Work Method Statements**
http://www.channelproject.com/global/docs/WMS_080205_Material_Placement_P_MDMG.pdf
http://www.channelproject.com/global/docs/WMS_080205_Method_Statement_EM_P_Contaminated.pdf
http://www.channelproject.com/global/docs/WMS_080205_Method_Statement_EM_P_Entrance.pdf

Note that these documents are subject to periodic review and revisions may be issued during the course of the project.

2. The Channel Deepening Project

2.1 Project description

2.1.1 Overview

The Channel Deepening Project (CDP) includes:

- » Capital dredging works associated with the channels, swing basins and berth pockets;
- » Management of dredged material; and
- » Modifications to existing infrastructure, including the protection of services, berth upgrades and upgrading and installation of new navigation aids.

The dredging and associated works are expected to take between 18 months to two years to complete.

The CDP components are as follows.

2.1.2 Capital dredging works

The dredging works will be undertaken largely within the existing channels in the north and south of the bay. The exceptions are the turning area at Hovell Pile, which will be enlarged to accommodate larger vessels and the entrances to the Port Melbourne and Great Ship Channels. The middle of the bay (north of Hovell Pile to south of Fawkner Beacon) is naturally deeper and does not require dredging.

2.1.3 Management of dredged material

Dredged material is to be placed within the Port of Melbourne dredged material ground (PoM DMG) located near the middle of the bay, both within the existing area and in a southern extension to it, as well as in a new DMG in the south east of the bay.

All of the dredged material sourced from the Port Melbourne, Williamstown and Yarra River Channels and associated berth pockets will be placed in the PoM DMG. The PoM DMG will be extended to the south to provide capacity for material from future maintenance dredging. Part of the PoM DMG will be bunded and capped with uncontaminated sediments to contain contaminated sediments from the Yarra River and Williamstown and Port Melbourne Channels and berth pockets.

Most of the material dredged from the south of the bay is to be stored in the new south east DMG (SE DMG). Sand dredged from the south of the bay will be used as capping material for the PoM DMG.

2.1.4 Berth works

As a consequence of deepening the shipping channels, a program of structural upgrades to berths is planned at Appleton Dock, Swanson Dock (East and West), Holden Dock and Gellibrand Pier to stabilise the docks beside the deepened channels.

This will ensure the berths will accommodate larger vessels and the lowered riverbed. The swing basins at Swanson Dock and Gellibrand Pier are being enlarged to accommodate turning movements of larger vessels.

2.1.5 Services

Several utility services crossing the Yarra River and Port Phillip Bay are to be protected from shipping movements. The following services are being protected in their current location:

- » The Melbourne Water Hobsons Bay Main Sewer, the Westernport-Altona-Geelong (WAG) oil pipeline, and the GasNet high pressure gas pipeline which all cross the Yarra River downstream of the West Gate Bridge; and
- » The Esso ethane pipeline that crosses Port Phillip Bay south of Fawkner Beacon.

The Telstra telecommunications cables and the CitiPower electrical power cables that currently cross the Yarra River downstream of the West Gate Bridge are being decommissioned and the services rerouted by the respective utility service providers.

2.1.6 Navigation Aids

To ensure ongoing safe navigation of vessels in the deepened shipping channels, some existing navigation aids are being upgraded or replaced and in some locations new navigation aids are being installed. The navigation aids include:

- » New marine-based piled structures for lateral and lead lights adjacent to the northern channels and South Channel; and
- » New land-based lead lights and sector lights at Queenscliff, Port Melbourne and alongside docks within the port.

2.2 Environmental Management

A comprehensive program determines PoMC's management of the environmental aspects of the project. Important elements of this include:

- » An Environmental Policy;
- » An Environmental Management System (EMS), consistent with the requirements of *ISO 14001:2004 Environmental management systems – Requirements with guidance for use* developed for the CDP. The EMS consists of the policies, plans, procedures and activities that together form a systematic method of managing the environmental aspects of the project;
- » An Environmental Management Plan (EMP). The EMP is a key component of the EMS and describes the main elements of the EMS and provides direction to detailed procedures and inter-relationships between different processes. The EMP is the focus of this audit.

2.3 The Environmental Management Plan

2.3.1 Scope

The EMP details the environmental management requirements to be followed for the CDP. The EMP includes:

- » Arrangements to integrate the EMP with PoMC's environmental policy and EMS;
- » The requirements for environmental management during the planning, implementation, evaluation and review of CDP construction activities;
- » The responsibilities for implementing the EMP;
- » The Project Delivery Standards (PDS) including environmental controls and limits to ensure that project objectives and targets are achieved;
- » An overview of the environmental monitoring programs and contingency plans and associated management action;
- » Post construction requirements including monitoring and inspections; and
- » The transition arrangements from construction phase to operations.

The EMP generally applies to the works described in Section 2.1 and environmental monitoring programs. PoMC has overall responsibility for the implementation of the CDP in accordance with the requirements of the EMP.

This audit was conducted against the approved EMP. For the period covered by this audit to 1 May 2009, the approved EMPs were as follows:

- » 2 September 2008 EMP (CDP_IMS_PL_004 Revision 4)
- » 3 November 2009 EMP (CDP_IMS_PL_004 Revision 5)
- » 23 January 2009 EMP (CDP_IMS_PL_004 Revision 6)

2.4 Project Delivery Standards

PDSs have been identified for the CDP to address key environmental risks, effects and legal requirements. The PDSs are a collation of the management and mitigation measures, environmental performance monitoring and contingency plans for the project. The CDP PDSs are:

- » Construction management (all activities);
- » Marine-based works (all areas);
- » Land-based works;
- » Dredging and plume;
- » Dredging schedule;
- » Dredged material management;
- » Entrance dredging;
- » Hydrohammer use and marine-based pile driving.

PDSs generally include the following:

- » An objective – the performance goal;
- » A target – performance level at which the objective is demonstrated as being achieved;
- » Application – the project activities and project areas to which the PDS applies (refer to drawing CDP-Env-50228 in Annexure 7 of the EMP for the location of the project areas);
- » Environmental controls – management and mitigation measures required to support achievement of the objective during the implementation of the project. These include process controls and associated monitoring;
- » Environmental limits – numerical performance standards, which the project must comply with;
- » Reference to environmental monitoring programs – the environmental monitoring programs applicable to the PDS; and
- » Reference to contingencies – the relevant contingency plans containing management actions, which may be taken in the event of potential exceedence of the environmental limit or response level.

It should be noted that the EMP formally defines 8 PDSs, listed above. Within those 8 standards are 58 environmental rules. However, the general convention through the delivery of the CDP has been to refer to the environmental rules individually as PDSs. This convention is continued in these audits and any reference to the 58 PDSs will by definition include the 58 environmental rules.

3. Audit Methodology

3.1 Standards

This audit was undertaken adopting a methodology consistent with ISO 19011 to meet the specific requirements of the Office of the Environmental Monitor (the Office) for the audit of PoMC's implementation of the EMP.

ISO 19011 "*Guidelines for Environmental Auditing*" provides a systematic approach to defining the requirements of the audit, planning, interpreting the elements of the EMP, collecting audit evidence, objectively assessing the evidence, and reporting in a clear and accurate manner. It also ensures that the audit has been conducted in accordance with an established and recognised audit methodology.

3.2 Audit Preparation

3.2.1 Overview

The audit methodology used in the preparation of this audit is presented schematically in Figure 1. Brief descriptions of key activities are described in greater detail below.

Prior to the audit the Office had identified those elements that it considered were particularly significant, and specified these in the tender brief as requiring focused audits, these are the subject of what are described as Activity 2 audits. This audit report is pertinent to the audit of the requirements of the EMP as set by the 58 PDSs.

3.2.2 Audit Plan and Scope

The requirements of the audit were outlined in a brief that the Office issued for this work (<http://www.oem.vic.gov.au/Independentaudits>), and a draft audit plan and a preliminary methodology for the audit were outlined in the tender submission. To ensure that the audit requirements and the brief were addressed, the scope of the audit was confirmed with the Office and the audit plan and methodology was further refined in subsequent meetings with the Office, Victorian regulators and the Commonwealth.

The audit plan extended to the series of audits that are required under this commission; the methodology outlined in this report is common to all of the audits, but the details of meetings and interviews outlined in the following sections of this report is pertinent to the audit of the requirements of the EMP and the PDSs.

This audit was the third audit of the implementation of the EMP. The scope of this audit was to assess the implementation of the EMP based on the information available from 1 October 2008 to 1 May 2009, and to assess compliance with each of the 58 Project Delivery Standards (PDSs). Items that have been fully assessed in previous audits and which contain no further actions are considered to have been completed and have not been reassessed as part of this audit.

The audit was focused on aspects of the EMP that relate to environmental management and protection of the environment; this audit did not seek to review and confirm compliance with aspects of the PDSs that relate to other aspects such as on-ship or on-shore occupational health and safety, or structural or geotechnical considerations.

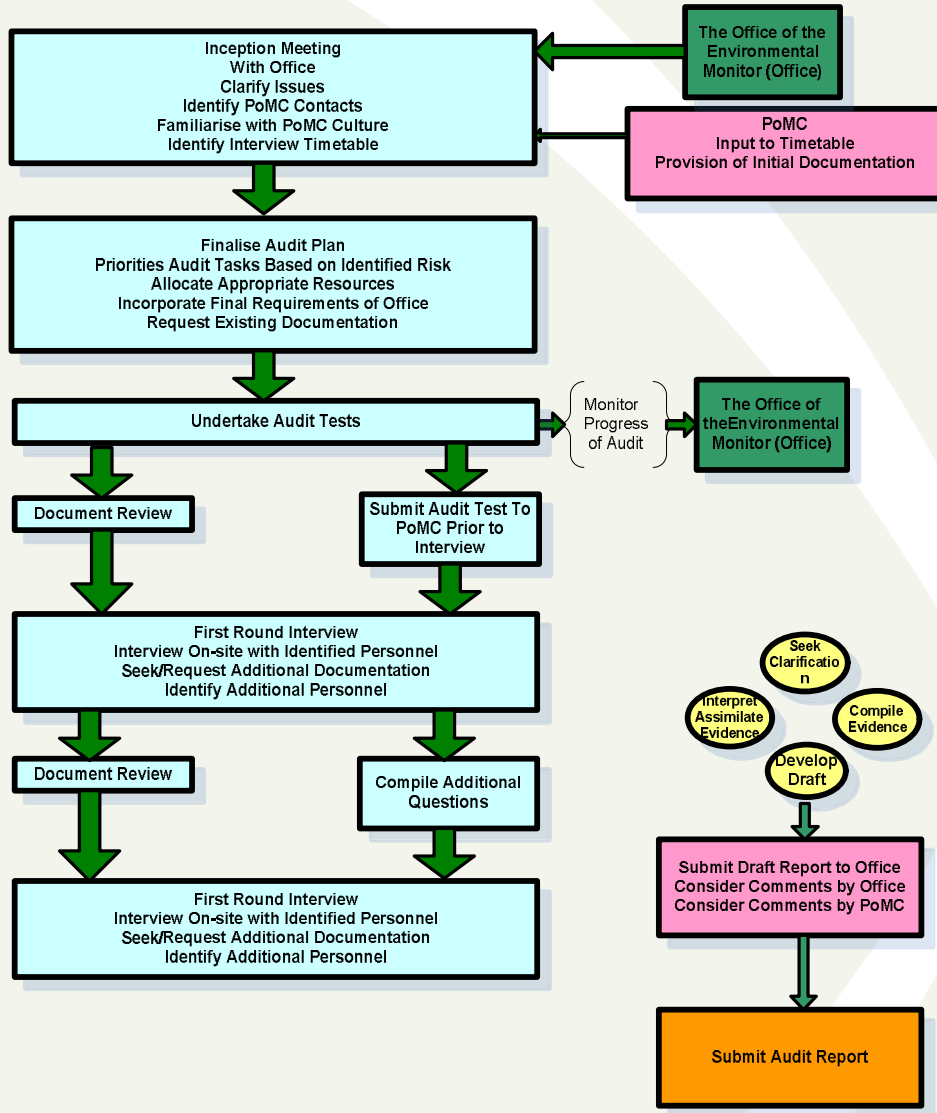
In assessing compliance of CDP activities and procedures with requirements of the EMP and the PDSs, check sheets were prepared by GHD and used to assist in identifying and obtaining evidence relevant to assessing compliance. The audit team met with PoMC nominated environmental representatives and sought relevant evidence; if requested evidence was deemed by PoMC to be not available or not relevant to the audit at that stage, the auditor sought evidence from PoMC to support that claim.

In general the audit comprised a desk review of documentation provided by PoMC and other information available from the Office, Victorian regulators, the Commonwealth and media reports. This review was supported by an inspection by the audit team of the main dredge vessels and berths.

3.3 Independence

In conducting the audit the independence requirements outlined in the Auditor's Declaration of Independence were complied with.

Figure 1 : Summary of Audit Methodology



3.4 Inception Meetings

As part of the preparation of the audit plan, the requirements of the brief were reviewed and discussed in a meeting with the Office, Victorian regulators and the Commonwealth on 9 September 2008.

Later the same day a meeting was also held with the Office and PoMC to ascertain the form of the information held by PoMC. A comprehensive listing of all elements of the EMP, audit questions and a preliminary set of requirements for evidence were prepared and submitted to the Office and PoMC.

A primary objective of these meetings was for the auditor and audit team to develop working relationships, mutual understandings and expectations with the Office and PoMC relating to the requirements and process of the audit and to provide an opportunity for the PoMC to present an overview of the dredging works, the organisational background, overview of compliance, and to arrange inductions for inspecting the dredge vessels.

3.5 Audit Tests and Ranking of Compliance

The requirements for determining compliance were discussed with the Office, Victorian regulators and the Commonwealth, and it was agreed that compliance would be graded in terms of full compliance, critical non-compliance, major non-compliance, minor non-compliance, not applicable and undetermined. The definition of these terms is outlined in Table 1. This grading was drawn from the method of grading compliance outlined in guidelines to auditors² under the Victorian Government *Safe Drinking Water Act 2003*.

Table 1 Summary Compliance Grades

Compliance Grade	Description
Full compliance	There is sufficient evidence to confirm that actions have been undertaken, prepared and/or implemented in full compliance with the requirements of the auditable element.
Critical non-compliance	The evidence shows that actions are not in full compliance with the requirements of the auditable element and this gives rise to a serious or imminent risk to the environment.
Major non-compliance	The evidence shows that actions are not in full compliance with the requirements of the auditable element and this gives rise to a high potential that the environment will be seriously affected if the non-compliance is not rectified.
Minor non-compliance	The evidence shows that actions are not in full compliance with the requirements of the auditable element but it is unlikely that this will cause the environment to be seriously affected.

² Victorian Government Department of Human Services, Water Regulatory Audit Guidance Note November 2007

Compliance Grade	Description
Not applicable	The auditable element falls outside the scope of the audit, eg work relevant to the project delivery standard has not yet commenced.
Undetermined	There is insufficient evidence to make a judgement on compliance.

Audit tests were developed for all requirements within the scope of the audit. These tests were designed to establish compliance with each element of the EMP. Evidence was sought from PoMC to establish whether the element has been complied with.

In order to maximise the efficiency with which the audit was carried out and to ensure the audit effort was directed to the most important issues, an assessment of the risk to the environment associated with each element of the EMP was determined and used to target issues and the level of effort put into each element.

3.6 Inspection of sites and vessels

PoMC provided an induction to the auditor and his team on 23 September 2008. The auditor and his team held a land-based inspection of the berths and the dredging vessels, The Queen of the Netherlands and the Cornelius Zanen on 25 and 26 September 2008.

The auditor's assistant also attended the piston coring investigation on the Alert on 4 and 5 June 2009.

3.7 Report on findings

The findings of the audit are presented in Section 4 of this report. The findings of the report are presented in tabular form for each of the 58 PDSs as they are listed in the EMP. The listing and findings are not presented in a "prioritised order" or "order of significance".

4. Audit Findings

4.1 Summary of Findings

The audit found that PoMC has a well developed system for documenting information relating to the CDP that is relevant to confirming compliance with the EMP and the PDSs.

With respect to meeting the requirements of each of the 58 PDSs, the audit found that:

- » There were 37 PDSs for which the audit concluded full compliance was achieved;
- » There were no major or critical non-compliances;
- » There was one PDS with a partial minor non-compliance, where the audit concluded that the nature of the non-compliance was minor and not likely to give rise to a serious environmental effect;
- » There were 20 PDSs that were not applicable (typically this was because the requirement pertained to a future activity not current in the audit period or to an item that has been fully assessed in a previous audit and closed out); and
- » There were no PDSs for which there was insufficient information available at the time of the audit to reach a conclusion regarding compliance.

Overall, the audit concluded that there was a high level of compliance with the requirements, and the non-compliance identified was of a minor nature and was not likely to give rise to a serious adverse environmental effect.

The issue that led to a grading of minor non-compliance related to PDS 24:

- » PDS 24 requires all dredging activities to take place within the construction zone. A review of the Alliance Environmental Incident Report on 21 May 2009, including associated screenshots of draghead tracking and bathymetric survey, indicated that on 19 April 2009 the Queen of the Netherlands, while dredging in South Channel East, dredged outside the construction zone. Both dragheads were not lifted when leaving the dredging zone boundary, with two draghead tracks extending 25 m beyond the construction zone, equating to 1.5 minutes of dredging time.

The Alliance Environmental Incident Report identifies that corrective action was undertaken. This followed PoMC's detection and validation of the non-compliance by bathymetric survey. Steps outlined in EMP Table 6 "Notification and Reporting Requirements" were followed as indicated in email correspondence on 8 May 2009. The Alliance Environmental Incident Report identifies the cause of the partial non-compliance was human error caused by miscommunication between vessel crew members and identifies remedies to be implemented to prevent a future occurrence. Corrective actions identified in the Alliance Environmental Incident Report have been executed and the incident has been closed-out.

There were some PDS requirements that were unable to be assessed because they had not yet fallen due. These requirements include:

- » PDS 5 Energy and greenhouse gases;
- » PDS 23 Sands and adjacent coast and beaches monitoring (to be assessed after the completion of dredging);
- » PDS 34 Dredging material placement (related to the extension bund);
- » PDS 35 PoM DMG – bund (related to the extension bund);
- » PDS 36 PoM DMG – containment of contaminated material (related to the extension bund);
- » PDS 38 PoM DMG maintenance and inspection (to be completed post construction);
- » PDS 39 SE DMG (South Channel requirements).

It can be expected that these requirements will be assessed in subsequent audits, including future independent audits of the implementation of the EMP and compliance with each of the 58 Project Delivery Standards (PDSs). These audits will provide a further check on compliance.

A number of requirements have been assessed in detail during the targeted audits and found to be fully compliant. Where these requirements do not have any further actions post the targeted audit, these requirements are considered closed out and have not been reassessed in this audit. These PDSs include:

- » PDS 37 PoM DMG – capping (related to the main bund);
- » PDS 40 Draghead design;
- » PDS 41 Dredging in the Entrance;
- » PDS 42 Clean up in the Entrance;
- » PDS 43 North-west side of Nepean Bank
- » PDS 44 Fish modelling;
- » PDS 45 Pre-construction plateau inspection; and
- » PDS 46 Construction plateau inspection.

No recommendations³ were made relating to items of non-compliance.

No opportunities for improvement were noted.

4.2 Acknowledgement

The auditor wishes to acknowledge that PoMC responded to the many requests by the audit team for information and evidence, and a large body of information was made available to the audit team for the purposes of the audit.

³ In the context of this report, “recommendations” refer to recommendations made by the auditor that relate to items of non-compliance and are intended to assist in avoiding future non-compliance. As such, it might be expected that recommendations will be carried out prior to the next audit.

4.3 Details of Compliance

Details pertaining to the requirements, evidence and compliance for each of the 58 PDSs are provided in Table 2 to Table 9.

Table 2 PDSs 1 – 8: Construction Management (all activities): Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
1.	<p>Hours of operation</p> <p>All activities may be conducted on a 24 hour, 7 days a week basis, except where explicitly restricted in a PDS, or relevant legislation.</p>	<p>PDS 33 Consideration of seasonal sensitivity and PDS 52 Hours of Operation (Hydrohammer use and marine-based pile driving) contain restrictions on hours of operation. The auditor concludes that compliance has been achieved with the requirements of both of these PDS.</p>	Full compliance	See PDS 33 and 52
2.	<p>Airborne noise</p> <p>All activities must be conducted within SEPP N-1 limits.</p>	<p>PoMC quarterly reports for the audit period state that noise monitoring for dredge vessels and pile driving was generally inaudible over background noise levels at closest residential areas and that airborne noise monitoring undertaken during the reporting period confirmed CDP activities complied with the SEPP N-1 requirements. To further verify compliance a review was undertaken of Bassett noise monitoring reports applicable to the audit period.</p> <p>Two noise complaints were received during the audit period. Quarterly Project Report No.4 states that noise levels measured in response to these complaints were compliant with SEPP N-1. Review of the Bassett noise monitoring reports (2008b and 2008c) supported this.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>PoMC Quarterly Project Reports No. 3, No. 4 and No. 5</p> <p>Bassett (2008a) Holden Oil Dock – Piling Noise, 4 December 2008.</p> <p>Bassett (2008b) 32 South Wharf Piling Operations noise; complaint response, 18 December 2008.</p> <p>Bassett (2008c) 32 South Wharf Piling Operations noise; complaint response, 22/23 December.</p> <p>Bassett (2009a) Noise measurements of 32 South Wharf piling operation (including night works) December 2008. 23 January 2009.</p> <p>Bassett (2009b) Yarra Bank Protection Works – Piling Noise. 12 January 2009.</p> <p>Bassett (2009a-2) Measurement of noise from the piling operations at Gellibrand Pier. 24 February 2009.</p> <p>Bassett (2009b) Prins der Nederlanden – Airborne Noise Monitoring – Portsea 23 February 2009.</p> <p>Bassett (2009c) Queen of the Netherlands – Airborne Noise Monitoring – Queenscliff 18 April 2009.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Noise assessment (desktop) of dredging vessels and major equipment (that are new to the CDP and not included in the existing modelling) to be conducted before acceptance and mobilisation onto project. Where the assessment indicates that the vessel or equipment may not conform to the SEES risk assessment outputs, appropriate action is to be taken as described in Airborne Noise Contingency Plan.</p>	<p>The PoMC Quarterly Report 4 states that a desktop assessment of the potential audibility of piling associated with navigation aid works along Port Melbourne Channel was conducted. This assessment was conducted outside of the audit period. A desktop assessment was also conducted to assess the potential noise impacts of piling operations at 32 South Wharf and recommended that evening and nighttime noise measurements be completed during the first 3 days of piling operations (Bassett 2008d). Bassett 2009a presents the results of noise monitoring, which found that CDP activities were compliant with the SEPP N-1.</p> <p>The PoMC Quarterly Report 5 states that a desktop assessment of potential noise impacts for proposed Sunday operations at Gellibrand Pier was conducted. This assessment found that predicted noise levels would be compliant with the SEPP N-1 for the Williamstown South area. Pre-start desktop noise assessment was also conducted for new vessels to the project, including the Prins der Nederlanden, the Ain d' Schalut and the modified Queen of the Netherlands, and that all three vessels were assessed as compliant with SEPP N-1. Review of the Bassett noise monitoring reports (2009d, 2009e, 2009f and 2009g) supported this conclusion.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>Bassett (2008d) Boskalis – Channel Deepening Project Works – Desktop assessment of the potential noise impacts of daytime, evening and night-time piling operations at 32 South Wharf, 5 December 2009.</p> <p>Bassett (2009a) Noise measurements of 32 South Wharf piling operation (including night works) December 2008. 23 January 2009.</p> <p>Bassett (2009d) Boskalis – Channel Deepening Project Works – Desktop review of the potential noise impacts from the piling operations at Gellibrand Pier, 13 February 2009</p> <p>Bassett (2009e) Boskalis – Channel Deepening Project – Prins der Nederlanden Pre-start desktop airborne noise assessment for new vessel, 4 March 2009.</p> <p>Bassett (2009f) Boskalis – Channel Deepening Project – Ain d' Schalut – Pre start desktop airborne noise assessment for new vessel, 28 April 2009.</p> <p>Bassett (2009g) Boskalis – Channel Deepening Project – Queen of the Netherlands – Pre start desktop airborne noise assessment for new vessel 9 April 2009.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
3.	<p>Airborne noise monitoring</p> <p>Noise monitoring is to be undertaken as described in the Airborne Noise Monitoring Program (Annexure 5).</p> <ul style="list-style-type: none"> » An initial daytime compliance noise check of CDP activities in the Yarra River and Hobson's Bay will be undertaken at the monitoring location(s) nearest to the work activity over the first 3 days of construction activities. 	<p>The PoMC Quarterly Report 4 states that initial daytime compliance noise measurements were completed for piling at Holden Dock on 15 and 17 November 2008, 32 South Wharf on 11, 12, 15 and 16 December 2008, and Yarra Bank Protection on 15, 17 and 18 December 2008. The Quarterly Report 4 indicates that compliance with SEPP N-1 was achieved for all of these measurements. This is supported by the findings of the Bassett noise assessment reports (Bassett 2008a, 2009a and 2009b).</p> <p>The PoMC Quarterly Report 5 states that initial daytime compliance noise measurements were completed for piling at Gellibrand Pier on 16 February 2009, dredging using the Prins der Nederlanden over 18 to 20 February 2009 at McCrae/Dromana/Rye and over 20 to 23 February 2009 at Portsea, and dredging using the Extended Queen of the Netherlands on 18 April 2009 at Queenscliff. The Quarterly Report 5 indicates that compliance with SEPP N-1 was achieved for these measurements. This is supported by the findings of the Bassett noise assessment reports (Bassett 2009a-2, 2009b-2 and 2008c).</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Bassett (2008a) Boskalis – Channel Deepening Project Works – Holden Oil Dock – Piling Noise 4 December 2009. MA0710</p> <p>Bassett (2009a) Boskalis – Channel Deepening Project Works – Noise measurements of 32 South Wharf piling operations (including night works) December 2008. 23 January 2009 MA0710</p> <p>Bassett (2009b) Boskalis – Channel Deepening Project Works – Yarra Bank Protection Works – Piling Noise. 12 January 2009. MA0710</p> <p>Bassett (2009a-2) Measurement of noise from the piling operations at Gellibrand Pier. 24 February 2009.</p> <p>Bassett (2009b-2) Prins der Nederlanden – Airborne Noise Monitoring – Portsea 23 February 2009.</p> <p>Bassett (2009c) Queen of the Netherlands – Airborne Noise Monitoring – Queenscliff 18 April 2009.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>» An evening and/or night-time noise check will be undertaken when equipment identified with the potential to exceed SEPP N-1 limits is to be used in the evening or night.</p>	<p>The PoMC Quarterly Report 4 states that evening compliance noise measurements were completed for piling at Holden Dock on 16 November 2008, and 32 South Wharf on 11, 15 and 16 December 2008. Night-time noise measurements were completed for piling at 32 South Wharf on 11, 15, 16, 18 and 23 December 2008. The Quarterly Report 4 indicates that compliance with SEPP N-1 was achieved for all of these measurements. This is supported by the findings of the Bassett noise assessment reports (Bassett 2008a and 2009a).</p> <p>The PoMC Quarterly Report 5 states that evening compliance noise measurements were completed for piling at Gellibrand Pier on 15 February 2009 and evening and night-time compliance noise measurements were completed for dredging using the Prins der Nederlanden at McCrae/Dromana/Rye over 18 to 20 February 2009 and at Portsea over 20 to 22 February 2009. The Quarterly Report 5 indicates that compliance with SEPP N-1 was achieved for these measurements. This is supported by the findings of the Bassett noise assessment reports (Bassett 2009a-2, 2009b-2 and 2008c).</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Bassett (2008a) Boskalis – Channel Deepening Project Works – Holden Oil Dock – Piling Noise 4 December 2009. MA0710</p> <p>Bassett (2009a) Boskalis – Channel Deepening Project Works – Noise measurements of 32 South Wharf piling operations (including night works) December 2008. 23 January 2009 MA0710</p> <p>Bassett (2009a-2) Measurement of noise from the piling operations at Gellibrand Pier. 24 February 2009.</p> <p>Bassett (2009b-2) Prins der Nederlanden – Airborne Noise Monitoring – Portsea 23 February 2009.</p> <p>Bassett (2009c) Queen of the Netherlands – Airborne Noise Monitoring – Queenscliff 18 April 2009.</p>
	<p>Where monitoring indicates an exceedence, or potential exceedence, of SEPP N-1 limits, appropriate action is to be taken as described in Airborne Noise Contingency Plan.</p>	<p>The Quarterly Report 4 states that all airborne noise monitoring completed during the reporting period (1 November 2008 to 31 January 2009) confirmed CDP activities complied with the SEPP N-1 and that no management actions were required. This is supported by the previously mentioned Bassett noise assessment reports (2008a, 2008b, 2008c, 2008d, 2009a and 2009b).</p> <p>The Quarterly Report 5 states that all airborne noise monitoring completed during the reporting period (1 February 2009 to 30 April 2009) confirmed CDP activities complied with the SEPP N-1 and that no management actions were required. This is supported by the previously mentioned Bassett noise assessment reports (2009a-2), 2009b-2, 2009c, 2009d, 2009e, 2009f, 2009g).</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	As above

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
4.	<p>Waste management</p> <p>All marine vessels to have sewage containment or treatment facilities. Sewage treatment will comply with Section 23G of the <i>Pollution of Waters by Noxious Substances Act 1986</i> (Vic).</p>	<p>Section 23G of the <i>Pollution of Waters by Oil and Noxious Substances Act 1986</i> (Vic) particularly relates to the prohibition of discharge of sewage into State waters.</p> <p>International Sewage Pollution Prevention Certificates for the Cornelis Zanen and the Queen of the Netherlands were provided as evidence for the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) and these certificates still apply to the current audit period.</p> <p>An International Sewage Pollution Certificate for the Prins der Nederlanden was provided as evidence for this audit. The certificate was issued on 3 February 2009 and is valid until 5 April 2014. This certificate certifies that the ship is equipped with a sewage treatment plant, holding tank and discharge pipeline in compliance with the International Convention for the Prevention of Pollution from Ships 1972, as modified by the protocol 1978.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>International Sewage Pollution Prevention Certificate – Prins der Nederlanden 3 February 2009</p>
	<p>No disposal of untreated sewage or other wastes to the bay.</p>	<p>Inspection of the Cornelis Zanen and the Queen of the Netherlands by the auditor when berthed during the last EMP audit (GHD 2008) confirmed that a licensed contractor was disposing of sewage to a shore-based facility. Further inspections of vessels have not been undertaken during this current audit period, but based on the findings of the previous audits, the auditor is satisfied that a licensed contractor is disposing of wastes.</p> <p>PoMC advised the auditor during the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) that the remaining marine vessels have sewage containment facilities. EPA waste transport and disposal certificates for February 2009 were sighted for the disposal of wastes from the Cornelis Zanen, Macedon, Tanunda and the Prins der Nederlanden for waste streams including oily water, oily rags and cans and grey water. EPA waste transport and disposal certificates for the disposal of wastes from Short Road for the period February 2009 were also sighted and included the disposal of oil containers, oil, bilge water, oily water, soiled rags and containers, and septic tank contents. These certificates indicate that these particular wastes were managed in accordance with the <i>Environment Protection Act 1970</i> (Vic).</p> <p>The International Sewage Pollution Prevention Certificates, EPA waste transport certificates and records provided for February 2009, as well as the fact that no disposal to the bay was reported during the audit period, were considered to provide adequate evidence that waste had been disposed of appropriately during the audit period.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>21 EPA waste transport certificates and records of disposal for February 2009.</p> <p>International Sewage Pollution Prevention Certificate – Prins der Nederlanden 3 February 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Contractor waste management arrangements to include waste minimisation, containment, segregation and appropriate reuse, recycling, treatment and disposal.</p>	<p>The CDP has developed a Waste Handling Procedure (CDP_ALL_PR_702 rev01 Waste Handling Procedure.pdf) that contains requirements for waste containment, segregation and disposal. Section 4.3 of the procedure states that opportunities for waste minimisation, reuse and recycling will be considered where practicable and where identified, incorporated into this procedure. The procedure also indicates that each vessel has a specific garbage/waste management plan, which provides details of specific waste types and management requirements that must be implemented for each vessel. Inspection of vessels by the audit team observed that wastes (such as from the engineering workshop) were being segregated for recycling.</p> <p>This procedure was reviewed during the last EMP audit (GHD 2008) and PoMC has advised (file note) that the procedure has not changed since the last audit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>Waste Handling Procedure (CDP_ALL_PR_702 rev01 Waste Handling Procedure.pdf).</p> <p>PoMC file note</p>
	<p>The handling and disposal of unexpected materials identified during dredging (e.g. inert debris such as metallic wastes and timber) to be included in waste management arrangements.</p>	<p>The Waste Handling Procedure (as discussed above) also covers unexpected wastes and requires these to be stored appropriately on the vessel and disposed in accordance with the procedure where appropriate. If required, a one off waste collection service is to be organised e.g. waste too bulky or requires special management.</p> <p>SITA manage wastes arising from the CDP, which requires them to dispose of wastes to a licensed facility. The waste disposal managed by SITA includes: general waste, paper/cardboard, commingled, oily rags, paint tins, 20L empty oil containers, liquid oil/water, liquid septic, and batteries (NiCad, Lead Acid, Alkaline and Nickel).</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>Service Agreement between SITA Australia Pty Ltd and Boskalis Australia Pty Ltd for the period 09/04/2008 to 09/11/2008.</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>All waste to be managed in accordance with:</p> <ul style="list-style-type: none"> » <i>Environment Protection Act 1970 (Vic)</i> » <i>Quarantine Act 1908 (Cwlth)</i> (applicable vessels) » <i>Pollution of Waters by Oil and Noxious Substances Act 1986 (Vic)</i> 	<p>For the purposes of confirming compliance with these Acts, the audit sought to confirm that wastes were stored and disposed of via licensed shore-based facilities. The previous points in this PDS addressed the arrangements that are in place for disposal of wastes and sewage through the review of evidence that includes:</p> <ul style="list-style-type: none"> » Agreement between SITA and Boskalis for waste transport services; » Waste handling procedure; » International Sewage Pollution Prevention Certificates; and » Samples of EPA waste transport certificates and records of disposal for the audit period for vessels and from Short Rd (February 2009). <p>These processes indicate that wastes are being stored and disposed of via licensed shore-based facilities or in accordance with <i>Section 23G of the Pollution of Waters by Oil and Noxious Substances Act 1986 (Vic)</i> and hence comply with the requirements of this PDS.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>21 EPA waste transport certificates and records of disposal for February 2009.</p> <p>Waste Handling Procedure (CDP_ALL_PR_702 rev01 Waste Handling Procedure.pdf.</p> <p>Service Agreement between SITA Australia Pty Ltd and Boskalis Australia Pty Ltd for the period 09/04/2008 to 09/11/2008.</p> <p>International Sewage Pollution Prevention Certificate – Prins der Nederlanden 3 February 2009</p>
5.	<p>Energy and greenhouse gases</p> <p>The project will identify, calculate and report on energy consumption and greenhouse emissions on major plant and equipment consistent with the provisions of the Greenhouse Challenge Plus Program.</p>	<p>Greenhouse gas emission calculations were reviewed for the audit period for:</p> <ul style="list-style-type: none"> » The Alliance for Marine Diesel Oil and Heavy Fuel » Fitzgeralds for Diesel (Shell) and Petrol (Shell). <p>The auditor considers the project to be complying with this requirement to date, however reporting will not occur until the project close-out</p> <p>The auditor concludes that this requirement is not applicable in the current audit period.</p>	Not applicable	<p>Monthly fuel consumption reporting prepared by the Alliance</p> <p>Monthly fuel consumption reporting prepared by Fitzgeralds</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
6.	<p>Equipment maintenance</p> <p>Maintenance programs will be implemented for all plant and equipment as defined in the <i>Occupational Health and Safety Regulations 2007</i> (Vic).</p>	<p>Plant and equipment is defined under Section 3.5.1 of the Occupational Health and Safety Regulations. Plant and equipment may be used during land-based works and on board vessels. The audit has sought to focus on maintenance of equipment that, if not carried out and the equipment were to fail, could give rise to an environmental impact. The audit has not sought to confirm that on-vessel or on-shore OH&S requirements for personnel are met, or that maintenance is being carried out for all systems. Discussion with PoMC indicates that important equipment in this regard includes equipment that involves oils and hydrocarbons.</p> <p>Registers of work orders for the Queen of the Netherlands (13 March 2009 and April 2009) and for the Cornelis Zanen (1 January 2009 to 28 April 2009) were reviewed. These registers included scheduled weekly, monthly and yearly maintenance tasks and inspections as well as other unplanned maintenance items. PoMC provided email advice that stated that registers of work orders were not available for the Prins der Nederlanden but advised that the system used by the Prins der Nederlanden is the same as that for the Queen and the Cornelis Zanen. The auditor has accepted the advice of the PoMC related to maintenance records for the Prins der Nederlanden. A sample of running hour reports for the Goomai and Storcken were also supplied with these documents, showing details of the machinery and components to be serviced, the due dates for servicing (based on hours of service) and the date of the last service.</p> <p>Records of maintenance and repair have also been sighted for a sample of major plant used for berthworks at 32 South Wharf. Records of scheduled maintenance and repair works for a Crane (model 1200 SC serial number 3513) were sighted and included a checklist of servicing undertaken on the 27 November 2008 including parts replaced and adjustments made. Records of unscheduled maintenance undertaken on the 30 March 2009 were also supplied for a Crane (Model number 1200 SC, serial number 3591-1) for works undertaken to correct an engine knock. Three further inspection reports were also supplied for this machinery for ultrasonic inspection tests undertaken during the audit period. Records of significant maintenance undertaken on the Queen of the Netherlands and the Cornelis Zanen when in Singapore were also provided.</p> <p>The "Summary of incidents" document provides a record of fuel and oil spills that occurred within this current audit period. A review of this document states that for spills of oil and fuel, corrective and preventative actions were implemented and included repair and testing of faulty components and in some cases a review of the maintenance program.</p> <p>These records indicate that maintenance programs have been implemented as required in this PDS.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Cornelis Zanen preventative maintenance list (work orders) 07 January – 28 April 2009.</p> <p>Queen preventative maintenance records (work orders) details for week ending 13 March 2009 (main engines and overhaul turbo-banks) for April 2009 (miscellaneous requirements).</p> <p>Email advice (PoMC) – equipment maintenance records not available for Prins der Nederlanden but system same as Cornelis Zanen and Queen. 9 August 2009.</p> <p>Sample of maintenance and repair records for berthworks plant and equipment (Fitzgeralds) – Cranes at 32 South Wharf, scheduled maintenance and unscheduled repair records.</p> <p>Cornelis Zanen major maintenance records – report for main engine maintenance, Singapore.</p> <p>Queen major maintenance records – report for main engine maintenance, Singapore.</p> <p>Summary of incidents.doc</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
7.	<p>Fuels, oils, chemicals and hazardous goods</p> <p>Storage and handling of chemicals in accordance with:</p> <ul style="list-style-type: none"> » <i>Dangerous Goods Act 1985 (Vic)</i> » International Ship Management (ISM) Code (applicable vessels) » <i>Pollution of Waters by Oil and Noxious Substances Act 1986 (Vic)</i> 	<p>For the purposes of this audit, the auditor has sought to confirm that storage and handling of chemicals complies with the requirements for storage and containment that will prevent releases to the environment. Bunkering requirements for fuel are addressed in PDS 12.</p> <p>Registers of chemicals and hazardous substances for the Cornelis Zanen, Queen of the Netherlands and the Prins der Nederlanden were sighted, as well as FLGO Consumption reports detailing purchase and consumption of fuels and oils for the Queen of the Netherlands for the week 05 April 2009 to 25 April 2009, the Cornelis Zanen for a range of weeks between 01 February 2009 and 02 March 2009 and the Prins der Nederlanden for 02 February to 28 February 2009.</p> <p>During the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) the auditor inspected the Queen of the Netherlands and the Cornelis Zanen including a visual inspection of fuel and chemical storage areas. This inspection indicated that the quantities of hazardous materials stored and handled, with the exception of fuel, were low and were well contained in storage areas that provided for effective containment. Such materials included, for example, paints and solvents. No further inspections were undertaken during the current audit period but the auditor considers that these findings from inspections undertaken still apply to the current audit period. Photos were provided for the Prins der Nederlanden to show fuel and chemical storage areas. The photos show that the chemical storages and the bunker point are in compliance with the relevant requirements of the legislation.</p> <p>A summary of incidents for the audited period to the end of April 2009 was reviewed and indicated there had been eight spills of hydraulic oil. The summary of incidents document indicated that two of these spills were completely contained on the vessel and did not leak to the marine environment. For each of the other six spills the Shipping Management Centre was notified and the actions required for remediation noted. The incident report and the summary of incident documents reviewed detailed the actions required including when the incident was closed with no further actions required. The Oil Response Company of Australia (ORCA) attended spills where required.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>CoZa inventory list for chemical store 04 June 2009.</p> <p>Prins inventory list for chemical store 29 May 2009.</p> <p>Queen inventory list for chemical store 20 May 2009.</p> <p>CoZa FLGO consumption, 01 February – 02 March 2009.</p> <p>Prins FLGO consumption, arrival – 28 February 2009.</p> <p>Queen FLGO consumption 05 April – 25 April 2009.</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>Prins der Nederlanden photographs of chemical store and bunker point.</p> <p>Summary of incidents.doc</p> <p>14 emails summarising incident reports</p>
	Asbestos to be managed in accordance with the Occupational Health and Safety Regulations 2007 (Vic).	<p>The auditor requested a sample of records of asbestos removal within the audit period (February 2009). PoMC provided a file note stating that the Alliance had advised that there was no removal of asbestos during February 2009 or adjacent months within the audit period.</p> <p>The auditor concludes that this requirement is not applicable in the current audit period.</p>	Not applicable	File Note – PoMC/Alliance advice that no removal of asbestos.

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
8.	<p>Emergency response preparedness</p> <p>Development and testing of emergency response procedures, integrated with Melbourne Port Emergency Management Plan, including provision for fuel, oil and chemical spills.</p>	<p>Two emergency response procedures have been developed for the project; these are:</p> <ul style="list-style-type: none"> » CDP_ALL_PR_703 Emergency Response Procedure; » CDP_ALL_PR_704 Oil Spill Prevention and Response Procedure. <p>These procedures both state that they comply with and are integrated with the Melbourne Port Emergency Management Plan, and a review of the procedures during the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) supported this. Both of these procedures contain provisions for spill response.</p> <p>Emails that detail the incidents for the spill events listed in “summary of incidents.doc” provided by PoMC were reviewed. These documents provided information on the procedures undertaken to report and resolve incidents.</p> <p>As additional evidence that emergency response procedures are tested, the auditor was supplied with vessel drill records for the Queen of the Netherlands, Cornelis Zanen, Prins der Nederlanden, Storcken, Edina, Goomai, Tanunda, Ain d'Schalut, Discovery, Macedon, and Adventure which detail the vessel and vessel safety drills undertaken for:</p> <ul style="list-style-type: none"> » Prevention of fuel leakage – spillage during bunkering (Shipboard Oil Pollution Emergency Plan (SOPEP) drill); and » Oil spill response – including use of oil booms and absorbent pads; <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>16 vessel drill records</p> <p>Summary of incidents.doc</p> <p>14 emails summarising incident reports</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p>
	<p>All dredge vessels to have oil spill response kits on board. Relevant personnel to be trained in its use.</p>	<p>An inspection of the Cornelis Zanen and the Queen of the Netherlands was undertaken during Channel Deepening Project Independent Audit – Activity 1 Audit 1 (GHD 2008) where it was concluded that both vessels had oil spill response kits on-board.</p> <p>An on-board inspection of other major vessels (Prins der Nederlanden, Ain d'Schalut Goomai and Storcken) was not undertaken within this audit period to verify that an oil spill response kit was on board. However, drill records supplied for these vessels and other vessels during the audit period detailed vessel SOPEP and oil spill containment drills. SOPEP drills were undertaken to test emergency response procedures during bunkering and involved the use of SOPEP equipment, which includes the spill kit. Oil spill drills also involved the use of the onboard spill kit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>Vessel drill, Prins der Nederlanden – SOPEP drill 9 March 2009.</p> <p>Vessel drill, Prins der Nederlanden – SOPEP drill 9 April 2009.</p>

Table 3 PDSs 9 – 19: Marine-based Works - Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
9.	<p>Safety</p> <p>A safety zone of 600 m radius to be established around major dredging equipment during operations.</p>	<p>A safety zone of 600 m in radius is established around major dredging equipment during operations. The auditor verified documents that detail EMP training as part of the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (December 2008) and these documents refer to the safety zone of 600 m radius. EMP training records were supplied for the current audit period to verify that EMP induction training has occurred.</p> <p>A placard on the bridge of the dredge vessels, stating that a safety zone of 600 m radius is to be established, was observed on vessels as part of the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008).</p> <p>The above evidence indicates that a safety zone has been established as required by this PDS.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>CDP_ALL_FRM_712 General Attendance Records for EMP Induction between 15 Dec 08 and 03 Apr 2009.</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p>
10.	<p>Marine pests</p> <p>Marine pest inspection and certification of monitoring and support vessels, dredgers and pontoons is required before mobilisation onto project, where these are sourced from outside Port Phillip Bay. Certification must be received from the final port of call, before entry to Port Phillip Bay.</p>	<p>A review of the marine pest inspection and vessel inspection reports indicates that inspection and certification was conducted on support vessels, dredgers and pontoons prior to mobilisation onto the project. The inspections were carried out on the following dates:</p> <ul style="list-style-type: none"> » 20 November 2008 to 1 December 2008 - Cornelis Zanen by Bureau Veritas, Singapore. Declaration of a dry-dock survey conducted at ST Marine Shipyard (Singapore) to verify biofouling was not present in accordance with inspection report forms of PoMC/Boskalis Alliance and Appendix A: WA Fisheries Vessel Inspection Report Form (Department of Fisheries – WA). It was concluded from the inspections that the ship was suitable for the intended purpose and a certificate from Bureau Veritas Marine Division issued. » 18 January 2009 - Biofouling inspection report for the Prins der Nederlanden, conducted by Senior Superintendent at the Sembawang Shipyard Singapore. This report concluded that the vessel was in a satisfactory condition and a certificate issued. » 18 March and 23 March 2009 - Ain d'Schalut, Camen and Micklyn by InterMarine Consulting Pty Ltd. Biofouling Inspections including vessel inspection form and checklist for each of the three vessels. Only outstanding cleaning action required was for the Ain d'Schalut, where power washing off the caked mud and barnacles was required from the lower third of its three spud posts (to be completed prior to the vessel departing from Newcastle). Follow-up emails and photos on the 23 March confirmed that the caked mud and barnacles were removed from the Ain d'Schalut as required before transport to Port Phillip Bay. 	Full compliance	<p>Vessel inspection report (biofouling) – Cornelis Zanen 20/11/2008 to 01/12/2008</p> <p>Vessel inspection report (biofouling) – Prins der Nederlanden 18-19/01/2009</p> <p>Vessel inspection report (biofouling) – Queen of Netherlands (21/03/2009) and follow up that states requirements were met (09/04/2009).</p> <p>Vessel inspection report (biofouling) –Ain d'Schalut, Camen and Micklyn – 18/03/2009 and follow up that states that requirements were met (23/03/2009).</p> <p>Marine Pest Inspection – Charter of Apollo 02/05/2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
		<ul style="list-style-type: none"> <li data-bbox="696 300 1489 518">» 21 March and 9 April 2009 Biofouling inspection of the Queen of the Netherlands by Intermarine Consulting Pty Ltd. Biofouling inspection undertaken in Singapore concluded that the vessel was generally clean but some mud washing was required for five individual areas within the checklist. It was also noted that there would be specific requirements for tank exchange/sediment management that must be fulfilled before entering Port Phillip Bay. A follow-up email (9 April) for an underwater inspection of the Queen of the Netherlands (from PoMC Dredging Superintendent) stated that all outstanding issues from the 21 March had been resolved. <li data-bbox="696 539 1489 703">» 2 May 2009 - Charter of Apollo – Marine Pest Inspection and In Survey (PoMC QA/QC Superintendent). Memo that notes that Apollo has been chartered for casual single beam echo sounder hydrographic services. The vessel was mobilised from Western Port of the hull, track transport to Mornington and sailing to Melbourne. Before mobilising the vessel was first slipped and the hull blasted with fresh water. Photographic evidence was also supplied to demonstrate that the hull was clean. <p data-bbox="696 724 1451 746">The auditor concludes that compliance has been achieved with this requirement.</p>		

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>All vessels to comply with "Protocol for Environmental Management – Domestic Ballast Water Management in Victorian State Waters", EPA Publication 949.1 (June 2006).</p>	<p>In confirming compliance with this PDS, the auditor has particularly sought to verify compliance with the requirement in EPA Publication 949.1 which states: <i>"Ballast water exchange at sea may be undertaken using a number of methods, depending on the configuration and stability of the ship. It is important to ensure that the volumetric exchange achieved is at least 95 per cent, using either sequential (empty/refill) exchange or flow-through exchange. Any exchange must be undertaken outside of Victorian State waters (at least 12 nautical miles off the Australian coast)."</i></p> <p>With respect to The Queen of the Netherlands, the auditor notes:</p> <p>EPA Ballast Water Log completed for the 5 April 2009 states that the hopper and fore peak tank would be flushed again south of Cape Otway before arrival in the Port of Melbourne. The EPA Ballast Water Report form dated the 5 April 2009 (for arrival on 7 April 2009) also stated that there was no ballast water onboard. AQIS clearance was given to berth in the Port of Melbourne for arrival on 7 April 2009 (clearance given on the 5 April 2009). This clearance indicates that the vessel complied with the relevant protocol.</p> <p>With respect to the Prins der Nederlanden, the auditor notes:</p> <p>A Ballast Water Report Form was completed with expected time of arrival at Victorian port on 16 February 2009. This form notes that ballast water was onboard and that an EPA ballast water log with all details would be completed with the approved ballast treatment/exchange method to be Sequential and Flow-through. The EPA ballast water log for the Prins der Nederlanden was completed showing that over 95 percent of the ballast water was discharged outside Port of Melbourne limits. AQIS clearance was given to berth in the Port of Melbourne arriving on 16 February 2009. This clearance indicates that the vessel complied with the relevant protocol.</p> <p>With respect to the Cornelis Zanen, the auditor notes:</p> <p>A Ballast Water Report Form was completed with the expected time of arrival on 14 December 2008 and states that there was no ballast water onboard. The EPA ballast water log indicated that 100% of ballast water was exchanged for the hopper and that the FPT was empty (8 December 2008). AQIS clearance was given to berth in the Port of Melbourne arriving on 14 December 2008. This clearance indicates that the vessel complied with the relevant protocol.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>AQIS clearance certificate for Queen of the Netherlands 5 April 2009.</p> <p>EPA ballast water logs for the Queen of the Netherlands 5 April 2009.</p> <p>EPA ballast water log for the Prins der Nederlanden 11 February 2009.</p> <p>Ballast water report form for the Prins der Nederlanden 5 February 2009.</p> <p>AQIS clearance certificate for Prins der Nederlanden 13 February 2009.</p> <p>AQIS clearance certificate for the Cornelis Zanen 15 December 2008.</p> <p>EPA ballast water report for the Cornelis Zanen 8 December 2008.</p> <p>EPA ballast water log for the Cornelis Zanen 8 December 2008.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	All vessels to comply with "Australian Ballast Water Management Requirements", AQIS (1 June 2007)	<p>AQIS Officers are responsible for conducting ballast water verification inspections on-board vessels to ensure compliance with Australia's ballast water management requirements. Clearance by AQIS indicates that a vessel complied with this requirement. Evidence of this requirement was supplied for vessels as detailed below.</p> <p>Queen of the Netherlands</p> <p>The Queen of the Netherlands has complied with the AQIS requirements. In particular it is noted that a review of the AQIS clearance for the Queen of the Netherlands indicated that the vessel was granted approval to berth at the Port of Melbourne. This clearance indicates that the vessel complied with this requirement.</p> <p>Prins der Nederlanden</p> <p>The Prins der Nederlanden has complied with AQIS requirements. In particular it is noted that a review of the AQIS clearance for the Prins der Nederlanden indicated that the vessel was granted approval to berth at the Port of Melbourne. This clearance indicates that the vessel complied with this requirement.</p> <p>Cornelis Zanen</p> <p>The Cornelis Zanen has complied with AQIS requirements. In particular it is noted that a review of the AQIS clearance for the Cornelis Zanen indicated that the vessel was granted approved to berth at the Port of Melbourne. This clearance indicates that the vessel complied with this requirement.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	As above

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
11.	<p>Vessel anchoring</p> <p>Vessels to anchor in accordance with the Port Waters of Melbourne Operations Handbook, 2006. This does not include the anchoring of pontoons at DMGs.</p>	<p>A review of the following data provided by PoMC was undertaken to confirm compliance with this requirement:</p> <ul style="list-style-type: none"> » Port Waters of Melbourne Operations Handbook, 2006; » Harbour masters approval to anchor in the SE DMG (for anchoring of the Queen of the Netherlands – dated 9 April 2009); » Follow-up email from General Manager of Marine and Navigation Services that states that approval to anchor in the DMG zone applies to trailer suction hopper dredgers. The email also states that approval is given to all vessels on request for anchoring in an area other than a designated anchorage (trading vessel or dredger). It is noted that in the recent past that has included the Cornelis Zanen and other vessels involved in the CDP. » Detailed logs of ship movement and anchoring (as per the sample requested by the auditor). <p>The information provided supported the conclusion that vessel anchoring was in accordance with the Handbook requirements. In particular:</p> <ul style="list-style-type: none"> » The logs for the Cornelis Zanen for (4-5 May) showed that the vessel anchored once in the Port Melbourne inner anchorage in accordance with the Port Waters of Melbourne Handbook. » The logs for the Prins der Nederlanden for anchoring in March indicated that the vessel anchored three times (4-5 March, 14-15 March and 20 March 2009) at the South East DMG (dredged material ground) in accordance with the Port Waters of Melbourne Handbook. » The Queen of the Netherlands did not anchor during the period for which a sample of anchoring records was requested by the auditor (1 April to 1 May 2009). However, anchoring requirements were audited during the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008), where anchoring for the Queen was found to be in accordance with the requirements of the Port Waters of Melbourne Handbook. <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>Port Waters of Melbourne Operations Handbook, 2006</p> <p>Harbour masters approval to anchor in the SE DMG (09/04/08)</p> <p>Follow up email clarifying which vessels have approval to anchor 7 September 2009.</p> <p>Logs of ship movement and anchoring for the Cornelis Zanen May 4 – 5 2009.</p> <p>Logs of ship movement and anchoring for the Prins der Nederlanden March 2009.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
12.	<p>Vessel bunkering</p> <p>All bunkering to take place in accordance with PoMC Bunkering Guidelines and Vessel Bunkering Procedures.</p>	<p>A sample of completed bunkering checklists were provided for each of the Prins der Nederlanden, Cornelis Zanen and Queen of the Netherlands as evidence. These example checklists were completed correctly and for the purpose of this audit the auditor considers that the example checklists provided were adequate to demonstrate correct use of bunkering checklists within the audit period.</p> <p>The Bunkers CDP.xls spreadsheet demonstrates compliance with bunkering procedures as it details the inspections that occurred for bunkering within the audit period. The bunkering procedures note that inspectors would be present to check for compliance prior to bunkering commencing. There is no requirement for all bunkering events to be inspected, but it is noted that within the Bunker CDP.xls spreadsheet that all bunkering involving Heavy Fuel Oil (HFO) and all but one bunkering involving Intermediate Fuel Oil (IFO) were subject to an inspection.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance.	<p>Spreadsheet of bunkering during the audit period and completed inspections. Bunkers CDP.xls</p> <p>PoMC Bunker Transfer Guidelines (Incorporating ship/road vehicle liquid transfers)</p> <p>Bunkering checklist – 10 March 09 Prins</p> <p>Bunkering checklist – 24 April 09 Cornelis</p> <p>Bunkering checklist – 28 April 09 Queen of the Netherlands.</p> <p>Bunkering logbook records – Prins, 06 March 09, 27 March 2009 and 10 April 2009.</p>
13.	<p>Cetaceans – vessel manoeuvring</p> <p>If within 300 m of a dolphin or whale, the vessel must not:</p> <ul style="list-style-type: none"> » approach a whale or dolphin head on; » be in the path of a whale or dolphin; » separate any whale or dolphin from a group; » come between a mother and a calf; » drop or lower an anchor overboard from the vessel. 	<p>Nineteen cetacean logs from vessels have been provided for the audit period. These cetacean logs were completed to indicate the type of whale/dolphin, the number seen, the size and type of the whale/dolphin and its behaviour. These logs note that the vessel was only required to undertake actions on a few occasions (avoid sudden changes in direction, reduce and/or maintain speed not exceeding five knots). One berthworks cetacean log for the 3 October 2008 was also supplied which showed the location of the cetaceans and that no action was required.</p> <p>The auditor was also supplied with a register of training that shows the dates on which Captains/skippers, deckhands/seamen, 1st Mates, 2nd Mates, Dredge masters and other staff received the cetacean training, as well as records of attendance at cetacean training for the audit period.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>19 cetacean logs (from vessels)</p> <p>CDP_ALL_RG_701 Cetacean Sections – Registers of Training.</p> <p>1 berthworks cetacean log 3 October 2008.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Within 300 m of a whale or dolphin, the vessel must:</p> <ul style="list-style-type: none"> » maintain a constant speed that does not exceed 5 knots. » avoid sudden changes in direction. » manoeuvre the vessel to a distance of at least 200 m from the whale or dolphin if it shows any signs of disturbance (where safe to do so). 	<p>Cetacean logs for Vigilant, Alert, Fine Time, John Norgate and Prins der Nederlanden indicate that for every log the management action taken was indicated by filling in the checkbox section and this was indicated by ticking the appropriate checkbox on the log (including a box for “none”). In most instances, if a vessel was within 300 m of a whale/dolphin, it maintained a constant speed that did not exceed five knots and/or avoided sudden changes in direction.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	As above.
14.	<p>Cetacean sightings and log</p> <p>Personnel on board vessels are to report all sightings of cetaceans.</p>	<p>PoMC provided 20 cetacean logs (19 vessels, one berthworks) and advised that this was a complete set of records of sightings at this time. The auditor has accepted this advice and concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>19 cetacean logs (vessels)</p> <p>1 berthworks cetacean log 3 October 2008.</p> <p>File Note – PoMC stating that there are not further communications related to cetacean sightings for the audit period.</p>
	<p>A log of cetacean sightings and action taken to be kept for all work areas.</p>	<p>Commentary on PDS 13 is relevant. The cetacean logs included a “Comments on Actions” section.</p>	Full compliance	<p>19 cetacean logs (vessels)</p> <p>1 berthworks cetacean log 3 October 2008.</p>
15.	<p>Services protection and removal</p> <p>Management measures including positional controls and mechanical devices or annexures to dredging equipment to minimise the risk of damage to services.</p>	<p>This requirement was covered as part of the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where it was determined that the protection equipment calibration test reports provided for the audit indicated that management measures were in place to minimise the risk of damage to services. This previously reviewed evidence and subsequent finding still applies to the current audit period.</p> <p>PoMC has also supplied details on the ‘Yarra Tree’. The Yarra Tree was used during the installation of specially designed steel protection plates to protect the sewer line that runs across the Yarra River. This information provides additional evidence that measures are in place to minimise the risk of damage to services.</p> <p>There were no recorded incidents/complaints in terms of damages to services. This provides an indication that services were not damaged.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>PoMC 2009 READ ME file – notification of no incidents or complaints associated with damage to services during the audit period.</p> <p>PoMC Yarra Tree Fact Sheet April 2009.</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
16.	<p>Marine-based berthworks and river protection works</p> <p>Management measures to minimise quantity of debris entering the river during demolition and construction works.</p>	<p>This PDS applies to the berthworks at Swanson Dock East and Swanson Dock West, where pontoons with trays under the structure to be demolished were required, to prevent debris dropping into the water below. Berthworks were completed at Swanson Dock East and West in December 2008. A review of the internal EMP Audit undertaken for berthworks at Swanson Dock West and 32 South Wharf on 22 October 2008 found that works had been undertaken in accordance with the requirements of PDS 16. These works were also assessed as part of the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where they were also found to be in full compliance with requirements.</p> <p>Other demolition and construction works that were marine based during the audit period occurred immediately adjacent to land and included works at 32 South Wharf. A review of photographic evidence for earthworks at 32 South Wharf indicated that management measures have been employed to minimise the quantity of debris entering the water. These included the installation of a floating boom with sediment fence around the construction works.</p> <p>It is noted from the photograph that works involved the removal of the wharf structure and piles, which were the main source of debris. These were removed from the water as part of the excavation process. These photos also show the floating boom around the construction works.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance.	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>PoMC (2008) EMP Audit Berthworks (Swanson Dock West and 32 South Wharf) 22 October 2008.</p> <p>Photographs showing removal of debris at 32 South Wharf and floating boom/silt curtain for the earthworks.</p> <p>PoMC (2009) Quarterly Project Report No.4.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
17.	<p>Heritage (marine-based) – identification of potential relics</p> <p>If potential relics are identified during construction activities, the process described in Annexure 6 will be followed.</p>	<p>One potential relic was recovered during dredging on the 19 September 2008. This find was outside the current audit period, however, investigations continued into the current audit period and hence were not closed out during the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008).</p> <p>» On 19 September 2008 the Queen of the Netherlands recovered an anchor and chain during dredging in South Channel East. The chain was 50 m in length and the crossbar of the anchor recovered was approximately 4.0 m long. Dredging ceased in the area of the anchor and chain and the archaeologist was notified within 24 hours as required by the EMP. Assessment by the archaeologist determined that the anchor and chain was most likely a relic. Subsequent letters and emails were supplied to show that each step in the process required by Annexure 6 for marine heritage had been followed for the anchor and chain, which was relocated to a suitable location around Popes Eye.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>Emails between PoMC and Cosmos Archaeology – notification of find and initial recommendations by Cosmos – 19 September 2008.</p> <p>Photos of the recovered relic.</p> <p>Email of preliminary notification of Heritage Vic by PoMC 19 September 2008.</p> <p>Letter (formal notification) of recovery of relic (PoMC to Heritage Victoria) 22 September 2008.</p> <p>Email of update on storage of relic as recommended by Archaeologist (PoMC to Heritage Victoria) 26 September 2008.</p> <p>Letter from Professional Dive Services to PoMC about relocation position at Popes Eye 27 September 2008.</p> <p>Email notification to HV of timing of further study of relic by Cosmos and request by HV to include relic once located on database. 3 October 2008.</p> <p>Report for placement of anchor at approved location at Popes Eye (Professional Dive Services) 14 October 2008.</p> <p>Email between PoMC and Cosmos Archaeology to allow dredging to recommence in location of artefact.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
18.	<p>Maritime heritage – berthworks and river protection</p> <p>Recording and removal of Stony Creek Ballast Wharf Yarra River (H7822-0423) site in Newport Park, and the Lower South Wharf (H7822-0598) site associated with the expansion of the Swanson Dock swing basin as follows:</p> <ul style="list-style-type: none"> » Recording of above-water and below-water remains of the structure and any visible artefacts associated with the structure. 	<p>This audit requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where it was determined that the above and below water surveys had been conducted to the archaeologist’s satisfaction and that no further survey work was required.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.
	<ul style="list-style-type: none"> » Monitoring of the riverbank modification works leading to the destruction of the site by an appropriately qualified archaeologist. If significant items are uncovered, the works will be suspended and the archaeologist given an opportunity to record the finds. 	<p>This audit requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where it was noted that the archaeologist had determined that there was no further requirement for on-site archaeological monitoring during dredging in the immediate vicinity of the former Stony Creek Ballast Wharf. It was also noted that if PoMC found any unexpected artefacts they would be retained, photographed and notified to the project archaeologist as required by Annexure 6 of the EMP. PoMC has advised that no further unexpected artefacts have been found since the last audit.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>File Note – PoMC advice that no further unexpected artefacts have been found since the last audit.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
19.	<p>Maritime heritage – dredging</p> <p>Multibeam survey to be conducted on the bed of South Channel, SE DMG and the PoM DMG extension within 2 months before the start of dredging. Results to be reviewed by an archaeologist. Where any potential additional heritage sites are identified, these shall be investigated and appropriate management action taken, as advised by the archaeologist. Where an additional heritage site is identified, a report of the findings is to be made available to Heritage Victoria.</p>	<p>PoM DMG Extension</p> <p>The requirements for PoM DMG Extension were covered in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008). However, the auditor notes that in regard to the riveting boilers found at PoM DMG 10A and 10B that Cosmos Archaeology recommended that further advice be sought from Heritage Victoria on the need to obtain a permit to bury these boilers under dredge spoil.</p> <p>Email evidence was supplied for this current audit, which stated that a meeting was held on the 24 April 2008 between PoMC, Heritage Victoria, CDP Project Archaeologist Cosmos Coroneos where the two boilers were discussed. At this meeting, Heritage Victoria concluded that no further action was required (i.e., no requirement for a permit to bury items under dredge spoil).</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p> <p>South Channel/SE DMG</p> <p>The requirements for a multibeam survey in South Channel and SE DMG were covered in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where it was concluded that compliance had been achieved and that no further works were required.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	<p>Part – full compliance.</p> <p>Part – not applicable.</p>	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>Email evidence – between PoMC and HV stating that a permit was not required to bury riveting boilers with dredge spoil – 25 August 2009.</p>
	<p>Conduct survey, excavation and removal of the Unidentified Dromana site (S894) (former Hovell pile light), South Channel. Report to be provided to Heritage Victoria.</p>	<p>It was noted as part of the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) that PoMC email correspondence dated 5 June 2008 indicated that the old Hovell Pile light structure was placed in the SEDMG on 3 June 2008 and that representatives of Heritage Victoria were present during the placement. However, the final report was not available for review during the last audit. The report has since been finalised and was supplied as evidence for this current audit. PoMC has provided advice (file note) that this final heritage report for the Hovell Pile Light was supplied to Heritage Victoria on 28 May 2009.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>Cosmos Archaeology April 2009, Former Hovell Pile Light (1924-1938), Excavation and Relocation Report.</p>
	<p>Before the start of dredging, the following items will be recorded and removed:</p> <ul style="list-style-type: none"> » Dumped rock and artefacts, Port Melbourne Channel. 	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where it was concluded that compliance had been achieved and that no further work was required at this site.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	<p>Not applicable.</p>	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<ul style="list-style-type: none"> » Wheels and axle, located at Hovell Pile, South Channel. 	<p>The report for the recovery, removal and relocation of the Wheels and Axle at Hovell Pile was completed within the audit period (Cosmos Archaeology, October 2008). The report details the archaeological disturbance, excavation of the wheels and axle in accordance with the requirements of the Consent (C586) granted by Heritage Victoria. The report concludes that the wheels and axle were not significant artefacts and are from a hand trolley that was deliberately or accidentally cast overboard from a passing vessel over 50 years ago. The objects recovered were placed into the South East DMG at a location approved by the PoMC.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	Cosmos Archaeology, October 2008, Wheels and Axle, Hovell Piles – Recovery, Recording and Relocation Report.
	Conduct site inspection in vicinity of the HMAS Goorangai (S294) before the start of dredging in that area.	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where evidence was supplied to the auditor that showed that no dredging was required within 200 m of the HMAS Goorangai and that therefore a pre-dredge inspection of the site was not required.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.
	Conduct two inspections of the Edward (S209) before the start of dredging in the Entrance.	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where a finding of full compliance was assigned. No further works related to this requirement were required during this current audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.
	Inspection and site works described above to be carried out under the supervision of an archaeologist.	The auditor concludes that this requirement is not applicable to the current audit period (as above).	Not applicable.	
	<p>The following management measures shall be implemented for the wreck of the HMAS Goorangai (S294):</p> <ul style="list-style-type: none"> » Use of the sweep bar in conjunction with the TSHD in the vicinity of the HMAS Goorangai to minimise over dredge. » Draghead tracking to confirm that dredging has not occurred within the area of heritage significance. » The areas to which these controls apply are identified in Drawing CDP-ENV-50254 – Construction Areas – Heritage significance 	<p>As discussed above, it was determined that there was no need to dredge within 200 m of the HMAS Goorangai.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	Multibeam survey to be conducted on the bed of Williamstown Channel, Port Melbourne Channel and South Channel within 12 months of completing dredging, to identify whether any more heritage sites have become exposed by batter adjustment. Results to be reviewed by an archaeologist. Where any potential additional heritage sites are identified, these shall be investigated and appropriate management action taken, as advised by or agreed with the archaeologist.	The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable.	
	Conduct site inspection within 2 months of completion of dredging in the vicinity of HMAS Goorangai (S294). This area is identified in Drawing CDP-ENV-50254 – Construction Areas – Heritage significance (Drawings are included in Annexure 7).	As previously discussed, it was determined that there was no need to dredge within 200 m of HMAS Goorangai. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable.	
	South Channel Pile Light (H1519 and H7821-0006) – four inspections of site, scheduled one per season within the first year after completion of dredging, with the aim of recording and recovering artefacts that have become exposed.	This is a post-construction requirement. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable.	
	Unidentified – Port Melbourne n.2 (787) – eight inspections of the site, scheduled one per season for 2 years following completion of dredging, with the aim of recording erosion processes affecting the site.	This is a post-construction requirement. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable.	
	Inspections to be carried out under the supervision of an archaeologist and reports to be provided to Heritage Victoria.	This is a post-construction requirement. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable.	

Table 4 PDSs 20 – 22: Land-based Works - Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
20.	<p>Stormwater and groundwater management</p> <p>Develop, implement and maintain stormwater and groundwater management plan to appropriately contain and manage discharges in accordance with <i>Environmental Guidelines for Major Construction Sites</i>, <i>EPA Publication 480</i>, <i>SEPP (Groundwater of Victoria)</i>, and <i>SEPP (Waters of Victoria)</i>.</p>	<p>As part of the Channel Deepening Project Independent Audit – Activity No. 1 Audit No. 1 (GHD 2008) the Fitzgerald Construction Environment Management Plan for Swanson Dock was reviewed. This document contains treatment and disposal measures for the disposal of contaminated run-off and concrete washout water (works at 32 South Wharf and Swanson Dock East and West). The review concluded that the provisions within this document are consistent with the EPA Publication 480, SEPP (Groundwaters of Victoria) and SEPP (Waters of Victoria). The content of this plan has not changed since the last audit. The Construction Environment Management Plan for Yarraville Wharf to Newport Park and Gellibrand Pier was sighted as part of this audit, and also contains measures for stormwater and groundwater management.</p> <p>To demonstrate that run-off from stormwater and groundwater has been controlled during the current audit period, PoMC provided photos of controls in place during construction works at 32 South Wharf, Yarraville (berthworks) and West Swanson Dock approach during the audit period. Some of the photos show that stormwater drainage is not impacted by the works, whilst others show controls such as booms or hay bales in place.</p> <p>The 4th OEM quarterly review notes that: <i>‘Stormwater and groundwater management measures are only applicable to land-based works during the construction phase of the project. Stormwater management is routinely reviewed as part of each internal audit undertaken for land-based works and navigation aid sites’</i> (OEM 2009). In addition to the review of photographs, a review of internal EMP audit reports that apply to the current audit period was undertaken. This review found that stormwater and groundwater management requirements have been addressed at each of the sites audited. No instances of inappropriately contained or managed discharges were noted in these reports.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>OEM 2009, Quarterly Review No. 4 – March 2009.</p> <p>PoMC (2008) EMP Audit Berthworks (Swanson Dock West and 32 South Wharf) 22 October 2008.</p> <p>PoMC (2008) EMP Audit – Berthworks –Yarraville to Newport Park (inc. Holden Dock) – 15 December 2008.</p> <p>PoMC (2008) EMP Audit – Land-based Navigation Aids 14 November 2008.</p> <p>PoMC (2009) EMP Audit – Land-based Navigation Aids 16 March 2009.</p> <p>PoMC (2009) EMP Audit – Berthworks (32 South Wharf) 17 March 2009.</p> <p>Fitzgerald Constructions, Channel Deepening Project Upgrade of Structures, Yarraville Wharf to Newport Park and Gellibrand Environmental Management Plan (Revision 2), June 2008</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
21.	<p>Contaminated material</p> <p>Manage and dispose of any land-based contaminated material in accordance with the <i>Environment Protection Act 1970</i>, subordinate legislation and associated guidance and technical notes. This includes <i>Industrial Waste Management Policy (Waste Acid Sulphate Soils)</i>, and <i>SEPP (Prevention and Management of Contaminated Land)</i>.</p>	<p>Six PoMC internal audit reports were reviewed for land-based works within the audit period. This review verified that the disposal of contaminated soils has occurred in accordance with PDS 21. The two PoMC audits for land based navigation aids confirmed that contaminated material had not been removed from the sites.</p> <p>Waste transport receipts for acid sulphate soil from works undertaken during the month of October (including at 32 South Wharf and West Swanson Dock) show that material was disposed of in accordance with the requirements of this PDS.</p> <p>A consultant report (Douglas Partners) was provided for an environmental soil investigation conducted at Holden Dock, Yarraville in December 2008. This investigation was required after odorous soil removed below the water line of the Yarra River on 10 November 2008 combusted on exposure to the atmosphere (during works undertaken to remove the rock revetment). The consultant's investigation examined the contamination that led to the combustion of the soil and classified soil at the site for off-site disposal in accordance with legislation and EPA guidelines. A drawing of the area was produced showing red areas as 'category A', orange as 'category B' and green as 'category C' for waste disposal purposes. Emails pertaining to this environmental incident state that prior to the resumption of work at the site, PoMC redesigned the bank shaping works so the area identified with highest contamination was left untouched. Disposal of material for this site occurred outside the current audit period (May 2009) and will be assessed in a future audit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>PoMC (2008) EMP Audit Berthworks (Swanson Dock West and 32 South Wharf) 22 October 2008.</p> <p>PoMC (2008) EMP Audit Land Based Navigation Aids 14 November 2008.</p> <p>PoMC (2008) EMP Audit Berthworks Yarraville to Newport Park (incl. Holden Dock) 15 December 2008.</p> <p>PoMC (2009) EMP Audit Berthworks (32 South Wharf) 30 January 2009.</p> <p>PoMC (2009) EMP Audit Land-based Navigation Aids 16 March 2009.</p> <p>PoMC (2009) EMP Audit Berthworks (32 South Wharf) 17 March 2009.</p> <p>Douglas Partners – Report of Rock Revetment Environmental Investigation, Holden Dock Yarraville, 12 December 2008.</p> <p>22 Waste transport receipts for transport of acid sulphate soil – 02 – 17 October 2008.</p> <p>Transaction reports for the transport of acid sulphate soil (14) 20-24 October 2008.</p> <p>Waste transport certificate details for acid sulphate soils 1 October 2008.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
22.	<p>Aboriginal heritage</p> <p>If a potential heritage or Aboriginal site is identified during construction activities, the process described in Annexure 6 of the EMP will be followed.</p>	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where a finding of full compliance was assigned. PoMC has advised (file note) that no heritage or Aboriginal sites were identified during construction activities within the current audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>PoMC advice (file note) – no heritage or Aboriginal sites identified during construction activities for the audit period.</p>
	<p>Monitoring by relevant Aboriginal representatives during construction at the Rocky Point and Narrows PEL Beacon sites in accordance with the Cultural Heritage Management Plan.</p>	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where a finding of full compliance was assigned. It was noted in the previous audit that a letter from Heritage Insight to PoMC (29 September 2008) stated that there is no further requirement for any further monitoring of construction works at either site provided no additional deep excavation occurs. PoMC has advised (file note) that CDP GM Engineering has confirmed no further deep excavation works has occurred since this time.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	<p>Letter from Heritage Insight Pty Ltd to PoMC, 29 September 2008.</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p> <p>File note – advice from CDP GM Engineering on excavation at The Narrows and Rocky Point.</p>
	<p>As far as practicable, and in accordance with the Cultural Heritage Management Plan, avoid excavation on the access track to the Narrows PEL Beacon site at Queenscliff. This will minimise the risk of causing impacts on any undiscovered Aboriginal archaeological sites.</p>	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1, Audit 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>No further works have occurred at this site within this current audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1, Audit 1 for the Office of the Environmental Monitor, December 2008.</p>

Table 5 PDSs 23 – 30: Dredging and Plume - Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
23.	<p>Sands and adjacent coast and beaches monitoring</p> <p>Undertake a baseline bathymetric survey of the Sands flood tidal delta system, with continuous cover of the area within the Entrance from Point Lonsdale to St Leonards (including Swan Bay), across to Hovell Pile to Martha Point to Point Nepean, and including all the adjacent coast and beaches within that area, at a resolution of better than or equal to five metre horizontal spacing and vertical accuracy of better than or equal to 0.5 m. To be completed prior to commencement of dredging in the south, and two and four years after dredging commences.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008
	<p>Multibeam surveys of the Entrance shipping channels and South Channel to be undertaken prior to commencement of dredging in respective areas in the south, and two and four years after dredging commences.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008
	<p>Current measurements to be undertaken in South Channel and inside the Entrance after completion of dredging. Measurements to be compared against SEES predictions.</p>	<p>This is a post-construction requirement.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	
	<p>Sediment size analyses to be undertaken in conjunction with refined sediment transport numerical modelling post-construction.</p>	<p>This is a post-construction requirement.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence										
24.	<p>Dredging</p> <p>Design depths are to be achieved as a minimum in all areas. Due to dredging tolerance, actual construction depth will exceed design depths. Design depths are as follows:</p> <table border="1" data-bbox="286 419 813 695"> <thead> <tr> <th></th> <th>Great Ship Channel / layby</th> <th>Sth Channel (fairway / channel / Hovell Pile)</th> <th>Port Mel & W'town Channels</th> <th>Yarra River Channel</th> </tr> </thead> <tbody> <tr> <td>Design depth (m)</td> <td>17.3 / 14.3</td> <td>16.8 / 15.8 / 16.3</td> <td>15.8</td> <td>16.1 / 15.8 / 15.25</td> </tr> </tbody> </table>		Great Ship Channel / layby	Sth Channel (fairway / channel / Hovell Pile)	Port Mel & W'town Channels	Yarra River Channel	Design depth (m)	17.3 / 14.3	16.8 / 15.8 / 16.3	15.8	16.1 / 15.8 / 15.25	<p>The April 2009 Alliance Monthly Report was reviewed (CDP_ALL_REP_303-09-04), with figures and volumes taken up to the end of April. The report provides information confirming that dredging remains within the maximum total insitu volume, width constraints and construction depth constraints.</p> <p>The Entrance requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 (GHD 2009) where a finding of full compliance was assigned.</p> <p>Dredging has not yet been completed in many areas. The final status of the dredging will be the subject of review in future audits, where post dredging hydrographic surveys will confirm whether design depths are being achieved.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>CDP_ALL_REP_303-09-04 Alliance Monthly Report April 2009</p> <p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p>
	Great Ship Channel / layby	Sth Channel (fairway / channel / Hovell Pile)	Port Mel & W'town Channels	Yarra River Channel										
Design depth (m)	17.3 / 14.3	16.8 / 15.8 / 16.3	15.8	16.1 / 15.8 / 15.25										
	<p>Dredging must remain within the maximum total insitu volume, width constraints and construction depth constraints identified below:</p> <ul style="list-style-type: none"> » Maximum total insitu volume to be dredged is 22.92 million m³ ± 15%; 	<p>The April 2009 Alliance Monthly Report states that an insitu volume of 17.42 million m³ in total has been dredged to the end of April. The total projected insitu dredge quantity is 22.34 million m³ and is within 15% of the maximum total insitu volume of 22.92 million m³.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>CDP_ALL_REP_303-09-04 Alliance Monthly Report April 2009</p>										
	<ul style="list-style-type: none"> » Maximum insitu volume to be dredged in the Entrance is 0.55 million m³ ± 15%; and 	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable in the current audit period.</p>	Not applicable	<p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p>										
	<ul style="list-style-type: none"> » Maximum insitu volume of contaminated sediments (soft silts) to be dredged is 1.72 million m³ ± 15% (dredging volume to be finalised following pre-construction bathymetry survey), and 	<p>The April 2009 Monthly Report shows that 1.382 million m³ of contaminated sediment (silts) have been dredged to the end of April. The total projected insitu dredge volume is 1.39 million m³ and is less than the maximum total insitu volume of contaminated sediments of 1.72 million m³.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>CDP_ALL_REP_303-09-04 Alliance Monthly Report April 2009</p>										

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>» A minimum of 50% of the area to be dredged and within toe lines is to be within 0.9 m of the design depth (sands and clays) and within 1.3 m of the design depth (Entrance). This does not apply to the sand waves within South Channel;</p>	<p>The April 2009 Monthly Report states that over 50% of the area to be dredged and within toe lines is within 0.9 m of the design depth for sands and clays.</p> <p>The Entrance requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>CDP_ALL_REP_303-09-04 Alliance Monthly Report April 2009</p> <p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p>
	<p>» A minimum of 90% of the area to be dredged and within toe lines is to be within 1.8m of the design depth (19.1 m total depth) as determined following completion of dredging (Entrance only); and</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	<p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p>
	<p>» For areas to be dredged, final channel width to be no greater than 25 m outside of the Williamstown Channel, Port Melbourne Channel, and South Channel design toe lines and 15 m of the Entrance design toe line. 50% of the delivered toe line is to be within 15 m of the Williamstown Channel, Port Melbourne Channel, and South Channel design toe lines and 9 m of the Entrance design toe line. This does not apply to the sand waves within South Channel, and the north-west side of Nepean Bank (where the minimum amount to achieve a design depth of 17.3 m is to be dredged).</p>	<p>The April 2009 Monthly Report states the current channel width is no greater than 25 m outside of the, Williamstown, Port Melbourne Channel, and South Channel design toe lines. Additionally, more than 50% of the currently delivered toe lines of the Williamstown Channel, Port Melbourne Channel, and South Channel are within the 15 m design toe lines.</p> <p>The Entrance requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that compliance has been achieved with this requirement</p>	Full compliance	<p>CDP_ALL_REP_303-09-04 Alliance Monthly Report April 2009</p>
	<p>Construction zone – construction zones have been identified to limit the footprint of dredging activities. Construction areas are identified in drawings listed below.</p>		Not applicable (for information)	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>All dredging activities to take place within the construction zones. No dredging (as a subset of dredging activities) is to take place within 65 m of the outside edge of the construction zone (Port Melbourne Channel, South Channel and the Entrance only, except to the extent necessary to achieve a design depth of 17.3 m along the north-west side of Nepean Bank). This is to be confirmed through draghead tracking (in dredging mode only) and validated by bathymetry survey (where draghead tracking indicates that dredging in this area has potentially occurred).</p>	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008), and Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009) where a finding of full compliance was assigned.</p> <p>The Entrance requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 (GHD 2009) where a finding of full compliance was assigned.</p> <p>Review of further information, and in particular the Alliance Environmental Incident Report on 21 May 2009 and associated screenshots of draghead tracking and bathymetric survey indicates that there was a 1.5 minute period on 19 April 2009 when the Queen of the Netherlands, while dredging in South Channel East, dredged outside the construction zone. Both dragheads were not lifted when leaving the dredging zone boundary, with two draghead tracks extending 25 m beyond the construction zone, equating to 1.5 minutes of dredging time.</p> <p>The Alliance Environmental Incident Report identifies that corrective action was undertaken. This followed PoMC's detection and validation of the non-compliance by bathymetric survey. Steps outlined in EMP Table 6 "Notification and Reporting Requirements" were followed as indicated in email correspondence on 8 May 2009 and the non-compliance was reported to regulatory agencies. The Alliance Environmental Incident Report identifies the cause of the non-compliance as human error caused by miscommunication between vessel crew members and identifies remedies to be implemented to prevent a future occurrence. Corrective actions identified in the Alliance Environmental Incident Report have been executed and the incident has been closed-out.</p> <p>The auditor concludes that the requirement was not fully complied with, and that the partial non-compliance was minor.</p>	<p>Minor non-compliance</p>	<p>CDP_ALL_REP_303-09-04 Alliance Monthly Report April 2009</p> <p>Tracking data and daily trip reports: Prins der Nederlanden (1 to 8 April 2009); Cornelis Zanen (24 to 30 June 2008); Queen of the Netherlands (8 to 14 February and 16 to 22 September 2008)</p> <p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p> <p>Alliance Environmental Incident Report CDP_ALL_FRM_801 and associated screenshot of draghead tracking and bathymetric survey (21 May 2009) and associated email correspondence (8 May 2009)</p> <p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Dredging equipment and associated support vessels will be required to manoeuvre outside construction areas, including transit between construction areas.</p>	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Additional tracking data supports that dredging equipment manoeuvred outside of construction zones for purposes such as sailing to and from DMGs, bunkering, anchoring or moving out of shipping channels to allow passing by other vessels.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>Tracking data and daily trip reports: Prins der Nederlanden (1 to 8 April 2009); Cornelis Zanen (24 to 30 June 2008); Queen of the Netherlands (8 to 14 February and 16 to 22 September 2008)</p>
	<p>Toe lines and construction zones are identified on:</p> <ul style="list-style-type: none"> » Drawing 35328 – Channel Deepening Project – Port of Melbourne – Coastal Management Consent Scope of Works; » Drawing 35329 – Channel Deepening Project – Port of Melbourne – South – Coastal Management Consent Scope of Works; » Drawing 35330 – Channel Deepening Project – Port of Melbourne – North – Coastal Management Consent Scope of Works; » Drawing 35331 – Channel Deepening Project – Port Phillip Entrance – South Channel – Coastal Management Consent Scope of Works; » Drawing 35332 – Channel Deepening Project – Port Phillip Entrance – South Channel – Coastal Management Consent Scope of Works; » Drawing 35333 – Channel Deepening Project – South Channel – West - Coastal Management Consent Scope of Works; » Drawing 35334 – Channel Deepening Project – South Channel – East - Coastal Management Consent Scope of Works; » Drawing CDP-ENV-50254 – Construction Areas – Heritage significance. <p>(Drawings are included in Annexure 7)</p>		<p>Not applicable (for information)</p>	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Dredging to be undertaken in accordance with EMP Method Statement for Dredging works North – Contaminated (CDP_ALL_MS_408).</p>	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009) where a finding of full compliance was assigned.</p> <p>Compliance for this PDS requires compliance with the following EMP PDSs:</p> <ul style="list-style-type: none"> » 27 – determined to be in full compliance; » 28 – determined to be in full compliance; » 29 – determined to be in full compliance; » 30 – determined to be in full compliance; and » 33 – determined to be in full compliance. <p>The EMP Method Statement for Dredging works North – Contaminated also requires compliance with EMP Table 6. Completion of dredging of contaminated sediments within an area requires reporting or notification to the designated Government agencies within 12 hours of determining that requirements for commencement of dredging of underlying uncontaminated material with that area have been met.</p> <p>Comparison of the reporting and notification dates with the dates that the final surveys were undertaken (attached to PoMC's targeted CDP EMP Audit Reports) supports the conclusion that this requirement is being met. Furthermore the PoMC Bund Notification Letters sent to agencies contain the date and time of "fulfilment" of dredge requirement. The accompanying email confirms this notification was sent within the specified 12-hour period.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>8 CDP Targeted EMP Audit Reports (dating from 3 October 2008 to 29 April 2009) and associated surveys and email correspondence.</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity No. 2 Audit Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence																														
	<p>Tracking of equipment activity as follows:</p> <table border="1" data-bbox="286 328 826 978"> <thead> <tr> <th data-bbox="286 328 376 395">Equipment</th> <th data-bbox="376 328 427 395">Time</th> <th data-bbox="427 328 488 395">Date</th> <th data-bbox="488 328 712 395">Co-ordinates</th> <th data-bbox="712 328 826 395">Other</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 395 376 571">TSHD</td> <td data-bbox="376 395 427 571">P</td> <td data-bbox="427 395 488 571">P</td> <td data-bbox="488 395 712 571">Dredging - x,y,z (northing, easting, depth to Chart Datum) Sailing & placement of dredged material – x,y,z (northing, easting)</td> <td data-bbox="712 395 826 571">Status of cycle (i.e. dredging, sailing, placement of dredged material)</td> </tr> <tr> <td data-bbox="286 571 376 746">Backhoe Dredge & Grab Dredge (contam material only)</td> <td data-bbox="376 571 427 746">P</td> <td data-bbox="427 571 488 746">P</td> <td data-bbox="488 571 712 746">x,y,z bucket (northing, easting, depth to Chart Datum)</td> <td data-bbox="712 571 826 746">Nil</td> </tr> <tr> <td data-bbox="286 746 376 842">Split hopper barges</td> <td data-bbox="376 746 427 842">P</td> <td data-bbox="427 746 488 842">P</td> <td data-bbox="488 746 712 842">x,y (northing, easting)</td> <td data-bbox="712 746 826 842">Nil</td> </tr> <tr> <td data-bbox="286 842 376 906">Spreader pontoon</td> <td data-bbox="376 842 427 906">P</td> <td data-bbox="427 842 488 906">P</td> <td data-bbox="488 842 712 906">x,y (northing, easting)</td> <td data-bbox="712 842 826 906">Nil</td> </tr> <tr> <td data-bbox="286 906 376 978">Diffuser pontoon</td> <td data-bbox="376 906 427 978">P</td> <td data-bbox="427 906 488 978">P</td> <td data-bbox="488 906 712 978">x,y,z (northing, easting depth to Chart Datum)</td> <td data-bbox="712 906 826 978">Nil</td> </tr> </tbody> </table>	Equipment	Time	Date	Co-ordinates	Other	TSHD	P	P	Dredging - x,y,z (northing, easting, depth to Chart Datum) Sailing & placement of dredged material – x,y,z (northing, easting)	Status of cycle (i.e. dredging, sailing, placement of dredged material)	Backhoe Dredge & Grab Dredge (contam material only)	P	P	x,y,z bucket (northing, easting, depth to Chart Datum)	Nil	Split hopper barges	P	P	x,y (northing, easting)	Nil	Spreader pontoon	P	P	x,y (northing, easting)	Nil	Diffuser pontoon	P	P	x,y,z (northing, easting depth to Chart Datum)	Nil	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Additional tracking data confirms that dredging equipment is still being tracked as outlined.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>Tracking data and daily trip reports: Prins der Nederlanden (1 to 8 April 2009); Cornelis Zanen (24 to 30 June 2008); Queen of the Netherlands (8 to 14 February and 16 to 22 September 2008)</p>
Equipment	Time	Date	Co-ordinates	Other																														
TSHD	P	P	Dredging - x,y,z (northing, easting, depth to Chart Datum) Sailing & placement of dredged material – x,y,z (northing, easting)	Status of cycle (i.e. dredging, sailing, placement of dredged material)																														
Backhoe Dredge & Grab Dredge (contam material only)	P	P	x,y,z bucket (northing, easting, depth to Chart Datum)	Nil																														
Split hopper barges	P	P	x,y (northing, easting)	Nil																														
Spreader pontoon	P	P	x,y (northing, easting)	Nil																														
Diffuser pontoon	P	P	x,y,z (northing, easting depth to Chart Datum)	Nil																														
	Use of green valve at all times when using overflow.	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Additional daily trip reports for TSHDs confirm that the green valve is being used during overflow operation. This is evidenced by a row on each report under the miscellaneous heading entitled "Turbidity Operational (Y/N)". In all cases this corresponded with "Y" in each trip column, thus indicating that the green valve was operational at all times when using overflow.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>Daily trip reports: Prins der Nederlanden (1 to 8 April 2009); Cornelis Zanen (24 to 30 June 2008); Queen of the Netherlands (8 to 14 February and 16 to 22 September 2008)</p>																														

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>The overflow valve of the TSHD will be closed when sailing.</p>	<p>This requirement was assessed in detail during the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Additional daily trip reports for TSHDs confirm that the overflow valve is closed while sailing. This is evidenced by a row on each report under the miscellaneous heading entitled "Turbidity during sailing (O/C)". In all cases this corresponded with "C" in each trip column, thus indicating that the overflow valve was closed when sailing.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>Daily trip reports: Prins der Nederlanden (1 to 8 April 2009); Cornelis Zanen (24 to 30 June 2008); Queen of the Netherlands (8 to 14 February and 16 to 22 September 2008)</p>
<p>25.</p>	<p>Management of pipeline between TSHD and spreader or diffuser pontoon during transfer of sediments</p> <p>Pipeline will be lit at night.</p>	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Review of EMP Dredge Schedules notes that dredging of unconsolidated contaminated sediments (silts) by the TSHD concluded on 5 October 2008, therefore sufficient conclusions can be drawn from the previous audit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>EMP Dredging Schedules (All revisions and updates up to 1 May 2009).</p>
	<p>Support vessels will maintain a watch for non-project vessels.</p>	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Review of EMP Dredge Schedules notes that dredging of unconsolidated contaminated sediments (silts) by the TSHD concluded on 5 October 2008, therefore sufficient conclusions can be drawn from the previous audit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>EMP Dredging Schedules (All revisions and updates up to 1 May 2009).</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Pumping will cease if an unauthorised vessel encroaches within 100 m of the pipeline, or if the integrity of the pipeline is compromised.</p>	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Additionally, PoMC have advised that no incidents have occurred to date. Review of Alliance Incident / Hazard Report Forms dated up to 30 April 2009 confirms this.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>Alliance Incident / Hazard Report Forms dated up to 30 April 2009 and Summary of Incidents.doc</p>
<p>26.</p>	<p>Third party infrastructure</p> <p>The process described in Annexure 6 will be followed for the management of sulphides, ammonium, TSS and turbidity in the Newport Power Station cooling water intake.</p>	<p>Review of monitoring data for the Newport Power Station cooling water intake document (CDP_ALL_REP_802 Ecogen Lab Results Summary_2.pdf), reveals that the Newport Power Station water intake control levels were exceeded once on 6 February 2009.</p> <p>A transmittal to Ecogen (ALL-3P-T-297) and subsequent email correspondence between PoMC/Alliance and the Newport Power Station (Ecogen 100mu TSS exceedance email dated 10 March 2009) indicates that the "slight exceedance" was discussed with Newport Power Station and the issue resolved, before being formally submitted in the 10 March transmittal. It is the view of the auditors that the management process in Annexure 6 has been followed.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>(CDP_ALL_REP_802 Ecogen Lab Results Summary_2.pdf)</p> <p>Transmittal to Ecogen (ALL-3P-T-297)</p> <p>Email correspondence between PoMC/Alliance and the Newport Power Station (Ecogen 100mu TSS exceedance email dated 10 March 2009)</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
27.	<p>Dredging of unconsolidated contaminated sediment</p> <p>Contaminated sediment exists in the Yarra River and Williamstown Channels and the southern section of the Port Melbourne Channel. Dredging of contaminated sediment to be conducted with the following equipment:</p> <ul style="list-style-type: none"> » TSHD operating in non-overflow mode with a silt draghead. » Grab dredge. » Backhoe dredge. 	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008), the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for construction of the bund (GHD 2009) and the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009), where a finding of full compliance was assigned.</p> <p>Review of the EMP Dredge Schedules notes that dredging of unconsolidated contaminated sediments (silts) by the TSHD concluded on 5 October 2008, therefore sufficient conclusions regarding dredging using the TSHD operating in non-overflow mode with a silt draghead can be drawn from previous audits.</p> <p>Review of nine PoMC CDP Targeted EMP Audit Reports (dating from 3 October 2008 to 29 April 2009) for Commencement of dredging the underlying uncontaminated material within an area indicates that the equipment used for the dredging of unconsolidated contaminated sediments (silts) in the Yarra River and Williamstown Channels and the southern section of Port of Melbourne Channel, was consistent with previous audit findings (GHD 2009). Equipment used comprised the Cornelis Zanen (TSHD), Goomai (Grab Dredge) and Storcken (Backhoe Dredge); no other equipment has been listed as being used in audit period.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>8 CDP Targeted EMP Audit Reports - Commencement of dredging the underlying uncontaminated material within an area (dating from 3 October 2008 to 29 April 2009)</p> <p>EMP Dredging Schedules (All revisions and updates up to 1 May 2009).</p> <p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity No. 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
28.	<p>Dredging of contaminated clays</p> <p>Contaminated clays in the two locations within Appleton Dock and near Webb Dock (identified in Annexure 7, Drawing CDP-Env-50383), and batter walls will be dredged with the following equipment to design depth:</p> <ul style="list-style-type: none"> » TSHD operating in non-overflow mode with a clay draghead. » Grab dredge. » Backhoe dredge. 	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008), the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for construction of the bund (GHD 2009) and the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009), where a finding of full compliance was assigned.</p> <p>Review of the EMP dredge schedules for both the TSHDs and the Goomai/Storken/Ain d'Schalut, confirm that the Cornelis Zanen (TSHD), Goomai (Grab Dredge) and Storken (Backhoe Dredge) were used to dredge contaminated clays.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>EMP Dredging Schedules (All revisions and updates up to 1 May 2009).</p> <p>EMP Dredge Schedule for Goomai, Storken and Ain d'Schalut (FINAL Rev2Upd4 CDP Schedule St-Go-Ai 14 May 2009.pdf)</p> <p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards, December 2008</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
29.	<p>Monitoring removal of contaminated sediments – TSHD</p> <p>The following process is to be used to determine the transition from dredging contaminated to uncontaminated material within the Yarra River and Williamstown Channels. This process applies to the TSHD.</p> <ol style="list-style-type: none"> 1. The thickness of the contaminated sediments will be determined based on: <ol style="list-style-type: none"> a. pre-dredge hydrographic survey. b. estimated top of underlying uncontaminated clay, based on the combined interpretation of boreholes and seismic investigation. 	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008), the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for construction of the bund (GHD 2009) and the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009), where a finding of full compliance was assigned.</p> <p>Review of seven CDP Targeted EMP Audit Reports (dating from 3 October 2008 to 9 January 2009) for Commencement of dredging the underlying uncontaminated material within an area indicates that the process used to determine the transition from dredging contaminated to uncontaminated material within the Yarra River and Williamstown Channels using the TSHD, remains consistent with previous audit findings.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>6 CDP Targeted EMP Audit Reports - Commencement of dredging the underlying uncontaminated material within an area (dating from 3 October 2008 to 9 January 2009)</p> <p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009</p>
	<ol style="list-style-type: none"> 2. Nominate the number of passes of the TSHD draghead required to dredge the full depth of unconsolidated contaminated sediments. This is to be based on the excavation thickness of a single pass of the TSHD draghead. Part passes will be rounded up to the nearest whole number. 	As above	Full compliance	
	<ol style="list-style-type: none"> 3. Identify areas of similar depth that can be practicably dredged with the same number of passes. This means localised shallower or deeper pockets of contaminated sediment that are too small to practicably be dredged separately will be incorporated into adjoining areas. 	As above	Full compliance	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	4. Apply a grid over each area for comparison of nominated and completed draghead passes. The grid cell size will be determined based on draghead width and draghead position accuracy.	As above	Full compliance	
	5. Record x,y,z coordinates of draghead tracks while dredging.	As above	Full compliance	
	6. Calculate the number of draghead passes recorded in each grid cell within an area.	As above	Full compliance	
	7. Dredging of underlying uncontaminated material will only commence when no fewer than the nominated number of dredging passes (minimum of 1 pass) has been recorded in each grid cell within an area.	As above	Full compliance	
30.	<p>Monitoring removal of contaminated sediments – backhoe and grab dredges</p> <p>The following process is to be used to determine the transition from dredging contaminated to uncontaminated material within the Yarra River and Williamstown Channels. This process applies to the backhoe/grab.</p> <ol style="list-style-type: none"> 1. The thickness of the contaminated sediments will be determined based on: <ol style="list-style-type: none"> a. pre-dredge hydrographic survey b. estimated top of underlying uncontaminated clay, based on known maintained levels. 	<p>This requirement was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008), the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for construction of the bund (GHD 2009) and the Channel Deepening Independent Audit Activity No. 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009), where a finding of full compliance was assigned.</p> <p>Review of nine CDP Targeted EMP Audit Reports (dating from 3 October 2008 to 29 April 2009) for Commencement of dredging the underlying uncontaminated material within an area indicates that the process used to determine the transition from dredging contaminated to uncontaminated material within the Yarra River and Williamstown Channels using backhoe/grab dredges, remains consistent with previous audit findings.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>8 CDP Targeted EMP Audit Reports - Commencement of dredging the underlying uncontaminated material within an area (dating from 3 October 2008 to 29 April 2009)</p> <p>GHD 2008, Channel Deepening Independent Audit Activity No. 1 Audit No. 1 - Audit of Channel Deepening Project EMP Project Delivery Standards., December 2008</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	2. Apply a grid over the area for determination of area coverage. The grid cell size will be determined based on backhoe/grab width and position accuracy.	As above	Full compliance	
	3. Remove full thickness of contaminated sediments to top of uncontaminated clay.	As above	Full compliance	
	4. Record x,y,z coordinates of backhoe or grab.	As above	Full compliance	
	5. Dredging of the underlying uncontaminated material will only commence when removal of contaminated sediment to the full thickness has been recorded in each grid cell within an area.	As above	Full compliance	

Table 6 PDSs 31 – 33: Dredging Schedule: Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
31	<p>Dredging schedule</p> <p>The initial dredging schedule to be submitted to DSE before implementation.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2008, Channel Deepening Project Independent Audit – Activity 1 Audit 1 for the Office of the Environmental Monitor, December 2008
	<p>Subsequent revisions of the dredging schedule and monthly updates will be submitted to DSE within 2 working days of approval by CDP management.</p>	<p>Review of the Dredge Schedules, PoMC Matter for Decision documents as well as Notification to Agencies letters and email records indicates that subsequent revisions of the dredging schedule and monthly updates were submitted to DSE within 2 days of approval by CDP management. Approval by CDP management can be seen in the form of signatures on the Matter for Decision documents and as a name in the “approved” column on revisions of the EMP Dredge Schedules. All dates in Notification to Agency letters and emails correspondence were within 2 working days of approval dates by CDP management.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>EMP Dredging Schedules (All revisions and updates up to May 2009).</p> <p>Matter for Decision (documents from 1 October 2008 to 1 May 2009).</p> <p>Notification to Agencies letters and email records (to various DSE contacts up to 1 May 2009).</p>
	<p>Dredging to take place as summarised in Table 16 ‘Dredging Summary’.</p>	<p>The EMP Table 16 ‘Dredging Summary’ contains requirements for ‘indicative dredging technology’, ‘indicative dredging volumes’, ‘material description’, ‘dredged material ground’, ‘management requirements’ and ‘disposal method’ for each dredge area.</p> <p>This requirement has been completed and was assessed in previous targeted audit reports relating to various dredge activities:</p> <ul style="list-style-type: none"> » Yarra River and Hobsons Bay and North of the Bay: 3 targeted contaminated sediments reports (GHD 2009): Targeted audit of EMP requirements for construction of the bund, Targeted audit of EMP requirements for management of contaminated sediments, and the Targeted audit of EMP requirements for sand capping. » South of the Bay: Focused audit of dredging in the South Channel & mechanisms to protect seagrass (GHD 2009). » The Entrance: Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009). <p>Additional data related to dredging indicates that dredging took place in accordance with Table 16; including tracking data, April Alliance Monthly Report and the May 2009 dredge schedule that indicate the location of the dredging, technology and DMG.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>EMP Dredging Schedules (All revisions and updates up to May 2009).</p> <p>Alliance Monthly Report April 2009 (CDP_ALL_REP_303-09-04)</p> <p>Tracking data and daily trip reports: Prins der Nederlanden (1 to 8 April 2009); Cornelis Zanen (24 to 30 June 2008); Queen of the Netherlands (8 to 14 February and 16 to 22 September 2008)</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
				<p>requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping, for the Office of the Environmental Monitor, August 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Focused audit of dredging in the South Channel, for the Office of the Environmental Monitor, June 2009</p> <p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p>
	<p>Dredging schedule to include:</p> <ul style="list-style-type: none"> » dredging technology. » dredging configuration (i.e. number and location of dredges, use of interval dredging). » timing, duration and sequence of dredging in Project Areas. 	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1 Audit 1 (GHD 2008) where a finding of full compliance was assigned.</p> <p>Review of the latest revisions of the EMP Dredging Schedule indicates that the revisions of the schedules include dredging technology, dredging configuration, timing, duration and sequence of dredging in the project areas.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>All revisions of EMP Dredging Schedules (All revisions and updates up to 1 May 2009).</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1 Audit 1 for the Office of the Environmental Monitor, December 2008</p>
	<p>Capping layer to be placed around 140 days after completion of the hydraulic placement of contaminated sediment to allow the sediment sufficient time to gain enough strength to support the capping layer.</p>	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	<p>GHD 2008, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping, for the Office of the Environmental Monitor, August 2009</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	Capping will be completed before 31 December 2009.	This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping (GHD 2009) where a finding of full compliance was assigned. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	GHD 2008, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping, for the Office of the Environmental Monitor, August 2009
32.	Consideration of environmental limits Revisions to the dredging schedule will be assessed to confirm ability to comply with airborne noise and turbidity environmental limits.	This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 1 Audit 1 (GHD 2008) where a finding of full compliance was assigned. Review of the latest Matter for Decision documents for revisions and updates to the dredging schedule confirms that all revisions to 1 May 2009 have been assessed to confirm ability to comply with airborne noise and turbidity environmental limits. The auditor concludes that compliance has been achieved with this requirement.	Full compliance	EMP Dredging Schedules (All revisions and updates up to 1 May 2009). Matter for Decision (documents to 1 May 2009) GHD 2008, Channel Deepening Project Independent Audit – Activity 1 Audit 1 for the Office of the Environmental Monitor, December 2008
33.	Consideration of seasonal sensitivities No dredging permitted between 18 December and 31 January in the South of bay to mitigate impacts on the recreation and tourism activities during the holiday season.	Review of the Dredging Schedule Revision 2 Update 10 indicates that no dredging occurred between 18 December 2008 and 31 January 2009 in the South of Port Phillip Bay. This was also confirmed by the following PoMC media releases: <ul style="list-style-type: none"> » <i>Dredging vessels to leave Melbourne for reconstruction and routine maintenance</i>, PoMC, 15 October 2008 » <i>Port moves to complete Port Phillip Bay channel deepening early</i>, PoMC, 22 December 2008 » <i>Port welcomes back 'new-look' Queen of the Netherlands</i>, PoMC, 7 April 2009 These media releases indicate that none of the three TSHDs were dredging in the south of Port Phillip Bay during the period 18 December 2008 to 3 January 2009. The auditor concludes that compliance has been achieved with this requirement.	Full compliance	Dredging Schedule Update 2 Revision 10 <i>Dredging vessels to leave Melbourne for reconstruction and routine maintenance</i> , Port of Melbourne Corporation, 15 October 2008 <i>Port moves to complete Port Phillip Bay channel deepening early</i> , PoMC, 22 December 2008 <i>Port welcomes back 'new-look' Queen of the Netherlands</i> , PoMC, 7 April 2009

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	Restrict dredging in Williamstown Channel (within Hobsons Bay) to less than 50% of key anchovy spawning period from 1 December to 28 February. A two weeks on/two week off sequence will be applied to this period.	<p>Review of the Dredging Schedule Revision 2 Update 10 indicates that dredging was restricted in Williamstown Channel to less than 50% of the key anchovy spawning period from 1 December 2008 to 28 February 2009. The schedule indicates only 12 days of dredging occurred in Hobsons Bay, out of the 59 day period, with these days broken into smaller blocks.</p> <p>Review of CDP Weekly Turbidity Monitoring Results over the audit period also confirmed that the number of days dredged was within the allowable limit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Dredging Schedule Update 2 Revision 10</p> <p>CDP Weekly Turbidity Monitoring Results (1 October 2008 to 1 May 2009)</p>
	No dredging using the TSHD in the Yarra River or Williamstown Channels between 15 October to 30 November to protect migration of the endangered Australian grayling species (relates to EPBC Act / NES matters – refer to Annexure 8).	<p>Review of the Dredging Schedule Revision 2 Update 10 indicates that no dredging using the TSHD in the Yarra River or Williamstown Channels occurred between 15 October and 30 November 2008. The schedule indicates TSHD dredging stopped in those areas on 12 October and commenced again on 16 December 2008.</p> <p>Review of CDP Weekly Turbidity Monitoring Results over the audit period also confirmed that no dredging using the TSHD in the Yarra River or Williamstown Channels was undertaken between 15 October and 30 November 2008.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Dredging Schedule Update 2 Revision 10</p> <p>CDP Weekly Turbidity Monitoring Results (1 October 2008 to 1 May 2009)</p>
	Dredging using the TSHD in Yarra River between 1 April and 31 July restricted to no more than two calendar months or equivalent in days to protect Australian grayling larval drift.	<p>This requirement was assessed in detail during the <i>Channel Deepening Independent Audit Activity No. 1 Audit No. (GHD 2008)</i>, to cover the 1 April to 31 July 2008 period, and found to be fully compliant.</p> <p>Review of the Dredging Schedule Revision 2 Update 10 indicates that dredging using the TSHD in the Yarra River between 1 April and 31 July 2009 was restricted to no more than two calendar months (or equivalent in days). The schedule indicates the TSHD dredged in the Yarra River a total of 58 days, spread over numerous smaller blocks, in the 122 day period. This is less than the sum of two months, in equivalent days, during the period.</p> <p>Review of CDP Weekly Turbidity Monitoring Results over the audit period also confirmed that the number of days dredged was well within the allowable limit.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Dredging Schedule Update 2 Revision 10</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1 Audit 1 for the Office of the Environmental Monitor, December 2008</p> <p>CDP Weekly Turbidity Monitoring Results (1 October 2008 to 1 May 2009)</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>In preparing the dredging schedule, consideration will be given to seasonal sensitivities and preferred seasons identified in Table 17 'Key Seasonal Sensitivities and Preferred Seasons'. The decision process, including how seasonal sensitivities were considered, will be documented.</p>	<p>This requirement was assessed in detail during the Channel Deepening Independent Audit Activity No. 1 Audit No. 1 (GHD 2008) and found to be fully compliant.</p> <p>The revisions and updates of the EMP Dredging Schedule and PoMC Matter for Decision documents from 1 October 2008 up to 1 May 2009 provide information that indicates that in preparing the dredge schedule, consideration was given to seasonal sensitivities and preferred seasons as identified in EMP Table 17 'Key Seasonal Sensitivities and Preferred Seasons'.</p> <p>The EMP Dredge Schedule includes information on <i>"Dredging Constraints"</i> in the section dealing with the time schedule. A table and legend entitled <i>"Environmental and Social Preferences"</i> is also presented, indicating preferred dredging periods in each area and any non-dredging or dredging restricted periods (as indicated in the first 4 dot points of this PDS). The Schedule also notes that <i>"Environmental limits and seasonal sensitivities have been considered during the development of the EMP Dredging Schedule"</i>.</p> <p>The information provided indicates that consideration was also given to seasonal activities for changes in the dredging schedule. The Matter for Decision documents include a Table indicating the <i>"Status of EMP Dredging Schedule"</i> against the <i>"EMP Requirements"</i> as well as continually updated schedule changes to reflect EMP Table 17 requirements.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	<p>Full compliance</p>	<p>EMP Table 17</p> <p>EMP Dredging Schedules (All revisions and updates up to 1 May 2009).</p> <p>Matter for Decision (documents to 1 May 2009)</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1 Audit 1 for the Office of the Environmental Monitor, December 2008</p>

Table 7 PDSs 34 – 39: Dredged Material Management - Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
34.	<p>Dredged material placement</p> <p>DMGs – all dredged material placement activities to take place within the specified DMGs (including associated construction areas) set out in:</p> <ul style="list-style-type: none"> » Drawing 35328 – Channel Deepening Project – Port of Melbourne – Coastal Management Consent Scope of Works » Drawing 35331 – Channel Deepening Project – Port Phillip Entrance – South Channel – Coastal Management Consent Scope of Works <p>(Drawings are included in Annexure 7)</p>	<p>This requirement has been assessed in each of the GHD Channel Deepening Project Independent Audits (2008 – 2009), where a finding of full compliance has been assigned. Information reviewed during the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund (2009), Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for management of contaminated sediments (GHD 2009) and Channel Deepening Project Independent Audit – Activity 2 Focused audit of dredging in the South Channel (GHD 2009) indicates compliance with this requirement during the current audit period.</p> <p>Dredge material placement in the extension bund will be audited in the next audit of the EMP.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for management of contaminated sediments, for the Office of the Environmental Monitor, February 2009</p> <p>GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Focused audit of dredging in the South Channel, for the Office of the Environmental Monitor, June 2009</p>
	Dredged material placement – All dredged material to be placed in accordance with Table 16 'Dredging Summary'.	As above	Full compliance	
	Dredged material placement including capping – to be undertaken in accordance with EMP Method Statement for material placement in PoM DMG (CDP_ALL_MS_410).	As above	Full compliance	
	Dredging and disposal locations to be recorded as per tracking of equipment table (refer to Table 11 – Dredging and plume PDS).	As above	Full compliance	
	Volumes are to be calculated from hydrographic survey data.	As above	Full compliance	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	Dredged material placement will not commence if a whale is sighted within 300 m of the TSHD placing material into a DMG. If a whale is sighted, placement can commence if the whale has been seen to move beyond 300m, or has not been sighted within 300m for at least 15 minutes.	Review of cetacean logs (Vessel Cetacean Logs – 1 Oct 08 – 30 April 09.pdf) provided for the audit period indicates that there were no whale sightings within 300 m of a TSHD during material placement at a DMG. The auditor concludes that compliance has been achieved with this requirement.	Full compliance	Vessel Cetacean Logs – 1 Oct 08 – 30 April 09.pdf
35.	PoM DMG – bund Bunds to be constructed in accordance with design specifications (Drawings C001, C002 and C003). (Drawings are included in Annexure 7)	This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund (GHD 2009) for the main bund, where a finding of full compliance was assigned. The extension bund will be audited in the next audit of the EMP. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	GHD 2008, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009
	Bunds to be constructed using: » consolidated sediments (clays) dredged from Port Melbourne Channel.	As above	Not applicable	
	» uncontaminated clays dredged from Yarra River and Williamstown Channels (this is due to a deficit of clay from the Port Melbourne Channel).	As above	Not applicable	
	» sand from South Channel used for cleaning the TSHD hopper.	As above	Not applicable	
	» contaminated clay from Appleton Dock, near Webb Dock and batter walls. The contaminated clays will be covered with uncontaminated clays or by capping, effectively isolating the contaminated clay from the marine environment.	As above	Not applicable	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	Once the main bund (Stage 1) is constructed, the remainder of consolidated sediments (clays) will be placed in the DMG extension (Stages 3 and 4). This clay will be used to construct bunds for future maintenance requirements in accordance with design specifications.	The extension bund will be audited in the next audit of the EMP. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	
36.	<p>PoM DMG – containment of contaminated material</p> <p>Contaminated unconsolidated sediments will require dredging and disposal into the DMG prior to completing the bund. As a result, contaminated unconsolidated sediments will be placed within the partially constructed banded DMG. Therefore, before the placement of the contaminated unconsolidated sediments the following information is required:</p> <ul style="list-style-type: none"> » Confirmation that the partially constructed bund has been constructed in accordance with design specifications. 	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund (GHD 2009) for the main bund, where a finding of full compliance was assigned.</p> <p>The extension bund will be audited in the next audit of the EMP.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2008, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for construction of the bund, for the Office of the Environmental Monitor, August 2009
	<ul style="list-style-type: none"> » Confirmation of bund capacity and volume of contaminated unconsolidated sediments to be dredged. 	As above	Not applicable	
	Daily during TSHD disposal (weather permitting) and weekly during barge disposal, hydrographic surveys required during placement of contaminated sediments to monitor depth contours and confirm DMG capacity and bund freeboard.	As above	Not applicable	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
37.	<p>PoM DMG – capping</p> <p>Prior to the placement of cap material the following is required.</p> <ul style="list-style-type: none"> » Confirmation by survey that bund has been constructed in accordance with design specifications. 	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping (GHD 2009) for the capping of the main bund, where a finding of full compliance was assigned.</p> <p>Capping of contaminated sediments in the extension bund will be audited in the next audit of the EMP.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping, for the Office of the Environmental Monitor, August 2009
	<ul style="list-style-type: none"> » All contaminated material removed for all dredging management units as per Table 11 – Dredging and plume PDS. 	As above	Not applicable	
	<p>Construction of cap for PoM DMG.</p> <ul style="list-style-type: none"> » Cap material to be placed in accordance with design requirements (Refer to drawings C001, C002 and C003). 	As above	Not applicable	
	<ul style="list-style-type: none"> » Cap thickness to be confirmed by survey and/or physical testing prior to transfer to PoMC. 	As above	Not applicable	
	<p>Bottom water velocity will be measured adjacent to the PoM DMG at -15m CD. This and other data will be used to inform the placement of the capping layer around 140 days after completion of the hydraulic placement of contaminated sediment, in accordance with EMP Method Statement for material placement in PoM DMG (CDP_ALL_MS_410).</p>	<p>This requirement was assessed in the Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping (GHD 2009) for the capping of the main bund, where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Project Independent Audit – Activity 2 Targeted audit of EMP requirements for sand capping, for the Office of the Environmental Monitor, August 2009
38.	<p>PoM DMG – maintenance and inspection</p> <p>Maintenance and inspection procedures to be put in place for the long-term management of the PoM DMG and incorporated into PoMC operations management system.</p>	<p>This is a post construction requirement.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	Inspections and corrective measures to be in accordance with design specifications (Drawing C003).	This is a post construction requirement. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	
	<p>Post-construction inspections of the bund should be undertaken in general accordance with the following intervals after completion of the construction of the bund.</p> <ul style="list-style-type: none"> » 2 weeks. » 1 month. » 2 months. » 4 months. » 8 months. » 12 months. » At 12-monthly intervals for the first five years after completion. » At 24-monthly intervals thereafter. » Within 2 weeks of a storm event (a 1 in a 100 year event) or seismic event (greater than 4.5ML on the Richter Scale), subject to safety considerations due to weather. 	<p>This is a post construction requirement.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Post construction inspections of representative areas of the capping should be undertaken in general accordance with the following intervals after completion of the capping.</p> <ul style="list-style-type: none"> » 1 month. » 4 months. » 12 months. » At 12-monthly intervals for the first five years after completion. » At 24-monthly intervals thereafter » Within 2 weeks of a storm event (a 1 in a 100 year event) or seismic event (greater than 4.5ML on the Richter Scale), subject to safety considerations due to weather. 	<p>This is a post construction requirement.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	
	<p>Undertake a marine pest survey of PoM DMG within 3 years of completion of project.</p>	<p>This is a post construction requirement.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	
39.	<p>SE DMG</p> <p>Minimum 0.5 m sand material to be placed over Entrance rock material.</p>	<p>At the time of this audit, dredging in South Channel is continuing.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	
	<p>Dredged material to be placed to maximum -15 m below Chart Datum.</p>	<p>At the time of this audit, dredging in South Channel is continuing.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	
	<p>Once the dredged materials have been placed in DMG, survey to confirm materials have been placed in accordance with requirements prior to transfer to PoMC.</p>	<p>At the time of this audit, dredging in South Channel is continuing.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	

Table 8 PDSs 40 – 50: Entrance Dredging - Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
40.	<p>Draghead design</p> <p>The draghead will be designed to minimise rockfall in accordance with the recommendations contained within Report number Z4117, <i>Physical Model Experiments with Ripper Dragheads in Rock. Experimental research program on reduction of spill WL</i> Delft Hydraulics, October 2006.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
	<p>An independent peer reviewer is to verify:</p> <ul style="list-style-type: none"> » that the draghead design is in accordance with the above mentioned report. <p>And:</p> <ul style="list-style-type: none"> » that the draghead has been constructed in accordance with the design. 	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
41.	<p>Dredging in the Entrance</p> <p>All dredging to be conducted with the ripper draghead.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
	<p>When dredging towards the canyon, the draghead to be lifted so that no rock will be removed within 5 metres of the canyon edge, as defined in EMP Method Statement for Dredging works South – Entrance (CDP_ALL_MS_409).</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
	<p>When dredging the canyon edge itself, dredging to be conducted from the canyon towards the plateau.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence															
42.	<p>Clean up in the Entrance</p> <p>All clean up activities to be conducted with the clean up draghead. This may be either the ripper draghead with the teeth shielded or else a separate draghead.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009															
	<p>Clean-up to be undertaken in accordance with EMP Method Statement for Dredging works South – Entrance (CDP_ALL_MS_409). Weather forecasts will be obtained from a reputable service provider.</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a minor non-compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009															
	<p>Conduct removal of loose material in accordance with the table below. This will result in approximately twenty programmed clean up events. After clean up, dredging may recommence.</p> <table border="1" data-bbox="280 758 862 1181"> <thead> <tr> <th>Quantity Dredged (Q)</th> <th>Hs predicted <3 m</th> <th>Hs predicted > 3 m</th> </tr> </thead> <tbody> <tr> <td>< 10,000 m³</td> <td>Continue dredging</td> <td>Continue dredging</td> </tr> <tr> <td>< 10,000 m³ < Q < 24,000 m³</td> <td>Continue dredging</td> <td>Clean-up for 8 to 18 hours depending on quantity dredged</td> </tr> <tr> <td>~ 24,000 m³</td> <td>Clean-up for at least 18 hours</td> <td>Clean-up for at least 18 hours</td> </tr> <tr> <td colspan="3">Note: Q = quantity dredged, Hs = significant wave height</td> </tr> </tbody> </table>	Quantity Dredged (Q)	Hs predicted <3 m	Hs predicted > 3 m	< 10,000 m ³	Continue dredging	Continue dredging	< 10,000 m ³ < Q < 24,000 m ³	Continue dredging	Clean-up for 8 to 18 hours depending on quantity dredged	~ 24,000 m ³	Clean-up for at least 18 hours	Clean-up for at least 18 hours	Note: Q = quantity dredged, Hs = significant wave height			<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
Quantity Dredged (Q)	Hs predicted <3 m	Hs predicted > 3 m																	
< 10,000 m ³	Continue dredging	Continue dredging																	
< 10,000 m ³ < Q < 24,000 m ³	Continue dredging	Clean-up for 8 to 18 hours depending on quantity dredged																	
~ 24,000 m ³	Clean-up for at least 18 hours	Clean-up for at least 18 hours																	
Note: Q = quantity dredged, Hs = significant wave height																			

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>In addition to the programmed clean-up events, conduct other clean-up events:</p> <ul style="list-style-type: none"> » prior to removal of the ridge along the north-west side of Nepean Bank as identified in EMP Method Statement for Dredging works South – Entrance (CDP_ALL_MS_409). » once design profile has been achieved. » in any areas identified at Management Review meetings (e.g. areas identified through towed video survey). 	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
	<p>The following process is to be used to monitor spatial extent of the clean up events. This process applies to each dredge – clean up cycle.</p> <ol style="list-style-type: none"> 1. Apply a grid over the dredging area for comparison of draghead passes (dredging) and draghead passes (clean up). 2. The x,y,z coordinates of the draghead tracks will be recorded during dredging and clean up. 3. Clean up is to continue until clean up has occurred in no fewer than 90% of the grid cells, which were dredged during the cycle. 	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a minor non-compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence															
	<p>If the time and/ or spatial coverage clean-up requirements described above are not achieved as a result of safety considerations due to unfavourable metocean conditions, then the following apply:</p> <table border="1" data-bbox="286 403 887 1050"> <thead> <tr> <th colspan="2" data-bbox="286 403 551 451"></th> <th colspan="2" data-bbox="562 403 887 451">Spatial extent of clean up</th> </tr> <tr> <th colspan="2" data-bbox="286 459 551 507"></th> <th data-bbox="562 459 719 507">≥80%</th> <th data-bbox="730 459 887 507"><80%</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 515 416 778" rowspan="2">Clean up time remaining</td> <td data-bbox="421 515 551 778">≤ 1 hour clean up remaining</td> <td data-bbox="562 515 719 778">No further clean-up required. Dredging may recommence when metocean conditions permit</td> <td data-bbox="730 515 887 778">Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.</td> </tr> <tr> <td data-bbox="421 786 551 1050">>1 hour clean up remaining</td> <td data-bbox="562 786 719 1050">Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.</td> <td data-bbox="730 786 887 1050">Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.</td> </tr> </tbody> </table>			Spatial extent of clean up				≥80%	<80%	Clean up time remaining	≤ 1 hour clean up remaining	No further clean-up required. Dredging may recommence when metocean conditions permit	Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.	>1 hour clean up remaining	Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.	Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
		Spatial extent of clean up																	
		≥80%	<80%																
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	>1 hour clean up remaining	Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.	Clean up is to resume when metocean conditions permit until the clean up requirements described above are achieved.																
43.	<p>North-west side of Nepean Bank</p> <p>Along the north-west side of Nepean Bank (i.e. in the direct vicinity of the Point Lonsdale section of the Port Phillip Heads Marine National Park) a ridge at least 5 m wide along the north-west edge of the bank will be left in place until the remaining area has been dredged to the required design depth (as shown in drawing CDP-Env-50439). (Drawings are included in Annexure 7), and as identified in EMP Method Statement for Dredging works South – Entrance (CDP_ALL_MS_409).</p>	<p>This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009															

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	The north-west edge of Nepean Bank to be dredged last in the dredging schedule for Nepean Bank.	This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	
44.	Fish modelling Modelling of dispersal of King George whiting larvae in the RL - 22 m scenario. Report to be prepared summarising the modelling outcomes and comparison with the existing model.	This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
45.	Pre-construction plateau inspection Conduct bathymetric survey and visual monitoring of scour holes at 3 monthly intervals in the trial dredge area and immediately adjacent areas of the Great Ship channel until the start of dredging. Following final survey, report to be prepared containing assessment of rate of scour and accretion and the mobility of material, the maximum potential depth of scour and the potential extent of lateral erosion in the scour holes. The assessment to include the consideration of hydrodynamic data records. Report to be available during construction.	This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
46.	Construction plateau inspection 4-6 weeks following commencement of dredging, and subject to weather conditions and dredge schedule, conduct towed video survey of dredged and adjacent areas. Results to be considered at CDP Management review meeting.	This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009
	Commence towed video survey at Rip Bank and Nepean Bank dredge plateaus to assess existence of loose rock as soon as practicable once design profile has been achieved and final clean up has been completed. Results of video to be reviewed to determine requirement for any additional clean up. Implement management action as determined. Report to be prepared following the towed video survey and additional clean up (if required).	This requirement has been completed and was assessed in the Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay (GHD 2009) where a finding of full compliance was assigned. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable	GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
47.	<p>Post-construction plateau inspection</p> <p>Undertake towed video survey at Rip Bank and Nepean Bank dredge plateaus to assess existence of loose rock within 3 months following completion of dredging in the Entrance.</p>	<p>The CEE 2009 report <i>Channel Deepening Project Towed Video Inspection of Rip Bank and Nepean Bank Dredged Areas</i> details the towed video survey work completed at Rip Bank and Nepean Bank between 19 and 27 February 2009. The CEE report states that the scope of works for the survey included an assessment of the degree of loose rock and comparison with the October 2008 towed video footage.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	CEE 2009, Channel Deepening Project Towed Video Inspection of Rip Bank and Nepean Bank Dredged Areas
48.	<p>Pre and post-construction bathymetric survey</p> <p>Bathymetric survey of the Entrance to be undertaken to identify bathymetric changes at following intervals:</p> <ul style="list-style-type: none"> » Prior to commencement of dredging in the Entrance » 3, 6, 9, 12 months post-dredging » 2 years post dredging » 4 years post dredging » 10 years post dredging » prior to programmed major maintenance dredging campaign (towed video survey also to be conducted at this time). 	<p>Dredging in the Entrance was formally declared to be complete to the satisfaction of the Minister for Environment and Climate Change on 19 December 2008.</p> <p>The pre-construction bathymetric survey was sighted during the GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009.</p> <p>Email advice from the Alliance Manager to the General Manager Environment – Channel Deepening Project states that the three month post-dredging survey in the Entrance (Rip Bank) that was due on 19 March 2009, commenced on 17 March 2009 but due to adverse wind and wave conditions could not be completed. The survey was rescheduled and subsequently completed on 24 March 2009. The auditor sighted the data transmittal for the survey data from the Alliance to the Channel Deepening Project and a scan of the CD containing the raw survey data.</p> <p>The remaining surveys were not due within the current audit period.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>GHD 2009, Channel Deepening Independent Audit Activity No. 2 Audit No. 1 - Targeted audit of dredging in the Entrance of Port Phillip Bay, February 2009</p> <p>Email advice from Alliance Manager to General Manager Environment – Channel Deepening Project, date 19 March 2009</p> <p>Alliance Transmittal Ref No. ALL-PoMC-T-463, dated 31 March 2009</p>
	<p>Report to be prepared following each survey containing assessment of accumulation and mobility of accretion due to scour, confirmation of the declared channel depth, and identifying any management responses such as no further action, further hydrodynamic modelling, further investigation or risk review (e.g. Aboriginal and non-Aboriginal heritage assessment) and/or additional clean-up.</p>	<p>SKM prepared a report following the March survey, which assessed scour and accretion, channel depth, and provided a recommendation for future assessments.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	SKM 2009, Port of Melbourne, Corporation, Channel Deepening Project, 3 month Post-Dredging Scour Assessment Report, The Entrance Rev 0, June 2009.

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
49.	<p>Post-construction deep reef habitat – impact & recovery assessment</p> <p>Due to the difficulties of using quantitative ecological methods in the Entrance environment, there is a need for flexibility in undertaking the following:</p> <ul style="list-style-type: none"> » Quantitative surveys by diver-operated video and remotely operated vehicles to describe the nature and distribution of impacts on the deep reef habitats. Surveys will be along standardised isobaths. 	<p>The Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report documents the data collection for the first post-dredging deep reef survey.</p> <p>The report states that survey video frames were captured from remotely operated vehicles as well as diver video transects along isobaths. The report states that the assessment resampled reef patches surveyed during the 2006 Supplementary Environmental Effects Statement surveys, with a focus on upper canyon depth bands of 27, 37, 47 and 57 metres.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report
	<ul style="list-style-type: none"> » Survey will compare the coverage and distribution of physical and biological parameters, to document the status of any ongoing physical disturbance, any biological impacts and recovery. 	<p>The Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report states that the status of physical conditions and impacts was assessed using the percentage cover of bare or recolonising categories and the frequency of defined impact categories. A biological impact assessment was also conducted.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report
	<ul style="list-style-type: none"> » Locations will include areas at Rip Bank and Nepean Bank and within the Port Phillip Heads Marine National Park impacted by rockfall, plus areas both within and remote from the general area of rockfall. 	<p>The Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report states that the survey covered areas of Nepean Bank and Rip Bank potentially affected by rockfall, and within the Port Phillip Heads Marine National Park. The report states that near control sites were at Lonsdale Wall, Nepean Bank and Rip Bank, an intermediate control site was at Portsea Hole, and a far control site was at Wilsons Promontory.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>» Timing will be:</p> <ul style="list-style-type: none"> – Commence as soon as practicable after the completion of dredging, but no later than 30 days after the final Entrance clean up has been completed (once design profile is achieved) to the satisfaction of the Minister for Environment and Climate Change. And results reported as soon as practicable following the completion of the survey and its analysis. – Approximately four and ten years after completion of dredging 	<p>Dredging in the Entrance was formally declared to be complete to the satisfaction of the Minister for Environment and Climate Change on 19 December 2008.</p> <p>The Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report states that the survey was conducted between 9 December 2008 and 9 February 2009 during neap tide periods. This is compliant with the requirement to commence survey as soon as practicable after the completion of dredging, but no later than 30 days after the final Entrance clean up has been completed (once design profile is achieved) to the satisfaction of the Minister for Environment and Climate Change.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	Australian Marine Ecology 2009, Port Phillip Bay Channel Deepening Project Deep Reef Impact and Recovery Assessment – Field Report
50.	<p>Post-construction tide monitoring report</p> <p>Collect tide gauge data at Queenscliff (296000N 5761900E), Hovell Pile (316325N 5755800E), West Channel Pile (303538N 5770405E), Williamstown (Breakwater Pier) (316790N 5807470E), Fawkner Beacon (317863N 5797863E) and Point Lonsdale Jetty (291600N 5759150E) for at least one year after completion of construction activities. Prepare a report to identify any changed tide conditions at Williamstown, Queenscliff, Geelong, Point Cook, Werribee and Mordialloc subsequent to completion to the project.</p>	<p>Tide gauge data has been collected at Williamstown, Fawkner Beacon, Hovell Pile, West Channel Pile, Queenscliff, Point Lonsdale, within Port Phillip Bay.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 1: October 2008</p> <p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 2: November 2008</p> <p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 3: December 2008</p> <p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 4: January 2009</p> <p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 5: February 2009</p> <p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 6: March 2009</p> <p>Tide Height Assessment Following Dredging in Port Phillip Bay Report 7: April 2009</p>

Table 9 PDSs 51 – 58: Hydrohammer Use and Marine-based Pile Driving - Summary of Requirements, Evidence and Compliance

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
51.	<p>Minimise use of hydrohammer</p> <p>Hydrohammer is only to be used following confirmation that material cannot be practically dredged by the TSHD. All available practical measures will be taken to break up hard material prior to use of the hydrohammer.</p>	<p>This hydrohammer has not been deployed within this audit period as part of the dredging program.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	PoMC Quarterly Project Report No.3, No.4 and No.5
52.	<p>Hours of operation</p> <p>Hydrohammer and marine-based pile driving operations to take place during daylight only (daylight is defined as where there is adequate light to see a minimum distance of 600 m).</p>	<p>As per PDS 51 – the hydrohammer has not been deployed within the audit period.</p> <p>For marine-based pile driving operations, the daily logs for February 2009 outline the start and finish times of works. These logs indicate that works started at 6 am and the latest finish time is 6 pm. On both days, the actual pile driving operations did not commence until after 9 am. The auditor considers that the data sample provided for February is adequate to demonstrate compliance with this requirement.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	Daily site diary for pile driving operations 15 and 16 February 2009.
	Hydrohammer only to be used Monday to Friday, excluding public holidays.	<p>As per PDS 51 – the hydrohammer has not been deployed within the audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	As for PDS 51

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
53.	<p>Start procedure</p> <p>The start procedure for the hydrohammer and pile driving unit will comprise the use of a noise producing device that is capable of gradually increasing the level of acoustic energy for 10 minutes prior to use of this equipment. The noise producing device shall provide an initial noise level that is no greater than 140 dB (this noise level is less than that known to produce a Temporary Threshold Shift for cetaceans). This is to enable mobile fauna to move away.</p>	<p>The hydrohammer has not been deployed within the audit period.</p> <p>With respect to the pile driving unit, a review of the following information provided by PoMC was undertaken:</p> <ul style="list-style-type: none"> » The start procedure for the underwater noise device; and » Daily logs (for two dates in February 2009 provided). <p>The daily logs are for the pile driving that occurred at Gellibrand Pier on the 15 and 16 February 2009 and the logs from both of these days note that noise monitoring for pile driving occurred.</p> <p>A letter from the Centre for Marine Science and Technology (CMST) was supplied as evidence for this PDS for the EMP audit (Channel Deepening Project Independent Audit – Activity 1 Audit 1, GHD 2008). This letter stated that the underwater noise level of the sound producing device, when set to its maximum output level, does not exceed 140 dB re 1 µPa beyond 10 m of the device. The letter also states that the maximum output level of the device (140 dB re 1 µPa beyond 10 m) has been assessed as appropriate to alert cetaceans to allow them to move away from pile driving operations.</p> <p>The auditor concludes that compliance has been achieved with this requirement.</p>	Full compliance	<p>The start procedure</p> <p>Daily site diary for pile driving operations 15 and 16 February 2009.</p> <p>Letter from CMST to PoMC advising on the maximum noise level of the noise producing device – 7 November 2008.</p> <p>GHD 2008, Channel Deepening Project Independent Audit – Activity 1 Audit 1 for the Office of the Environmental Monitor, December 2008</p>
54.	<p>Hydrohammer – noise assessment</p> <p>An initial noise check of the hydrohammer, confirming actual noise emissions against the modelling used to evaluate underwater noise impacts from the CDP will be undertaken, as follows:</p> <ul style="list-style-type: none"> » Underwater noise monitoring of the hydrohammer by marine biology acoustic specialist. 	<p>As for PDS 51 – the hydrohammer has not been deployed during this audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	As for PDS 51
	<ul style="list-style-type: none"> » Hydrohammer operations only to continue for as long as necessary to obtain sufficient data to confirm the source noise level and ambient underwater noise levels. 	As above.	Not applicable.	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	» Analysis by marine biology acoustic specialist to confirm that the emission measurements conform to model used in the SEES risk assessment. Once confirmed, no further monitoring is required.	As above.	Not applicable.	
	» Hydrohammer operations only to resume following written confirmation by marine biology acoustic specialist that the results of the noise emission monitoring are within those modelled.	As above.	Not applicable.	
	» If the specialist confirms that the noise results significantly differ from those assessed in the noise modelling (either more or less), the contingencies identified within the Underwater Noise Contingency Plan are to be considered and appropriate action taken prior to continuing the use of the hydrohammer for the CDP.	As above.	Not applicable.	
55.	Hydrohammer – cetaceans Hydrohammer vessel master to ensure that there are personnel available to observe a minimum of 600 m radius from the hydrohammer vessel (may be in combination with other project vessel crews or land based).	As for PDS 51 – the hydrohammer has not been deployed during the current audit period. The auditor concludes that this requirement is not applicable to the current audit period.	Not applicable.	As for PDS 51
	A minimum of 15 minutes of active cetacean spotting required before hydrohammer operations commence.	As above.	Not applicable.	
	Vessel master to confirm 'all clear' for cetaceans within a 600 m radius of the hydrohammer before the commencement of hydrohammer operations.	As above.	Not applicable.	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>Hydrohammer vessel master will advise other CDP vessels in the vicinity that hydrohammer operations are scheduled. Crews of these vessels will then also keep a watch for cetaceans before and during hydrohammer operations.</p> <p>» If a cetacean is spotted within 600 m of the hydrohammer vessel or is assessed as likely to move within 600 m of the hydrohammer vessel, the hydrohammer to suspend operations immediately. Operations may only recommence when no cetacean has been sighted within 600 m of the hydrohammer for at least 15 minutes, or if the cetacean(s) are seen to move beyond 600 m.</p>	As above.	Not applicable.	
	Any break in hydrohammer operations that results in a break in observations will require the 15 minutes pre-startup observation to be redone before hydrohammer operations can resume.	As above.	Not applicable.	
56.	<p>Hydrohammer – no-dive zone</p> <p>A 1.4 km ‘no-dive zone’ to be established around the hydrohammer operations. Beach activities (e.g. swimming, snorkelling, and surfing) will be unrestricted within 500 m off shore.</p>	<p>As for PDS 51 – the hydrohammer has not been deployed during the current audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	Not applicable.	

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
57.	<p>Marine-based pile driving – noise assessment</p> <ul style="list-style-type: none"> » An initial check of marine-based pile driving equipment, confirming actual noise emissions against the modelling used to evaluate underwater noise impacts from the CDP will be undertaken as described in the Underwater Noise Monitoring Program (Annexure 5). 	<p>Evidence was observed for pile driving occurring on three separate occasions within the audit period including on 2 October 2008 (impact pile driving, navigation aid markers, Williamstown/Port Melbourne Channels), 15 November 2008 (impact pile driving, Holden Dock, Yarra River) the 15 and 16 of February 2009 (impact pile driving, Gellibrand Pier).</p> <p>A review of the noise reports from the Centre of Marine Science and Technology of Curtin University and the Underwater Noise Monitoring Detailed Design indicated that measurements of underwater noise included:</p> <ul style="list-style-type: none"> » Ambient sound (snapping shrimp, vessel passage and machinery noise in the background; » Underwater sound speaker system used to deter cetaceans from the immediate pile driving area before piling commences; » ICE 44B vibratory piling rig; » Impact pile driving – IHC S-90 hammer and 5 tonne drop hammer. <p>The information indicated that vibratory piling and impact pile driving underwater was consistent with noise modelling that PoMC based their marine underwater risk assessment on. The measurements were also lower than those modelled in the underwater noise risk assessment report.</p> <p>The auditor concludes that compliance has been achieved with this audit requirement.</p>	Full compliance	<p>CMST (2008) Port of Melbourne, Impact Pile Driving Underwater Noise, 02 October 2008.</p> <p>CMST (2008) Port of Melbourne, Williamstown Channel Impact Pile Driving Underwater Noise Assessment 15 November 2008.</p> <p>CMST (2009) Port of Melbourne, Gellibrand Pier Impact Pile Driving Underwater Noise Assessment 24 February 2009.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
58.	<p>Marine-based pile driving – cetaceans</p> <p>'All clear' for cetaceans within a 300 m radius of the pile driving unit to be confirmed before the commencement of pile driving operations.</p>	<p>Evidence was observed for pile driving occurring on three separate occasions within the audit period including on 2 October 2008 (impact pile driving, navigation aid markers, Williamstown/Port Melbourne Channels), 15 November 2008 (impact pile driving, Holden Dock, Yarra River) the 15 and 16 of February 2009 (impact pile driving, Gellibrand Pier).</p> <p>Cetacean logs did not identify any sightings near the impact pile driving locations during these piling activities.</p> <p>Cetaceans were sighted 500 m from berthworks at West Swanson Dock on 3 October 2008. The log noted that no actions were required as no pile driving was occurring in this area.</p> <p>The auditor concludes that compliance has been achieved with this audit requirement.</p>	Full compliance	<p>Berthworks cetacean record 03 October 2008.</p> <p>Cetacean logs for vessels 1 October 2008 to 29 April 2009.</p> <p>Daily site diary for pile driving operations 15 and 16 February 2009.</p> <p>CMST (2008) Port of Melbourne, Impact Pile Driving Underwater Noise, 02 October 2008.</p> <p>CMST (2008) Port of Melbourne, Williamstown Channel Impact Pile Driving Underwater Noise Assessment 15 November 2008.</p> <p>CMST (2009) Port of Melbourne, Gellibrand Pier Impact Pile Driving Underwater Noise Assessment 24 February 2009.</p>
	<p>Maintain a watch for cetaceans when operating in Williamstown Channel, North of bay and South of bay and berths.</p>	<p>Pile driving occurred in Williamstown Channel on the 15 November 2008 and the 15 and 16 of February 2009 at Gellibrand Pier. Cetacean logs show that no cetaceans were sighted. Cetacean training records provided for the audit period provides additional evidence that staff were trained and watching for cetaceans throughout the audit period.</p> <p>No marine-based pile driving occurred in South of bay during this audit period.</p> <p>The auditor concludes that compliance has been achieved with this audit requirement.</p>	Full compliance	<p>Berthworks cetacean record 03 October 2008.</p> <p>Cetacean logs for vessels 1 October 2008 to 29 April 2009.</p> <p>Daily site diary for pile driving operations 15 and 16 February 2009.</p> <p>CDP_ALL_RG_701 Cetacean Sections – Registers of Training.</p>

PDS	Project Delivery Standard	Audit Findings (1 October 2008 to 1 May 2009)	Compliance	Supporting Evidence
	<p>If a cetacean is spotted within 300 m of equipment, the following actions shall be taken:</p> <ul style="list-style-type: none"> » Pile driving unit to suspend operations immediately. » If cetaceans are not seen to move beyond 300 m, operations cannot restart until no cetacean has been sighted for at least 15 minutes. » If cetaceans are seen to move beyond 300 m, operations can recommence immediately. 	<p>No cetaceans spotted within 300 m of pile driving equipment during this audit period.</p> <p>The auditor concludes that this requirement is not applicable to the current audit period.</p>	<p>Not applicable</p>	<p>Berthworks cetacean record 03 October 2008.</p> <p>Cetacean logs for vessels 1 October 2008 to 29 April 2009.</p> <p>Daily site diary for pile driving operations 15 and 16 February 2009.</p>



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Document Status

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		Name	Signature	Name	Signature	Date
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