

# Annual Environmental Management Report 2014

for

Sydney International Container Terminal 3  
Phase 2



# Contents

	Page number
Acronyms and Glossary .....	iii
Executive summary .....	iv
1. Introduction .....	1
1.1 Project overview.....	1
1.2 Background to this report.....	1
1.3 Purpose and scope of this report.....	2
1.4 Annual Environmental Management reports .....	4
1.5 Environmental plans .....	4
1.6 Construction status .....	7
2. Project approvals and licenses.....	8
2.1 Approvals and licenses .....	8
2.2 Approval modifications .....	9
3. Approvals Compliance Review.....	10
3.1 MCoA Compliance Review .....	10
3.2 Commonwealth Project Approvals Review.....	12
3.3 Compliance Status.....	12
4. Complaints .....	16
4.1 Complaint management and reporting .....	16
4.2 Complaint summary .....	16
5. Assessment of impact predictions .....	18
6. Summary of monitoring results.....	19
7. Environmental performance .....	23
7.1 Environmental objectives and targets.....	23
7.2 Environmental performance.....	27
8. Annual independent environmental audit.....	28
8.1 Audit purpose .....	29
8.2 Audit findings.....	29
8.3 Audit conclusion.....	30
9. Conclusions .....	31



## List of tables

Table 1-1	Report location where MCoA requirements are addressed.....	3
Table 1- 2	Annual Environmental Management Reports to date table .....	4
Table 1-3	Construction Environmental Management Plans Phase 1 and 2 .....	5
Table 1-4	Construction activities from September 2013 to September 2014 .....	7
Table 2-1	Approvals and licenses required for construction .....	8
Table 2-2	Modifications to approval .....	9
Table 3-1	MCoA compliance status as at November 2014.....	12
Table 6-1	Construction Environmental Monitoring .....	19
Table 7-1	Project environmental objectives and targets – compliance status .....	24

## List of appendices

Appendix A	MCoA Compliance Checklist
Appendix B	Comparison of EIS Predictions and conclusions
Appendix C	Federal Approvals
Appendix D	Complaints Register
Appendix E	Monthly Environmental Monitoring Reports

## Quality Control

Version	Author	Date	Reviewer	Date	Quality Review	Date
V01	Eladio Perez	21/1/15	Noel Storan	27/1/15	Paul Simpson	28/1/15

## Document Control

Version	Date	Reference	Version	Submitted to
V01	28/1/15	MCoA B4.2	V01	NSW Ports
V01	28/1/15	MCoA B4.2	V01	DP&I



# Acronyms and Glossary

<b>ANZECC</b>	Australian and New Zealand Environmental and Conservation Council
<b>ASS</b>	Acid Sulphate Soil
<b>CCC</b>	Community Consultative Committee
<b>CEMP</b>	Construction Environmental Management Plan
<b>DDG</b>	Dust Deposition Gauge
<b>DP&amp;I</b>	NSW Department of Planning and Industry
<b>EIS</b>	Environmental Impact Statement
<b>EM</b>	Environmental Manager
<b>EPA</b>	Environmental Protection Authority
<b>EPL</b>	Environmental Protection Licence (issued by EPA)
<b>ER</b>	Environmental Representative
<b>ESCP</b>	Erosion and Sedimentation Control Plan
<b>HVAS</b>	High Volume Air Sampler
<b>JSEA</b>	Job Safety and Environmental Analysis
<b>LORAC</b>	Laing O'Rourke
<b>MCoA</b>	Minister's Conditions of Approval
<b>NATA</b>	National Association of Testing Authorities
<b>NSWP</b>	NSW Ports
<b>OEH</b>	Office of Environment & Heritage
<b>PASS</b>	Potential Acid Sulphate Soil
<b>PEHEP</b>	Penrhyn Estuary Habitat Enhancement Plan
<b>PM<sub>x</sub></b>	Particulate Matter with an aerodynamic diameter of less than or equal to x microns
<b>PPV</b>	Peak Particle Velocity
<b>Sensitive Receivers</b>	Occupants of residential or institutional land uses that may be impacted by dust, noise or vibration
<b>SPC</b>	Sydney Ports Corporation
<b>TSP</b>	Total Suspended Particulates (airborne)
<b>TSS</b>	Total Suspended Solids (waterborne)





# Executive summary

This Annual Environmental Management Report has been prepared according to Condition B4.2 of the Minister's Conditions of Approval (MCoA) for the Port Botany Expansion. Condition B4.2 sets out the following requirements for an environmental management report to be completed annually during construction:

- Detail compliance with the MCoA conditions.
- Contain a copy of the Complaints Register, and details of how complaints were addressed and resolved.
- Include a comparison of the environmental impacts and performance predicted in the Environmental Impact Statement (EIS) and additional information documents provided to the Department and Commission of Inquiry.
- Detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion.
- Contain a list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident.

This report satisfies the requirements for the second year of construction of terminal operations infrastructure known as Sydney Port Botany Terminal 3 Phase 2, which is being constructed and operated by Sydney International Container Terminal Limited (SICTL).

This report covers the period from September 2013, to September 2014. This period spans the end of Phase 1 construction, which began in September 2012 and ended in March 2014 and the beginning of Phase 2 in June 2014 and concludes that the project is compliant and meeting environmental requirements to date. The issues identified in the Annual Independent Audit have been addressed satisfactorily and closed off successfully.

## Compliance with MCoA conditions, licenses and approvals

As part of a separate requirement in the MCoA, an Annual Independent Environmental Audit was performed in August-September 2014, in accordance with Condition B4.5, that reviewed compliance against the MCoA, including all modifications, and the Commonwealth approval to date. The results of the audit have been used to compile this Annual Environmental Management Report 2014.

In relation to the MCoA the audit found two non-compliances in relation to upload of previous reports to the SICTL web site, four Issues of Concern (IOC) and five Opportunities for Improvement (OFI). Refer to Section 3 and Section 8.2 for audit findings and Appendix 1 for more details. It is noted that at the time of the Independent audit report issue, all non-compliances, Issues of concern and

opportunities for Improvement had been appropriately actioned and successfully closed out.

There were nil findings at the audit in relation to the Commonwealth approval:

NSW Minister's Conditions of Approval:

**2 Non-Compliant, with 4 Issues of Concern and 5 Opportunities for Improvement, identified and closed**

Commonwealth Project Approval:

**Compliant**

License to Sell/Possess Radiation Apparatus:

**Compliant**

## Complaints management

The management and handling of complaints is performed systematically and in a timely manner. Complaints are recorded in a register that complies with the requirements of MCoA B3.1 and are reported to the department by NSW Ports. One complaint received during the period was not due to non conformance or lack of environmental controls or construction activities on site.

## Comparison to impact predictions

The comparison performed in the Annual Independent Environmental Audit of the environmental impacts and performance predicted in the EIS found that the predictions and conclusions made are largely realised in the construction outcomes to date and that generally there were positive outcomes.

Monitoring results for dust indicated that there were more than two exceedances over the period, than predicted. However exceedances may not be a result of the construction activities, but rather bush fires, Golf course activities.

The water consumption in early 2014 was in the vicinity of 24-25 M which is in excess of the 15 ML predicted, however the current consumption phase 2 nearing completion indicated annual consumption of around 9-10 ML two thirds of the predicted. Water was used for dust suppression. Stockpile materials on site are currently being removed.

## Environmental monitoring

Environmental monitoring was performed and reported monthly as required by the MCoA, EIS and Penrhyn Estuary Habitat Enhancement Plan (PEHEP). Analysis of the monitoring data shows that the project met all environmental monitoring criteria for the period.

## Environmental performance

The Annual Independent Environmental Audit found that environmental monitoring was performed and reported as required by the MCoA, EIS and PEHEP. Analysis of monitoring results shows that the project has met environmental monitoring requirements. No exceedance has been found to date regarding noise.

Some exceedances have been noted for dust during monitoring this period. Dust monitoring is performed as required by the EIS and in the Construction Environment Management Plan (CEMP); four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion and a real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter.

During Phase 1 the environmental monitoring was undertaken by Laing O'Rourke and provided to the contractor on the Patrick site adjacent. In Phase two, Fulton Hogan the contractor for Patrick, performed the monitoring and provided the results to Burton contractors for SICTL. See Appendix E for the monthly reports.

The results are reported monthly by the contractor, any exceedances are investigated and monitoring reports suggest that exceedances were from sources other than project construction activities including bush fire and golf course activities.

The Phase 2 contractors were deemed to achieve a good level of effectiveness and implementation of their approved CEMP and management of environmental controls on the project with respect to the relevant scope and approved CEMP.

Overall, compliance to environmental management was good and no non-conformance recorded, five Issues of Concern, and two Opportunities for Improvement were identified at the audit in relation to; sub-contractor management, liquid storage and house and record keeping. All have been satisfactorily addressed and closed. No major incidents have been reported to date.

# 1. Introduction

## 1.1 Project overview

The Sydney Port Botany Terminal 3 Project (SPBT3) Phase 1 and Phase 2 follows on as part of the terminal operations infrastructure construction planning approval of the Port Botany Expansion Project (PBE). The SPBT3 Project involves the creation of a new container terminal by Sydney International Container Terminals (SICTL) the new terminal operator. This report straddles the period end of SPBT3 Phase 1 and the part of Phase 2.

The SPBT3 Project is located within the City of Botany Bay, 12 kilometres south of the Sydney CBD. The Project site is located in Gate 150-160, Sirius Road, off Foreshore Rd, and the site is bounded by the existing Patrick terminal, Penrhyn Road, Foreshore Road, Sydney Airport and Botany Bay.

SICTL leased the 45 hectare site and awarded several contracts to construction contractors for the civil works, building works and crane delivery and assembly work along with ancillary works in phases with Phase 1 commencing in September 2012 and ending in March 2014. Phase 2 commenced June 2014 and was assessed up to September 2014 in this report.

The Phase 1 Main civil works construction contract was awarded to Laing O'Rourke and the maintenance and operations building works contract was awarded to Grindley Constructions. The main substation and high voltage connection works was awarded to Downer. These contractor performed works under their own approved CEMPs. The crane delivery, assembly and ancillary works has been undertaken by several contractors and working under the SICTL Framework CEMP.

Similarly the Phase 2 construction program is to provide additional container storage capacity and was awarded to Burton Contractors for the civil works and Kone Cranes for the crane delivery and assembly under the approved Phase 2 & 3 CEMP.

This report covers the period from September 2013, to September 2014.

## 1.2 Background to this report

The project is based on the design of the preferred alternative in EIS prepared by SPC in 2003. After a Commission of Inquiry, the NSW Minister for Planning granted staged development consent in 2005 and 2006 under the Environmental Planning and Assessment Act 1979, subject to a number of Minister's Conditions of Approval (MCoA). The MCoA covers three different project components:

- *Construction Terminal Footprint Infrastructure* – those aspects of the development associated with the establishment of the port footprint (as generally outlined in sections 8.2 – 8.5 of Volume 1 of the EIS) including dredging and reclamation, compaction and preloading, wharf construction, road and rail infrastructure linkages (including the GSW), and Penrhyn Estuary enhancement works.

- *Construction Terminal Operations Infrastructure* – those aspects of the development associated with the establishment of terminal operations infrastructure (as generally described in section 8.6 of Volume 1 of the EIS) including hardstand areas (container storage, car parks and truck queuing areas), quay cranes, rail mounted gantries, administration facilities, workshops etc.
- *Terminal Operations* – relates to long term operation of the expanded port.

Construction works commenced on the Construction Terminal Footprint Infrastructure component in May 2008, and was completed in November 2012 with the completion of the Grade separation. Construction works commenced on the Construction Terminal Operations Infrastructure component on September 2012.

These components are addressed by Schedules 2A and 2B of the MCoA (Schedule 2C of the MCoA is not relevant to this component of the project, as it relates only to terminal operation).

In addition, the Commonwealth granted consent in 2006 under the Environment Protection and Biodiversity Conservation Act 1999, for aspects of the project relating to migratory birds and applied to SPBT3 to works such as stormwater drainage near the Penrhyn Estuary.

### 1.3 Purpose and scope of this report

The purpose of this Annual Environmental Management Report is to satisfy the requirements of MCoA Condition B4.2 for the second year of terminal operations infrastructure construction, nominally from September 2013 to September 2014. Condition B4.2 requires an environmental management report annually during construction with the following requirements:

*‘The Applicant must prepare an Annual Environmental Management Report for the development. The Annual Environmental Management Report must:*

- *detail compliance with the conditions of this consent;*
- *contain a copy of the Complaints Register (for the preceding twelve-month period, exclusive of personal details) and details of how these complaints were addressed and resolved;*
- *include a comparison of the environmental impacts and performance predicted in the EIS and additional information documents provided to the Department and Commission of Inquiry;*
- *detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion by a suitably qualified person;*
- *contain a list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident;*
- *be prepared within 12 months of commencement of construction, and every 12 months thereafter;*

- be approved by the Director-General; and
- be made available for public inspection.'

Each of these requirements, are addressed in this report, Table 1-1 below shows where each location reference can be found.

**Table 1-1 Report location where MCoA requirements are addressed**

<b>MCoA B4.2 Requirement</b>	<b>Reference location</b>
Detail compliance with the conditions of the MCoA	<ul style="list-style-type: none"> <li>▪ Section 3 <ul style="list-style-type: none"> <li>▸ Appendix A MCoA Compliance Checklist</li> <li>▸ Appendix C Federal Approval</li> </ul> </li> </ul>
Contain a copy of the Complaints Register (for the preceding twelve-month period, exclusive of personal details) and details of how these complaints were addressed and resolved	<ul style="list-style-type: none"> <li>▪ Section 4 <ul style="list-style-type: none"> <li>▸ Appendix D</li> </ul> </li> </ul>
Include a comparison of the environmental impacts and performance predicted in the EIS and additional information documents provided to the Department & COI	<ul style="list-style-type: none"> <li>▪ Section 5 <ul style="list-style-type: none"> <li>▸ Appendix B Comparison of EIS Predictions and Conclusions</li> </ul> </li> </ul>
Detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion by a suitably qualified person	<ul style="list-style-type: none"> <li>▪ Section 6 <ul style="list-style-type: none"> <li>▸ Appendix E Monthly Environmental Monitoring Reports</li> </ul> </li> </ul>
Contain a list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and action taken to prevent recurrence of that type of incident	<ul style="list-style-type: none"> <li>▪ Section 7 <ul style="list-style-type: none"> <li>▸ Appendix E Monthly Environmental Monitoring Reports</li> </ul> </li> </ul>
Be prepared within 12 months of commencement of construction, and every 12 months thereafter	<ul style="list-style-type: none"> <li>▪ Ongoing construction activities for Phase 1 and 2 from September 2013 to September 2014</li> </ul>

This report will be submitted to the Department of Planning and Infrastructure (DP&I) for approval by the Director-General, and then be made publicly available via the NSW Ports and SICTL website.

NB: the results of the separate *Annual Independent Environmental Audit* required under MCoA Condition B4.5 have been used to compile sections of this report. Appendices A, B and C are based on the Annual Independent Environmental Audit report for SPBT3 project, August/September 2014, dated 12/9/2014.

## 1.4 Annual Environmental Management reports

The sequence of Annual Environmental Management Reports over the life of the project is shown in Table 1-2 below.

**Table 1- 2 Annual Environmental Management Reports to date table**

Period	Report Title	Submission Date
<i>June 2008 to May 2009</i>	Annual Environmental Management Report 2009	August 2009
<i>June 2009 to May 2010</i>	Annual Environmental Management Report 2010	August 2010
<i>June 2010 to May 2011</i>	Annual Environmental Management Report 2011	August 2011
<i>June 2011 to November 2012</i>	Annual Environmental Management Report 2012	January 2013
<i>September 2012 to September 2013</i>	Annual Environmental Management Report 2013	January 2014
<i>September 2013 to September 2014</i>	Annual Environmental Management Report 2014 (this report)	January 2015

## 1.5 Environmental plans

A number of Construction Environmental Management Plans have been prepared and approved by DP&I, that take into account environmental actions and measures identified in, or required by, the MCoA, PEHEP, EIS, and contract between SICTL and the various contractors. The Main civil works construction contract for Phase 1 was awarded to Laing O'Rourke. The maintenance and operations building works contract was awarded to Grindley Constructions. These contractors performed works under their own approved CEMPs. The crane delivery, assembly and ancillary works has been undertaken by several contractors (Kone Cranes, Inver/ZPMC, Fujitsu, Cargotec/Calmar) working under the SICTL Framework CEMP. These works were completed by the end of March 2014.

The Phase 2 and Phase 3 Main Works CEMP was approved on 11/12/13 for the Phase 2 works that commenced in June 2014. The main Phase 2 civil contract was awarded to Burton Civil Engineering Contractors (Burton). The supply and installation of the Phase 2 Automatic Stacking Cranes (ASC's) was again awarded to Kone Cranes, under the same approved Phase 2 and Phase 3 Main Works CEMP.

The purpose of these plans is to guide construction activities, by specifying measures to manage impact on the environment. These measures have been developed from the MCoA, EIS, PEHEP, licences, permits, analysis of aspects and impacts, and other relevant documents. Environmental monitoring is also defined in the sub-plans, to quantify any impact and measure compliance with environmental requirements undertaken by the contractors.

A list of environmental approved CEMP and sub plans required by the MCOA is provided in Table 1-3 below.

**Table 1-3 Construction Environmental Management Plans Phase 1 and 2**

[illegible]



		<ul style="list-style-type: none"> <li>Management Plan</li> <li>▶ Construction Waste Management Plan</li> <li>▶ Emergency Response and Incident Management Plan</li> </ul>	
<p>Phase 2 Civil Construction and crane supply and installation</p> <ul style="list-style-type: none"> <li>▶ Ground Improvement, earthworks, trenching for services and utilities</li> <li>▶ Internal roads, pavements, crane footings, high mast and bollards lighting, fencing landscaping and drainage</li> <li>▶ Container stacking yards, container stacking beams, rail beams and rails</li> <li>▶ Kerbs and footpaths, signs</li> <li>▶ Drainage and stormwater connections</li> <li>▶ Terminal services and utilities</li> <li>▶ Electrical substation construction and electrical installation</li> <li>▶ Temporary roads for various contractors</li> <li>▶ Supply and installation and commissioning of Information, Communication and Technology Infrastructure</li> <li>▶ Supply and installation &amp; Commissioning of Automated Stacking Cranes (ASC) Cranes</li> </ul>	Burton Contractors	<p>SICTL Main Works Construction Environmental Management Plan Phase 2 &amp; 3</p> <ul style="list-style-type: none"> <li>▶ Soil and Water Quality Management Plan</li> <li>▶ Air Quality and Dust Management Plan</li> <li>▶ Construction Noise and Vibration Management Plan</li> <li>▶ Waste Management Plan</li> <li>▶ Emergency Response and Incident Management Plan</li> <li>▶ Construction Traffic Management Plan</li> <li>▶ Acid Sulphate Soils Management Plan</li> <li>▶ Shorebird Management Plan</li> <li>▶ Bird Hazard Management Plan</li> <li>▶ Feral Animal Management Plan</li> <li>▶ Energy Management Action Plan</li> <li>▶ Water Resource Management Plan</li> </ul>	11/12/13

The latest versions of the approved CEMP's are available on the SICTL website.

## 1.6 Construction status

Construction activities are summarised in the table below for the period of September 2013 to September 2014.

**Table 1-4 Construction activities from September 2013 to September 2014**

Dates	Activity
September-December 2013	<ul style="list-style-type: none"> <li>▶ Earthworks and ground improvements</li> <li>▶ Drainage activities</li> <li>▶ Site utilities</li> <li>▶ Precast concrete fabrication for utilities and services work</li> <li>▶ Concrete batch plant operations</li> <li>▶ Concrete paving</li> <li>▶ Rail beam preparation and construction</li> <li>▶ Noise Barrier installation and painting</li> <li>▶ Crane rail installation</li> <li>▶ Landscaping</li> </ul>
January – March 2014	<ul style="list-style-type: none"> <li>▶ Spoil removal</li> <li>▶ Minor earthworks</li> <li>▶ Concrete batch plant and paving operations</li> <li>▶ Ballast deliveries</li> <li>▶ Rail beam preparation and construction</li> <li>▶ Rail installation</li> <li>▶ Minor rectifications</li> <li>▶ Finishing operations and maintenance buildings</li> <li>▶ landscaping</li> <li>▶ Noise barrier completed</li> <li>▶ Operations and Maintenance buildings completed</li> <li>▶ Phase 1 Demobilisation by Laing O'Rourke and Grindley</li> </ul>
April – June 2014	<ul style="list-style-type: none"> <li>▶ Fulton Hogan continued works and environmental monitoring on the Knuckle area for Patrick</li> <li>▶ Mobilisation of Phase 2 by Burton Contractors in June</li> </ul>
July -September 2014	<ul style="list-style-type: none"> <li>▶ Earthworks and ground improvements</li> <li>▶ Concrete beam construction</li> <li>▶ Drainage activities</li> <li>▶ Site utilities conduit installation for stormwater and power</li> <li>▶ Precast concrete pits installation for utilities and services work</li> <li>▶ Concrete batch plant operations</li> <li>▶ Concrete paving</li> <li>▶ Crane rail installation and welding</li> <li>▶ Reefer Gantry installation</li> </ul>

## 2. Project approvals and licenses

### 2.1 Approvals and licenses

Table 2.1 provides a summary of approval and licenses required for SPBT3 to date.

**Table 2-1 Approvals and licenses required for construction**

Approval/License	Relevant Authority	Date/Details
<b>Approvals</b>		
NSW Development Consent, Stage 1 (Ref: DA-494-11-2003i)	DP&I	13 October 2005
NSW Development Consent, Stage 2 (Ref: DA-494-11-2003i)	DP&I	22 August 2006
Commonwealth Approval under EPBC Act (Ref. 2002/543)	DSEPAC/ Department of Environment	3 January 2006
Provision of Utility Services for the Port Botany Expansion – Part 5 (EP&A Act) Approval	SPC	October 2008
<b>Licences &amp; Permits</b>		
License Sell and/or possess radioactive substances or items containing radioactive substances.	EPA	▪ Radiation Licence: RL30128
NB: No EPL issued for this phase of works	EPA	▪ Nil

## 2.2 Approval modifications

Table 2.2 summarises all modifications to the project approval

**Table 2-2 Modifications to approval**

Approval	Date	Number	Variation
MCoA	11 Sept 2007	MOD 107-9-2006-i	Minor text changes
	11 Sept 2007	MOD 134-11-2006-i	Condition B2.40
	11 Sept 2007	MOD 149-12-2006-i	Conditions B2.9 and B2.22
	17 Sept 2007	MOD 78-9-2007-i	Conditions C2.20 & C2.25
	21 Sept 2008	MOD 60-9-2008	Conditions B2.46 & C2.25
	12 Dec 2008	MOD 68-12-2008	Condition B2.19
	20 Mar 2009	DA-494-11-2003i MOD7	Changes to location of rail corridor
	30 May 2009	DA-494-11-2003i MOD8	Condition B2.9
	18 June 2009	DA-494-11-2003i MOD9	Adding a new Condition B2.10B
	13 July 2009	DA-494-11-2003i MOD10	Revising Condition B2.10B
	21 Nov 2011	DA-494-11-2003i MOD11	Changes to building heights and locations
	6 Jun 2012	DA-494-11-2003i MOD12	Changes to stormwater first flush system
	31 Oct 2012	DA-494-11-2003i MOD13	Changes to stormwater for the southern expansion area
	April 2013	DA-494-11-2003i MOD14	Changes to temporary uses at northern tip of Hayes Dock and Traffic Impact Assessment. Condition C1.2
	20 March 2013	DA-494-11-2003i MOD15	Changes to Quay Crane Operations Condition C2.22
Commonwealth Approval under EPCB Act	7 Dec 2006	Ref. 2002/543	Minor text changes

# 3. Approvals Compliance Review

Compliance with the approvals described in Table 2-2 was assessed in the Annual Independent Environmental Audit in September 2014. Detailed findings of the audit are included in Appendices 1 and 2. The findings of each of the approvals are presented below.

## 3.1 MCoA Compliance Review

The Annual Independent Environmental Audit found that there were two non-conformances identified at the audit and four of Issues of Concern (IOC) and five Opportunities for Improvement (OFI) were raised in relation to the MCoA and subsequently adequately addressed and closed. These findings and outcomes are summarised below:

- **MCoA NC 1. Condition B4.2.** The Annual Environmental Management Report (AEMR) 2013 had not been uploaded to the SICTL or NSW Ports Web site. **Action Taken:** The AEMR was uploaded onto the SICTL website prior to audit completion. **Closed.**
- **MCoA NC 2. Condition B4.5.** The 2013 Annual independent Audit Report had also not been uploaded on to the SICTL website. **Action Taken:** The 2013 annual audit report was uploaded onto the SICTL website prior to audit completion. **Closed.**
- **MCoA IOC1. Condition B2.35.** Burton Contractor waste dockets from Coates Hire did not provide a waste classification or full description of the waste (docket is an equipment receipt docket, not waste) and did not always provide quantity. Destination of waste was not on the docket. No classification was entered into the waste register (not provided by supplier – Coates Hire). **Action Taken:** Burton Contractors contacted Coates Hire and requested that all dockets show the appropriate waste classification (K130). Dockets issued since the first audit date were reviewed and found to include appropriate classification, quantity removed, and evidence was provided that the waste is appropriately disposed. **Closed**
- **MCoA IOC 2. Condition B2.43.** The Emergency Response Management Plan had not been updated to include the contractor's response team names and contact numbers as required by DP&I approval letter dated 11/12/2013. **Action taken:** Burton has provided the required contact detailed and the CEMP was revised on 10/09/2014 (Rev 2) and now includes the names of the Emergency Response Team in Section 3.1. Emergency Contacts are in Section 3.2. The revised CEMP has been uploaded to the SICTL website. **Closed.**
- **MCoA IOC 3. Condition B3.1.** The SICTL website did not provide current relevant complaints and enquiries contact information (except the complaints

line). A call to the General Enquiries line on the website went to voicemail and a message was left at 9.35am 14/08/14 – no return call was made (incorrect number). A call to the Media Enquiries – Manager Public Affairs – Hutchison Ports Australia (02 9875 8500) was not connected – message “The number you have dialled in not connected - please check the number and dial again” – incorrect number). An email to the “Contact Us” email address on the Hutchison Ports Website was undeliverable. Message sent 10.06am 14/08/14 – message – mail system error – returned email. **Action Taken:** The website contact details were updated on the last day of the audit – 3 September 2014 and these were re-tested and now found to be accurate. **Closed.**

- **MCoA IOC 4. Condition B4.4.** A review of Burton induction records and interviews with random persons undertaking work on the project site found that there were a number of Boral subcontractors that had not received induction training including Bullamakanka and Coastwide. Induction is the key methodology for providing environmental training to staff and subcontractors. **Action Taken:** Evidence was provided on the return visit to the site on 3 September 2014 that all subcontractors (including Boral and their subcontractors) have undertaken the full induction that includes environmental requirements. **Closed.**
- **MCoA OFI 1. Condition B1.3.** The Legal and other Requirements register of the CEMP needed updating because of repealed legislation. **Action taken:** The repealed Acts have been removed in the CEMP update of the 10/9/14. **Closed.**
- **MCoA OFI 2. Condition B3.1.** The TOC of the CEMP Appendix 6 refers to Statement of Commitments Tracking; however the Appendix 6 is MCoA Compliance Tracking. **Action Taken:** Table was updated as part of the CEMP Rev 2 update on 10/9/2014. **Closed.**
- **MCoA OFI 3. Condition B2.19A.** The Burton Contractors Environmental Notes prepared for out of hours works (OOHW) for the last 2 OOHW did not reflect changes to the monitoring requirements (based on email request and response from NSW Ports) regarding ongoing working hours on a Saturday. **Action taken:** File notes prepared since the first site visit now reflect changes to monitoring requirements. **Closed.**
- **MCoA OFI 4. Condition B3.1.** The SICTL web site does not distinguish between plans that are currently valid i.e. Phase 1 and Phase 2 & 3 CEMPs and sub plans. **Action taken:** The website page for Environmental Management Plans has been restructured and now includes a separate heading for Phase 1 Phase 2 & 3. **Closed.**
- **MCoA OFI 5. Condition B3.1.** The complaints line administered by NSW P was tested and did not receive an immediate answer, but a call back within 2 hours. **Recommendation:** NSW Ports should ensure that the complaints line can be answered in a more timely manner (e.g. – re-routing or providing a mobile number). **Action Taken:** Re-testing of the phone number found changes made to the answering of the complaints line and it now appears to be satisfactory.

## 3.2 Commonwealth Project Approvals Review

The EPBC Act is presently administered by the Department of Environment. A review of the conditions found that all conditions had been complied with and in each other aspect the project was found to be compliant. Refer to Appendix C.

## 3.3 Compliance Status

The MCoA compliance status is described in Table 3-1 bellow. It compares the Grade Separation Works Post Construction Status as at the last report, to the current Terminal Operation Infrastructure Construction status. The third and fourth column shows the status of each Condition of Approval as one of:

- Complete;
- Compliant & Ongoing;
- Future Action.

**Table 3-1 MCoA compliance status as at November 2014**

MCoA No.	Condition Title	Compliance status	
		November 2013 Terminal Operations Infrastructure Construction	November 2014 Terminal Operations Infrastructure Construction
A1.1	Scope of Development	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
A1.2	Scope of Development	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
A1.3	Statutory Requirement	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
A1.4	Port Through Capacity Limits	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
A1.5	Estuary Flushing Protocol	Complete	<b>Complete</b>
A2.1	Staging of Development	Complete	<b>Complete</b>
A2.2	Staging of Development	Complete	<b>Complete</b>
A2.3	Staging of Development	Complete	<b>Complete</b>
A2.4	Port Freight Logistics Plan	Complete	<b>Complete</b>
A3.1	Commencement of Construction of Terminal Operations Infrastructure	Compliant & Ongoing	<b>Complete</b>
B1.1	Application of Schedules	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B1.2	Application of Schedule	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B1.3	Construction Environmental Management Plan (CEMP)	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B1.4	Compliance Certification	Compliant &	<b>Compliant &amp;</b>

		Ongoing	<b>Ongoing</b>
B1.5	Compliance Certification	Future Action	<b>Future Action</b>
B2.1	Air Quality Management – Odour Impacts and Sediment Sampling	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.2	Air Quality Management – Odour Impacts and Sediment Sampling	Complete	<b>Complete</b>
B2.3	Air Quality Management – Odour Impacts and Sediment Sampling	Complete	<b>Complete</b>
B2.4	Dust Management Plan	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.5	Soil and Water Management Plan	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.6	Acid Sulphate Soils	Complete	<b>Compliant &amp; Ongoing</b>
B2.7	Pollution Prevention	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.8	Impact of Dredging	Complete	<b>Complete</b>
B2.9	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.9A	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.10	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.10A	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.10B	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.11	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.12	Impact of Dredging on Water Quality	Complete	<b>Complete</b>
B2.13	Consultation with Sydney Water	Complete	<b>Complete</b>
B2.14	Traffic, Transport and Infrastructure Management. – Construction Traffic Management Plan	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.15	Safety Audit	Complete	<b>Complete</b>
B2.16	Port Traffic Handbook	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.17	Rail Siding Capacity	Future Action	<b>Future Action</b>
B2.18	Rail Access to New Terminal	Complete	<b>Complete</b>
B2.19	Noise and Vibration Management – Restrictions to Hours	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.19A	Noise and Vibration Management – Restrictions to Hours	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.19B	Noise and Vibration Management – Restrictions to Hours	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.20	Construction Noise Management Plan	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.21	Construction Noise Goals	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.22	Construction Noise Criteria (Dredging)	Complete	<b>Complete</b>
B2.22A	Construction Noise Criteria (Dredging)	Complete	<b>Complete</b>
B2.23	Construction Noise Barrier	Future Action	<b>Complete</b>
B2.23A	Construction Noise Barrier	Future Action	<b>Complete</b>
B2.24	Other Construction Noise Matters	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>



			<b>Ongoing</b>
B2.25	Other Construction Noise Matters	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.26	Other Construction Noise Matters	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.27	Port Traffic & Rail Noise Management Plan	Future Action	<b>Complete</b>
B2.28	Rail Noise Working Group	Future Action	<b>Complete</b>
B2.29	Rail Noise Assessment (Botany Yard to Cooks River)	Future Action	<b>Future Action</b>
B2.30	Terminal Design and Flushing of Penrhyn Estuary	Complete	<b>Complete</b>
B2.31	Penrhyn Estuary Habitat Enhancement Plan (PEHEP)	Complete	<b>Complete</b>
B2.32	PEHEP – Alternative Compensatory Habitat Options	Complete	<b>Complete</b>
B2.33	Construction Waste Management Plan	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.34	Waste Management On-site	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.35	Waste Management On-site	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.36	Hazardous and Industrial Waste	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.37	Visual Amenity Plan	Complete	<b>Complete</b>
B2.38	Protection of Remains of Government Pier & Associated Cultural Deposits	Complete	<b>Complete</b>
B2.39	Potential for Discovery of Aboriginal Heritage Objects	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.40	Hydrodynamic & Coastal Processes	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.40A	Hydrodynamic & Coastal Processes	Future Action	<b>Compliant &amp; Ongoing</b>
B2.41	Construction Safety Study	Complete	<b>Compliant &amp; Ongoing</b>
B2.42	Fire Safety Study	Complete	<b>Complete</b>
B2.43	Emergency Response and Incident Management Plan	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.44	Impact on Aviation Operations at Sydney Airport	Compliant & Ongoing	<b>Complete</b>
B2.45	Impact on Aviation Operations at Sydney Airport	Compliant & Ongoing	<b>Complete</b>
B2.46	Obstacle Limitation Surface	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.47	Terminal Construction Lighting Design	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B2.48	Development & Certification of Navigational & Surveillance Technologies	Complete	<b>Complete</b>
B3.1	Community Information/Complaints Handling	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B3.2	Community Consultative Committee	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B3.3	Community Consultative Committee	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>

			<b>Ongoing</b>
B3.4	Community Enhancement	Complete	<b>Complete</b>
B3.5	Banksia Street Pedestrian Bridge	Complete	<b>Complete</b>
B4.1	Incident Reporting	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B4.2	Annual Environmental Management Report	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B4.3	Environmental Representative	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B4.4	Environmental Training	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B4.5	Environmental Auditing	Compliant & Ongoing	<b>Compliant &amp; Ongoing</b>
B4.6	Maintenance and Management Plan for Extended Area	Complete	<b>Complete</b>

# 4. Complaints

## 4.1 Complaint management and reporting

The handling of complaints was performed in accordance with the requirements of the MCoA B3.1. A number of complying methods are available for community comments, inquiries and complaints to be made regarding the development. These methods were adequately published consist of the following:

- a toll free 1800 hotline number that is widely advertised via Construction Updates and site signage, this number is the same number that has been used by SPC through the earlier and planning stages of this project.
- a specific email address that is also widely advertised via newsletter and site signage.
- SICTL Website includes contact numbers and email for complaints and general enquiry information regarding the project.

NSW Ports administers the 1800 177 722 line. The inquiry or complaint is distributed immediately to relevant contractor and recorded in the enquiries and complaints register.

SICTL keep a register of comments, inquiries and complaints as required. The register records:

- the date and time of the comment, inquiry or complaint.
- the means by which the comment, inquiry or complaint was made.
- personal details of the commenter, inquirer or complainant, or a note if no details were provided.
- the nature of the complaint.
- actions taken in relation to the comment, inquiry or complaint.
- If no action was taken, the reason no action was taken is recorded.
- quarterly reports are supplied to the Department by NSW Ports detailing the above.

## 4.2 Complaint summary

Only one approach was made to the project between the September 2013 and September 2014.

- A similar complaint regarding the lights on the newly installed Quay Cranes was received in December and investigated. It was found that and lights were in compliance with airport regulation and as no further communication resulted the issue closed.

It is worth noting that this complaint was not due to construction issues or non-conformance with MCoA or non-compliance with CEMP environmental controls or related in any way to construction activities on site.

Complaints were reported to DP&I quarterly as required. Information on inquiry and complaints was covered at the relevant CCC meetings. Construction Updates and CCC minutes are on the NSW Ports website as required. For Complaints Register refer to Appendix D.

## 5. Assessment of impact predictions

An assessment against the predictions made and the conclusions drawn in the development application, EIS, additional information and Commission of Inquiry material was undertaken during the Annual Independent Environmental Audit in September 2013. An audit checklist was prepared by reviewing all source material and extracting relevant information relating to predictions and conclusions. Detailed findings are included in the checklist in Appendix B of this report.

The assessment of predictions and conclusions used the following categories to reflect outcomes:

- largely as predicted / concluded, or positive outcome;
- partially as predicted, or unknown; or
- not as predicted, or negative outcome.

Overall, the assessment found that the majority of predictions and conclusion drawn in the documentation are largely realised in the construction outcomes to date, generally with positive outcomes when compared to the predictions/conclusions.

At the site visit it was noted that sand at the Boral Batch plant was not well managed however these issues were subsequently addressed and verified as adequate action taken on the follow up visit. Stock piles are tidy and managed in accordance with the CEMP.

The assessment identifies one instance where the construction outcomes were not as predicted or negative outcomes in relation to PM<sub>10</sub> dust monitoring. Dust monitoring was performed as required on behalf of SICTL and Patrick and some exceedances were noted in the monthly monitoring reports however the reports suggest that the source were not due to project related activities, such as bush fire and golf course maintenance activities. Additional dust mitigation was implemented to manage dust including additional water cart, polymer spraying of stockpiles and removal of stockpiles. The monitoring results for the period reviewed indicate there have been more than 2 exceedances as predicted, however the resulting investigation did not conclude that these were due to construction activities.

The predicted consumption of water on the site was found to be at times more than the predicted 15ML required per year based on ten month consumption figures and approximate the 22.4ML. Site discussions suggest that increase use of water for dust suppression was a factor during low and infrequent rain fall. At the end of Phase 1 and 2 consumption of water on site is expected to fall below the 15ML predicted.

## 6. Summary of monitoring results

A number of environmental parameters are monitored throughout construction to measure environmental impacts. Monitoring is required by the MCoA, EIS, and contractual obligations between NSW Ports and SICTL.

Monitoring has been undertaken for dust, noise, water quality, shorebird observation and acid sulphate soils as described in the table below.

**Table 6-1 Construction Environmental Monitoring**

Element	Requirement	Location	No	Parameter	Frequency
Shorebirds	PEHEP	On site	-	Shorebird numbers	Weekly
Noise	EIS	Residential areas, sensitive receiver locations	6	LA10(15min), RBL – dB(a)	Monthly
Dust	EIS	HVAS – Botany Golf Course	1	PM 10	Real Time Continuous
		Gauges – Residential areas, Penrhyn Estuary	4	TSP	Monthly
Acid Sulphate	MCoA B2.6	On site where suspected	-	PASS/ASS	As required
Water	EIS	At discharge location; Estuary or Botany Bay	-	<ul style="list-style-type: none"> <li>Oil and Grease visual</li> <li>pH</li> <li>turbidity</li> </ul>	As required when dewatering prior to discharge

Analysis of monitoring results shows that the project has met all environmental monitoring requirements. No exceedance has been found to date regarding noise or water and no Acid Sulphate soils have been suspected or encountered.

Some exceedances have been noted for dust during monitoring this period. Dust monitoring is performed as described in Table 6.1 above; four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion and a real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter.

During Phase 1 the environmental monitoring was undertaken by Laing O'Rourke and provided to the contractor on the Patrick site adjacent. In Phase two, Fulton Hogan the contractor for Patrick, performed the monitoring and provided the results to Burton contractors for SICTL. See Appendix E for the monthly reports.

The results are reported monthly by the contractor, all exceedances are investigated and these are discussed in the relative monthly report in Appendix E and briefly for Phase 1 and Phase 2 below:

## **PHASE 1**

### **OCT 2013**

This month the real-time dust monitor installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter recorded 4 instances that the daily average project criterion of 50µg/m<sup>3</sup> was exceeded. These results were recorded on the 18<sup>th</sup>, 19<sup>th</sup>, 21<sup>st</sup> and 29<sup>th</sup> readings of 5µg/m<sup>3</sup>, 55µg/m<sup>3</sup>, 141µg/m<sup>3</sup> and 57µg/m<sup>3</sup> respectively above the project criterion of 50µg/m<sup>3</sup>. Investigation noted that the elevated readings coincided with bush fire event, poor air quality in the Sydney area and high winds and this is thought to be the dominant cause of the elevated reading. Dust mitigation measures had been ongoing throughout the period and additional measures had already been put in place such as a third water cart for dust control spraying, surplus material had been removed from site, polymer spray sealant had been applied to other stockpiled material, further briefing of all project personnel of the importance of effective dust management was initiated and a co-ordinated approach the contractor on the adjacent Patrick site was undertaken to minimise off site impacts. No residential properties or road networks were impacted by dust and there have been no dust related complaints during this period. See the October 2013 monthly report for further details in Appendix E.

### **Nov 2013**

Three exceedances were recorded on the real time MP<sub>10</sub> dust monitor this month and the Dust deposition gauge at the Penrhyn Estuary dust deposition gauge recorded a 4.3 g/m<sup>2</sup> slightly above the 4.0g/m<sup>2</sup> goal for the project. Bush fires, high winds and poor air quality in the Sydney region with high ash content in the sample suggest that this exceedance is not due to site works. Dust control measures remained in place and were continually maintained. A co-ordinated effort was made with the contractor on the Patrick site adjacent to minimise offsite impacts. No residential properties or road networks were impacted by dust and there have been no dust related complaints during this period. See the November 2013 monthly report in Appendix E for further details.

### **Dec 2013**

One dust exceedance was recorded this month again in the Penrhyn Estuary dust deposition gauge of 5.1g/m<sup>2</sup>, which is above the 4.0 g/m<sup>2</sup> goal for the project. Again high ash content of 4.1 g/m<sup>2</sup> was noted in the sample. The investigation and combined approach with the Patrick contractor working in the adjacent site, this result is not considered to be caused by Laing O'Rourke construction activities. Dust mitigation measures in accordance with the CEMP and Dust Management Plan were in place and further polymer spray sealant had been applied to material stockpiles to minimise off site impacts. Again, no residential properties or road networks were impacted by dust and there have been no dust complaints received by the project during this monitoring period.

### **Jan 2014**

All results received for the deposition gauges are within EPA guidelines and Project criteria with the exception of one gauge located in the upper Penrhyn Estuary. The

dust deposition gauge located in the upper Penrhyn Estuary returned a total insoluble matter value of 4.5 g/m<sup>2</sup>/month which is slightly above the project guideline of 4.0 g/m<sup>2</sup>/month. This is the third exceedance of dust deposition monitoring targets during the current phase of the port expansion project at this location. Laing O'Rourke water cart operations have been focussed in this area to ensure dust levels are brought back below the project targets.

Other construction contractors engaged by Patrick Stevedores, working adjacent the Terminal 3 site and Penrhyn Estuary have been notified of the exceedance in a combined approach to minimise offsite impacts of Port expansion works.

It is noted, however, that no residential properties or road networks were impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

## **Phase 2**

### **June 2014**

Two exceedances for the PM<sub>10</sub> were recorded in the June dust monitoring, however as no work were being performed on Burton site at that time and the winds were predominantly from a westerly direction at the time, the investigation concluded that, appropriate dust mitigation measures were implemented at the time and so it is unlikely that construction works on site were the source of the exceedance. No residential properties or road networks were impacted by this MP<sub>10</sub> exceedance and there have been no dust related complaints during this period. See the June 2014 monthly report in Appendix E for further details.

### **July 2014**

Three exceedances for the PM<sub>10</sub> were recorded in the July 2014 dust monitoring. Investigations indicated that strong west-north westerly winds were being experienced in the area during this period. Hence it is improbable that the source of the particulate matter responsible for the exceedance was the Burton's construction site located to the south of the monitoring location. Dust mitigation controls were in place at these times and deemed to be appropriate. No residential properties or road networks were impacted by this MP<sub>10</sub> exceedance and there have been no dust related complaints during this period. See the July 2014 monthly report in Appendix E for further details.

### **August 2014**

Two exceedances of project PM<sub>10</sub> particulate matter criteria were recorded during August 2014. Investigation into the exceedances identified the following information:

On both days that the exceedances were recorded, Sydney Airport Meteorological Station indicated that strong north-westerly winds were being experienced in the area during this period, therefore it is improbable that the source of the particulate matter responsible for the exceedance was the Burton's construction site located to the south of the monitoring location; and a number of dust controls were in place on site at the time the exceedance occurred and that no dust or particulate matter was observed leaving the site. Controls included but weren't limited to use of a water cart and street sweeper, compaction of stockpiles, sealing up of areas and prior placement and compaction of select material along entry and exit points.



It was concluded that all appropriate and reasonable mitigation measures had been undertaken at the site and that construction works did not represent the source of the exceedance. No residential properties or road networks were impacted by this MP<sub>10</sub> exceedance and there have been no dust related complaints during this period. See the August 2014 monthly report in Appendix E for further details.

All monthly monitoring results and monitoring findings and interpretations are presented in Monthly Reports located in Appendix E these are also available on the SICTL web site.

# 7. Environmental performance

## 7.1 Environmental objectives and targets

The four CEMPs required for the construction of Terminal infrastructure have numerous objective and targets set by SICTL and the various contractors. Broadly all the objectives and targets have been met. The compliance status of the stated targets and objective are summaries in the following Table 7-1.

**Table 7-1 Project environmental objectives and targets – compliance status**

Objective	Targets	OK?	Compliance Status as at end September 2014
<b>SICTL Phase 1 and 2</b>			
Effective site environmental controls	<ul style="list-style-type: none"> <li>Environmental controls are developed and implemented prior to starting work on site.</li> <li>Complete an effective inspection and maintenance regime.</li> </ul>	<div>✓</div> <div>✓</div>	<ul style="list-style-type: none"> <li>The annual audit reported no non-conformance in relation to Environmental Controls being implemented.</li> <li>Monthly audits on contractors have all been performed to date.</li> </ul>
Environmental performance	<ul style="list-style-type: none"> <li>Zero major environmental incidents and no breaches.</li> </ul>	<div>✓</div>	<ul style="list-style-type: none"> <li>No major environmental incidents have been reported to date.</li> </ul>
Effective implementation environmental systems	<ul style="list-style-type: none"> <li>Full compliance with Planning Approval requirements.</li> </ul>	<div>✓</div>	<ul style="list-style-type: none"> <li>The annual audit found two non-conformances with the MCoA, to do with uploading reports to the website and these were corrected immediately and closed out prior to the audit being finalised.</li> </ul>
Community issues carefully managed	<ul style="list-style-type: none"> <li>Zero valid complaints.</li> </ul>	<div>✓</div>	<ul style="list-style-type: none"> <li>No complaints were received.</li> </ul>
<b>Laing O'Rourke Phase 1</b>			
Effective site environmental controls	<ul style="list-style-type: none"> <li>Environmental controls are developed and implemented prior to starting work on site.</li> <li>Achieve alignment with SICTL expectations in relation to best practice control measures.</li> <li>Complete a rigorous and effective inspection and maintenance regime.</li> <li>Maintenance issues addressed within specified timeframes.</li> </ul>	<div>✓</div> <div>✓</div> <div>✓</div> <div>✓</div>	<ul style="list-style-type: none"> <li>The annual audit reported no non-conformance, Safe Work method Statement (SWMS) are submitted and checked prior to starting work, weekly inspections are recorded and environmental controls are maintained to date, Monthly Environmental Monitoring Reporting is compliant to date.</li> <li>Regular monthly audits by SICTL show LOR are compliant</li> <li>Weekly and monthly inspections by the EM ensure environmental controls are maintained</li> <li>Maintenance issues are addressed in a timely manner</li> </ul>

Objective	Targets	OK?	Compliance Status as at end September 2014
Environmental performance	<ul style="list-style-type: none"> <li>Zero major environmental incidents and no breaches.</li> <li>Zero infringement notices from the EPA or notices from Local Council.</li> <li>All environmental spills to be reported to SICTL within 2 hrs of occurrence.</li> <li>Major incidents must be reported immediately.</li> </ul>	✓ ✓ ✓ ✓	<ul style="list-style-type: none"> <li>No major environmental incidents or breaches have been reported.</li> <li>No infringements received or recorded.</li> <li>All spills reported and cleaned up appropriately.</li> <li>No major incident reported to date.</li> </ul>
Effective implementation of the environmental system	<ul style="list-style-type: none"> <li>90% or better internal audit results.</li> <li>Full compliance with Planning Approval requirements.</li> </ul>	✓ ✓	<ul style="list-style-type: none"> <li>Internal and external audit results show 90% or better on environmental system implementation.</li> <li>No non-conformances were recorded on the annual audit</li> </ul>
Community issues carefully managed	<ul style="list-style-type: none"> <li>Zero valid complaints.</li> <li>All complaints reported to SICTL's Representative immediately and responded to within two hours.</li> </ul>	✓ ✓	<ul style="list-style-type: none"> <li>Community complaints to date could not be attributed to construction activities on the project.</li> <li>All enquiries and complains were reported and responded to in a timely manner.</li> </ul>
<b>Grindley Phase 1</b>			
Effective Site Environmental Controls	<ul style="list-style-type: none"> <li>Achieve alignment with SICTL expectations in relation to best practice control measures.</li> <li>Fulfil environmental obligations.</li> </ul>	✓ ✓	<ul style="list-style-type: none"> <li>Environmental controls have been implemented in accordance with the CEMP.</li> <li>No non-conformances were recorded in the annual audit.</li> </ul>
Increase amount of waste being recycled, reduce waste costs	<ul style="list-style-type: none"> <li>85% of waste to be recycled.</li> </ul>	✓	<ul style="list-style-type: none"> <li>Waste monitoring and segregation ensured that at least 85% of waste was able to be recycled.</li> </ul>
Environmental Performance	<ul style="list-style-type: none"> <li>Zero major environmental incidents and no breaches.</li> <li>Zero infringement notices.</li> <li>All environmental spills to be reported to SICTL within 2 hrs of occurrence.</li> </ul>	✓ ✓ ✓	<ul style="list-style-type: none"> <li>No major environmental incidents or breaches were recorded.</li> <li>No infringement or warnings were received to date.</li> <li>No environmental spills have been reported to date.</li> </ul>

Objective	Targets	OK?	Compliance Status as at end September 2014
Reduce the amount of environmental impact our operations have on the environment	<ul style="list-style-type: none"> <li>Environmental issues identified and controlled prior to causing negative impacts on the project or on the environment.</li> </ul>	✓	<ul style="list-style-type: none"> <li>Environmental monitoring and controls have prevented negative impacts on the project and environment.</li> </ul>
Effective implementation of the environmental system	<ul style="list-style-type: none"> <li>90% or better internal audit results.</li> <li>Full compliance with Planning Approval requirements.</li> </ul>	✓ ✓	<ul style="list-style-type: none"> <li>Internal audits show 90% or better on environmental systems.</li> <li>No non- conformance were recorded on planning approval at the annual audit.</li> </ul>
Community issues carefully handled	<ul style="list-style-type: none"> <li>Zero valid complaints all complaints reported to SICTL's Representative</li> </ul>	✓	<ul style="list-style-type: none"> <li>No Complaints have been received regarding Grindley scope of works.</li> </ul>
<b>Burton Contractors Phase 2</b>			
Effective site environmental controls	<ul style="list-style-type: none"> <li>Environmental controls are developed and implemented prior to starting work on site.</li> <li>Complete an effective and regular inspection and maintenance regime.</li> </ul>	✓	<ul style="list-style-type: none"> <li>All environmental controls were developed and implemented prior to starting work in June 2014.</li> <li>Monthly environmental audits have been performed and environmental controls have been deemed to be effective.</li> </ul>
Environmental performance	<ul style="list-style-type: none"> <li>Zero major environmental incidents and no breaches.</li> </ul>	✓	<ul style="list-style-type: none"> <li>No major environmental incidents and no EPA breach notices have been reported or received.</li> </ul>
Effective implementation environmental systems	<ul style="list-style-type: none"> <li>Full compliance with Planning Approval requirements.</li> </ul>	✓	<ul style="list-style-type: none"> <li>Overall the audit found a good level of compliance to the MCoA, no non-conformances for Burton. Two issues of concern and one opportunity for improvement were actioned and closed out prior to audit close out.</li> </ul>
Community issues carefully managed	<ul style="list-style-type: none"> <li>Zero valid complaints.</li> </ul>	✓	<ul style="list-style-type: none"> <li>No community complaints relating to construction have been received in this period.</li> </ul>

## 7.2 Environmental performance

A review of effectiveness of environmental management was undertaken during the Annual Independent Environmental Audit in September 2014. The effectiveness of environmental management was assessed primarily through the site inspection, interviews with key personnel, review of monitoring results and site records (e.g. inspection checklists etc.)

The assessment indicated that the CEMP's and associated sub-plans were overall, a high level of effectiveness and implementation of environmental impact mitigation works and initiatives documented in the CEMP and sub plans were noted in the areas managed by Burton Contractors.

No areas were identified in which environmental performance was non-conforming; however a number of issues of concern and opportunities for improvement are noted for most contractors at the audit. These were identified in relation to the areas of the management of concrete wash water and slurry, stockpile management and dust mitigation at the Boral batch plant compound. Issues of concern and opportunities for improvement were all addressed and closed before the end of the audit. No major incidents have been reported to date.

Environmental monitoring is being performed as required and any exceedances are investigated and recorded in the monthly environment reports. To date none are attributable to this construction activities on site and no construction related environmental complaints have been received. See Appendix E for the monthly environmental monitoring reporting.

These reports are also uploaded to the SICTL project website for public availability and these results are discussed at the CCC meetings as recorded in the minutes of the meetings available on the NSW Ports website.

## 8. Annual independent environmental audit

An independent environmental audit was required to be undertaken for the Sydney Port Botany Terminal 3 in accordance with MCoA Condition B4.5

The audit was performed by suitably qualified auditor approved by the Director-General within one year of commencement of construction. Construction of the terminal operations infrastructure commenced on 12 September 2012. The on-site component of the audit was conducted over 4 days; 29, 30 August and 3 and 4 September 2013. The independent environmental audit was completed in accordance with the principals ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 – Procedures for Environmental Auditing.

At the time of the audit, the following assessment was made against relevant Ministers Conditions of Approval including Modifications 1-15, the Commonwealth EPCB Approval, no Environmental Protection License was in force at the time. The assessment of construction against EIS predictions made and conclusions drawn included assessments against the following documents:

- Port Botany Expansion: Environmental Impact Statement (ten volumes), prepared by URS Pty Ltd and dated November 2003.
- The Port Botany Expansion Commission of Inquiry - Primary Submission (two volumes), prepared by URS Pty Ltd and dated May 2004.
- The Port Botany Expansion Commission of Inquiry - Supplementary Submission to Environmental Impact Statement prepared by URS Pty Ltd and dated August 2004.
- The Port Botany Expansion Environmental Impact Statement - Supplementary Submission (two volumes), prepared by URS Pty Ltd and dated October 2004.

The review of effectiveness of environmental management primarily involved site visits to the various contractors and subcontractors work sites, observation of activities, interviews with their management and supervisors and review of site documentation and records. Actual practice on site was reviewed both in terms of good environmental practice and the commitments made in the respective CEMPs, sub-plans and Impact Mitigation Plans.

The site field visit component of the audit included a visit to all major construction areas/activities of the site as described in the Independent Environmental Audit Report December 2013.

## 8.1 Audit purpose

The purpose of the audit was to undertake the required assessment and review of compliance, EIS predictions and the effectiveness of environmental management and mitigation works as required under MCoA B4.5 which states;

*“Within one year of the commencement of construction and every year thereafter for the duration of construction a full independent environmental audit shall be undertaken by a suitably qualified person/team approved by the Director-General. Audits would be made publicly available and would:*

- (a) be carried out in accordance with ISO 14010 and ISO 14011 – Procedures for Environmental Auditing;*
- (b) Assess compliance with the requirement of this consent, other licences/ approvals;*
- (c) Assess the construction against the predictions made and conclusions drawn in the development application, EIS, additional information and Commission of Inquiry material and:*
- (d) Review effectiveness of environmental management including any environmental impact mitigation works.*

## 8.2 Audit findings

It was found that overall, there was a good level of compliance to the Ministers Conditions of Approval. Two non-compliances were identified at the audit, four (4) Issues of Concern and five (5) Opportunities for Improvement were raised in relation to the MCoAs. Section 3.1 previously summarised the finding which were addressed and closed at the time. Also refer to the table in Appendix A, B and C for the detailed audit findings.

The assessment against the predictions made and conclusions drawn in the EIS and other associated documentation, once again found that the majority of predictions and conclusions relevant to this phase of the project are largely realised in the construction outcomes to date. The assessment found that there were generally positive outcomes when compared with the predictions and conclusions. However, one prediction with a negative outcome regarding the Boral Batch Plant was during a site inspection where wind and water erosion was noted. These issues were subsequently addressed following the first audit visit and adequate actions taken were verified.

Two partially as predicted findings regarding dust monitoring exceedances in relation to  $MP_{10}$  and the  $4g/m^2/month$  goal criteria had been exceeded and the investigations and commentary in the monitoring reports suggest that these were due to sources other than project activities including bush fires and golf course activities.

Detailed findings are included in the checklist in Appendix B.

The auditor noted nil findings in relation to the EPCB approval. Condition 8 of the Approval required that by the First of July each year after the date of this approval or as otherwise agreed by the Minister, written certification of compliance with the approval must be provided. The written certification was provided on 24th June 2014,



it verified that all conditions were complied with. Refer to Appendix C for detailed checklist and findings.

### 8.3 Audit conclusion

It can be concluded that the Annual Independent Audit was performed within the timeframe required by a suitably qualified person with the Director General's approval. The audit outcomes and findings with the MCoA were satisfactorily addressed and closed before the end of the audit and that the EIS predictions and conclusions are largely realised in construction outcomes to date. The assessment found that there were generally positive outcomes when compared with the prediction and conclusions of the EIS. Exceedances in dust monitoring were found to be due to sources not related to construction activities on site or lack of environmental control. The EPBC certificate of compliance verified that all conditions had been complied with. All audit findings have been addressed to the auditor's satisfaction and closed.

# 9. Conclusions

This Annual Environmental Management Report is the second for the construction of terminal operations infrastructure and addresses the requirements of MCoA Condition B4.2 for the period September 2013 to 30 September 2014.

The findings of the Annual Independent Environmental Audit performed in September 2014 addressed similar MCoA requirements, and found that the project has a good level of compliance with the MCoA. Two non con-compliances were raised against the MCoA in relation to web site updates and these were actioned and closed out prior to the audit conclusion. Opportunities for improvement and issues of concern have been satisfactorily addressed and closed.

The management and handling of complaints is performed systematically and in a timely manner. Complaints are recorded in a register that complies with the requirements of MCoA B3.1 and are reported to the Department. One complaint received was not due to construction activities on site.

The comparison of the environmental impacts and performance predicted in the EIS found that the predictions and conclusions are largely realised in the construction outcomes to date and that generally there were positive outcomes. Brief exceedances in dust criterion and goals were not found to be caused by construction activities.

Environmental monitoring was performed and reported as required by the MCoA, EIS and PEHEP. Analysis of the monitoring data shows that the project met environmental monitoring requirements for the period.

The Phase 2 contractor, Burton Contractors, at the time of the audit was found to have a high level of implementation and effective management of environmental controls on the project with respect to the relevant approved construction environmental management plan and no major incidents have been reported to date.

This report is submitted to the Director General for approval and will be available for public inspection on the NSW Ports and SICTL web site.

**Appendix A**  
MCoA Compliance  
Checklist

# Annual Audit Checklist for - Sydney Port Botany Terminal 3 Project Phase 2

## Ministers Conditions of Approval (MCoA) Audit 2014

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
SCHEDULE A: OVERALL SCOPE OF DEVELOPMENT WORKS AND GENERAL PROVISIONS						
A1	GENERAL					
Scope of Development						
A1.1	SPC/NSWP SICTL	<p>The approved aspects of the development shall be carried out generally in accordance with:</p> <p>a) Development Application DA-494-11-2003-i, lodged with Department on 26 November 2003.</p> <p>b) Port Botany Expansion: Environmental Impact Statement (ten volumes), prepared by URS and dated Nov 2003;</p> <p>c) Port Botany Expansion Commission of Inquiry – Primary Submission (two volumes), prepared by URS dated May 2004</p> <p>d) Port Botany Expansion Commission of Inquiry – Supplementary Submission to Environmental Impact Statement, prepared by URS and dated August 2004</p> <p>e) Port Botany Expansion Environmental Impact Statement – Supplementary Submission (two volumes), prepared by URS and dated October 2004;</p> <p>f) modification application MOD-107-9-2006-i, accompanied by <i>Port Botany Expansion, Section 96(1A) Application: Modification of Consent Conditions</i>, prepared by SPC and dated September 2006;</p> <p>g) modification application MOD-134-11-2006-i, accompanied by <i>Port Botany Expansion, Section 96(1A) Modification – Wharf Structure Design</i>, prepared by SPC and dated November 2006;</p> <p>h) modification application MOD-149-12-2006-i, accompanied by <i>Port Botany Expansion, Section 96(1A) Modification – Application to</i></p>	<p>Whilst the development has generally been carried out in accordance with the conditions of this consent, two (2) non-compliances were identified during the audit. Details are provided in Table 1 and in the body of the Audit Report, however they are summarised below:</p> <p>B4.2 – The Annual Environmental Management Report (AEMR) for 2013 was not made publicly available as required</p> <p>B4.5 – The Annual Independent Environmental Audit Report for 2013 was not made publicly available as required</p> <p>Since the audit, these reports have now been uploaded to the SICTL website and are now publicly available.</p>		NC	

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		<p><i>Modify Conditions B2.9 and B2.22 of the Port Botany Consent, prepared by SPC and dated 1 December 2006;</i></p> <p>i) modification application MOD-78-9-2007-i, accompanied by <i>Port Botany Expansion – Modification of Conditions C2.20 &amp; C2.25</i>, prepared by SPC, dated July 2007;</p> <p>j) modification application MOD-60-9-2008, accompanied by <i>Port Botany Expansion – Modification of Conditions B2.46 &amp; C2.25</i>, prepared by SPC, dated 27 August 2008;</p> <p>k) modification application MOD-68-12-2008, accompanied by a letter from SPC dated December 2008;</p> <p>l) modification application MOD-08-03-2009, accompanied by a letter from Sydney Ports Corporation dated 16 February 2009 and assessment report titled <i>Port Botany Expansion – Rail Operations Section 96(1A) Modification</i> dated February 2009</p> <p>m) modification application DA-494-11-2003-I MOD 8, accompanied by an assessment report titled <i>“Port Botany Expansion – Sip Turning Area Dredging Section 96 (1A) Modification</i> dated May 2009;</p> <p>n) modification application DA-494-11-2003-I MOD 9 accompanied by an assessment report titled <i>“Port Botany Expansion – Additional High Spot Dredging off Molineux Point Section 96 (1A) Modification”</i> dated May 2009.</p> <p>o) modification application DA-494-11-2003-I MOD 10, accompanied by an assessment within the letter titled <i>“Port Botany Expansion – Section 96(1A) Modification – Additional Ship Turning Area Dredging”</i> dated 8 July 2009;</p> <p>p) modification application DA-494-11-2003-i MOD 11, accompanied by an assessment report titled <i>“Sydney Port Botany Terminal No. 3 PKG-17.1 Planning Section 75W Modification Operations Building and Maintenance Building”</i> dated 14 September 2011;</p>				
A1.1 cont'd	SPC/NSWP	q) modification application DA-494-11-2003-i MOD 12, accompanied by an assessment report titled <i>“Sydney Port Botany Terminal No. 3 PKG-17.1 Planning Section 75W Modification to Stormwater First</i>				

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		<p><i>Flush System” dated 15 February 2012 and supplementary advice provided on 6 June 2012 in relation to other proprietary SQID devices;</i></p> <p>r) modification application DA-494-11-2003-i MOD 13, accompanied by an assessment report titled “<i>Project No. 231658 Section 75W Modification to Stormwater Management System for Southern Expansion Area</i>” dated 31 October 2012;</p> <p>s) modification application DA-494-11-2003-i MOD 14, accompanied by assessment reports titled “Port Botany Expansion – Section 75W Modification 14 to DA-494-11-2003i for Temporary Uses at northern tip of Hayes Dock”, dated January 2013; and “Port Botany Expansion, Cumulative Construction Traffic Impact Assessment, Terminal Operations Infrastructure (March 2013 – March 2014)”, dated April 2013;</p> <p>t) modification application DA-494-11-2003-i MOD 15, accompanied by assessment report titled ‘SICTL Quay Crane Operations’, prepared by HPH and dated 20 March 2013;</p> <p>u) the conditions of this consent</p> <p>Insofar as they relate to the approved development.</p>				
A1.2	NSWP SICTL	<p>In the event of an inconsistency between:</p> <p>a) the conditions of this consent and any document listed from condition A1.1a) to t) inclusive,, the conditions of this consent shall prevail to the extent of the inconsistency; and</p> <p>b) any document listed from condition A1.1a) to t) inclusive, the most recent document shall prevail to the extent of the inconsistency.</p>	<p>Noted</p> <p>No compliance obligations related to this condition</p>	C		
<b>Statutory Requirements</b>						
A1.3	NSWP SICTL	All licences, permits and approvals shall be obtained and maintained as required throughout the life of the development. No condition of this consent removes the obligation to obtain, renew or comply with such licences, permits or approvals.	<p>Noted</p> <p>No Environment Protection Licence is required as part of this package of works</p> <p>The Federal EPBC Approval 2002/543 remains valid and was</p>	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			assessed at this audit. (refer to Main report and Appendix 3)			
<b>COMMENCEMENT OF CONSTRUCTION OF TERMINAL OPERATIONS INFRASTRUCTURE</b>						
A3.1	SPC/NSWP	Commencement of the construction of terminal operations infrastructure on the area of the Stage 1 port footprint shown hatched in Schedule 3, shall not occur until such time as the Sydney Ports Corporation has submitted documentation, to the satisfaction of the Minister, by way of a copy of a contract(s) or agreement(s), by way of lease(s) or similar arrangement, between the Sydney Ports Corporation and any other party or parties, in respect of the construction and operation of new terminal facilities on that area that demonstrate that the area shall operate as a stand alone terminal. The Minister may exempt areas of the approved footprint from the requirements of this condition where it can be demonstrated that option agreements relating to such areas were in force prior to consent being granted.	<i>Assessed as compliant at previous audits. No further assessment required</i>	C		

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ◆ ☒ ☒	NA
SCHEDULE B – CONSTRUCTION WORKS AND ONGOING ENVIRONMENTAL MANAGEMENT OF THE NON-OPERATIONAL ASPECTS OF THE TERMINAL						
GENERAL REQUIREMENTS						
Application of Schedule						
B1.2	NSWP	The conditions in this Schedule of the consent relate the following aspects of the development:  a) development activities and works associated with the construction phase(s) of terminal footprint infrastructure including transportation and delivery of materials and construction personnel to/from the site;	Noted No compliance issues related to this condition	C		
B1.2	Burton Contractors	The conditions in this Schedule of the consent must be complied with by the Applicant, or any party undertaking the activities and works referred to under condition B1.1 on behalf of the Applicant.	The outcomes of the Sydney Port Botany Terminal 3 construction project indicate that all of the relevant Minister's Conditions of Approval have been complied with.  Whilst no non-compliances have been identified, some observations and Issues of Concern will require action by various contractors / subcontractors to improve environmental performance.	C		
Construction Environmental Management Plan (CEMP)						
B1.3	Burton Contractors SICTL	The Applicant shall prepare a Construction Environmental Management Plan (CEMP) which, must be approved by the Director-General prior to the commencement of any site preparation or construction works. The CEMP must:	Yes. SICTL Main Works Main Works Construction Environment Management Plan Phase 2 & 3 Version 11/13 Revision 1 dated 18 November 2013 including statement of commitments tracking in Appendix 6.  The Director General granted approval for the CEMP and related management plans in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects.	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable



MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		-Describe all activities to be undertaken on the site during site establishment and construction;	Yes – described in Section 2 – Scope of main works	C		
		-Describe relevant stages/phases of construction, including a work program outlining relevant timeframes for each stage/phase.	Yes – In section 2 - Scope – table showing expected duration of construction activities	C		
		-clearly outline stages/phases of construction that require on-going environmental management monitoring and reporting up to and beyond the commencement of operations of the terminal;	Yes – Section 3 – Objectives and Targets section of CEMP	C		
		-detail statutory and other obligations that the Applicant is required to fulfil during site establishment and construction, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;	<p>Yes - Section 3 – Legal and Other Requirements Section – provides overview of legal and other requirements including MCoA, Modifications, EPBC approval, EIS, PEHEP.</p> <p>Specific requirements detailed in Appendix 1 – Legal and Other Requirements</p> <p>Dangerous Goods Act 1975 and Rivers and Foreshores Improvement Act 1948 have been repealed. Update of register required. (Note – this was also raised at previous audit and fixed)</p>		OFI	
		-include specific consideration of measures to address any requirements of the Department, DEC, DNR and the Council during site establishment and construction;	<p>Yes – Appendix 6 – Statement of commitments tracking against MCoA. .</p> <p>Note: there is inconsistency of title - CEMP Table of Contents refers to Appendix 6 - “Statement of Commitments” Tracking, however Appendix 6 is “MCoA Compliance Tracking”. ToC should be revised during next revision.</p>		OFI	
		-describe roles and responsibilities for all relevant employees involved in site establishment or construction;	Yes – Key responsibilities and Authorities are outlined in Section 3 of the CEMP including SICTL Project Manager, Project Environment Representative, Contractors, Engineering	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			and supervisory personnel and all personnel.			
		-detail how environmental performance of the site preparation and construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;	Yes – Objectives and Targets – section 2.1 of CEMP – Regular Environmental Inspection checklists, Quantitative environmental monitoring and monthly reporting	C		
		- include all Management Plans/Studies and Monitoring Programs required in this schedule	Yes –CEMP with Appendices. Section 8 – Monitoring and Measurement outlines required environmental monitoring – includes Water discharge, construction noise, construction vibration and air quality (dust).  Contractor is required to provide SICTL with monthly environmental monitoring reports and upload to the project website.	C		
		- include arrangements for community consultation and complaints handling procedures during construction;	Yes – Section 3 of CEMP – Community Notifications, 3.1 – Community Notifications Procedure and 3.2 - Enquiries and Complaints response.	C		
		-be made available for public inspection after approval of the Director General	Yes – available on the SICTL website (only recently added)	C		
		- Separate CEMPs may be prepared and submitted for works associated with the construction of the terminal footprint.	Yes – the CEMP for the current scope of works has been prepared and submitted for the construction of the Phase 2 and 3 of Terminal 3.	C		
<b>Compliance Certification</b>						
B1.4	Burton Contractors SICTL	Prior to each of the events listed from a) to c) below, or within such period otherwise agreed by the Director-General, documentation certifying that all conditions of this consent applicable prior to that event have been complied with shall be submitted to the satisfaction of the Director-General. Where an event is to be undertaken in stages, submission of compliance certification may be staged	The Director General granted approval for the Compliance Certification Report in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects	C		

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		consistent with the staging of activities relating to that event, subject to the prior agreement of the Director-General.				
		a) commencement of construction works associated with the development;	Addressed in previous audits - construction of port footprint			NA
		b) commencement of each phase of construction works established under the program required under condition B1.3; and	Burton Contractors Statement of Compliance Phase 2 and 3 dated 25/07/14 prepared by Burton Contractors. Appendix 6 of the CEMP as required by condition B 1.3 is the instrument that is used to track compliance- as approved by DP&I and this is used on an ongoing basis to track compliance.	C		
		c) completion of each phase of construction works established under the program required by condition B1.3.	Stage 1 (dated 30/10/13) Stage 2 (dated 27/02/2014) and Stage 3 (dated 13/06/2014) Post Construction Compliance Certification Report sighted. The reports detail the compliance with MCoA for Phase 1 Stages 1, 2 and 3	C		
		The certifying documentation shall clearly outline any on-going environmental management, monitoring or reporting requirements associated with the concluded construction works phase.	Letter from DP&I dated 22/07/2014 notes that the Phase 1, Stage 2 and 3 works have been generally compliant with the development consent and is satisfied with the Post Construction Compliance Report.	C		
B1.5	SPC/NSWP SICTL	Notwithstanding condition B1.4, the Director-General may require an update report on compliance with all, or any part, of the conditions of this consent. Any such update shall meet the requirements of the Director-General and be submitted within such period as the Director-General may agree.	There had been no requests for additional compliance reporting at the time of the audit	C		
<b>B2 CONSTRUCTION ENVIRONMENTAL PERFORMANCE</b>						
<b>Air Quality Management</b>						
<b>Odour Impacts and Sediment Sampling</b>						
B2.1	Burton	Unless otherwise permitted by an Environment Protection Licence	There was no evidence of odour during the audit, and there	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
	Contractors	applicable to the development, the Applicant shall ensure that construction works are undertaken in compliance with section 129 of the protection of the Environment Operations Act 1997. [S129 prohibits odour emission without a licence]	have been no report or complaints regarding odour.			
<b>Dust Management Plan</b>						
B2.4	SICTL	The Applicant shall prepare a Dust Management Plan in consultation with DEC, RTA, DOP, Botany and Randwick Councils. The Applicant shall address the requirements of these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan. Plan must include, but not be limited to strategies in which the construction shall:	An Air Quality and Dust Management Sub-plan is included in Appendix 8 of the CEMP – Sub-Plans	C		
		-minimise or prevent the emission of dust from the site;	The Air Quality and Dust Management Plan requires actions to minimise or prevent emissions of dust	C		
		-ensure that all trafficable areas and vehicle manoeuvring areas in or on the premises shall be maintained, at times, in a condition that will minimise the generation, or emission from the premises, of wind blown or traffic generated dust;	Yes – Section 3.3 Control and Mitigation Measures.	C		
		-ensure that all vehicles entering and leaving the site and carrying a load that may generate dust are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle at all times; and	Yes – Section 3.3 – Mitigation Measures	C		
		-ensure that all dust source surfaces are sealed..	Yes – Section 3.3 – Mitigation Measures	C		
		The Plan shall be approved by the Director-General prior to commencement of construction.	Yes. SICTL Main Works Main Works Construction Environment Management Plan Phase 2 & 3 Version 11/13	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			Revision 1 dated 18 November 2013. The Director General granted approval for the CEMP and related management plans including the Air Quality and Dust Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects			
<b>Soil and Water Management</b>						
<b>Soil and Water Management Plan</b>						
B2.5	SICTL	The Applicant shall prepare a Soil and Water Management Plan in consultation with DEC, RTA, DOP, DNR, Botany and Randwick Councils. The Applicant shall address the requirements of these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan. The Plan must detail erosion and sediment controls, prepared in accordance with Managing Urban Stormwater: Soils and Construction (available from the Department of Housing) and must:	A Soil and Water Quality Management Plan (SWQMP) is included in Appendix 8 to the CEMP – Sub-Plans	C		
		-identify the management responses to activities that could cause soil erosion or result in the discharge of sediments and/or other pollutants from the site;	Yes - addressed in section 4.1 – 4.4 of SWQMP			
		-specify standards/performance criteria for erosion, sediment, and pollution control including water sediment basin locations and discharge points, for example parameters, frequency, duration location and method; and	Yes - addressed in Section 5 of SWQMP Site Waste Water controls. Section 5.2 – Mitigation Measures	C		
		-describe what actions and measures will be implemented, the effectiveness these actions and measures and how they will be monitored during the works, clearly indicating who will conduct the monitoring, how the results of this monitoring would be recorded; and, if any non-compliance is detected.	Yes - addressed in section 6.1 and 6.2 – Water monitoring, monitoring of controls	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
	SICTL	The Plan shall be approved by the Director-General prior to commencement of construction.	Yes. Part of SICTL Main Works Main Works Construction Environment Management Plan Phase 2 & 3 Version 11/13 Revision 1 dated 18 November 2013 The Director General granted approval for the CEMP and related management plans including the Soil and Water Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects	C		
<b>Acid Sulphate Soils</b>						
B2.6	SICTL	Prior to the commencement of construction activities, the Applicant must prepare an Acid Sulphate Soils Management Plan to assess and manage any Acid Sulphate Soils (ASS) or potential ASS (PASS). The Plan shall be prepared in accordance with the Acid Sulphate Soils Manual 1998 published by the NSW Acid Sulphate Soil Management Advisory Committee. In the event that ASS are encountered during the works, the Applicant shall notify the NSW Maritime Authority immediately.	Yes - An Acid Sulphate Soils Management Plan is included as an Appendix to the CEMP in Appendix 8 – Sub-Plans  The Director General granted approval for the CEMP and related management plans including the Acid Sulphate Soils Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects	C		
<b>Pollution Prevention</b>						
B2.7	Burton Contractors	Unless permitted through an environment protection licence applicable to the development, the Applicant must comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters. [S120 prohibits pollution without a licence.]	Addressed in various sections of the CEMP.  Site Inspections were carried out at all work sites and compliance to Section 120 was assessed. Whilst management of process and concrete washout water at the batch plant was noted as inadequate, there was no evidence and limited likelihood of contaminated water leaving site, therefore no breach of section 120.	C		
<b>Impact of Dredging</b>						
B2.8 – 2.12	Nil	All activities associated with dredging and reclamation works must be carried out in a manner that protects seagrass beds between the	No dredging or reclamation works are being undertaken are part of this phase of works. Conditions B2.8 – B2.12 are not			NA

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		dredge area and Foreshore Beach, and between the dredge area and Parallel Runway.	applicable and are not included in the scope of this audit			
<b>Consultation with Sydney Water</b>						
B2.13	SICTL	Prior to commencement of construction, the Applicant is required to consult with Sydney Water regarding the likely requirements from Sydney Water for a section 73 Compliance Certificate.	This was assessed as compliant at the last audit noting that a Customer agreement had been signed by a SICTL representative – dated 20/12/2012. No changes since last audit.	C		
<b>Traffic, Transport and Infrastructure Management</b>						
<b>Construction Traffic Management Plan</b>						
B2.14	SICTL Burton Contractors	Prior to the commencement of any construction works, the applicant must prepare a Construction Traffic Management Plan in consultation with RTA, DOP, Botany and Randwick Councils and SSROC. The Applicant shall address the requirements of these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan. Plan must include, but not be confined to, mitigation measures identified in EIS such as:	A Construction Traffic Management Plan (CTMP) has been prepared as part of the CEMP – Appendix 8 – Sub-Plans  A Traffic Management Plan for management of traffic within the construction site has also been prepared by Burton Contractors	C		
		-identification of preferred haulage routes;	Yes Section 5.2 of CTMP – Construction Vehicle Routes	C		
		-access routes and, signage and access arrangements on site;	Yes	C		
		-measures to limit the impact on Foreshore Rd. and Botany Rd.;	Yes	C		
		-need for restrictions on delivery hours and/or routes; and,	Yes	C		
		-development of traffic management measures during construction works to ensure minimal traffic disruptions	Yes	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ◆ ☒ ☒	NA
		The plan must be submitted and approved by the Director-General prior to the commencement of construction.	Yes. Part of SICTL Main Works Main Works Construction Environment Management Plan Phase 2 & 3 Version 11/13 Revision 1 dated 18 November 2013  The Director General granted approval for the CEMP and related management plans including the Construction Traffic Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects	C		
<b>Safety Audit</b>						
B2.15	NSWP	The Applicant must undertake a safety audit in accordance with RTA guidelines upon completion of works but prior to operation to ensure the safety of any road works, traffic management facilities, cycling and pedestrian provisions undertaken as part of the proposed works.	Not required for this package of works or scope of this audit No further action required	C		NA
B2.16	SICTL  Burton Contractors	Prior to construction the Applicant must prepare a handbook and distribute it to drivers of construction related vehicles providing information on accepted routes, constraints to traffic and preferred hours of use and amenities on such routes to ensure that the impact of traffic growth on local traffic is minimised.	Drivers Handbook –Delivery and Cartage Truck Drivers Induction and Site Safety Rules developed by Burton Contractors (350#DJH#20140515). These are provided to all drivers who sign that they have received it. A Port Traffic Handbook is also available and is displayed on noticeboards in the crib rooms and offices	C		
<b>Rail Siding Capacity</b>						
B2.17	NSWP	To maximise the increase in rail mode share associated with the expansion of the Port, rail siding capacity shall be provided in accordance with the Plan required by condition A2.4 of Schedule A.	Rail siding capacity provided in accordance with Port Freight Logistics Plan. The rail operation is managed and monitored by SICTL Operations. The railway is completed, compliant, but is not yet actively operating.	C		
		<b>Rail Access to New Terminal</b>				
B2.18	NSWP Boulderstone	The Applicant shall ensure that Grade separation of Penrhyn Road	Grade Separation Works were completed prior to previous audit. Rail access has now been provided	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable



MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
	(previous phase)	over the rail access to the new berth includes the grade separation of the inter-terminal road over the rail access to Patrick's terminal. This is required to ensure efficient operation of both road and rail access to all existing and proposed new berths.				
<b>Noise and Vibration Management</b>						
<b>Restriction to Hours</b>						
B2.19	<b>SICTL</b>  Burton Contractors	<p>The Applicant shall only undertake construction activities associated with the project (with the exception of dredging construction activities) that would generate an audible noise at any residential premises during the following hours:</p> <ul style="list-style-type: none"> <li>a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;</li> <li>b) 8:00 am to 1:00 pm on Saturdays; and</li> <li>c) at no time on Sundays or public holidays.</li> </ul> <p>Audible noise is defined as "noise that can be heard at the receiver". This condition does not apply in the event of a direction from police or other relevant authority for safety or emergency reasons. Note: 'safety or emergency reasons' refers to emergency works which may need to be undertaken to avoid loss of life, property loss and/or to prevent environmental harm.</p>	<p>Work is generally only undertaken within the approved hours, however extended hours (out of hours works) have been required on Saturdays from 7.00am to 3.00pm. Justification for the extended hours is primarily related to ensuring major construction activities are completed prior to the start of October and the beginning of the shorebird migration and breeding period.</p> <p>An Out of Hours Work Register is maintained (7 entries 1 June to 26 July), and an Environmental File Note is prepared for each event to provide justification and evidence of assessment by the Burton Contractors Environmental coordinator. The works are regarded as inaudible. The file notes indicated that site personnel are briefed on the strict requirements regarding noise.</p> <p>Noise monitoring record sheet sighted for first 4 events – reviewed records for 5/7/14 – verify "inaudible". Correspondence from NSW Ports concurs with Burton Contractors view that further monitoring required only when construction work and/or equipment changes, or if there is a complaint.</p>	<b>C</b>		

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			<p>Monthly noise monitoring is conducted at sensitive receivers during works (in addition to OOHW) and summarised in client monthly report.</p> <p>There have been no noise related complaints since commencement of this this package of works.</p>			
B2.19A	Burton Contractors SICTL	The Applicant must seek the Director-General's approval to conduct construction activities audible at residential premises (with the exception of dredging construction activities) outside the hours specified under condition B2.19 on a case-by-case basis. In seeking the Director-General's approval, the Applicant shall demonstrate a need for activities to be conducted during varied hours and how local acoustic amenity will be protected, as well as details of how the EPA's requirements with respect to the variation of hours have been addressed.	<p>Out of hours Work Register maintained (Inaudible)</p> <p>There have been no out of hours works required that are audible at residential premises and require approval</p> <p>Environmental Notes prepared for OOHW for the last 2 OOHW did not reflect changes to the monitoring requirements (based on email request and response from NSW Ports) regarding ongoing working hours on a Saturday.</p>	C	OFI	
B2.19B	Burton Contractors SICTL	For activities subject to an environmental protection licence issued by the EPA under the <i>Protection of the Environment Operations Act 1997</i> , conditions B2.19 and B2.19A do not apply if the EPA has approved activities to be conducted outside the hours permitted by condition B2.19.	Noted – No Environment Protection Licence on this package of works			NA
<b>Construction Noise Management Plan</b>						
B2.20	SICTL	Prior to the commencement of construction, the Applicant must prepare a Construction Noise Management Plan in consultation with DEC, DOP, Botany and Randwick Councils. The Plan shall include noise mitigation for piling works for diesel powered machinery, provision of training to ensure that construction workers are aware of the noise created during construction and are appropriately trained to minimise noise where possible. In addition, the Construction Noise Management Plan must:	A Construction Noise and Vibration Management Plan is included as a sub-plan in Appendix 8 – sub-plans of the CEMP	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
B2.20 Cont'd	SICTL	-identify general activities that will be carried out and associated noise sources;	Activity Specific Risks are addressed in Section 2.4 of the CNVP including concrete batching, earth works and ground improvement, drainage installation, supply and installation of automated stacking cranes and Quay cranes and communication infrastructure. Typical construction plant and equipment and their power levels are also identified.	C		
		-assess construction noise impacts at the relevant receivers;	Section 2.8 of the CNVP – Monitoring – states that compliance monitoring will be conducted on a monthly basis as outlined in the monitoring requirements table (including attended monitoring at 9 identified receivers) .	C		
		-provide details of overall management methods and procedures that will be implemented to control noise during the construction stage;	Yes – addressed in Section 2.7 – Mitigation Measures	C		
B2.20 Cont'd	SICTL	- identification of all feasible and reasonable measures to minimise noise and vibration, including but not limited to: <ul style="list-style-type: none"> <li>• using least noisy construction methods, vehicles, plant and equipment;</li> <li>• positioning and orientating noisy plant and equipment so as to minimise noise impacts on noise sensitive receivers and wildlife in Penrhyn Estuary;</li> <li>• positioning items of noisy plant and equipment as far apart as is practicable from each other;</li> <li>• minimising noisy activities by adopting alternative construction measures;</li> <li>• carrying out above ground loading and unloading activities as far away as is practicable from noise sensitive receivers and wildlife in Penrhyn Estuary;</li> <li>• designing each work site to minimise the need for truck reversing movements;</li> </ul>	Yes – addressed in Section 2.7 – Mitigation Measures	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		<ul style="list-style-type: none"> <li>ensuring all vehicles and self-propelled plant and equipment enter and leave the premises in a forward direction unless unforeseen accidents or other unforeseeable circumstances arise that may require reversing movements, in which case minimising any such reversing movements;</li> <li>taking all practicable steps to avoid reversing movements on the surface within the premises, and where it is impracticable to avoid reversing movements, taking all necessary steps to minimise reversing movements;</li> <li>preventing vehicle, plant and equipment queuing and idling outside the hours of construction prescribed by this consent.</li> </ul>				
B2.20 Cont'd	SICTL	-include a pro-active and reactive strategy for dealing with complaints including achieving the construction noise goals, particularly with regard to verbal and written responses;	Yes – addressed in Section 3 – Community Notifications - 3.2 Community Notifications Procedure and 3.2 - Enquiries and Complaint Response	C		
		-detail noise monitoring, reporting and response procedures consistent with DEC requirements;	Yes – Section 2.8 of the CNVP – Monitoring – states that compliance monitoring will be conducted on a monthly basis and Section 4 – non-compliance and corrective action	C		
	Burton Contractors SICTL	-provide for internal audits of compliance of all plant and equipment;	Section 2.9 of the CNVP – Incident Planning and Response requires that noisy activities would cease or reduce and remedial work would be implemented if noise goals are exceeded or if any complaints are received. All plant and machinery will also be checked and verified for noise levels if noise levels exceed noise goals any noise complaints are received.	C		
		-indicate site establishment timetabling to minimise noise impacts;	Yes – addressed in Section 2.7 – Mitigation Measures	C		
		-procedures for notifying residents of construction activities likely to	Section 3.1 of the CNVP provides a Community Notifications Procedure for community members identified as being	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		affect noise amenity;	impacted by the project works. The notification would be distributed via letterbox drop and include residents/businesses identified as being impacted. The CCC will be given construction notifications and updates monthly.			
B2.20 cont'd	SICTL	-address the requirements of DEC; and	There is no Environment Protection Licence and there have been no incidences where out of hours works were audible or has required EPA approval or consultation.	C		
	SICTL	-be approved by the Director-General prior to the commencement of any works on the site.	Yes. Part of SICTL Main Works Main Works Construction Environment Management Plan Phase 2 & 3 Version 11/13 Revision 1 dated 18 November 2013  The Director General granted approval for the CEMP and related management plans including the Construction Noise Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects	C		
		<b>Construction Noise Goals</b>				
B2.21	Burton Contractors SICTL	The goal for noise from construction activities as the LA10 (15 minute) should not exceed the Rating Background Level (RBL) plus 5dB(A) at sensitive receivers.	This forms the basis for setting baseline levels in noise monitoring	C		
		<b>Construction of Noise Barrier</b>				
B2.23	SICTL	To help minimise the impact of operational noise on the surrounding area, a noise barrier shall be constructed by the Applicant along northern and eastern boundaries of the site prior to the commencement of operations. The applicant must seek appropriate independent expert advice to ensure the design of the noise barrier has regard to the flight path requirements of bird species using the area.	The construction of the noise barrier was complete at the time of the audit. Compliance regarding seeking independent expert advice on the design was assessed at the previous audit and has not been reassessed.	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
B2.23A	SICTL	Subject to the alternative rail option being implemented as described within the report listed in condition A1.11), the Applicant shall construct a three metre high noise barrier along the northern edge of the Inter-terminal Access Road Corridor prior to the commencement of operations. The bottom two metres of the barrier shall be opaque and the top one metre shall be of transparent material sufficiently patterned to minimise impacts to bird species utilising the adjacent Penrhyn Estuary.	The three metre high noise barrier was constructed and completed prior to commencement of operations and is compliant with the condition as reflected in the Stage 3 Post Construction Completion Report.	C		
		<b>Other Construction Noise Matters</b>				
B2.24	Burton Contractors SICTL	The Applicant is required to identify measures to be implemented to ensure that where movement alarms are fitted to vehicles, plant or equipment entering or operating on the site, such alarms are of a type that minimises noise at noise sensitive receivers.	Induction material and the CNVP identify that “reversing alarms are only permitted during construction hours. White noise reverse alarms / clackers are permitted at any time”.	C		
B2.25	Burton Contractors SICTL	The Applicant must install all physical noise management measures as early as is practicable during construction of the Port Botany Expansion project.	The permanent noise barrier was complete at the time of the audit.	C		
B2.26	Burton Contractors SICTL	The Applicant must not undertake any blasting on the premises	No blasting has occurred on the project	C		
		<b>Port Traffic and Rail Noise Management Plan</b>				
B2.27	NSWP	Within two years of commencement of terminal operations at the development, a Port Traffic and Rail Noise Management Plan shall be prepared by the Applicant in consultation with relevant stakeholders, including the Community Consultative Committee, DEC, DOP, Botany Council, SSROC and RailCorp. The Plan shall	<i>Future requirement</i> A Rail Noise Working Group (RNWG) meeting (No.1) was convened on 1/05/2014. The minutes noted that Port Traffic and Rail Noise Management Plan is to be prepared within two years of the commencement of terminal operations (i.e. before			NA

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		include consideration for traffic re-routing, traffic clustering and traffic rescheduling	6 November 2015). A plan was tabled at the meeting and discussion was held regarding the scope.			
		<b>Rail Noise Working Group</b>				
B2.28	NSWP	While expansion will generate an increase of trains on freight rail lines, the manager of the freight line RailCorp is subject to an Environment Protection licence with the EPA. The Applicant must establish a Rail Noise Working Group prior to the operation of the development. The Rail Noise Working Group shall address all associated rail noise issues and shall include but not be limited to RailCorp, ARTC, SPC, DOP, relevant councils and representatives of Community Consultative Committee and is required to consult with relevant regulatory authorities including DEC .	<p>A Rail Noise Working Group (RNWG) meeting (No.1) was convened on 1/05/2014. Attendees of the meeting include representatives from NSW Planning and Environment, ARTC, Sydney Trains, Randwick City Council, Botany Bay Council, NSW Public Health Unit, SICTL, NSW Ports and a community member.</p> <p>The requirements of conditions B2.28 were discussed, with a focus on whether there is a need for RNWG to continue given the existing noise management forums that have been established to address noise matters, including rail. NSW Ports is of the view that as the CCC was not in place at the time of the PBE project conditions were drafted,, the RNWG would be duplicating discussion already being held to date. It was confirmed that the majority of the RNWG members already reside on the EPA Noise working group and that community representatives are informed and updated of the group's progress at the CCC meetings.</p> <p>The minutes noted that a representative from NSW Planning and Environment commented that they would be open to considering consolidating discussions relating to PBE rail noise if there are other groups / forums more broadly looking at port noise issues</p>	C		

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			(with some reservations and further discussions).  Attendees were requested to advise if they thought there was any value in continuing to hold the RNWG and meeting in the future. The vast majority of attendees agreed that the PBE rail noise matters could be addressed in the EPA working group and CCC forum. The discussions on this matter concluded with NSW Ports advising they would write to the Department of Planning and Environment advising that a meeting had been convened and that member agreed that matters to be discussed at future RNWG meetings could be consolidated into other existing forums (i.e. the CCC and the EPA working group meetings). No further meetings will be held.			
		<b>Rail Noise Assessment – Botany Yard – Cooks River</b>				
B2.29	NSWP	Prior to construction of Stage 4 – rail duplicated line, a noise assessment should be conducted by the Rail Noise Working Group to identify potential impacts on residents and to recommend mitigation measures, including identification of responsibility for implementation of such measures.	Future requirement The Rail Noise Working Group (RNWG) meeting held on 1/05/2014 discussed this condition and NSW Ports recommended that this condition be deleted as part of any future modification to the PBE approval given a noise assessment would be undertaken by the proponent carrying out the rail duplication works. There was no objection from any of the RNWG members.			NA
B2.30 – B2.32		<b>Penrhyn Estuary (aquatic and terrestrial, surface water quality and related issues)</b> <b>Conditions B2.30 to B2.32 were a once off requirement and are not part of the scope of this audit</b>				NA
		<b>Waste Management</b>				
		<b>Construction Waste Management Plan</b>				
B2.33	SICTL	Prior to the commencement of construction, the Applicant is required to prepare a Construction Waste Management Plan in consultation with Botany Council and DEC. The Plan must provide details of	A Waste Management Plan is included as a sub-plan in Appendix 8 of the CEMP.	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable



MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		proposed waste management measures to minimise production and impact of wastes generated at the site including but not limited to:	The Director General granted approval for the CEMP and related management plans including the Construction Waste Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects			
		-identification of the type and quantities of waste that would be generated, a description of how the waste would be handled, stored, re-used, recycled, and if necessary, appropriately treated;	The types of waste that would be generated are identified in Section 4.2.1 – Waste Sources, and a description of how the wastes would be handled, stored etc. are in section 4.2.5 – Storage / Handling and Section 4.3 – Mitigation Measures.	C		
	Burton Contractors SICTL	-identification of a designated area for the storage and collection of waste and recyclable materials to be provided on the site;	Appendix 1 of the Waste Management Plan provides a map showing locations on site where waste will be segregated and stored in bays	C		
		-description of how the effectiveness of these measures would be monitored and, if non-compliance detected, actions to be required;	The previous audit report noted that the SICTL Waste Management Plan does not include any monitoring requirements for waste. As a result, a new section was added to the WMP – Monitoring and auditing of waste measures.  The CEMP/WMP for the new scope of works also does not include monitoring requirements for waste. (however it is noted that monitoring is actually occurring)  Waste monitoring should be added to the WMP at the next revision.		OFI	
		-measures to involve and encourage employees and contractors to minimise domestic waste production on site and to reuse/recycle where possible.	Yes – addressed in Section 4.3 of Waste Management Plan – Mitigation measures	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		<b>Waste Management On-Site</b>				
B2.34	Burton Contractors SICTL	Management of waste must be in accordance with the environment protection licence issued by EPA under the Protection of the Environment Operations Act 1997.	No EPL on project See below.			NA
B2.35	Burton Contractors SICTL	All wastes and material generated on the site during construction and operation shall be classified in accordance with the DEC's Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes prior to transporting the waste off site and be disposed of to a facility that may lawfully accept the waste.	<p>All wastes on generated on site are classified in accordance with the 2008 guidelines and disposed of appropriately. Wastes removed from site are recorded in the Waste Register prepared and maintained by Burton Contractors.</p> <p>Dockets and other records were sighted to verify that wastes are taken to a facility that can lawfully accept the waste.</p> <p>Soil/spoil removed from site is being sent to another construction site at Oakdale for re-use and has been classified as ENM in a Waste Classification Report dated 23 June 14 by Ade consulting Group. Soil/ENM is transported by transporter Silky Waste. At the time of the audit, 8 loads of soil had been transported off site.</p> <p>Sewage waste is also documented on the Waste Register, noting that it is transported by Coates Hire and disposed of at a Sydney Water approved dump point.</p> <p>At the time of the first site visit, waste dockets from Coates Hire did not provide a waste classification (K130) or full description of the waste (docket is an equipment receipt docket, not waste) and does not always provide quantity. Destination of waste is not on the docket. No classification is entered into the waste register (not provided by supplier).</p>		IOC	

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			This issue has since been resolved – refer to findings tables.  A Material Import Register is also maintained by Burton Contractors, documenting loads of recycled material brought onto site. Dockets indicated that imported materials are in accordance with the recycled aggregate exemption under clause 51A of the Waste Regulation.			
		<b>Hazardous and Industrial Waste</b>				
B2.36	Burton Contractors	Except as expressly permitted by a licence issued by the EPA under the Protection of the Environment Operations Act 1997, only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises: -waste oil/water, hydrocarbons/water mixtures or emulsions; and -grease trap waste.	No Hazardous Wastes outside these criteria have been generated.	C		
		<b>Potential for Discovery of Aboriginal Heritage Objects</b>				
B2.39	Burton Contractors SICTL	If an Aboriginal object is discovered during the construction of the development, works should cease in the subject area and the Applicant shall notify DEC immediately.	No Aboriginal artefacts or objects have been uncovered to date. An Unexpected Finds procedure is provided at induction which states that if any archaeological sites, artefacts are discovered during construction, work must cease. Instructions are provided regarding fencing off and communications to the workforce.	C		
		<b>Hazards and Risk Management</b>				
		<b>Construction Safety Study</b>				
B2.41	SICTL	The Applicant shall prepare a Construction Safety Study prior to commencement of construction of terminal operations infrastructure, accordance with Hazardous Industry Planning Advisory Paper No.7 – Construction Safety Study Guidelines (DoP, 1992). The commissioning portion of the Construction Safety Study may be	A Construction Safety Study Report (v 02/ July 2014) has been prepared by SICTL and covers the activities relating to the current scope of works. A letter from NSW Ports indicates that the Report (Version 1) was issued to DP&I for approval on 13/05/2014. The latest version of the report indicates that	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		submitted 2 months prior to commencement of commissioning. The study shall be submitted for the approval of Director-General prior to the commencement of construction of the terminal operations infrastructure.	DP&I comments were incorporated into the document on 28/08/2014.  At the time of the audit, the CSS Report was still with DP&I for final approval.			
		<b>Fire Safety Study</b>				
B2.42	SICTL	The Applicant shall prepare a Fire Safety Study prior to the commencement of construction of the terminal operations infrastructure in accordance with <i>Hazardous Industry Planning Advisory Paper No.2 – Fire Safety Study Guidelines</i> (DoP, 1992). The study shall be submitted for the approval of the Director-General and the Commissioner of the NSW Fire Brigades prior to the commencement of construction of the terminal operations infrastructure.	At the previous independent audit, it was noted that The Fire Safety Study for Terminal 3 was approved by Fire and Rescue NSW in a letter dated 25 October 2013. The letter reference the Fire Safety Study – 201467-P-EN-REPT-10 (Revision 1) dated 10 October 2013 and authored by Mr Michael Mason.	C		
		<b>Emergency Incident Management</b>				
		<b>Emergency Response and Incident Management Plan</b>				
B2.43	Burton Contractors SICTL	<p>The Applicant shall develop an Emergency Response and Incident Management Plan in consultation with DEC, DOP, Council and the Community Consultative Committee. The Plan must be approved by the Director-General prior to the commencement of construction and shall detail:</p> <ul style="list-style-type: none"> <li>-terminal security and public safety issues;</li> <li>-effective spill containment and management;</li> <li>-effective fire fighting capabilities;</li> <li>-effective response to emergencies and critical incidents; and</li> <li>-a single set of emergency procedures, consistent with the existing Port Botany Emergency Plan, should be developed that can be scaled</li> </ul>	<p>Appendix 8 of the CEMP includes an Emergency Response and Incident Management Plan.</p> <p>The Director General granted approval for the CEMP and related management plans including Emergency Response and Incident Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects</p> <p>As noted in the letter, approval was subject to Section 3.1 of the Plan being completed prior to commencement of construction. Section 3.1 of the Plan was required to be updated to include the names and current contact details for members of the Emergency Response Team. The Emergency</p>		IOC	

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		as appropriate for any incident or emergency.	<p>Response and Incident Management Plan available on the website at the time of the audit was the same as the version originally approved by DP&amp;I and has therefore not been updated as requested. (Issue of Concern)</p> <p>This comes under the umbrella of the Port Botany Emergency Plan which is a sub-plan of the Sydney East District Disaster Plan (DISPLAN). An evacuation drill was conducted on 05/07/2014 and spill response has been presented in toolbox talks dated 6/08/14 (Burton Contractors).</p> <p>A Site Spill Register is maintained by Burton Contractors. One minor spill has been recorded – a hydraulic oil leak from a 5 tonne excavator occurred on 18/07/2014. The spill was cleaned up using a spill kit and the incident was reported. The Director General granted approval for the CEMP and related management plans including the Emergency Response and Incident Management Plan in a letter dated 11/12/2013, signed by the Director, Infrastructure Projects</p>			
<b>Aviation Construction Management</b>						
<b>Impact on Aviation Operations at Sydney Airport</b>						
B2.44	SPC/NSWP	The Applicant shall ensure that all aspects associated with construction considers the required lateral separation distances to minimise the interference to Sydney Airport radar and navigational systems.	<i>This was assessed as compliant at previous audits and was not reassessed</i>			NA

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
B2.45	SPC/NSWP	The Applicant shall ensure design of the navigation channel and ship turning areas considers the required lateral separation distances to minimise interference to Sydney Airport radar and navigational systems. Design shall be undertaken in consultation with Air Services Australia.	Design of the navigation channel and ship turning areas has been completed previously by others and is not relevant to this scope of works. See Conditions B2.44 and B2.48.			NA
		<b>Obstacle limitation Surface</b>				
B2.46	SICTL Burton Contractors	The Applicant shall ensure that all construction equipment is below obstacle limitation surface, unless otherwise permitted by an approval under <i>the Airports (Protection of Airspace) Regulation 1996</i> and following consultation with the Department of Infrastructure, Transport, Regional Development and Local Government, Civil Aviation Safety Authority and Sydney Airport Corporation Limited.	A crane study was undertaken by Two Way Cranes on behalf of Burton Contractors for the installation of a pit using a 21m boom at the construction site. Email correspondence to Peter Bleasdale (Airfield Design Manager) notes that there are no issues for Sydney Airport at the height quoted of 21m – (25 AHD).	C		
		<b>Terminal Construction Lighting Design</b>				
B2.47	SICTL Burton Contractors	The Applicant shall ensure design specifications of any construction lighting conform to the requirements of Regulation 94 of the Civil Aviation Regulations 1988.	The CEMP aspects register identifies that design specifications for any lighting conform to the requirements of Regulation 94 of the Civil Aviation Regulations 1988 and that all construction lighting is minimal and facing downwards.	C		
		<b>COMMUNITY INFORMATION, INVOLVEMENT AND CONSULTATION</b>				
		<b>Community Information and Complaints Handling</b>				
B3.1	NSWP SICTL Burton Contractors	The Applicant must meet the following requirements in relation to community consultation and complaints management:	Community Consultation is coordinated overall by NSW Ports, with inquiries and complaints distributed to relevant project personnel. The process is described within section 8.2 of the CEMP – enquiries and complaint response	C		
	NSWP Burton	-all monitoring, management and reporting documents required	The CEMP for Phase 2 and 3 Main Works has been recently uploaded to the Hutchison Ports website and the following			

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
	Contractors SICTL	under the development consent shall be made publicly available;	<p>website is provided within the Plan:  <a href="http://www.hutchisonports.com.au/port-botany-expansion">http://www.hutchisonports.com.au/port-botany-expansion</a>.</p> <p>Also on the website are the CEMPs and sub-plans from earlier phases of the project by Liang O'Rourke and Grindley Constructions. The website does not distinguish between Plans that are currently valid and those that no longer relevant to current works.</p> <p>Environmental Monitoring Reports are available on the website from September 2012 up to and including July 2014. Reports from June 2014 are by Burton Contractors (reporting to SICTL). Reports prior to that were by Liang O'Rourke (latest report was for April 2014 – works completed in May 2014).</p>		OFI	
		-provide means by which public comments, inquiries and complaints can be received, and ensure that those means are adequately publicised; and	<p>A General Enquiries line and a Complaints line is provided in the CEMP and on the Hutchison Ports website for the Port Botany Expansion Project.</p> <p>The Auditor phoned the complaints line several days after commencement of the audit - message left at 10.18am and the call was returned at 12.17 pm. CEMP notes that project personnel will respond immediately at all times to inquiries and complaints. If complaint goes to voicemail at NSW Ports, this would be difficult to achieve.</p> <p>A call to the General Enquiries line on the website went to voicemail and a message was left at 9.35am 14/08/14 – no return call was made.</p> <p>A call to the Media Enquiries – Manager Public Affairs –</p>		IOC	

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion	Audit Outcome		
			Evidence, supporting documentation	* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			Hutchison Ports Australia (02 9875 8500) was not connected – message “The number you have dialled in not connected - please check the number and dial again”)  An email to the “Contact Us” email address on the Hutchison Ports Website was undeliverable. Message sent 10.06am 14/08/14 – message – mail system error – returned email  The website contact details were updated on the last day of the audit – 3 September 2014 and these were re-tested.			
		-includes details of a register to be kept of all comments, inquiries and complaints received by the above means, including the following register fields:	Burton Complaints Register sighted – no entries. Complaints register includes all the fields required by this condition.	C		
		-the date and time, where relevant, of the comment, inquiry or complaint;	Sighted the NSW Ports Complaints Register within the Quarterly Complaints Report (Oct -13 – Jan 14). One complaint has been recorded over the period since the last independent audit. The Register includes all fields required by this condition and these were appropriately populated for the complaint made.			
		-means by which comment, inquiry, complaint was made (telephone, fax, mail, email, person);				
		-any personal details of the commenter, inquirer or complainant that were provided, or if no details were provided, a note to that effect;				
		-the nature of the complaint;				
	NSWP Burton Contractors SICTL	-any action(s) taken by the Applicant in relation to the comment, inquiry or complaint, including any follow-up contact with the commenter, inquirer or complainant; and	Details of actions taken including follow-up actions were included in the register. The actions appear appropriate to the issue raised.	C		
		-if no action was taken by the Applicant in relation to the comment, inquiry or complaint, the reason(s) why no action was taken.	Actions were taken on all recorded complaints (1 only)	C		
	NSWP	-Provide quarterly reports to the Department and DEC, where relevant, outlining details of complaints received.	Quarterly Complaints reports for the 12 month period since the last audit were sighted. The reports were submitted to DP&I by NSW Ports for the following periods:	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable



MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			<ul style="list-style-type: none"> <li>15 July 2013 – 15 Oct 2013 (dated 21/10/13) No complaints for the period</li> <li>15 Oct – 15 January (dated 29/01/14) – 1 complaint. Summary of complaint(s) attached</li> <li>14 Jan – 15 April (dated 16/05/14) – no complaints for the period.</li> <li>15 April – 15 July (dated 6 August 2014) – no complaints for the period</li> </ul>			
		<b>Community Consultative Committee</b>				
B3.2	NSWP SICTL	Within 6 months of this consent or prior to commencement of construction, whichever is earlier, the Applicant shall establish a Community Consultative Committee to oversee the environmental performance of the development. This committee shall:	Since the last audit, the PBE Community Consultative Committee has been amalgamated with the Port Botany Neighbourhood Liaison Group and is now called the Port Botany Community Consultative Committee. The first meeting for the combined committee was held on 26/11/2013 (Minutes are on the NSW Ports website) <a href="http://www.nswportsbotany.com.au/projects/assets/Community-Downloads/">http://www.nswportsbotany.com.au/projects/assets/Community-Downloads/</a>	<b>C</b>		
		(a) be comprised of 2 representatives from the Applicant, including the person responsible for environmental management, 1 representative from Botany Bay City Council; and at least 3 representatives from the local community, whose appointment has been approved by the Director-General in consultation with the Council.	There are at least 2 representatives of NSW Ports (usually 4), The ER EPRM and the Project Manager from Burton Contractors (May 2014) SICTL representatives (4), Steven Poulton represents City of Botany Bay Council, Bronwyn Englaro represents Randwick City Council. Community representatives include John Burgess, Lynda Newnam, Tom Nolan, Charles Abela	<b>C</b>		
		(b) be chaired by an independent party approved by the Director-General;	Roberta Ryan is Independent Chairperson	<b>C</b>		
		(c) meet at least four times a year, or as otherwise agreed by the	Minutes on website indicate at least 4 times yearly. Meeting	<b>C</b>		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		CCC;	minutes available for 20 May 2014, 25 Feb 14, 26 Nov 2013, 1 Oct 2013, 2 July 2013			
		(d) review and provide advice on the environmental performance of the development, including any construction or environmental management plans, monitoring results, audit reports, or complaints; &	Minutes reviewed – includes updates on construction activities – SICTL and Patrick, Environmental Monitoring monthly reports.	C		
		Note: The Applicant may, with the approval of the Director-General, combine the function of this CCC with the function of other Community Consultative mechanisms the area, however, if it does this it must ensure that the above obligations are fully met in the combined process.	As noted above, the CCC has now amalgamated with the Port Botany Neighbourhood Liaison Group and is now called the Port Botany Community Consultative Committee. The committee minutes reviewed indicate that the obligations within these conditions of approval are fully met in the combined process.	C		
B3.3	NSWP SICTL	The Applicant shall, at its own expense:				
		(a) ensure that 2 of its representatives attend the Committee's meetings;	Minutes indicated that at least 2 representatives from NSW Ports, and SICTL / Hutchison Ports attend the committee meetings	C		
		(b) provide the Committee with regular information on environmental performance/management;	Yes – regular information on environmental performance and management is provided (Section of minutes – Port Botany Expansion Construction Update in each minutes) and Environmental Monitoring	C		
		(c) provide meeting facilities for the Committee;	Yes	C		
		(d) arrange site inspections for the Committee, if necessary;	As required	C		
		(e) take minutes of the Committee's meetings;	Minutes sighted on website	C		
		(f) make these minutes available on the Applicant's website within 14 days of the Committee meeting, or as agreed to by the	As per agreement by the committee. Last meeting minutes posted on the NSW Ports website as at the time of the audit was 20 May 2014. Next meeting due 26 August 2014.	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		Committee;				
		(g) respond to any advice or recommendations the Committee may have in relation to the environmental management or performance of the development; and	Yes – minutes show responses to advice / recommendations / questions.	C		
		(h) forward the minutes of each Committee meeting, and any responses to the Committee's recommendations to the Director-General within a month of the Committee meeting.	Port Botany CCC minutes are forwarded to DP&I via email. Sighted emails dated; <ul style="list-style-type: none"> <li>16/06/14 for meeting held 20 May 2014;</li> <li>18/03/2014 for meeting held 25 Feb 2014</li> <li>14/10/13 for meeting held 1 Oct 2013</li> <li>16/12/13 for meeting held 26 Nov 2013;</li> </ul> As per email dates above, evidence was provided that minutes have been forwarded to DP&I within one month of the committee meeting as required by this condition.	C		
<b>B4</b>		<b>ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING</b>				
		<b>Incident Reporting</b>				
B4.1	NSWP SICTL Burton Contractors	The Director-General shall be notified of any incident with actual or potential significant off-site impacts on people or biophysical environment within 12 hours of Applicant, or other relevant party undertaking the development, becoming aware of the incident. Full written detail of the incident shall be provided to the D-G within seven days of the date on which the incident occurred. The D-G may require additional measures to be implemented to address the cause or impact of any incident, as it relates to this consent, reported in	There have been no environmental incidents that would be required to be reported to the DG  Contractors Incident reports were reviewed and key project personnel were interviewed as part of the audit confirming that there have been no significant environmental incidents over the past 12 months or on the project to date.	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		accordance with this condition, within such period as the D-G may require.				
		<b>Annual Environmental Management Report (AEMR)</b>				
B4.2	SICTL	The Applicant must prepare an Annual Environmental Management Report for the development. The Annual Environmental Management Report must:	The latest (Fifth) Annual Environmental Management Report dated 17 January 2014 was prepared on behalf of SICTL by EP Risk Management.	C		
		-detail compliance with the conditions of this consent;	Yes	C		
		-contain a copy of the Complaints Register (for the preceding twelve-month period, exclusive of personal details) and details of how these complaints were addressed and resolved;	Yes (2 complaints received for reporting period). Complaints register in Appendix D of the report. Details of how the complaints were addressed and resolved were detailed in the Register.	C		
		-include a comparison of the environmental impacts and performance predicted in the EIS and additional information documents provided to the Department and Commission of Inquiry;	Yes – Section 5 and Appendix B – sourced from 2013 Independent Environmental Audit report	C		
		-detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion by a suitably qualified person;	Yes – Section 6 and Appendix E	C		
		-contain a list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident;	Yes – Section 7 – Environmental performance – Project Environmental objectives and targets – compliance status Table 7-1 provides status of all performance goals achieved (all achieved)	C		
		-be prepared within twelve months of commencement of construction, and every twelve months thereafter;	The AEMR was prepared following the last Independent Environmental Audit and is approximately 12 months since the submission last AEMR. There was a slight delay in the preparation of the AEMR as a result of a delay in the finalisation of the Independent Environmental Audit Report. The delay was due to additional follow-up audit activities being required prior to finalisation.	C		
		-be approved by the Director-General; and	The latest (Fifth) Annual Environmental Management Report	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			dated 17 January 2014 was submitted on 4 February 2014. . Sighted letter from DP&I to NSW Ports dated 19/02/214 noting that the Department reviewed the report and considered that it generally meets the requirements of this condition.			
		-be made available for public inspection.	The AEMR for 2013 was not available on the NSW Ports website (previous location of AEMR reports) or SICTL website at the time of the audit. (August 2014).  The AEMR was uploaded onto the SICTL website on 3 September 2014		NC	
		<b>Environmental Representative</b>				
B4.3	SICTL	Prior to the commencement of construction, a suitably qualified and experienced Environmental Representative(s) shall be nominated and approved by the D-G. The Environmental Representative(s) shall be employed for the duration of the construction and the on-going management, mitigation and monitoring associated with the development, excluding direct terminal operation matters subject to the conditions in Schedule C, or as otherwise agreed by the D-G. The Environmental Representative shall be:	The following persons have been appointed as ER and back-up ER on the project. Both have been approved by DP&I: <ul style="list-style-type: none"> <li>Noel Storan – approved by DP&amp;I 19/03/2013</li> <li>Eladio Perez - approved by DP&amp;I 10/04/2013</li> </ul> Letters from DP&I provide verification of appointment There have been no changes since the last audit – same ER's are employed on the project.	C		
		a) the primary contact point in relation to environmental performance of construction phases;	The responsibilities of the Project Environment Representative are listed in the SICTL CEMP and reflect the requirements of parts a) to f) of this condition.	C		
		responsible for all Management Plans and Monitoring Programs required under this consent, in relation to construction phases;				
		responsible for considering/advising on matters specified in the conditions of this consent, and all other licences and approvals relating to the environmental performance and impacts of the construction phases;				
		d) responsible for the management of procedures and practices for receiving and responding to complaints & inquiries in relation to the				

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		environmental performance of construction phases;  e) required to facilitate an induction/training program for relevant persons involved with construction phases;  f) given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on environment be likely to occur.				
		<b>Environmental Training</b>				
B4.4	Burton Contractors	<p>Prior to commencement of any dredging, reclamation and construction an Environmental Training Program shall be developed and implemented to establish a framework in which relevant employees will be trained in environmental management and operation of plant and equipment, including pollution control equipment, where relevant. Program shall include, but not necessarily limited to:</p> <p>a) identification of relevant employment positions associated with the development that have an operational or management role related to environmental performance;</p> <p>b) details of appropriate training requirements for relevant employees;</p> <p>c) program for training relevant employees in operational and/ or management issues associated with environmental performance;</p> <p>d) program to confirm/update environmental training and knowledge during employment of relevant persons.</p>	<p>Environmental Training material is contained within the Burton Contractors Port Botany Site Induction Powerpoint Presentation and is required to be provided to all persons conducting work on site. The induction material was reviewed and generally meets the requirement for awareness training for site personnel.</p> <p>Blue book training has also been identified as a training requirement. At the time of the audit, a course had been booked for key site personnel to attend on 18 August 2014.</p> <p>Section 6 of the CEMP – Training, Awareness and Competence outlines the environmental induction / training requirements and includes site induction, toolbox talks, briefings, notifications and other forums as required. An outline of environmental training required for site based personnel is presented in table form for various environmental aspects.</p> <p>A review of induction records and interviews with random</p>			IOC

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
			persons undertaking work on the site found that there were a number of Boral subcontractors that had not received induction training including Bullamakanka and Coastwide. Refer to main findings (table 1) of this report			
		<b>Environmental Auditing</b>				
B4.5	SICTL	<p>Within one year of the commencement of construction and every year thereafter for the duration of construction a full independent environmental audit shall be undertaken by a suitably qualified person/team approved by the Director-General. Audits would be made publicly available and would:</p>	<p>This independent audit was conducted within the required 12 month period by fully qualified Environmental Auditor approved by the Director General.</p> <p>The previous independent audit was also undertaken by the same auditor in August / September 2013 which was also in compliance with this condition.</p> <p>A review of both the NSW Ports and SICTL websites found that the requirement that the “audits would be made publicly available” had not been fulfilled at the time of the 2014 Independent Audit in August. The last Independent Environmental Audit report (2013) had not been uploaded to either of these websites.</p> <p>The 2013 Independent Environmental Audit Report has since been uploaded to the website following the commencement of this audit (uploaded 18 August 2014).</p> <p>Once finalised, this audit report is to be made publicly available on the SICTL website as soon as possible after formal issue</p>		NC	
		-be carried out in accordance with ISO 14010 and ISO 14011 – Procedures for Environmental Auditing;	Yes - Carried out in accordance with ISO19011:2011 - this supersedes ISO 14010 and 14011.	C		

**Appendix A:** Key to audit outcomes: **C** = Conforms; **O** = Opportunity for Improvement; **IOC** = Issue for Concern  
**NC** = Non Compliance; **NA** = Not applicable

MCoA No	Auditee	MCoA Requirement	Comments, observations, discussion  Evidence, supporting documentation	Audit Outcome		
				* See footer for key		
				C ✓	Finding O IOC NC ♦ ☒ ☒	NA
		-assess compliance with requirements of this consent, other licences/approvals;	Yes – refer to this appendix – all Ministers Conditions of Approval relevant to the current scope of works is included	C		
		-assess the construction against the predictions made and conclusions drawn in the development application, EIS, additional information and Commission of Inquiry material; and	Yes – Refer to Appendix 2 of this report	C		
		-review effectiveness of environmental management, including any environmental impact mitigation works.	Yes – Refer to Section 3.4 of the main Environmental Audit Report	C		
		Note: An independent and transparent environmental audit can verify compliance (or otherwise) with the Minister's consent and various approvals. Auditing also provides an opportunity for continued improvement in environmental performance.	Noted.	C		
		<b>Maintenance and Management Plan for Expanded Area</b>				
B4.6	NSWP	Within 1 month of full reclamation, or as otherwise agreed to by D-G, the Applicant shall prepare a Maintenance and Management Plan for the expanded area to address maintenance issues including safety, vegetation management, feral pest management, other issues identified by the Applicant in consultation with DOP. The preparation and implementation is required in case the expanded area is not leased to a new operator immediately upon construction completion. The Plan is required until such time as a lease is signed	Maintenance Management Plan dated 28/09/11 referenced in last audit for Grade Separation Works. No further action required  At the time of the audit, Phase 1 of the project construction had been completed and operating, and Phase 2 project works were underway. The Phase 3 area will be developed when there is sufficient demand	C		



## **Appendix B**

### Comparison of EIS Predictions & Conclusions

# Appendix B - Development Application, EIS, additional information and Commission of Inquiry (COI) Material and S96 Application checklists 2014

## Part 1 - EIS Predictions & Conclusions Audit Checklist

**Note:** predictions relating to dredging impacts during construction have not been included in this checklist as dredging was completed in 2011. However, predictions relating to dredging impacts over the longer term have been retained.

### Ch 14 - Land Use

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
-	No construction predictions made. All issues raised refer to other chapters.	Noted				NA

### Ch 15 - Hydrodynamics and Coastal Processes

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
-	No construction predictions made for Hydrodynamic and Coastal Processes	Noted				NA

### Ch 16 - Hydrology and Water Quality

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
16.4.1	It is anticipated that construction activity would not cause blockages to water flow through Springvale and	No recorded blockages. Construction activities on current package of works would have minimal impact	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	😞	NA
	Floodvale Drains and the Mill Stream.					
16.4.2 (a)	Initial consolidation of material in the reclaimed area is expected to take up to two years. During this time the surface of the reclamation, if not protected, may be subject to erosion.	<p>Phase 1 of the Terminal 3 construction project is now complete and the surface is fully sealed.</p> <p>Phase 2 is currently under construction and the surface is being progressively sealed. As an active construction site, water carts are being utilised to control dust, and erosion was not identified as a significant issue in Phase 2.</p> <p>Phase 3 area is currently fenced off and parts of it are being utilised as a lay-down area. SICTL are responsible for ensuring appropriate erosion and dust control. The area was previously subject to Maintenance Management Plan dated 28/09/11 under the control of NSW Ports.</p>	😊			
16.4.2 (b)	Dredged or construction material stockpiles and active construction areas may be subject to erosion and sedimentation from surface runoff.	<p>Stockpiles were on site within the Burton Contractors construction area at the time of the audit. These were generally well managed and no significant erosion or sedimentation from surface runoff was noted.</p> <p>However, stockpiles of sand and aggregate at the Boral Batch plant were generally not well managed and evidence of wind and water erosion were noted during the site inspection (refer to main findings). These issues were subsequently addressed following the first audit visit.</p> <p>Some issues have been identified as requiring further actions to manage a large stockpile of site material in the undeveloped area located at the southern end of the SICTL Lease Area. A letter from NSW Ports to SICTL dated 29 August 2014 formally raised concerns over the</p>			😞	

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; NA = Not applicable

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
		management of the stockpile in relation to dust generation and erosion concerns. In its conclusion, the letter stated: “NSW Ports considers that the timely and complete removal of the stockpile is appropriate” and “NSW Ports urgently requests SICTL implement site controls to prevent the generation of dust, erosion and ponding as current measures are inadequate. At the time of the site visit on 3 Sept 2014, this issue was in the process of being responded to by SICTL.				
16.4.2 (c)	There is a potential for spills and leaks from plant and equipment and onsite fuel storage during construction.	<p>Potential is noted.</p> <p>Only minor quantities of fuels are kept on site and these pose minimal risks. Some minor hydraulic oil spills from burst hydraulic hoses have been recorded and these have been cleaned up. Spill kits are kept on site and in some work vehicles.</p> <p>Refuelling on site is undertaken by “mini tankers”. The mini-tanker driver has Safe Work Method Statement that includes environmental safeguard and since the initial site visit, he has now been fully site inducted, which includes presentation of site environmental management requirements.</p>	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

## Ch 17 - Groundwater

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
17.4.4	However, it is not expected that any of these works (excavation and pile driving associated with construction of road and rail bridges) would significantly impede groundwater flow, and as a result, groundwater levels would not be affected during construction irrespective of the construction method.	Monthly monitoring commenced in April 2002. Ongoing monitoring was required until one year following completion of reclamation. The period of one year after completion of reclamation has now lapsed and groundwater monitoring is no longer required (no further excavation or pile driving related to road and rail bridges)	☺			
17.4.4	Services for the proposed Port Botany Expansion would be installed underground in shallow trenches (up to approximately 1.2 m deep) along Foreshore Road and Penrhyn Road. It is expected that in these areas the groundwater would be below the depth of the trenching activities. Therefore, the construction of services would generally not involve excavation below the water table. Service trenches would be backfilled using excavated material or sand bedding, and therefore, even if excavation did intercept the water table, it is expected that groundwater levels would not be affected.	Generally true. No change from last audit report. Activities for Terminal 3 would not have any further impact on Foreshore Road and Penrhyn Road.  Excavations to install SQIDs and Liquid Detention Units (LDUs) are dug below the water table, and pumps are being used to temporarily lower the water table in the excavation area. Once pumping has ceased, the water table quickly rises again, and appears to have minimal impact on overall water table levels.	☺			
17.5	The construction of the proposed Port Botany Expansion would, however, have the potential to cause minor localised contamination of groundwater from fuel and oil spills/leaks from construction equipment or machinery.	Noted that there is potential, however, there have been no reported spills likely to affect groundwater.	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

## Ch 18 – Geology, Soils and Geotechnical

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
18.3.2	The majority of the construction works would involve reclamation and construction of the hardstand, berths and port infrastructure with expected negligible impact on soil erosion. However, construction of other infrastructure in the vicinity of Penrhyn Estuary would involve removal of vegetation and other activities that would disturb soils with the possibility of soil erosion.	Prediction largely true. No further removal of vegetation as part of Terminal 3 construction	☺			
18.3.3	Once the reclamation is above the water level, any sulphide contained within the sandy sediment matrix may be subject to oxidation. However the overall risk of adverse ecological effects from these oxidised PASS is considered to be low	Prediction true. The previous audit noted that there had been only one instance where PASS has been identified and that it was appropriately managed. There have been no other instances during current phases of works.	☺			
18.3.3	Sediment and soil currently below the water table disturbed during the earthworks for the proposed habitat enhancement activities in Penrhyn Estuary may have acid generating potential	Prediction true.- see above	☺			
18.3.4	Disturbance of estuarine sediment during the proposed construction activities would result in only localised and temporary remobilisation of contaminated sediment and is therefore not likely to cause a significant risk to human health or the environment.	No disturbance of estuarine sediments during Terminal 3 infrastructure works	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

## Ch 19 – Aquatic Ecology

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	😞	NA
19.6.1	Vibration would occur as a result of construction and operation of the new terminal. Most aquatic animals would tend to habituate to the changes in noise and vibration, therefore, impacts could be considered as low.	Minimal vibration is generated during the Terminal 3 infrastructure works				NA
19.6.2	The removal of mangroves would require a permit from NSW Fisheries under the FM Act. Given the small size of the stand relative to other areas in Botany Bay, this loss is considered to be ecologically sustainable.  On the other hand, the creation of additional saltmarsh habitat is considered a positive effect as it would represent a substantial increase of almost 4%, based on West et al (1985), in the area of this habitat within Botany Bay.	No mangroves were removed as part of the Terminal 3 infrastructure works				NA

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

## Ch 20 – Terrestrial Ecology

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
20.10	The proposed Port Botany Expansion would result in changes to the terrestrial environment on the northern side of Botany Bay between the Parallel Runway and Penrhyn Road.	Noted. No work done in this area for Terminal 3.	☺			
20.10	Key impacts from the proposal on the 23 shorebird and one seabird species considered as regular or occasional visitors to Penrhyn Estuary could include disturbance to feeding and roosting from a change in lighting regime, increased movement, noise from construction and operation of the port (and associated infrastructure such as railway lines) and potential entry/exit flyway barriers due to the enclosure of Penrhyn Estuary.	SPC conducts shorebird monitoring in accordance with the Bird Monitoring Plan in the PEHEP – states that monitoring will continue until success levels are assessed after 5 years following commencement of port operations (page 50 of PEHEP Report Exec Summary) The Port Botany Post Construction Environmental Monitoring report – Shorebird Monitoring Annual Report dated Sept 2013 notes that <i>“The PEHE works have expanded both feeding and roosting habitat for shorebirds, and has eliminated much disturbance in the estuary. Ongoing management is needed, however, with two main issues including a) wind erosion of Big Island roosting site, and b) management of fox predation”</i> .	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable



## Ch 21 – Traffic & Transport

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	😞	NA
21.7.1	<p>1. Construction generated truck traffic volumes would be significantly lower than the existing volume generated by the port. The estimated 103 truck deliveries per day in the second year, which is the maximum during the construction period, represents about 7% of the existing 1,450 port trucks on an average day). MOD 14 increased this number to 145.</p> <p>2. Construction traffic would also represent a very small proportion of peak traffic volumes. As a result, the impact of construction vehicles on the performance of the road system would likely be very minor.</p>	<p>The previous audit report noted that there were high volumes of construction traffic generated due to concurrent construction activities at the SICTL and Patrick sites.</p> <p>Since the completion of Phase 1, there has been a reduction in the construction activities being undertaken. Figures derived from truck counts undertaken by Burton Contractors and Laing O'Rourke found that the maximum daily truck numbers was 114 in Nov 2013, however for other months, the average max daily numbers ranged from 2 (May 2014) to 105 (Sept 13)</p>	😊			
21.7.1	The materials to be delivered to the site (rocks, piling equipment and concrete) would generally be transported by standard articulated and rigid trucks, although depending on the sources, some rock materials may also be delivered by barge. The use of restricted access oversize/overmass vehicles would be unlikely, except possibly for transport of some plant and equipment to and from the construction site (e.g. loaders, dozers, rollers, cranes and graders).	Generally true. Materials are generally transported by standard articulated trucks and rigid trucks. No materials delivered by barge.	😊			
21.7.1	Normal construction working hours would generally apply for landside activities (7 am to 6 pm Monday to Friday; 7 am to 1 pm Saturday). These are generally considered as "daytime" working hours and are in line with EPA guidelines and working hours of other construction projects around Sydney. Some works may be undertaken outside of these hours (e.g. maintenance	<p>True. The approved hours (condition B2.19) are 7 am to 6.00pm Mon – Friday, however, for Saturdays are from 8.00am to 1.00pm (change from prediction).</p> <p>Works have been conducted during extended hours on Saturdays (7.00am to 5.00pm), however these have been assessed as inaudible.</p>	😊			

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	😞	NA
	or road and rail works) to minimise impact on other users. Where the project requires construction work outside these hours, the regulatory authorities and affected stakeholders would be notified.	There have been no works requiring approvals as all works to date have been assessed as inaudible at the nearest residential receivers.				
21.7.1	As pedestrian and cyclist activity on Foreshore Road is currently very low, the construction traffic is expected to have a negligible impact on these road users.	Noted. Pedestrian and cyclist activity is not being monitored (not required to be monitored)		😐		
21.7.1	Construction of the intersection would cause some minor and temporary disruption to traffic using Foreshore Rd.	Noted. Intersection works complete	😊			
21.7.1	These operations (on the inter-terminal access corridor) would not add significantly to construction traffic on the southern side of Penrhyn Estuary.	Prediction true	😊			
21.7.1	The installation/connection of services would not add significantly to construction traffic.	Prediction true	😊			

## Chapter 22 – Noise & Vibration

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	😞	NA
22.6	Vibration criteria to protect buildings from damage would be complied with. The vibration comfort criteria would also be complied with.	There are no activities relating to the construction of Terminal 3 that would cause significant vibration	😊			

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

## Chapter 23 – Air Quality

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
23.10	Dispersion modelling of dust emissions from construction of the proposed new terminal showed that PM10 (24-hour) concentrations and monthly dust depositions did not exceed the project criterion of 16 µg/m3 and 2 g/m2/month respectively at residences closest to the work sites (to the north of Foreshore Road) for the periods of maximum construction activity.	<p>Dust Management Sub-Plan has been prepared and dust is being monitored. There have been no dust complaints to date.</p> <p>Monthly Environmental Monitoring reports dated between August 2013 and August 2014 (July results) were reviewed. At the time of the last day of the audit (3 Sept 2014) August monitoring results were not available). During the period July 2013 to April 2014, Laing O'Rourke were primarily responsible for undertaking monitoring and reporting results. Since May 2014, Burton Contractors are the Principal contractors on site, and dust monitoring data is being collected by Fulton Hogan (working on separate phase of project) and provided to Burton Contractors for monthly reporting purposes.</p> <p>No criteria has been set for project, however, the EPA dust goal of 4g/m2/month has been set as a guideline. Over the monitoring period, there have been 3 exceedances of the dust goal as noted in the monitoring reports of Nov 2013, Dec 2013 and Jan 2014 (Oct, Nov and Dec results).</p> <p>Monitoring reports suggest that the exceedances were from sources other than project activities including bushfires and golf course activities (see below)</p>		☹		
23.10	Concentrations of PM10 during construction would result in at most two additional exceedances per year of the 50µg/m3 criteria measured in the vicinity of the site in recent years, which is not considered to be significant.	The monitoring results noted PM10 exceedances in three of the months (Aug, Oct and Nov 2013) recordings, with 8 readings in total above the criteria. Commentary in the monitoring reports suggests that the majority of exceedances were from sources other than		☹		

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

		<p>project activities including bushfires and golf course activities. The reports also stated that additional measures were put into place to manage dust including polymer spraying on stockpiles, additional water cart spraying and removal of stockpiles.</p> <p>The monitoring results for the yearly period reviewed indicated that there have been more than 2 exceedances over the period than predicted, however exceedances may not be a result of the construction activities.</p>				
23.10	Predicted TSP concentrations are significantly lower than EPA criteria of 90µg/m3 beyond the site boundary.	TSP not required to be separately reported and are not measured as TSP – only PM 10 is measured.		☺		
23.10	An assessment of greenhouse gas emissions found that construction and operation of the Port Botany Expansion would reduce overall greenhouse gas emissions in the future “Long Term” operating scenario, when compared to the “do nothing” scenario.	Future action				<b>NA</b>

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☺ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

## Chapter 24 – Cultural Heritage

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	☹	NA
24.7.1	The construction of the proposed development would have no identifiable impact on Aboriginal archaeological heritage values as there were no Aboriginal sites recorded within the primary study area and the potential for submerged Aboriginal sites is negligible given that any cultural material would have been exposed to, and affected greatly by, waves, tides and currents.	Noted. No Aboriginal artefacts found to date	😊			
24.10	European structures of maritime cultural heritage significance have been identified in close proximity to the proposed reclamation and dredging area. The main maritime heritage feature identified was the former Government Pier. The Pier would be conserved by Sydney Ports Corporation as part of the development.	The Pier was built into the design of the Penrhyn Estuary enhancement – addressed in the SPC Public Realm Concept Design Report. Pier has been conserved	😊			

## Chapter 26 – Social Impact Assessment

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	☹	NA
26.6	During construction of the proposed expansion, most of the social impacts would be on the local Port Botany community and the community of people using the recreational facilities near the port. Social impacts during this phase would include a partial restriction on recreational use of Foreshore Beach and areas of Botany Bay, increased traffic on local roads, and increased noise levels.	The current Terminal 3 works do not impact on Foreshore Beach	😊			

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

## Chapter 29 – Bird Hazard

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
29.3.2	Pooling of water may occur on the reclaimed land from uneven surfaces. Birds may take advantage of the pools for bathing, especially if close to a roost site or feeding area. Pooling of water can attract birds to congregate and form large flocks.	No significant pooling of water was observed on the project site. Temporary pooling following rain events drain quickly.	☺			
29.3.2	Construction sites may also attract birds if workers feed birds and leave food scraps.	The site inspection conducted as part of the audit found that all bins containing food waste were covered. The site environmental induction requires that waste is disposed of in waste receptacles provided.	☺			
29.3.2	Areas illuminated at night are likely to attract birds, especially Silver Gulls. Such areas help to provide a secure roosting environment where potential predators, such as foxes or feral cats can be seen. Additionally, lights may also attract insects such as moths and other large insects, which in turn attract Silver Gulls.	Minor out of hours work have occurred, however this is unlikely to have attracted predators or birds. The current contractors on site (Burtons) have not undertaken night works to date - OOHW have been restricted to daytime hours on a Saturday.	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

### Chapter 30 – Operational Aviation Issues

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
30.4.1	There would be no anticipated impact on OLS (Obstacle Limitation Surface) during construction as equipment, including lighting masts and pile drivers, would be selected so as not to intrude into the OLS (i.e. less than 52 m LAT). Given that the OLS is the lower of the surfaces which control aircraft safety, the PAN-OPS would also not be compromised by the proposed development.	For the current scope of works, there is no impact on the OLS. For works undertaken by Liang O'Rourke and Kone Cranes, approvals were obtained from SACL (addressed in previous audit report).	☺			

### Chapter 32 – Emergency & Incident Management

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			C	O	NC	NA
	No construction predictions made for Emergency & Incident Management					NA

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

### Chapter 33 – Water & Wastewater

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			☺	☹	☹	NA
33.2.1	It is estimated that during construction of the new terminal, approximately 15 ML of potable water would be required per year.	<p>A water meter has now been installed on the site and consumption figures were available up to May 2014. Total consumption to this date (10 months of data) is 22.4 ML. for June and July were made based on May 2014 consumption, and concluded that the annual consumption would be in the vicinity of 24 – 25 ML which is in excess of the 15ML prediction.</p> <p>Discussions on site indicated that water for dust suppression is generally from potable water sources. Apparently, ground water extracted during construction activities is discharged and not used for dust suppression due to potential water storage constraints.</p>			☹	
33.3.1	The volume of wastewater generated during construction would depend on the number of construction workers at the site and the nature of the construction activities being undertaken. For significant periods of the construction program, up to 160 construction workers would be on site. With this number of workers, the peak domestic wastewater volume during construction would be about 14 kL per day.	<p>Figures provided by Burton Contractors (since June 2014) show approximate generation of 1500 litres per day based on a five day week, weekly maximum removal of 7,500 litres to date. This is significantly lower than the predicted range and last year's figures.</p> <p>Figures provided by Laing O'Rourke during peak construction period in 2013 (as reported in previous audit report) were approximately 8,200 litres per day representing approximately 70% of site usage at the time. This equates to around 10,500 litres per day for the site, which was within the predicted range</p>	☺			

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable



## Chapter 34 – Waste

Section	Predictions / Conclusions	Assessment	Audit Outcomes																			
			See footer for key																			
			😊	😐	😞	NA																
34.2	Activities during the construction of the Port Botany Expansion resulting in the generation of waste would include: <ul style="list-style-type: none"><li>• dredging and reclamation;</li><li>• construction of road and rail connections;</li><li>• construction of public recreation facilities;</li><li>• construction of wharf structures and pavements;</li><li>• installation of utility connections;</li><li>• construction of road and rail exchange facilities;</li><li>• construction of buildings; and</li><li>• landscaping.</li></ul>	Noted	😊																			
34.2	<table><tr><th>CONSTRUCTION WASTE</th><th>ESTIMATED ANNUAL QUANTITY OF WASTE FOR DISPOSAL</th></tr><tr><td>Construction materials (rock, concrete, timber, masonry, bricks, plasterboards, metal and packaging materials)</td><td>3,000 tonnes</td></tr><tr><td>Road and rail waste (road stone/railway ballast/concrete and metal railway lines)</td><td>200 tonnes</td></tr><tr><td>Dredged material</td><td>None (contained on site)</td></tr><tr><td>Green Waste</td><td>None (reused on site)</td></tr><tr><td>Excavated soil</td><td>None (contained on site)</td></tr><tr><td>Domestic waste (glass, aluminium cans, paper and cardboard, milk bottles, soft drink bottles and food waste)</td><td>720 m³</td></tr><tr><td>Human waste</td><td>14,000 kL</td></tr></table>	CONSTRUCTION WASTE	ESTIMATED ANNUAL QUANTITY OF WASTE FOR DISPOSAL	Construction materials (rock, concrete, timber, masonry, bricks, plasterboards, metal and packaging materials)	3,000 tonnes	Road and rail waste (road stone/railway ballast/concrete and metal railway lines)	200 tonnes	Dredged material	None (contained on site)	Green Waste	None (reused on site)	Excavated soil	None (contained on site)	Domestic waste (glass, aluminium cans, paper and cardboard, milk bottles, soft drink bottles and food waste)	720 m³	Human waste	14,000 kL	The waste figures collected by Laing O'Rourke and Burton contractors do not easily match with the criteria provided. A review of the figures from both contractors found that good percentages of waste removed from site has been recycled, and VENM / ENM has generally been re-used on other construction sites.	😊			
CONSTRUCTION WASTE	ESTIMATED ANNUAL QUANTITY OF WASTE FOR DISPOSAL																					
Construction materials (rock, concrete, timber, masonry, bricks, plasterboards, metal and packaging materials)	3,000 tonnes																					
Road and rail waste (road stone/railway ballast/concrete and metal railway lines)	200 tonnes																					
Dredged material	None (contained on site)																					
Green Waste	None (reused on site)																					
Excavated soil	None (contained on site)																					
Domestic waste (glass, aluminium cans, paper and cardboard, milk bottles, soft drink bottles and food waste)	720 m³																					
Human waste	14,000 kL																					

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

## Chapter 35 – Energy

Section	Predictions / Conclusions	Assessment	Audit Outcomes			
			See footer for key			
			😊	😐	😞	NA
35.2	<p>During the construction phase, energy consumption would result from activities including:</p> <ul style="list-style-type: none"> <li>dredging and reclamation works, enhancement of public recreation areas and Penrhyn Estuary;</li> <li>berth and port infrastructure works;</li> <li>development of terminal facilities; and</li> <li>procurement and delivery of construction materials.</li> </ul> <p>Electricity would be used for small hand-held construction tools and site office equipment.</p>	Noted	😊			
35.2	<p>The use of fuels and electricity would be minimised during the construction phase for environmental reasons as well as economic savings</p>	<p>The Energy Management sub-plan provides initiatives for reducing energy.</p> <p>As noted in the previous audit (the prediction is difficult to quantitatively assess.</p>	😊			

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

## Part 2 - COI Predictions & Conclusions – audit checklist

### Primary Submission Volume 1

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			😊	😐	😞	NA
-	No predictions/conclusions relevant to construction.					NA

### Primary Submission Volume 2

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			😊	😐	😞	NA
-	No predictions/conclusions relevant to construction.					NA

### Supplementary Submission

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			😊	😐	😞	NA
Document 3B Section 4.2.5	Compared with the existing volume of truck trips generated by the port (120 for the AM peak and 55 for the PM peak), the volume of construction generated vehicles is significantly lower, and would hence represent a very small proportion of peak traffic volumes (<10%). As a result, the impact of construction vehicles on the performance of the road system is likely	As noted in the previous independent audit report, A “PBE Cumulative Traffic Assessment” (April 2013) concluded that “there will be no notable difference for traffic on Foreshore Road including the intersection of the Foreshore Road and the SICTL access bridge”. Section 6 of the report concludes that “the road network provides sufficient capacity to accommodate	😊			

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			😊	😐	😞	NA
	to be negligible.	the construction traffic movements with no amendments to existing infrastructure". Refer to section 21.7.1 of this checklist.				
Document 4A	Cumulative (background + Port Botany construction) frequency of exceedance of the Department of Environment and Conservation (DEC) 24-hour PM10 criteria of 50 µg/m3. In addition to the 27 exceedances of the criteria resulting from background air quality, the Port Botany construction works result in a maximum 2 additional days where the criteria may be exceeded.	Some PM10 exceedances were recorded (July, Sept, Oct 2013) however monitoring reports suggest that the source was not from construction activities – see prediction 23.10		😐		

### Part 3 - S96 Applications - Predictions & Conclusions Audit Checklist

#### S96 Application – September 2008, no MOD-60-9-2008 (B2.46)

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			😊	😐	😞	NA
	The Applicant shall ensure that all construction equipment is below the obstacle limitation surface, unless otherwise permitted by an approval under the <i>Airports (Protection of Airspace) Regulation 1996</i> and following consultation with the Department of Infrastructure, Transport, Regional Development and Local Government, Civil Aviation Safety Authority and Sydney Airport Corporation Limited.	Condition B2.46 of the MCoA was modified to allow for breaches of the OLS subject to SACL approval and requires approval to breach the OLS.  No new Approvals have been required since the last audit and engagement of Burton Contractors. Refer to MCoA checklist.	😊			

Key to audit outcomes:

😊 = Largely as predicted/concluded – positive outcome; 😐 = Partially as predicted / or unknown 😞 = Not as predicted – negative outcome; **NA** = Not applicable

**S96 Application – December 2008, no MOD-68-12-2008 (B2.19)**

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			☺	☹	☹	NA
	No prediction – change to condition – B2.19A	See B2.19 MCoA Checklist – needs approval from DoP for out of hours work for non-scheduled activities.- Complies	☺			

**S96 Application – March 2009, no no MOD 08-03-2009 (B2.23A) (Rail Corridor)**

Section	Predictions / Conclusions	Assessment	Audit Outcome			
			* See footer for key			
			☺	☹	☹	NA
-	There would be some reduced impacts around the northern edge of Penrhyn Estuary as the rail track in this location and the rail bridge crossing the flushing channel would no longer be required. This would reduce potential impacts to shorebirds using the Estuary and have the beneficial effect of removing the need for culverts crossing the discharge locations of Floodvale and Springvale Drains and the associated potential for disturbance of contaminated sediments.	<i>Future activity – by new port operator.</i>				

Key to audit outcomes:

☺ = Largely as predicted/concluded – positive outcome; ☹ = Partially as predicted / or unknown ☹ = Not as predicted – negative outcome; **NA** = Not applicable

## **Appendix C**

### Federal Approvals

## Appendix C

### EPBC SEWPAC (formerly DEH and DEWHA) Approvals – EPBC 2002/543 Audit Checklist 2014

Para-graph	Approval Requirement	Comments, observations, discussion Evidence, supporting documentation	Audit Outcome		
			* See footer for key		
			C ✓	Finding O IOC NC ♦ ☹ ☒	NA
1	The person taking the action must construct the port expansion involving the creation of five additional shipping berths, the provision of road, rail and terminal infrastructure and the enhancement of public and ecologically significant areas, in accordance with the site plan shown at ANNEXURE 2 to this approval.	Noted Construction of the new container terminal footprint is complete and in accordance with the approved site plan.	C		
2	Prior to the commencement of construction, the person taking the action must inform the Minister how radar and air navigation issues associated with the port expansion have been resolved to the satisfaction of Airservices Australia.	SPC received confirmation from the Department of Environment, Water, Heritage and the Arts (DEWHA – dated 2/07/07) that this condition has been satisfactorily addressed and was not reassessed at this audit.	C		
3	The person taking the action must prepare and submit for the Minister's approval a habitat enhancement plan for Penrhyn Estuary to manage impacts on listed migratory bird species during the construction and operation of the new port facilities at Port Botany. The action must not commence until the plan has been approved.  The approved PEHEP must be implemented.	The Penrhyn Estuary Habitat Enhancement Plan was approved prior to commencement of construction (March 2007). The Certification of compliance letter referred to in Condition 8 notes the following: <ul style="list-style-type: none"> <li>The Penrhyn Estuary enhancement works are completed and were in accordance with the PEHEP.</li> <li>The PEHEP post construction monitoring program commenced in early 2012 with the first year of monitoring being completed in March 2013. The monitoring Annual Report 2013 is available on Sydney Ports' website (verified).</li> <li>The draft Monitoring Annual Report 2014 is expected in the next 2-3 weeks for review (as at June 2014). Once finalised, it will be placed on the Sydney Ports website. At the time of the</li> </ul>	C		

Para-graph	Approval Requirement	Comments, observations, discussion Evidence, supporting documentation	Audit Outcome		
			* See footer for key		
			C ✓	Finding O IOC NC ◆ ☐ ✖	NA
		independent audit (30/08/14) the report had not yet been posted on the Sydney Ports website.			
4	Should the person taking the action wish to amend or change the habitat enhancement plan approved under paragraph 3, a revised version of the plan must be submitted to the Minister for approval. If the Minister approves such a revised plan, that plan must be implemented in place of the plan as originally approved.	No revisions have been made of the PEHEP, however a review was conducted in March 2012 and resubmitted for approval in August 2012 (see item 6 below). There has been no change since the last independent environmental audit.	C		
5	If the Minister believes that it is necessary or desirable for the better protection of the environment to do so, the Minister may request the person taking the action to make specified revisions to a plan or plans approved pursuant to paragraphs 3 or 4, and to submit the revised plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves a revised plan pursuant to this condition, the person taking the action must implement that plan instead of the plan as originally approved.	No Notifications or requests had been made at the time of the audit	C		
6	The habitat enhancement plan required under condition 3 must be reviewed and resubmitted to the Minister for approval every five years or as otherwise agreed by the Minister. The resubmitted plan must incorporate the relevant results of the independent audit report required under condition 7	The Annual Certification letter referred to in Condition 8 below states provides the following information: The PEHEP was approved in March 2007, and Sydney Ports completed a review of the in March 2012. The review report was submitted to the Department of Sustainability, Environment, Water, Population and communities with the Annual certification letter from the previous year dated 29 August 2012.  There have been no material changes to the PEHEP in the previous 5 years necessitating revision or submission of the Plan for further approval by the Minister. A revision to the PEHEP is planned following completion of construction of the terminal operating	C		



Para-graph	Approval Requirement	Comments, observations, discussion Evidence, supporting documentation	Audit Outcome		
			* See footer for key		
			C ✓	Finding O IOC NC ◆ ☐ ✖	NA
		infrastructure and after the results of the independent audit required by Condition 7. The revised PEHEP will be issued to the Minister for Approval.			
7	After construction of the new port facilities at Port Botany has been completed, and every five years thereafter or as otherwise agreed by the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval for the new port facilities at Port Botany, and the effectiveness of measures to mitigate impacts on listed migratory bird species, is carried out. The independent auditor must be accredited by the Quality Society of Australasia, or such other similar body as the Minister may notify in writing. The audit criteria must be agreed by the Minister and the audit report must address the criteria to the satisfaction of the Minister. An audit report must be given to the Minister within six months of the fifth anniversary of completion of construction of the new port facilities at Port Botany, and within six months of every fifth anniversary thereafter.	Construction of terminal operations infrastructure is on-going. No action is required at this time			NA
8	By 1 July of each year after the date of this approval or as otherwise agreed by the Minister, the Chief Executive Office of Sydney Ports Corporation must provide written certification that Sydney Ports Corporation has complied with the conditions of approval.	Sydney Ports letter dated 24 June 2014 and signed by the Chief Executive Officer and Director Grant Gilfillan provides certification of compliance with the conditions of approval.	C		
9	If, at any time after 5 years from the date of this approval, the Minister notifies Sydney Ports Corporation in writing that the Minister is not satisfied that there has been substantial commencement of construction of the action, construction of the action must not thereafter be commenced.	Approval was issued on 3/01/2006 and construction commenced in May 2008 which is well within the 5 year required timeframe. No changes since last independent audit	C		

**Appendix D**  
Complaints Register

## Appendix D - SICTL Sydney Port Botany Terminal 3 Phase 2 Complaints Handling Register (Sept 13-Sept 14)

[illegible]

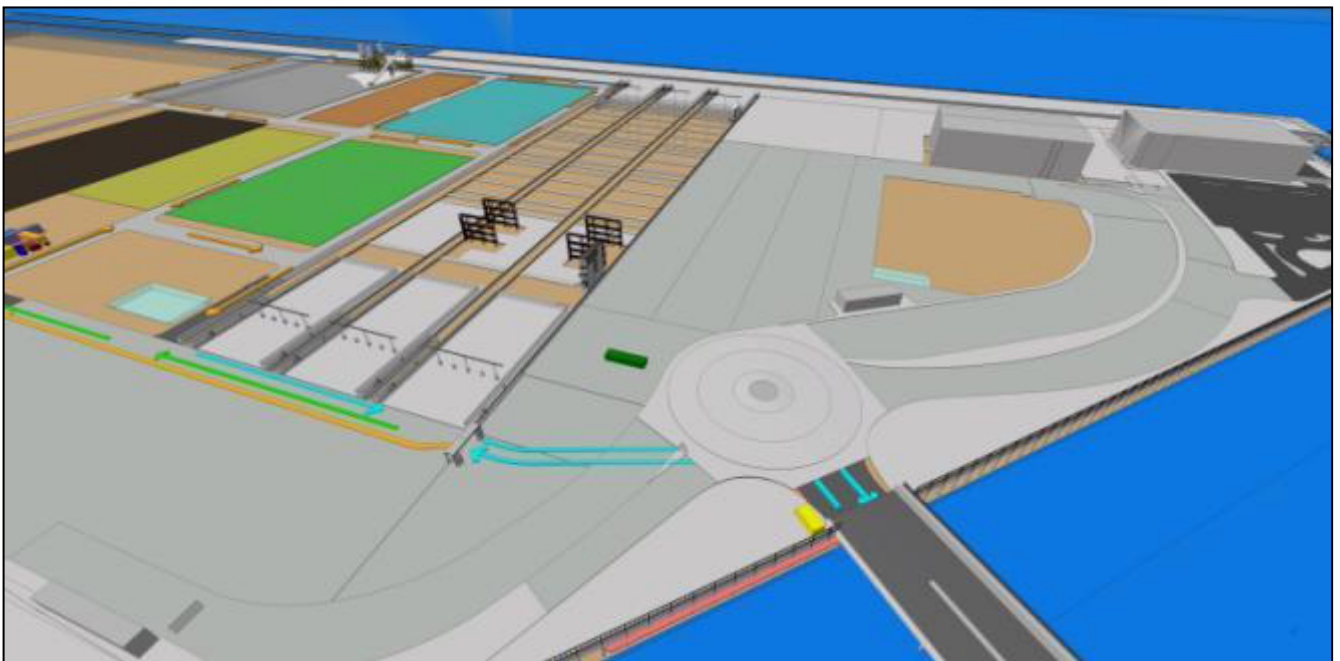
## **Appendix E**

### Monthly Environmental Monitoring Reports

# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **September 2013**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	03/10/13	Issue	JA	03/10/13	JA

## SPBT3 Monthly Environmental Report – September 13

### Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality.....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>4</b>
3.1	Day time noise monitoring .....	4
<b>4.0</b>	<b>Soil and Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – Noise Monitoring Results .....</b>	<b>9</b>
	Day Monitoring .....	9
	Noise Monitoring Locations.....	10
	<b>Appendix 3 – September 2013 Terminal 3 Water Monitoring Results .....</b>	<b>11</b>
	<b>Appendix 4 – September 2013 Terminal 3 Shorebird Observations.....</b>	<b>13</b>

## SPBT3 Monthly Environmental Report – September 13

### 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Terminal 3 expansion at Port Botany for the month of September 2013.

Monitoring has been undertaken for dust, noise, water quality and shorebird observations.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 expansion works.

#### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of August 2013 included the following:

- Earthworks and ground improvements
- Drainage activities
- Services works
- Concrete batch plant and paving operations
- Noise wall installation and painting
- Landscaping

### 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for September 2013 have yet to be received from our laboratory. August 2013 results are reported in Appendix 1.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. There have been no dust complaints received this month. Dust monitoring results are given in this report and are outlined in Appendix 1.

There have been no dust complaints received this month and all results considered representative of the Terminal 3 construction project are within EPA and Project criteria. Dust monitoring results are given in this report and are outlined in Appendix 1.

### 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during September 2013. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

#### 3.1 Day time noise monitoring

Noise measurements were undertaken on 12<sup>th</sup> September 2013. Work activities being undertaken on the Terminal 3 project included ground improvements and earthworks, stormwater drainage and services installation, batch plant operation, paving, noise wall installation, landscaping and material deliveries.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded LAeq levels exceeded the noise goals for noise emissions from the Port Botany expansion Project at 5 of the 6 locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.



## SPBT3 Monthly Environmental Report – September 13

---

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Soil and Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

Water monitoring has been undertaken during September for dewatering activities undertaken during drainage works. All dewatering results have been compliant with the discharge criteria set in the project Environmental Impact Statement. Dewatering results are summarised in Appendix 3.

### 5.0 Shorebird Monitoring

No shorebird observations were obtained this month. This may be due to the noise wall construction impeding views of Penrhyn Estuary from the Terminal 3 site. Shorebird observations from the Terminal 3 site during September 2013 are outlined in Appendix 4.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during September 2013 for the Terminal 3 project site. Inspections have focused on dust suppression with dry conditions through the month. No significant environmental issues were observed or identified. Completed inspection sheets may be available on request.

### 7.0 Appendices

**Appendix 1 – Dust Monitoring Results**  
**Appendix 2 – Noise Monitoring Results**  
**Appendix 3 – Water Monitoring Results**  
**Appendix 4 – Terminal 3 Shorebird Observations**

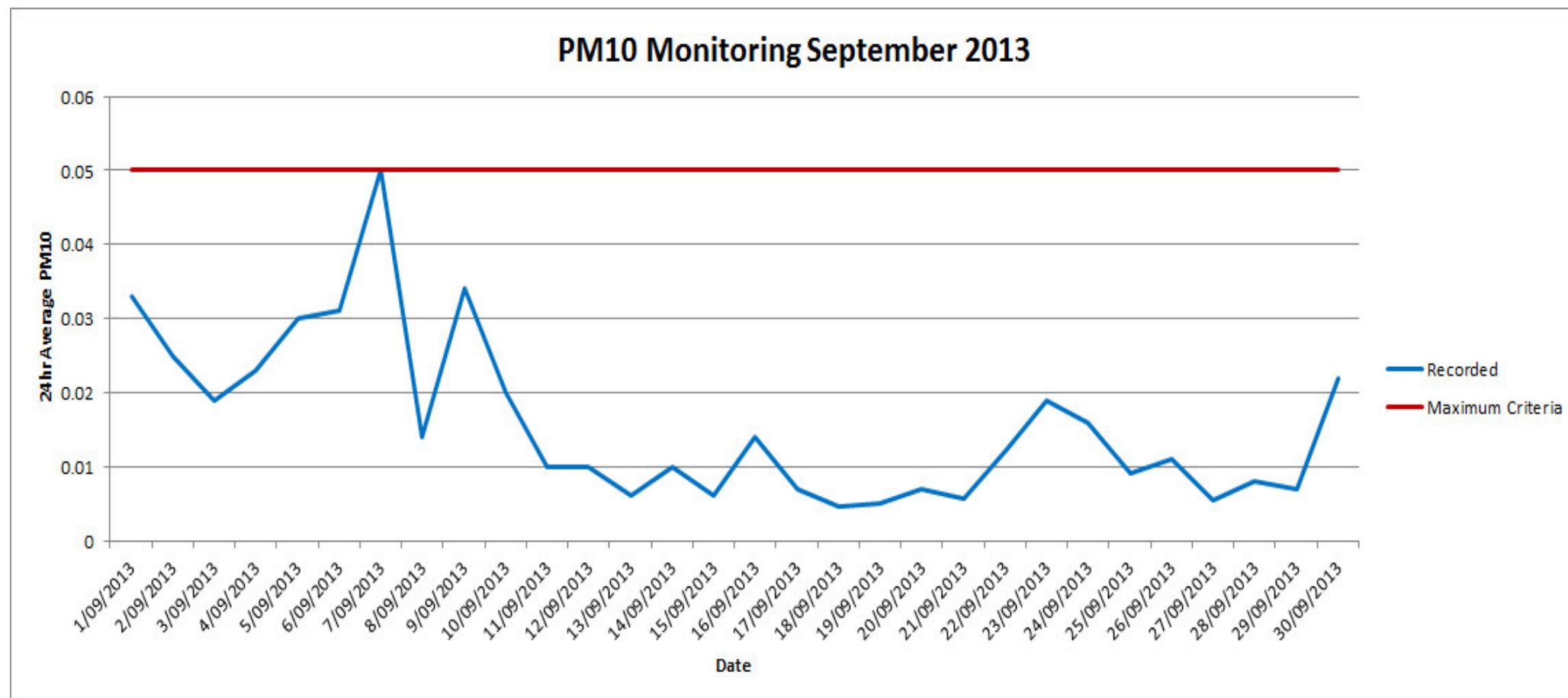
## Appendix 1 – Dust Monitoring Results

### Dust Deposition Gauge Results - August 2013

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	0.8	0.4	0.8	1.2	2.0	EN1303552-003	4	Within EPA guideline levels	Earthworks Drainage works Deliveries Paving Concrete batch plant Structural works Utilities Noise wall install
2	14 The Esplanade	0.4	0.3	0.6	0.7	1.3	EN1303552-001	4	Within EPA guideline levels	
3	74 Australia Ave	1.0	0.3	0.6	1.3	1.9	EN1303552-002	4	Within EPA guideline levels	
4	Botany Golf Course	0.7	0.3	0.4	1.0	1.4	EN1303552-004	4	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

## SPBT3 Monthly Environmental Report – September 13

PM<sub>10</sub> Monitoring Results – September 2013

## SPBT3 Monthly Environmental Report – September 13

### Appendix 2 – Noise Monitoring Results

#### Day Monitoring

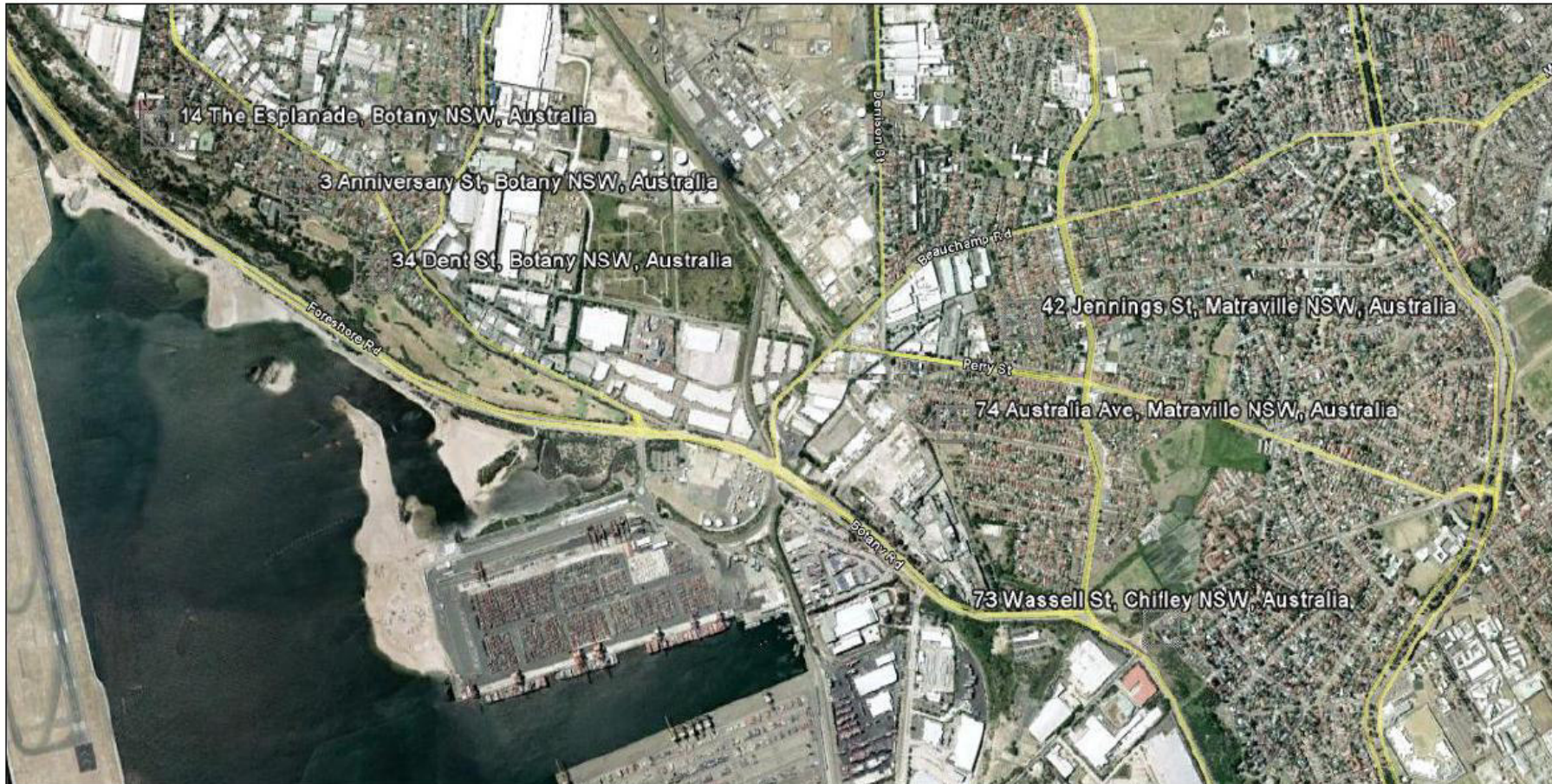
Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	12/09/2013	10:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	49	54	58	63	61	52	4	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	12/09/2013	11:20	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	47	52	64	66	64	60	12	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jennings St	12/09/2013	12:05	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	40	45	67	82	62	51	22	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4 - North of Golf Course	3 Anniversary Rd	12/09/2013	10:50	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	57	62	60	64	61	55	-2	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5 - Australia Avenue	74 Australia Ave	12/09/2013	13:00	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	42	47	57	62	59	54	10	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6 - Military Road	73 Wassell St	12/09/2013	12:35	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	46	51	56	58	56	53	5	Noise from Bunnerong Rd, Local traffic noise, local industry. Terminal 3 construction inaudible

**Note 1:** Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only



## SPBT3 Monthly Environmental Report – September 13

### Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St

# SPBT3 Monthly Environmental Report – September 13

## Appendix 3 – September 2013 Terminal 3 Water Monitoring Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC07	2-Sep	AM	Yes	Bay - SC07	No	7.6	0.8
SC07	2-Sep	PM	Yes	Bay - SC07	No	7.3	1.5
SC07	3-Sep	AM	Yes	Bay - SC07	No	7.5	3.6
SC07	3-Sep	PM	Yes	Bay - SC07	No	7.2	2.8
SC07	4-Sep	AM	Yes	Bay - SC07	No	7.1	5.1
SC07	4-Sep	PM	Yes	Bay - SC07	No	6.9	4.3
SC07	5-Sep	AM	Yes	Bay - SC07	No	7.3	4.2
SC07	5-Sep	PM	Yes	Bay - SC07	No	6.9	5.1
SC07	6-Sep	AM	Yes	Bay - SC07	No	7.0	1.8
SC07	6-Sep	PM	Yes	Bay - SC07	No	7.1	1.6
SC07	9-Sep	AM	Yes	Bay - SC07	No	7.0	2.3
SC07	9-Sep	PM	Yes	Bay - SC07	No	7.3	0.8
SC07	10-Sep	AM	Yes	Bay - SC07	No	7.2	1.2
SC07	10-Sep	PM	Yes	Bay - SC07	No	7.5	2.4
SC07	11-Sep	AM	Yes	Bay - SC07	No	7.1	3.3
SC07	11-Sep	PM	Yes	Bay - SC07	No	7.4	6.4
SC07	12-Sep	AM	Yes	Bay - SC07	No	7.2	1.8
SC07	12-Sep	PM	Yes	Bay - SC07	No	7.3	1.6
SC07	13-Sep	AM	Yes	Bay - SC07	No	7.4	2.3
SC07	13-Sep	PM	Yes	Bay - SC07	No	7.3	3.1
SC07	24-Sep	AM	Yes	Bay - SC07	No	7.0	4.5
SC07	24-Sep	PM	Yes	Bay - SC07	No	6.9	2.0
SC07	25-Sep	AM	Yes	Bay - SC07	No	7.2	2.3
SC07	25-Sep	PM	Yes	Bay - SC07	No	6.9	2.5
SC07	26-Sep	AM	Yes	Bay - SC07	No	6.8	3.1
SC07	26-Sep	PM	Yes	Bay - SC07	No	7.1	4.8
SC07	27-Sep	AM	Yes	Bay - SC07	No	7.3	2.7
SC07	27-Sep	PM	Yes	Bay - SC07	No	7.2	6.1
SC07	30-Sep	AM	Yes	Bay - SC07	No	7.0	5.1
SC07	30-Sep	PM	Yes	Bay - SC07	No	7.2	8.9
Bay - SC07	2-Sep	AM	N/A	N/A	No	7.4	1.1
Bay - SC07	10-Sep	AM	N/A	N/A	No	7.7	2.1
Bay - SC07	24-Sep	AM	N/A	N/A	No	7.2	2.0
SC14b	2-Sep	AM	Yes	Estuary SC14	No	7.3	2.7
SC14b	2-Sep	PM	Yes	Estuary SC14	No	7.4	3.8
SC14b	3-Sep	AM	Yes	Estuary SC14	No	6.9	2.6
SC14b	3-Sep	PM	Yes	Estuary SC14	No	7.2	5.8
SC14b	4-Sep	AM	Yes	Estuary SC14	No	7.3	3.2
SC14b	4-Sep	PM	Yes	Estuary SC14	No	7.1	3.8
SC14b	5-Sep	AM	Yes	Estuary SC14	No	7.1	3.2
SC14b	5-Sep	PM	Yes	Estuary SC14	No	7.2	4.2
SC14b	6-Sep	AM	Yes	Estuary SC14	No	7.1	1.8
SC14b	6-Sep	PM	Yes	Estuary SC14	No	7.3	5.6
SC14b	9-Sep	AM	Yes	Estuary SC14	No	7.0	1.8

## SPBT3 Monthly Environmental Report – September 13

SC14b	9-Sep	PM	Yes	Estuary SC14	No	7.3	2.6
SC14b	10-Sep	AM	Yes	Estuary SC14	No	7.5	3.1
Estuary SC14	2-Sep	AM	N/A	N/A	No	7.2	0.7
Estuary SC14	9-Sep	AM	N/A	N/A	No	7.3	1.5
SC14c	2-Sep	AM	Yes	Estuary SC14	No	6.8	3.8
SC14c	2-Sep	PM	Yes	Estuary SC14	No	6.9	4.2
SC14c	3-Sep	AM	Yes	Estuary SC14	No	7.4	2.9
SC14c	3-Sep	PM	Yes	Estuary SC14	No	7.6	1.8
SC14c	4-Sep	AM	Yes	Estuary SC14	No	7.4	2.6
SC14c	4-Sep	PM	Yes	Estuary SC14	No	7.4	2.3
SC14c	5-Sep	AM	Yes	Estuary SC14	No	7.5	4.8
SC14c	5-Sep	PM	Yes	Estuary SC14	No	7.3	4.6
SC14c	6-Sep	AM	Yes	Estuary SC14	No	7.2	5.2
SC14c	6-Sep	PM	Yes	Estuary SC14	No	7.2	1.8
SC14c	9-Sep	AM	Yes	Estuary SC14	No	7.0	3.1
SC14c	9-Sep	PM	Yes	Estuary SC14	No	7.2	2.0
SC14c	10-Sep	AM	Yes	Estuary SC14	No	7.1	1.6
Estuary SC14	2-Sep	AM	N/A	N/A	No	7.7	1.0
Estuary SC14	9-Sep	AM	N/A	N/A	No	7.5	1.3



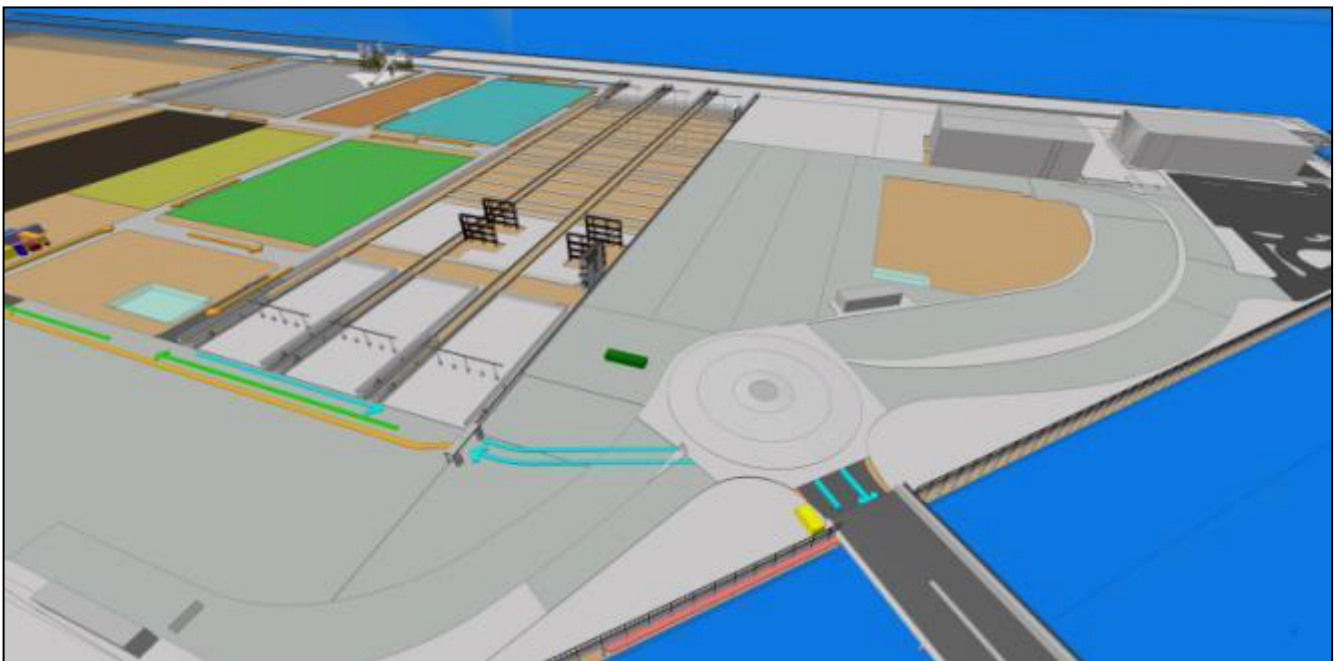
### Appendix 4 – September 2013 Terminal 3 Shorebird Observations

No shorebird observations were obtained this month. This may be due to the noise wall construction impeding views of Penrhyn Estuary from the Terminal 3 site.

# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **October 2013**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	02/11/13	Issue	JA	02/11/13	JA

# SPBT3 Monthly Environmental Monitoring Report – October 13

## Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality .....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>5</b>
3.1	Day time noise monitoring .....	5
<b>4.0</b>	<b>Soil and Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – Noise Monitoring Results .....</b>	<b>10</b>
	Day Monitoring .....	10
	Noise Monitoring Locations.....	11
	<b>Appendix 3 – October 2013 Terminal 3 Water Monitoring Results .....</b>	<b>12</b>
	<b>Appendix 4 – October 2013 Terminal 3 Shorebird Observations .....</b>	<b>13</b>

# SPBT3 Monthly Environmental Monitoring Report – October 13

## 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Terminal 3 expansion at Port Botany for the month of October 2013.

Monitoring has been undertaken for dust, noise, water quality and shorebird observations.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works.

### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of October 2013 included the following:

- Earthworks and ground improvements
- Drainage activities
- Services works
- Concrete batch plant and paving operations
- Noise wall installation and painting
- Landscaping

## 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for October 2013 have yet to be received from our laboratory. September 2013 results are reported in Appendix 1. All results received for the deposition gauges are within EPA guidelines and Project criteria.

A real-time dust monitor has also been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. This monitor recorded 4 instances that the daily average project criterion of 50µg/m<sup>3</sup> was exceeded during October 2013. These results are outlined below.

Date	Terminal 3 PM <sub>10</sub> Monitor (µg/m <sup>3</sup> )
18/10/13	51
19/10/13	55
21/10/13	141
29/10/13	57

It is noted that the above range of dates falls within the period of high bushfire activity around Sydney and surrounding regions during October 2013. Poor air quality was observed across the state during this time with similar trends seen to those shown in this report. It was also seen on 21/10/13 that NSW Health authorities issued a public health warning due to poor air quality across the State; with Campbelltown and Camden the worst affected areas. With respect to the conditions encountered across NSW during this period, it is thought that the predominant source causing elevated PM<sub>10</sub> values is related to bushfire activity and the resulting smoke and air quality impacts.

With respect to the information above, Laing O'Rourke remain committed to the ongoing management of dust suppression across its Terminal 3 site. The majority of the site is now completed hard-stand area ready for operational purposes. In addition to dust mitigation measures already in place, a third water cart was brought to site during October and around 100,000 tonnes of stockpiled material is being removed for recycling offsite, reducing risk of dust emissions from the Terminal 3 construction area. A polymer 'spray sealant' has also been applied to material stockpiled on the Southern end of Terminal 3 site, forming a hard crust over the material and minimising wind erosion effects by stabilising the material. Further briefing of all project personnel of the importance of effective dust management will also be undertaken.

## SPBT3 Monthly Environmental Monitoring Report – October 13

There have been no dust complaints received by the project this month. Dust monitoring results are outlined in Appendix 1.

### 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during October 2013. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

#### 3.1 Day time noise monitoring

Noise measurements were undertaken on 9<sup>th</sup> October 2013. Work activities being undertaken on the Terminal 3 project included ground improvements and earthworks, drainage and services activities, batch plant operation, paving, noise wall installation, landscaping and material deliveries.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded LA<sub>eq</sub> levels exceeded the noise goals for noise emissions from the Port Botany expansion Project at all 6 locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Soil and Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

Water monitoring has been undertaken during October for dewatering activities undertaken during drainage works. All dewatering results have been compliant with the discharge criteria set in the project Environmental Impact Statement. Dewatering results are summarised in Appendix 3.

### 5.0 Shorebird Monitoring

Shorebird observations were obtained this month. The noise wall is thought to be impeding views of Penrhyn Estuary from the Terminal 3 site and stopping shorebird observations. Shorebird observations from the Terminal 3 site during October 2013 are outlined in Appendix 4.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during October 2013 for the Terminal 3 project site. Inspections have focused on dust suppression with dry conditions through the month. No significant environmental issues were observed or identified. Completed inspection sheets may be available on request.

### 7.0 Appendices

**Appendix 1 – Dust Monitoring Results**  
**Appendix 2 – Noise Monitoring Results**  
**Appendix 3 – Water Monitoring Results**  
**Appendix 4 – Terminal 3 Shorebird Observations**

## Appendix 1 – Dust Monitoring Results

### Dust Deposition Gauge Results - September 2013

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	1.2	0.5	1.4	1.7	3.1	EN1303769-003	4	Within EPA guideline levels	Earthworks Drainage works Deliveries Paving Concrete batch plant Structural works Utilities Noise wall install Landscaping
2	Joseph Banks Park	0.8	0.4	1.6	1.2	2.8	EN1303769-001	4	Within EPA guideline levels	
3	Purcell Park	1.9	0.5	1.1	2.4	3.5	EN1303769-002	4	Within EPA guideline levels	
4	Botany Golf Course	1.1	0.5	2.5	1.6	4.1	EN1303769-004	4	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

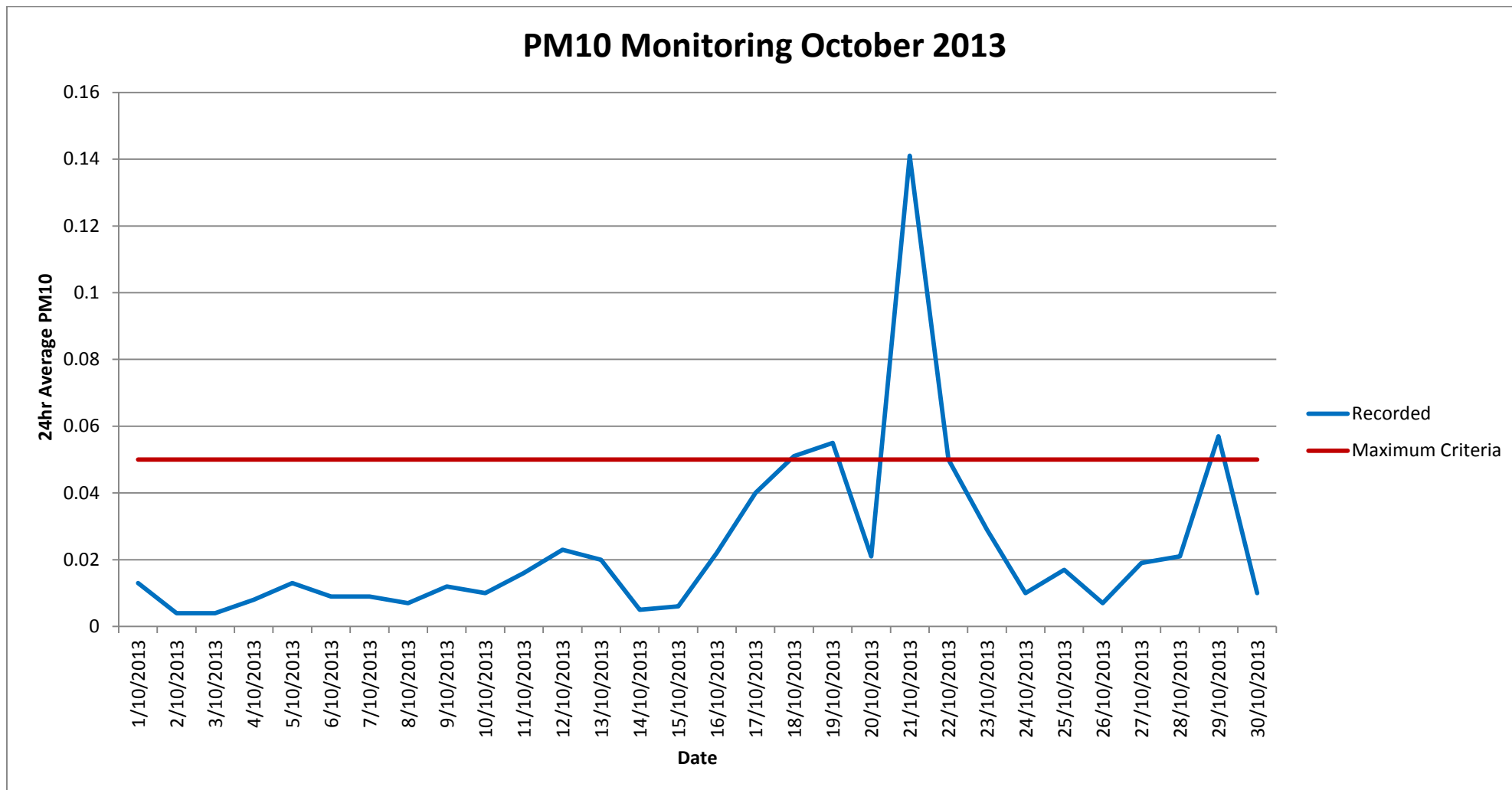


## SPBT3 Monthly Environmental Monitoring Report – October 13

### Dust Monitoring Locations



PM<sub>10</sub> Monitoring Results – October 2013



# SPBT3 Monthly Environmental Monitoring Report – October 13

## Appendix 2 – Noise Monitoring Results

### Day Monitoring

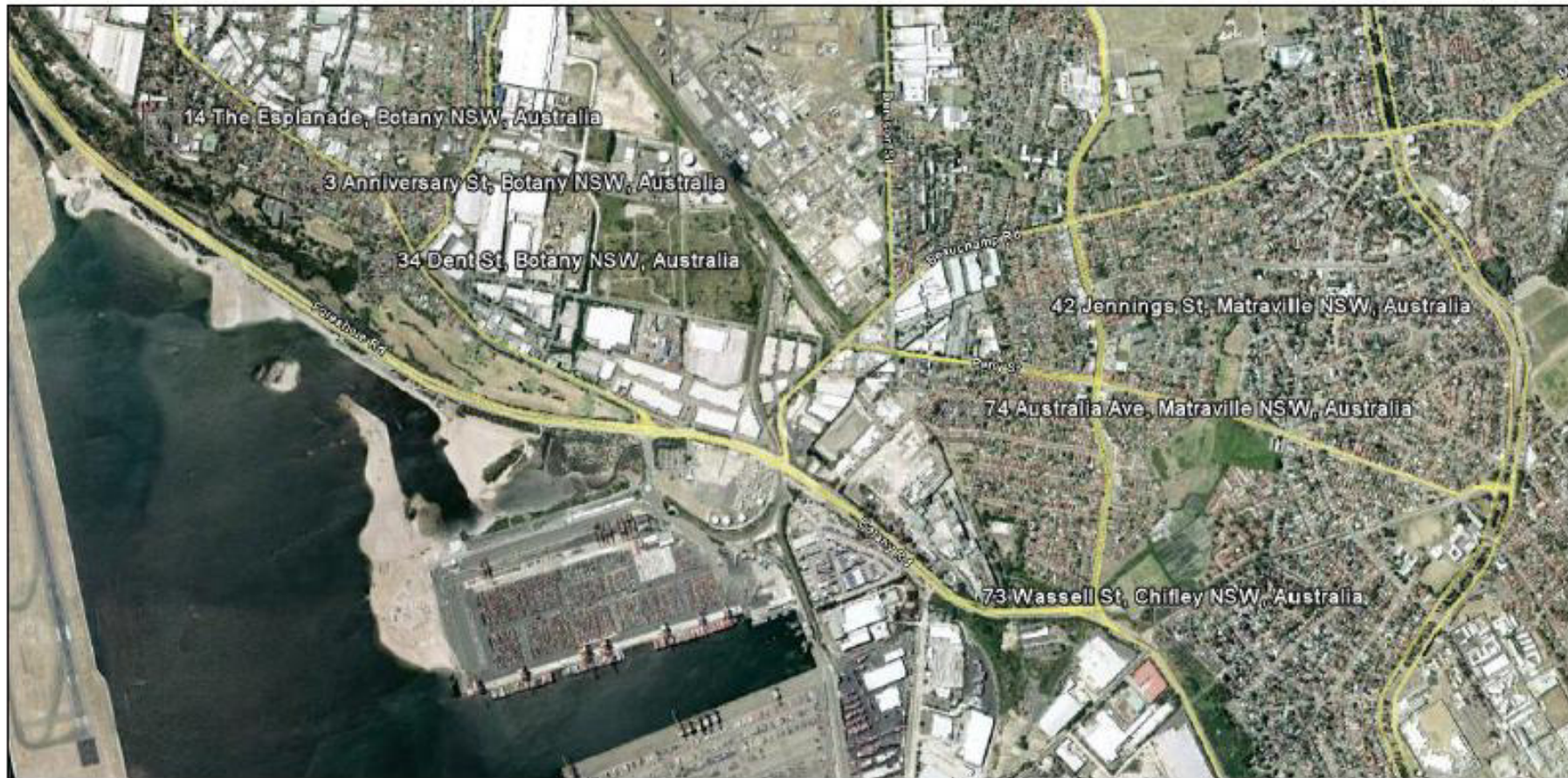
Noise Monitoring Results - SPBT3 October 2013															LAING O'ROURKE
Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	9/10/2013	10:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	49	54	66	72	66	55	12	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	9/10/2013	11:20	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	47	52	67	75	69	54	15	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jennings St	9/10/2013	12:05	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	40	45	68	78	70	54	23	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4 - North of Golf Course	3 Anniversary Rd	9/10/2013	10:50	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	57	62	63	66	64	61	1	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5 - Australia Avenue	74 Australia Ave	9/10/2013	13:00	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	42	47	60	67	63	56	13	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6 - Military Road	73 Wassell St	9/10/2013	12:35	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	46	51	52	60	53	48	1	Noise from Bunnerong Rd, Local traffic noise, local industry. Terminal 3 construction inaudible

Note 1: Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only



## SPBT3 Monthly Environmental Monitoring Report – October 13

### Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St

# SPBT3 Monthly Environmental Monitoring Report – October 13

## Appendix 3 – October 2013 Terminal 3 Water Monitoring Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC07	1-Oct	AM	Yes	Bay - SC07	No	7.2	3.6
SC07	1-Oct	PM	Yes	Bay - SC07	No	7.1	3.2
SC07	2-Oct	AM	Yes	Bay - SC07	No	7.3	4.5
SC07	2-Oct	PM	Yes	Bay - SC07	No	7.3	2.1
SC07	3-Oct	AM	Yes	Bay - SC07	No	7.2	3.8
SC07	3-Oct	PM	Yes	Bay - SC07	No	7.0	3.6
SC07	4-Oct	AM	Yes	Bay - SC07	No	7.1	4.5
SC07	4-Oct	PM	Yes	Bay - SC07	No	7.4	2.7
SC07	7-Oct	AM	Yes	Bay - SC07	No	7.3	1.8
SC07	7-Oct	PM	Yes	Bay - SC07	No	7.4	3.9
SC07	8-Oct	AM	Yes	Bay - SC07	No	7.3	4.8
SC07	8-Oct	PM	Yes	Bay - SC07	No	7.2	1.0
SC07	9-Oct	AM	Yes	Bay - SC07	No	7.2	4.6
SC07	9-Oct	PM	Yes	Bay - SC07	No	7.5	3.8
SC07	10-Oct	AM	Yes	Bay - SC07	No	7.2	0.9
SC07	11-Oct	PM	Yes	Bay - SC07	No	7.1	4.6
SC07	14-Oct	AM	Yes	Bay - SC07	No	6.9	5.2
SC07	14-Oct	PM	Yes	Bay - SC07	No	7.0	5.6
SC07	15-Oct	AM	Yes	Bay - SC07	No	7.4	4.8
SC07	15-Oct	PM	Yes	Bay - SC07	No	7.0	3.9
SC07	16-Oct	AM	Yes	Bay - SC07	No	7.5	7.6
Bay - SC07	2-Oct	AM	N/A	N/A	No	7.3	1.2
Bay - SC07	7-Oct	AM	N/A	N/A	No	7.4	0.9
Bay - SC07	14-Oct	AM	N/A	N/A	No	7.3	1.1
SC15	30-Oct	AM	Yes	Estuary - SC15	No	7.9	19.8
SC15	30-Oct	PM	Yes	Estuary - SC15	No	8.1	12.3
SC12 - SQID Cleanout	22-Oct	AM	Yes	Estuary - SC12	No	8.2	19.6

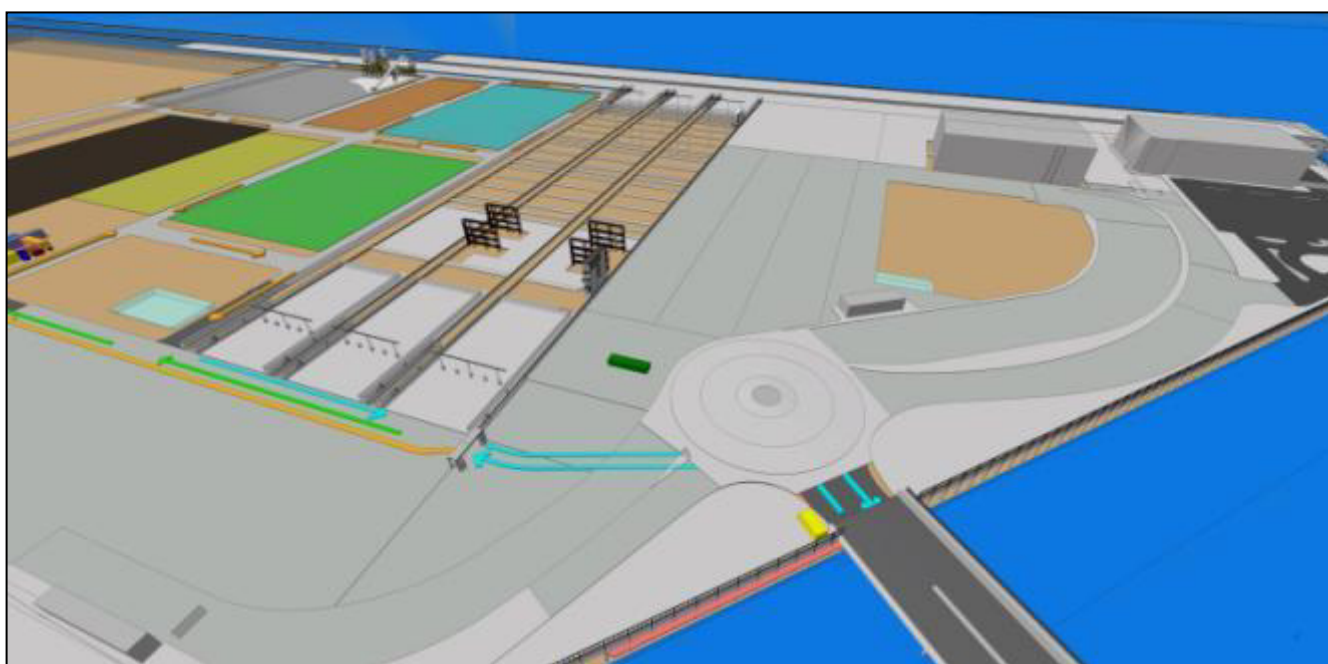
**Appendix 4 – October 2013 Terminal 3 Shorebird Observations**

Date	Bird Type	Location	Reported by	Action
21/10/2013	2 x Pied Oyster Catchers	Penrhyn Estuary - adjacent SC14	J Ambler	No action required, not within work area, no threat to birds
21/10/2013	4 x Little Terns	Penrhyn Estuary - adjacent SC14	J Ambler	No action required, not within work area, no threat to birds

# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **November 2013**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	03/12/13	Issue	JA	03/12/13	JA



# SPBT3 Monthly Environmental Monitoring Report – November 13

## Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality .....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>5</b>
3.1	Day time noise monitoring .....	5
<b>4.0</b>	<b>Soil and Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>6</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>7</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>8</b>
	<b>Appendix 2 – Noise Monitoring Results .....</b>	<b>11</b>
	Day Monitoring .....	11
	Noise Monitoring Locations.....	12
	<b>Appendix 3 – November 2013 Terminal 3 Water Monitoring Results .....</b>	<b>13</b>
	<b>Appendix 4 – November 2013 Terminal 3 Shorebird Observations.....</b>	<b>14</b>

# SPBT3 Monthly Environmental Monitoring Report – November 13

## 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Terminal 3 expansion at Port Botany for the month of November 2013.

Monitoring has been undertaken for dust, noise, water quality and shorebird observations.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works.

### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of November 2013 included the following:

- Earthworks and ground improvements
- Drainage activities
- Services works
- Concrete batch plant and paving operations
- Noise wall installation and painting
- Landscaping

## 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for November 2013 have yet to be received from our laboratory. October 2013 results are reported in Appendix 1.

All results received for the deposition gauges are within EPA guidelines and Project criteria with the exception of one gauge located in the upper Penrhyn Estuary. The dust deposition gauge located in the upper Penrhyn Estuary returned a value of 4.3 g/m<sup>2</sup>.month which is slightly above the guideline of 4.0 g/m<sup>2</sup>.month. This is the first exceedance of dust deposition monitoring targets during the current phase of the port expansion project. It is noted that the above range of dates falls within the period of high bushfire activity around Sydney and surrounding regions during October 2013. Poor air quality was observed across the state during this time with an ash content of 3.9 g/m<sup>2</sup>.month given for the Penrhyn Estuary dust gauge. This is considered to have contributed to the exceedance of the project goal.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. Three exceedances of project criteria were observed during November 2013 and discussed in this section.

The real-time PM<sub>10</sub> monitor returned readings of 88µg/m<sup>3</sup> on 02/12/13, 94µg/m<sup>3</sup> on 03/12/13 and 94µg/m<sup>3</sup> on 08/12/13, which are in excess of the project daily average criteria of 50µg/m<sup>3</sup>. Readings on the 2<sup>nd</sup> and 8<sup>th</sup> December occurred during northerly winds, suggesting that any PM<sub>10</sub> particulate matter had originated from the opposite side of the monitor to the Terminal 3 site, further towards the industrial estates of Botany and Banksmeadow. Laing O'Rourke does not consider the Terminal 3 construction site to have contributed to these two results. The reading on the 3 December occurred on a Sunday when no Laing O'Rourke construction work was undertaken on the Terminal 3 site, with winds reaching 76km/hr from the south. Although no construction work was undertaken, the Terminal 3 site may have contributed to this reading.

In regards to the information above, Laing O'Rourke remains committed to the ongoing management of dust suppression across its Terminal 3 site and minimising offsite impacts. High winds were observed during the reporting period, consistently in excess of 50km/hr and at times reaching over 90km/hr from the south. The site is majority hard-stand area as large areas have now been paved with concrete, ready for operational purposes, with further paving to be undertaken. An additional, third water cart was brought to site during October and around 100,000 tonnes of stockpiled sand has been removed for recycling offsite, reducing risk of future dust emissions from the Terminal 3 construction area. A polymer 'spray sealant' has been applied to material stockpiled on the Southern end of Terminal 3 site, forming a hard crust over the material and

## SPBT3 Monthly Environmental Monitoring Report – November 13

minimising wind erosion effects by stabilising the material. Further polymer will be sprayed across the site during December 2013 to minimise potential offsite dust impacts.

Other construction contractors engaged by Patrick Stevedores, working adjacent the Terminal 3 site and Penrhyn Estuary have been notified of the exceedances in a combined approach to minimise offsite impacts of Port expansion works. No residential properties or road networks were impacted by dust and there have been no dust complaints received by the project during this monitoring period.

Dust monitoring results are outlined in Appendix 1.

### 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during November 2013. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

#### 3.1 Day time noise monitoring

Noise measurements were undertaken on 8<sup>th</sup> November 2013. Work activities being undertaken on the Terminal 3 project included earthworks, drainage and services activities, batch plant operation, paving, noise wall installation, landscaping and material deliveries.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded  $LA_{eq}$  levels exceeded the noise goals for noise emissions from the Port Botany expansion Project 5 of the 6 monitoring locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Soil and Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

Water monitoring has been undertaken during November for dewatering activities undertaken during drainage works. All dewatering results have been compliant with the discharge criteria set in the project Environmental Impact Statement. Dewatering results are summarised in Appendix 3.

### 5.0 Shorebird Monitoring

No shorebird observations were obtained this month, no shorebirds were present on the Terminal construction site. With the noise wall installed around the perimeter of the site, birds present in Penrhyn Estuary cannot be seen.

## SPBT3 Monthly Environmental Monitoring Report – November 13

---

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during November 2013 for the Terminal 3 project site. Inspections have focused on dust suppression with dry conditions through the month. No significant environmental issues were observed or identified. Completed inspection sheets may be available on request.

### 7.0 Appendices

**Appendix 1 – Dust Monitoring Results**  
**Appendix 2 – Noise Monitoring Results**  
**Appendix 3 – Water Monitoring Results**  
**Appendix 4 – Terminal 3 Shorebird Observations**

## SPBT3 Monthly Environmental Monitoring Report – November 13

### Appendix 1 – Dust Monitoring Results

#### Dust Deposition Gauge Results - October 2013

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	3.9	0.4	1.6	4.3	2.5	EN1304211-004	4	Above EPA guideline levels	Earthworks Drainage works Deliveries Paving Concrete batch plant Structural works Utilities Noise wall install Landscaping
2	Joseph Banks Park	1.4	1.1	0.6	2.5	3.1	EN1304211-001	4	Within EPA guideline levels	
3	Purcell Park	2.3	0.9	1.0	3.2	4.2	EN1304211-002	4	Within EPA guideline levels	
4	Botany Golf Course	1.2	0.2	1.1	1.4	2.5	EN1304211-004	4	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month



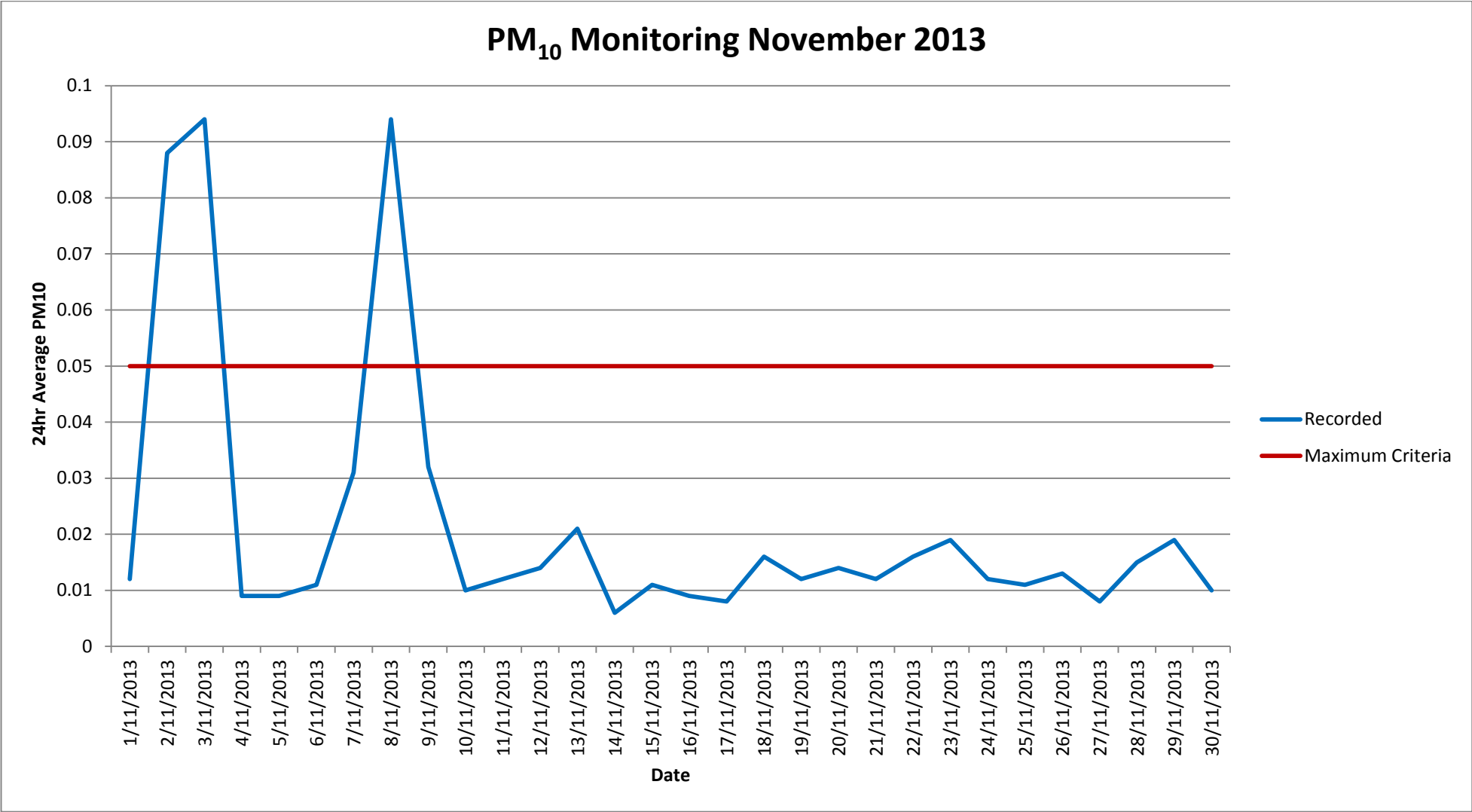
## SPBT3 Monthly Environmental Monitoring Report – November 13

### Dust Monitoring Locations



SPBT3 Monthly Environmental Monitoring Report – November 13

PM<sub>10</sub> Monitoring Results – November 2013





## SPBT3 Monthly Environmental Monitoring Report – November 13

## Appendix 2 – Noise Monitoring Results

## Day Monitoring

Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	8/11/2013	9:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Noise Wall	Standard Day	Fine	No	49	54	64	66	65	62	10	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	8/11/2013	10:40	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Noise Wall	Standard Day	Fine	No	47	52	61	74	63	51	9	Local traffic and foreshore road noise, aircraft noise, park noise, golf lawn mowing. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jenning St	8/11/2013	12:25	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Noise Wall	Standard Day	Fine	No	40	45	65	77	66	46	20	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4- North of Golf Course	3 Anniversary Rd	8/11/2013	10:00	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Noise Wall	Standard Day	Fine	No	57	62	57	64	61	52	-5	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5- Australia Avenue	74 Australia Ave	8/11/2013	11:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Noise Wall	Standard Day	Fine	No	42	47	56	65	59	46	9	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6- Military Road	73 Wassell St	8/11/2013	13:05	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Noise Wall	Standard Day	Fine	No	46	51	53	59	56	49	2	Noise from Bunnerong Rd, Local traffic noise, local industry, adjacent park. Terminal 3 construction inaudible

Note 1: Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only

## SPBT3 Monthly Environmental Monitoring Report – November 13

### Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St

## SPBT3 Monthly Environmental Monitoring Report – November 13

### Appendix 3 – November 2013 Terminal 3 Water Monitoring Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC15	1-Nov	AM	Yes	Estuary - SC15	No	7.3	12.6
SC15	1-Nov	PM	Yes	Estuary - SC15	No	7.2	14.3
SC15	4-Nov	AM	Yes	Estuary - SC15	No	7.4	10.6
SC15	4-Nov	PM	Yes	Estuary - SC15	No	7.4	7.8
SC15	5-Nov	AM	Yes	Estuary - SC15	No	6.9	2.6
SC15	5-Nov	PM	Yes	Estuary - SC15	No	7.8	18.2
SC15	6-Nov	AM	Yes	Estuary - SC15	No	7.6	16.4
SC15	6-Nov	PM	Yes	Estuary - SC15	No	7.4	13.4
SC15	7-Nov	AM	Yes	Estuary - SC15	No	7.4	13.5
SC15	7-Nov	PM	Yes	Estuary - SC15	No	7.5	16.2
SC15	8-Nov	AM	Yes	Estuary - SC15	No	7.1	14.9
SC15	8-Nov	PM	Yes	Estuary - SC15	No	8.1	8.7
Bay - SC15	4-Nov	AM	N/A	N/A	No	7.3	3.1

### Appendix 4 – November 2013 Terminal 3 Shorebird Observations

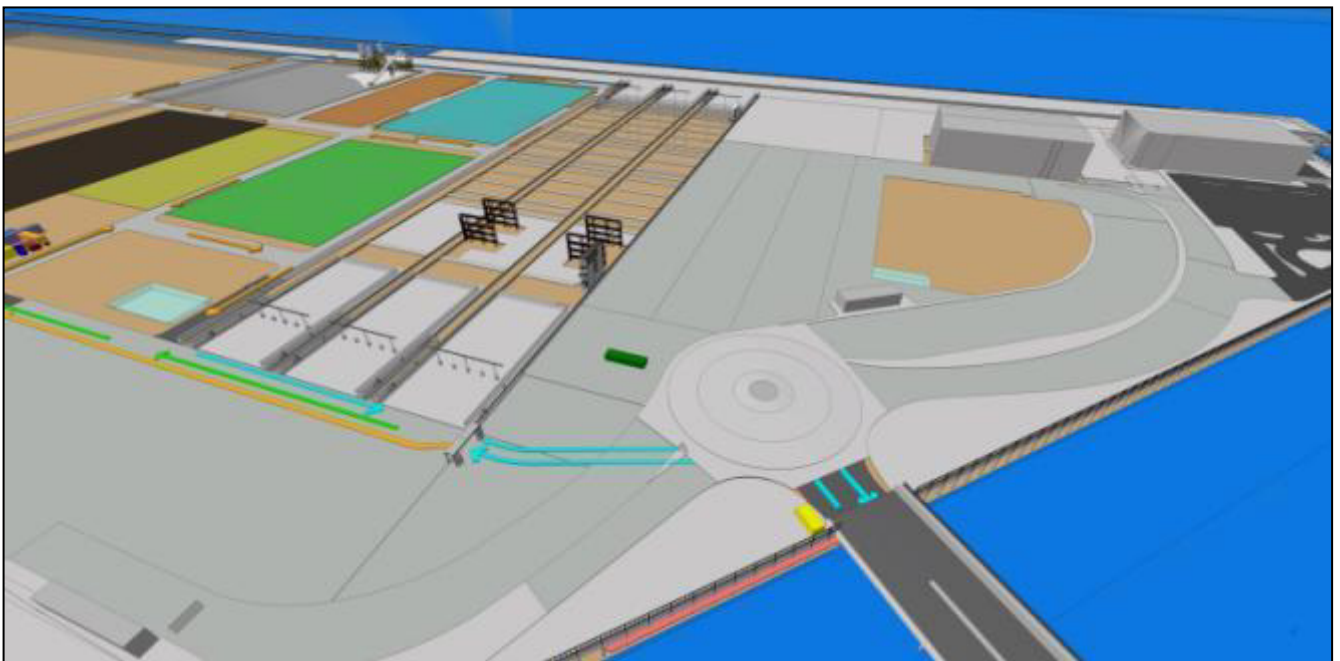
There have been no shore bird sightings by project personnel during the reporting period.



# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **December 2013**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	06/01/14	Issue	JA	06/01/14	JA

# SPBT3 Monthly Environmental Monitoring Report – December 13

## Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality.....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>4</b>
3.1	Day time noise monitoring .....	5
<b>4.0</b>	<b>Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – December 13 Day Noise Monitoring Results .....</b>	<b>10</b>
	Noise Monitoring Locations.....	11

# SPBT3 Monthly Environmental Monitoring Report – December 13

## 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Laing O'Rourke Terminal 3 expansion work at Port Botany for the month of December 2013.

Monitoring has been undertaken for dust, noise, water quality and shorebird observations.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works.

### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of November 2013 included the following:

- Earthworks and ground improvements
- Drainage activities
- Services works
- Concrete batch plant and paving operations
- Rail beam preparation and construction
- Noise wall installation and painting
- Landscaping

## 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for December 2013 have yet to be received from our laboratory. November 2013 results are reported in Appendix 1.

All results received for the deposition gauges are within EPA guidelines and Project criteria with the exception of one gauge located in the upper Penrhyn Estuary. The dust deposition gauge located in the upper Penrhyn Estuary returned a total insoluble matter value of 5.1 g/m<sup>2</sup>.month which is above the project guideline of 4.0 g/m<sup>2</sup>.month. This is the second exceedance of dust deposition monitoring targets during the current phase of the port expansion project and is repeated at the same location. A high ash content of 4.1 g/m<sup>2</sup>.month was received for this Penrhyn Estuary dust gauge and thought to have contributed to the exceedance of the total insoluble matter. The source of the ash content is being investigated and not considered to be caused by the Laing O'Rourke Terminal 3 construction activities.

However, further to the polymer 'spray sealant' that has been applied to material stockpiled on the Southern end of the Terminal 3 site, additional applications of this polymer have been sprayed across the Terminal 3 site during December 2013 to minimise potential offsite dust impacts. Water Cart operations are also continuing across the site.

Other construction contractors engaged by Patrick Stevedores, working adjacent the Terminal 3 site and Penrhyn Estuary have been notified of the exceedance in a combined approach to minimise offsite impacts of Port expansion works. No residential properties or road networks were impacted by dust and there have been no dust complaints received by the project during this monitoring period.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. No exceedances of project PM<sub>10</sub> particulate matter criteria were recorded during December 2013.

Dust monitoring results are outlined in Appendix 1.

## 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during December 2013. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.



## SPBT3 Monthly Environmental Monitoring Report – December 13

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

### 3.1 Day time noise monitoring

Noise measurements were undertaken on 3<sup>rd</sup> December 2013. Work activities being undertaken on the Terminal 3 project included earthworks, drainage and services activities, batch plant operation, paving, noise wall installation, rail beam construction, landscaping and material deliveries.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded  $LA_{eq}$  levels exceeded the noise goals for noise emissions from the Port Botany Expansion Project at 5 of the 6 monitoring locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

## 4.0 Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

### 4.1 Water Monitoring

No dewatering activities have been undertaken on the Laing O'Rourke Terminal 3 site during December 2013.

## 5.0 Shorebird Monitoring

No shorebird observations were obtained this month. With the noise wall installed around the perimeter of the site, birds present in Penrhyn Estuary cannot be seen and no target bird species have been identified on site. Sydney Ports Corporation manage Penrhyn Estuary and report on findings and progress separately to the Terminal 3 construction works.

## 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during December 2013 for the Terminal 3 project site. Inspections have focused on dust suppression with hot and dry conditions through the month. No significant environmental issues were observed or identified.

## **7.0 Appendices**

**Appendix 1 – Dust Monitoring Results**  
**Appendix 2 – Noise Monitoring Results**

## SPBT3 Monthly Environmental Monitoring Report – December 13

### Appendix 1 – Dust Monitoring Results

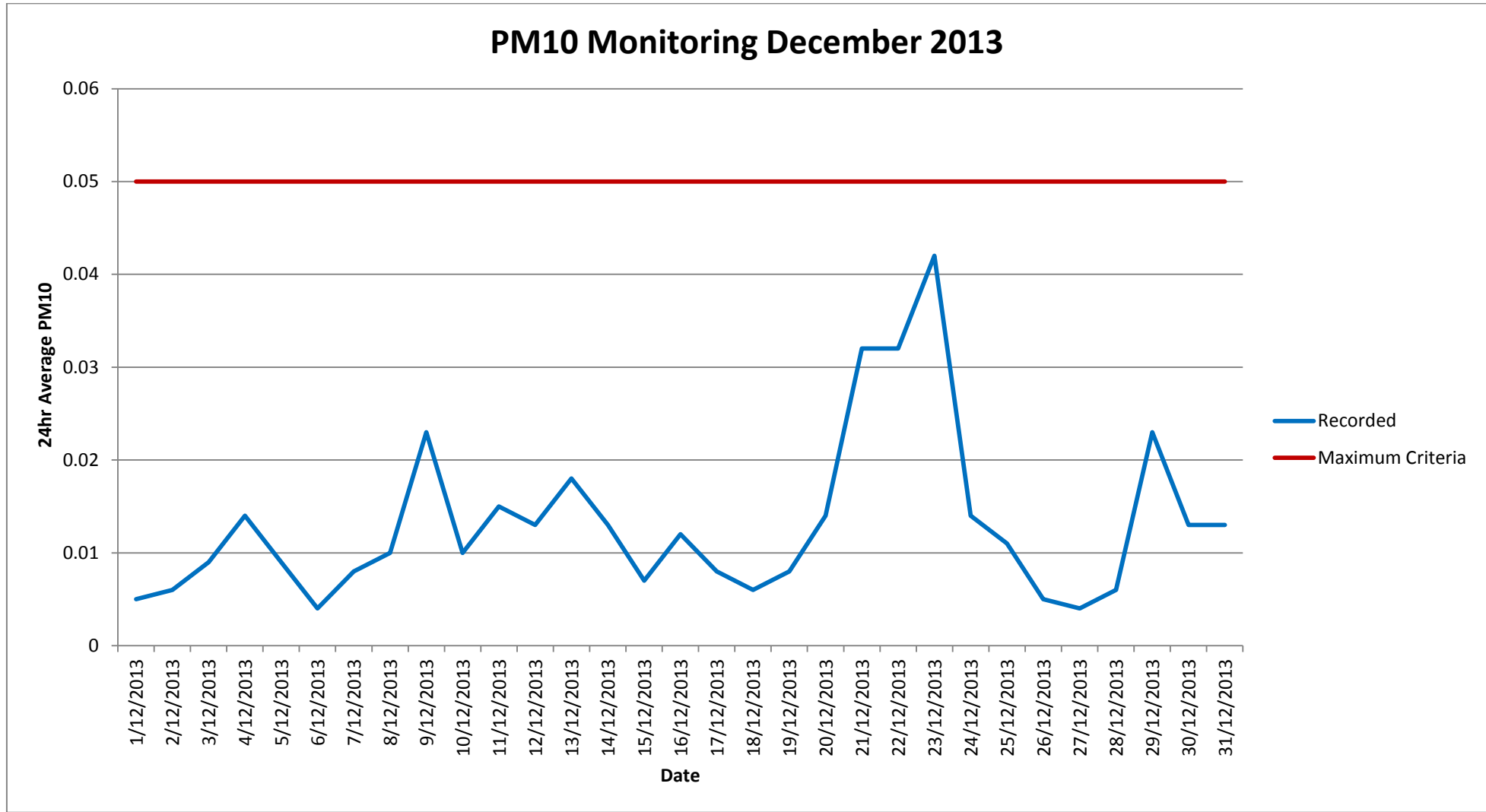
#### Dust Deposition Gauge Results - November 2013

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	4.1	1.0	4.4	5.1	9.5	EN1304608-003	4	Above EPA guideline levels	Earthworks Drainage works Deliveries Paving Concrete batch plant Structural works Utilities Noise wall install Landscaping
2	Joseph Banks Park	0.8	0.4	4.5	1.2	5.7	EN1304608-001	4	Within EPA guideline levels	
3	Purcell Park	2.5	0.7	3.7	3.2	6.9	EN1304608-002	4	Within EPA guideline levels	
4	Botany Golf Course	1.5	0.6	6.0	2.1	8.1	EN1304608-004	4	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

# SPBT3 Monthly Environmental Monitoring Report – December 13

## PM<sub>10</sub> Monitoring Results – December 2013



## SPBT3 Monthly Environmental Monitoring Report – December 13

### Dust Monitoring Locations





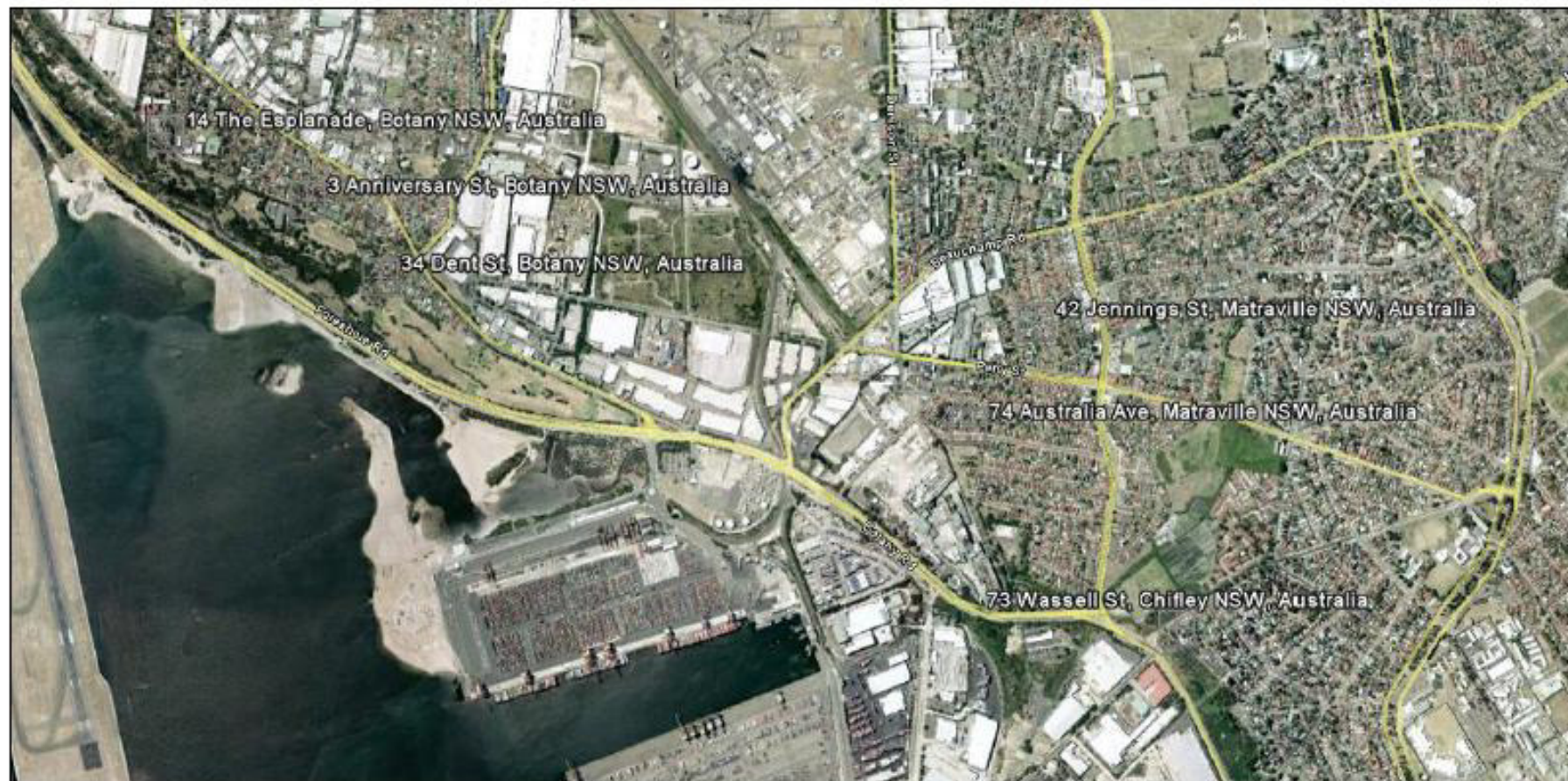
## SPBT3 Monthly Environmental Monitoring Report – December 13

### Appendix 2 – December 13 Day Noise Monitoring Results

Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level LA90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	3/12/2013	9:40	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	49	54	55	62	60	39	1	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	3/12/2013	10:55	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	47	52	60	66	62	56	8	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jennings St	3/12/2013	12:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	40	45	61	81	65	44	16	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4- North of Golf Course	3 Anniversary Rd	3/12/2013	10:15	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	57	62	54	61	59	46	-8	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5- Australia Avenue	74 Australia Ave	3/12/2013	11:35	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	42	47	48	56	51	43	1	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6- Military Road	73 Wassell St	3/12/2013	13:15	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	46	51	52	60	56	37	1	Noise from Bunnerong Rd, Local traffic noise, local industry, adjacent park. Terminal 3 construction inaudible

## SPBT3 Monthly Environmental Monitoring Report – December 13

### Noise Monitoring Locations



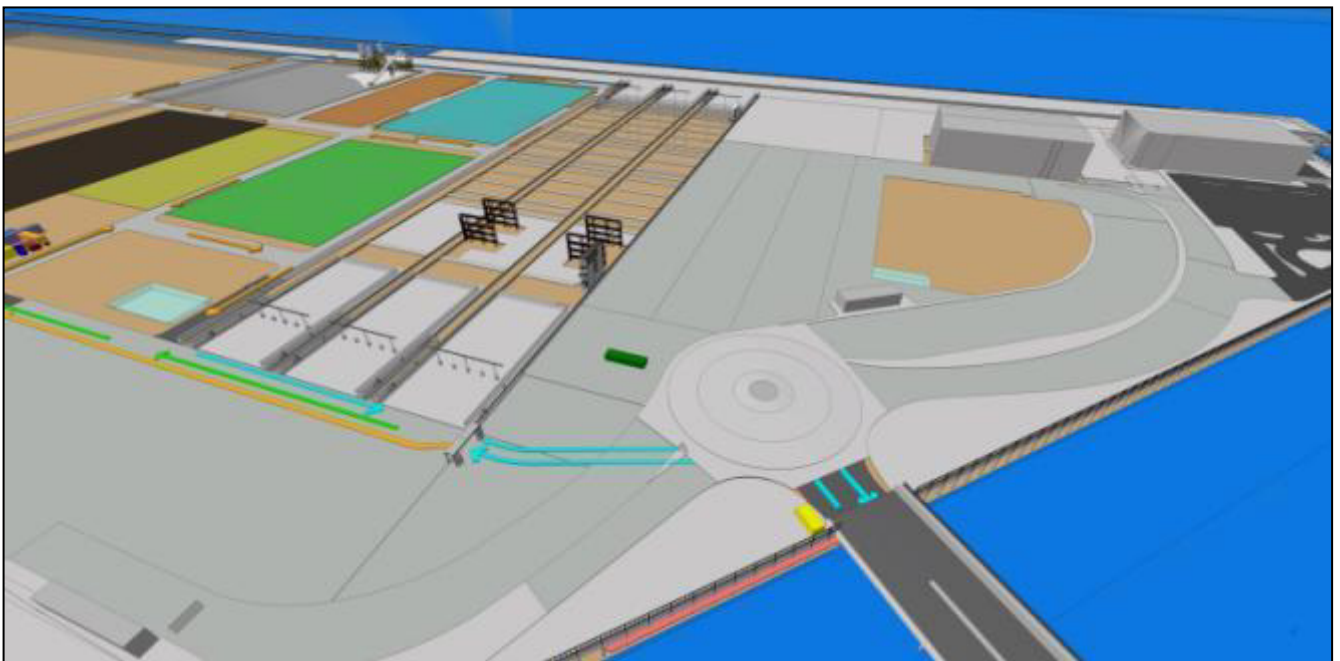
Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St



# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **January 2014**





Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	01/02/14	Issue	JA	01/02/14	JA

# SPBT3 Monthly Environmental Monitoring Report – January 14

## Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality.....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>4</b>
3.1	Day time noise monitoring .....	5
<b>4.0</b>	<b>Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – January 14 Day Noise Monitoring Results.....</b>	<b>10</b>
	Noise Monitoring Locations.....	11

# SPBT3 Monthly Environmental Monitoring Report – January 14

## 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Laing O'Rourke Terminal 3 expansion work at Port Botany for the month of January 2014.

Monitoring has primarily been undertaken for air quality and noise.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works.

### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of November 2013 included the following:

- Earthworks and spoil removal
- Services works
- Concrete batch plant and concrete pouring operations
- Rail beam preparation and construction
- Ballast deliveries

## 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for January 2014 have yet to be received from our laboratory. December 2013 results are reported in Appendix 1.

All results received for the deposition gauges are within EPA guidelines and Project criteria with the exception of one gauge located in the upper Penrhyn Estuary. The dust deposition gauge located in the upper Penrhyn Estuary returned a total insoluble matter value of 4.5 g/m<sup>2</sup>.month which is slightly above the project guideline of 4.0 g/m<sup>2</sup>.month. This is the third exceedance of dust deposition monitoring targets during the current phase of the port expansion project at this location. Laing O'Rourke water cart operations have been focussed in this area to ensure dust levels are brought back below the project targets.

Other construction contractors engaged by Patrick Stevedores, working adjacent the Terminal 3 site and Penrhyn Estuary have been notified of the exceedance in a combined approach to minimise offsite impacts of Port expansion works.

It is noted, however, that no residential properties or road networks were impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. No exceedances of project PM<sub>10</sub> particulate matter criteria were recorded during January 2014. Technical issues were encountered on 24<sup>th</sup> January 2014 with a fault in the satellite communication system. PM<sub>10</sub> data is not shown after this date.

Dust and PM<sub>10</sub> monitoring results are outlined in Appendix 1.

## 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during January 2014. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

## SPBT3 Monthly Environmental Monitoring Report – January 14

### 3.1 Day time noise monitoring

Noise measurements were undertaken on 6<sup>th</sup> January 2014. Work activities being undertaken on the Terminal 3 project included earthworks, services activities, batch plant operation, rail beam construction, and material transport.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded  $LA_{eq}$  levels exceeded the noise goals for noise emissions from the Port Botany Expansion Project at 5 of the 6 monitoring locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

No dewatering activities have been undertaken on the Laing O'Rourke Terminal 3 site during January 2014.

### 5.0 Shorebird Monitoring

No shorebird observations were obtained this month. With the noise wall installed around the perimeter of the site, birds present in Penrhyn Estuary cannot be seen and no target bird species have been identified on site. Sydney Ports Corporation manage Penrhyn Estuary and report on findings and progress separately to the Terminal 3 construction works.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during January 2014 for the Terminal 3 project site. Inspections have focused on dust suppression with hot and dry conditions through the month. No significant environmental issues were observed or identified.

## **7.0 Appendices**

**Appendix 1 – Dust Monitoring Results**  
**Appendix 2 – Noise Monitoring Results**

## Appendix 1 – Dust Monitoring Results

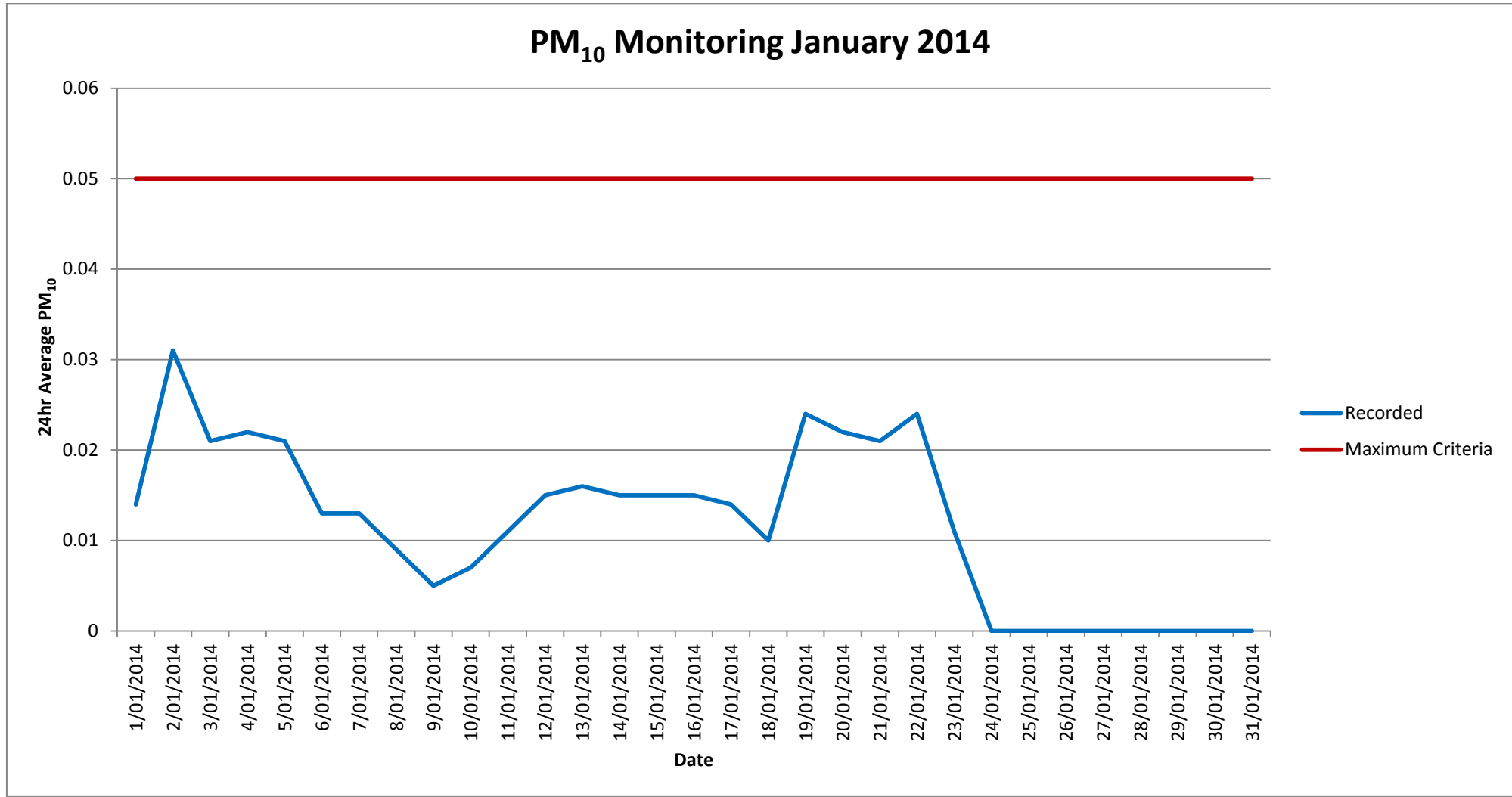
### Dust Deposition Gauge Results - December 2013

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	3.7	0.8	2.0	4.5	6.5	EN1400135-003	4.5	Above EPA guideline levels	Earthworks Deliveries Concrete batch plant Rail Beam
2	Joseph Banks Park	0.6	0.4	1.7	1.0	2.7	EN1400135-001	4.5	Within EPA guideline levels	
3	Purcell Park	2.2	0.7	2.2	2.9	5.1	EN1400135-002	4.5	Within EPA guideline levels	
4	Botany Golf Course	0.8	0.4	0.8	1.2	2.0	EN1400135-004	4.5	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

# SPBT3 Monthly Environmental Monitoring Report – January 14

## PM<sub>10</sub> Monitoring Results – January 2014





## SPBT3 Monthly Environmental Monitoring Report – January 14

### Dust Monitoring Locations





## SPBT3 Monthly Environmental Monitoring Report – January 14

### Appendix 2 – January 14 Day Noise Monitoring Results

Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	6/01/2014	9:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	49	54	60	65	62	57	6	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	6/01/2014	10:35	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	47	52	58	63	60	55	6	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jenning St	6/01/2014	12:15	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	40	46	63	78	60	42	18	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4 - North of Golf Course	3 Anniversary Rd	6/01/2014	10:00	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	57	62	54	61	59	47	-8	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5 - Australia Avenue	74 Australia Ave	6/01/2014	11:25	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	42	47	51	62	53	43	4	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6 - Military Road	73 Wassell St	6/01/2014	13:00	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	46	51	58	70	62	45	7	Noise from Bunnerong Rd, Local traffic noise, local industry, adjacent park. Terminal 3 construction inaudible

**Note 1:** Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only

## SPBT3 Monthly Environmental Monitoring Report – January 14

### Noise Monitoring Locations



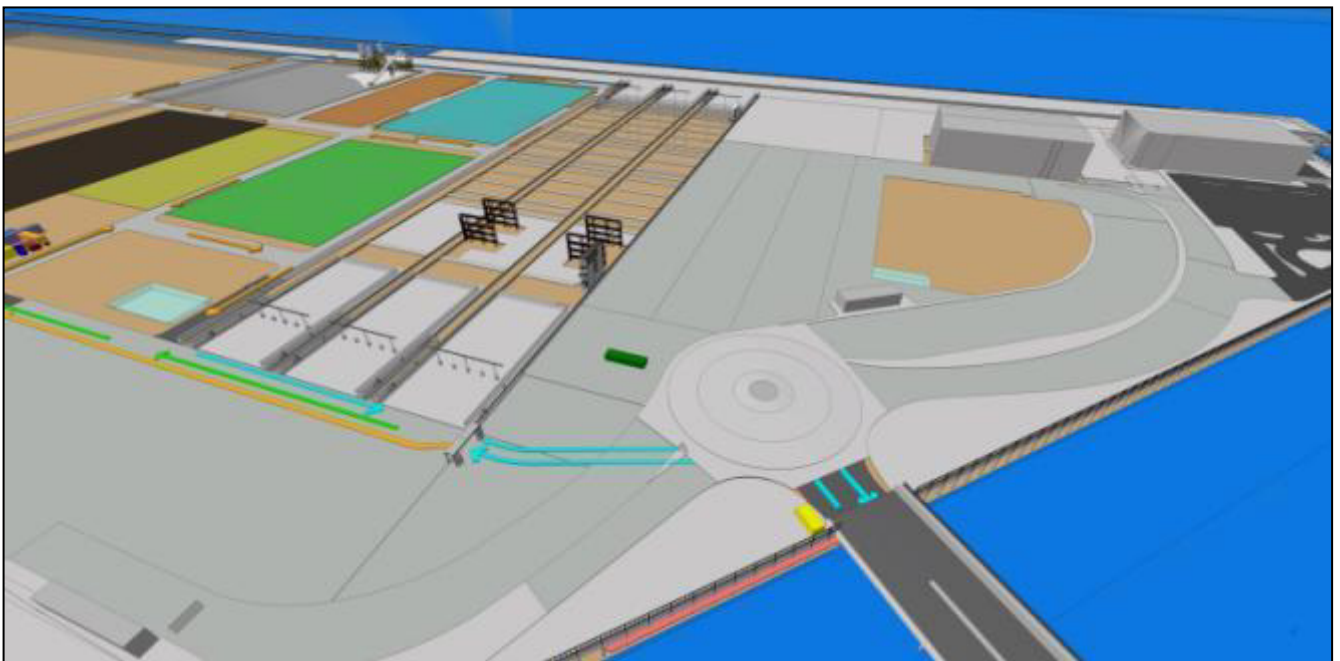
Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St



# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **February 2014**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	03/03/14	Issue	JA	03/03/14	JA

# SPBT3 Monthly Environmental Monitoring Report – February 14

## Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality.....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>4</b>
3.1	Day time noise monitoring .....	4
<b>4.0</b>	<b>Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – February 2014 Day Noise Monitoring Results .....</b>	<b>10</b>
	Noise Monitoring Locations.....	11
	<b>Appendix 3 – February 2014 Dewatering Results.....</b>	<b>12</b>

# SPBT3 Monthly Environmental Monitoring Report – February 14

## 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Laing O'Rourke Terminal 3 expansion work at Port Botany for the month of February 2014.

As Laing O'Rourke works are drawing to a close and construction activities have reduced, monitoring has primarily been undertaken for air quality and noise.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works.

### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of November 2013 included the following:

- Earthworks and spoil removal
- Services works
- Concrete batch plant and paving operations
- Rail beam preparation and construction
- Ballast deliveries
- Landscaping

## 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for February 2014 have yet to be received from our laboratory. January 2014 results are reported in Appendix 1.

All results received for the deposition gauges are within EPA guidelines and Project criteria. After recent dust exceedances adjacent the works, Laing O'Rourke water cart operations have been focussed on active work sites to ensure dust levels are kept below the project targets.

No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. No exceedances of project PM<sub>10</sub> particulate matter criteria were recorded during February 2014. Technical issues were encountered on 24<sup>th</sup> January 2014 with a fault in the satellite communication system. PM<sub>10</sub> data was not able to be regained until 10<sup>th</sup> February 2014.

Dust and PM<sub>10</sub> monitoring results are outlined in Appendix 1.

## 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during February 2014. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

### 3.1 Day time noise monitoring

Noise measurements were undertaken on 24<sup>th</sup> February 2014. Work activities being undertaken on the Terminal 3 project included earthworks, rail installation, services activities, batch plant operation, rail beam construction, and material transport.

## SPBT3 Monthly Environmental Monitoring Report – February 14

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded  $LA_{eq}$  levels exceeded the noise goals for noise emissions from the Port Botany Expansion Project all 6 monitoring locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

Dewatering activities took place during February 2014 after heavy rainfall. All dewatering was within project criteria. Results of Laing O'Rourke dewatering activities on the Terminal 3 site during February 2014 are shown in Appendix 3.

### 5.0 Shorebird Monitoring

No shorebird observations were obtained this month. With the noise wall installed around the perimeter of the site, birds present in Penrhyn Estuary cannot be seen and no target bird species have been identified on site. Sydney Ports Corporation manages Penrhyn Estuary and report on findings and progress separately to the Terminal 3 construction works.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during February 2014 for the Terminal 3 project site. Inspections have focused on dust suppression with hot and dry conditions through the first half of the month. No significant environmental issues were observed or identified.

### 7.0 Appendices

Appendix 1 – Dust Monitoring Results  
Appendix 2 – Noise Monitoring Results  
Appendix 3 – Dewatering Results



## SPBT3 Monthly Environmental Monitoring Report – February 14

### Appendix 1 – Dust Monitoring Results

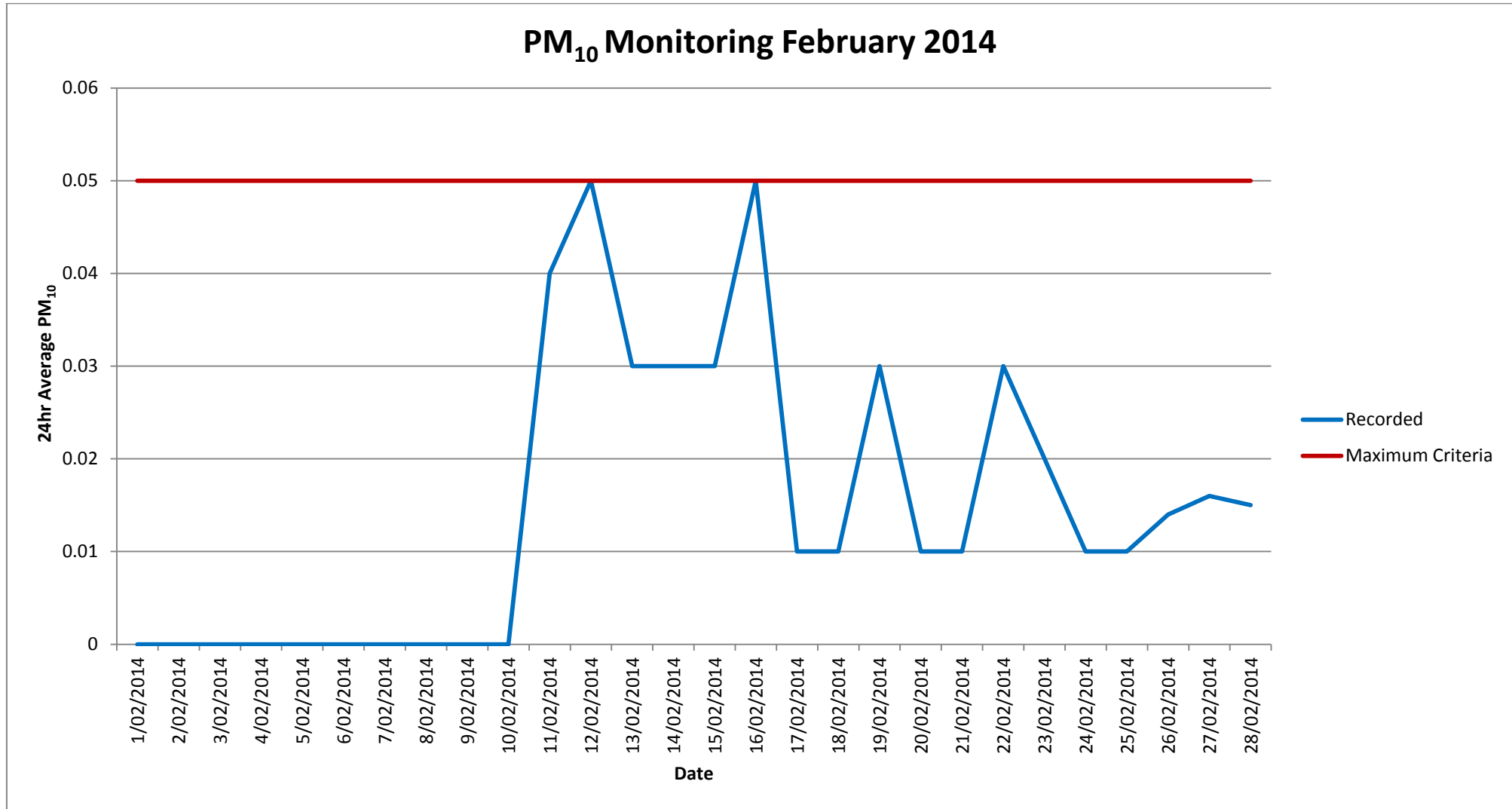
#### Dust Deposition Gauge Results - January 2014

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	1.6	0.7	1.7	2.3	4.0	EN1400429-003	4.0	Within EPA guideline levels	Earthworks Deliveries Concrete batch plant Paving Rail Beam Landscaping Ballast deliveries
2	Joseph Banks Park	0.4	0.6	0.6	1.0	1.6	EN1400429-001	4.0	Within EPA guideline levels	
3	Purcell Park	0.7	0.6	1.0	1.3	2.3	EN1400429-002	4.0	Within EPA guideline levels	
4	Botany Golf Course	0.5	0.6	0.4	1.1	1.5	EN1400429-004	4.0	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

# SPBT3 Monthly Environmental Monitoring Report – February 14

## PM<sub>10</sub> Monitoring Results – February 2014



## SPBT3 Monthly Environmental Monitoring Report – February 14

### Dust Monitoring Locations





## SPBT3 Monthly Environmental Monitoring Report – February 14

### Appendix 2 – February 2014 Day Noise Monitoring Results

Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	24/02/2014	10:45	Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	49	54	64	74	68	52	10	Noise from Foreshore Rd traffic, aircraft noise, local traffic, Residential construction main noise source, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	24/02/2014	9:45	Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	47	52	56	62	59	52	4	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jennings St	24/02/2014	12:00	Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	40	45	56	67	59	41	11	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4 - North of Golf Course	3 Anniversary Rd	24/02/2014	10:15	Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	57	62	64	74	62	50	2	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5 - Australia Avenue	74 Australia Ave	24/02/2014	11:30	Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	42	47	53	63	57	45	6	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6 - Military Road	73 Wassell St	24/02/2014	12:30	Material deliveries Batch Plant Pavement Works Rail Beam Construction	Standard Day	Fine	No	46	51	55	59	58	52	4	Noise from Bunnerong Rd, Local traffic noise, local industry, adjacent park. Terminal 3 construction inaudible

**Note 1:** Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only

## SPBT3 Monthly Environmental Monitoring Report – February 14

### Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St

Appendix 3 – February 2014 Dewatering Results

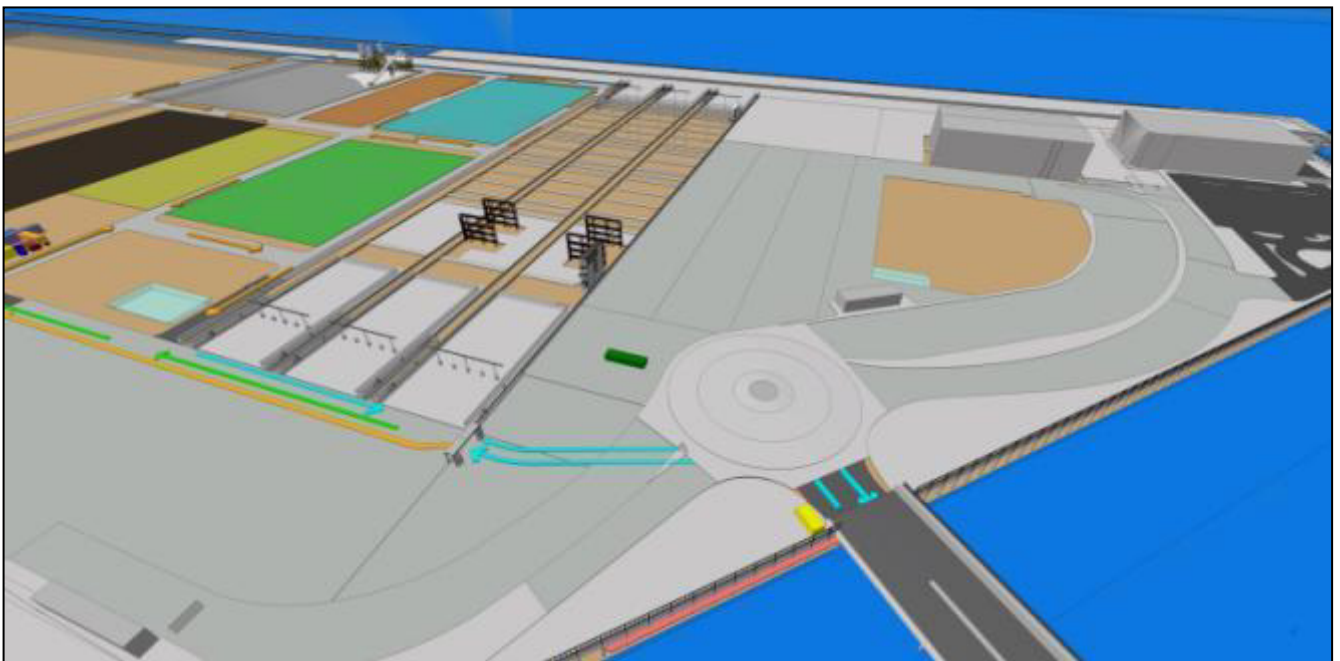
Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC9	20-Feb	9:00AM	Yes	Terminal Stormwater	No	8.50	13.0
SC10	20-Feb	9:20AM	Yes	Terminal Stormwater	No	8.45	22.8



# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **March 2014**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	01/04/14	Issue	JA	01/04/14	JA



## SPBT3 Monthly Environmental Monitoring Report – March 14

### Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality.....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>4</b>
3.1	Day time noise monitoring .....	4
<b>4.0</b>	<b>Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – March 2014 Day Noise Monitoring Results.....</b>	<b>10</b>
	Noise Monitoring Locations.....	11
	<b>Appendix 3 – March 2014 Dewatering Results.....</b>	<b>12</b>

## SPBT3 Monthly Environmental Monitoring Report – March 14

### 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Laing O'Rourke Terminal 3 expansion work at Port Botany for the month of March 2014.

As Laing O'Rourke works are set to be completed in May 2014, construction activities have reduced and monitoring has primarily been undertaken for air quality and noise.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works and all monitoring has been within project targets.

#### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of March 2014 included the following:

- Minor earthworks
- Services works
- Concrete batch plant and paving operations
- Rail beam preparation and construction
- Ballast deliveries
- Rail installation

### 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for March 2014 have yet to be received from our laboratory. February 2014 results are reported in Appendix 1. All results received for the deposition gauges are within EPA guidelines and Project criteria.

No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. No exceedances of project PM<sub>10</sub> particulate matter criteria were recorded during March 2014.

Dust and PM<sub>10</sub> monitoring results are outlined in Appendix 1.

### 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during March 2014. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

#### 3.1 Day time noise monitoring

Noise measurements were undertaken on 31<sup>st</sup> March 2014. Work activities being undertaken on the Terminal 3 project included minor earthworks, rail construction, services activities, batch plant operation, and material deliveries.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded LA<sub>eq</sub> levels exceeded the noise goals for noise emissions from the Port Botany Expansion Project at 4 of the 6 monitoring

## SPBT3 Monthly Environmental Monitoring Report – March 14

---

locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

Minor dewatering activities took place during March 2014 after rainfall events. All dewatering was within project criteria. Results of Laing O'Rourke dewatering activities on the Terminal 3 site during March 2014 are shown in Appendix 3.

### 5.0 Shorebird Monitoring

Sightings of a number of birds in the Phase 2 SICTL area may have been observations of Little Terns. This cannot be confirmed as they took off from the sight before a clear observation could be made. No works are being undertaken within this area. The project Environmental Representative was made aware of the observation.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during March 2014 for the Terminal 3 project site. Inspections have focused on erosion and sediment controls during wet weather through the month. No significant environmental issues were observed or identified.

### 7.0 Appendices

Appendix 1 – Dust Monitoring Results  
Appendix 2 – Noise Monitoring Results  
Appendix 3 – Dewatering Results

## Appendix 1 – Dust Monitoring Results

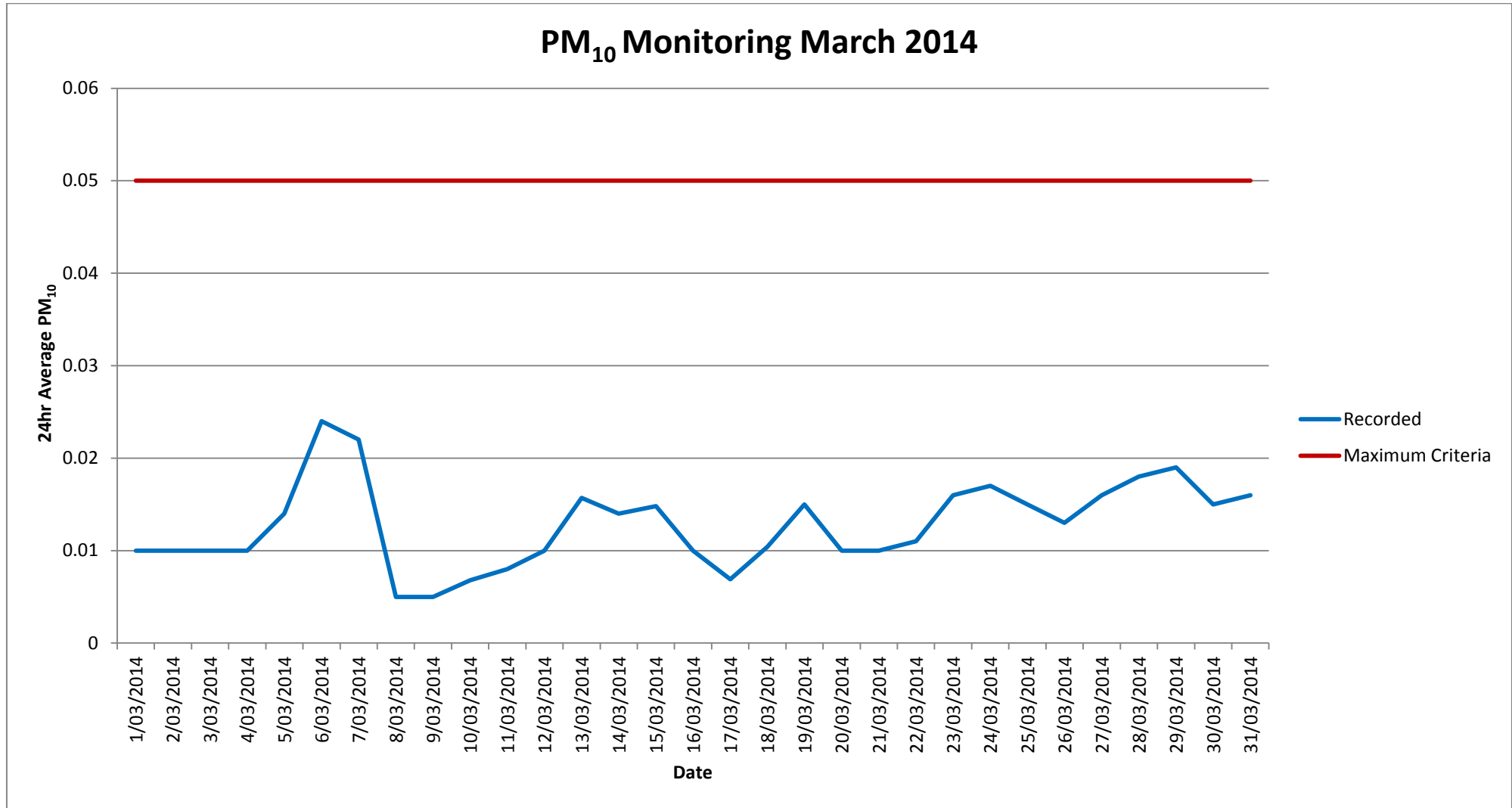
### Dust Deposition Gauge Results - February 2014

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	1.9	0.6	5.9	2.5	8.4	EN1400878-003	4.0	Within EPA guideline levels	Earthworks Deliveries Concrete batch plant Paving Rail Beam Ballast deliveries
2	Joseph Banks Park	0.8	0.4	4.8	1.2	6.0	EN1400878-001	4.0	Within EPA guideline levels	
3	Purcell Park	0.8	0.6	4.6	1.4	6.0	EN1400878-002	4.0	Within EPA guideline levels	
4	Botany Golf Course	0.5	0.2	5.3	0.7	6.0	EN1400878-004	4.0	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

# SPBT3 Monthly Environmental Monitoring Report – March 14

## PM<sub>10</sub> Monitoring Results – March 2014





## SPBT3 Monthly Environmental Monitoring Report – March 14

### Dust Monitoring Locations



# SPBT3 Monthly Environmental Monitoring Report – March 14

## Appendix 2 – March 2014 Day Noise Monitoring Results

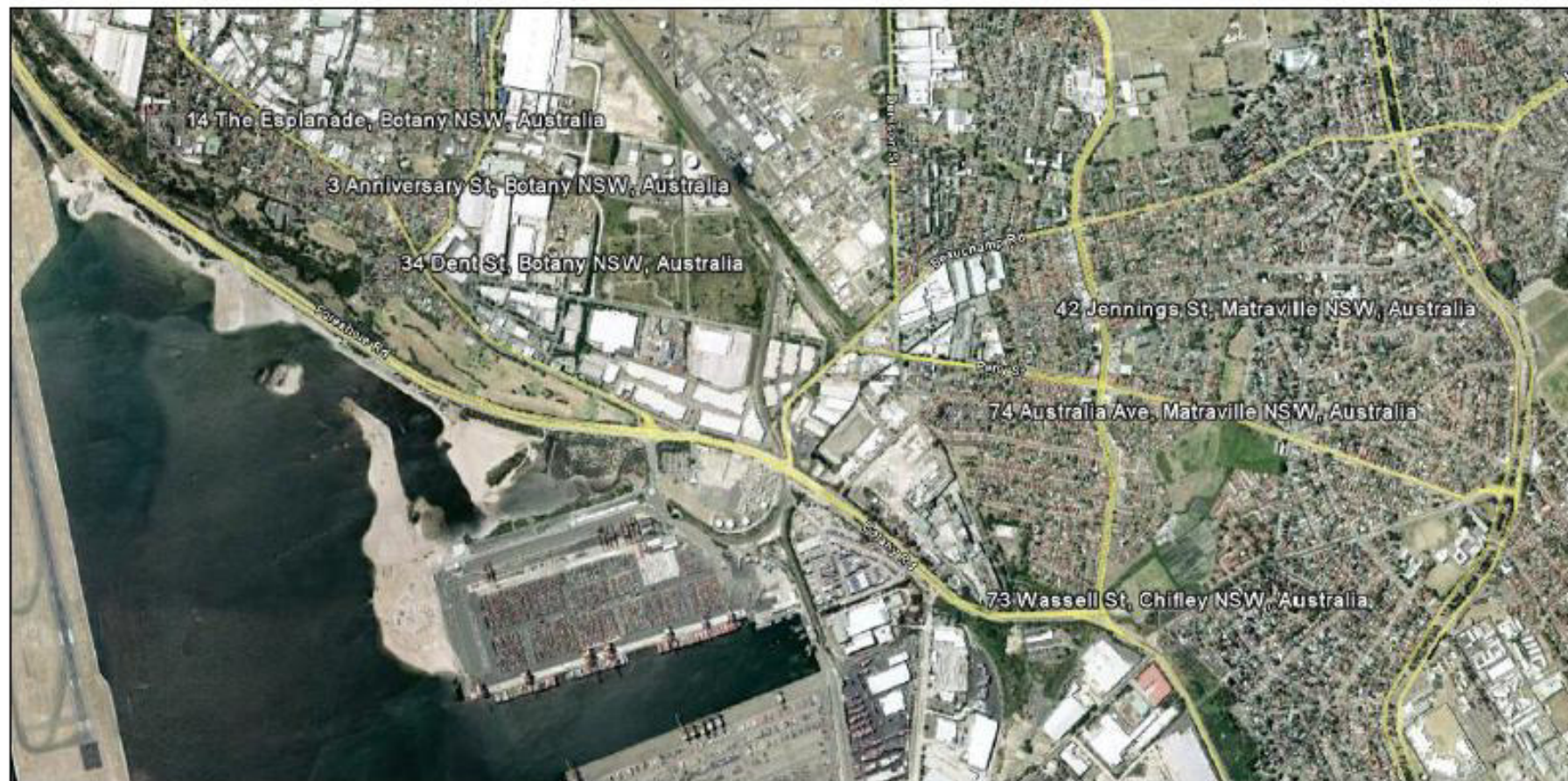
Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	31/03/2014	10:30	Material deliveries Batch Plant Pavement Works Rail Beam Construction Tamping Rail	Standard Day	Fine	No	49	54	60	69	64	52	6	Noise from Foreshore Rd traffic, aircraft noise, local traffic, Residential construction main noise source.park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	31/03/2014	9:30	Material deliveries Batch Plant Pavement Works Rail Beam Construction Tamping Rail	Standard Day	Fine	No	47	52	52	58	55	49	0	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jennings St	31/03/2014	11:45	Material deliveries Batch Plant Pavement Works Rail Beam Construction Tamping Rail	Standard Day	Fine	No	40	45	60	69	66	52	15	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4- North of Golf Course	3 Anniversary Rd	31/03/2014	10:00	Material deliveries Batch Plant Pavement Works Rail Beam Construction Tamping Rail	Standard Day	Fine	No	57	62	62	73	65	51	0	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5- Australia Avenue	74 Australia Ave	31/03/2014	11:15	Material deliveries Batch Plant Pavement Works Rail Beam Construction Tamping Rail	Standard Day	Fine	No	42	47	58	71	58	48	11	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6- Military Road	73 Wassell St	31/03/2014	12:15	Material deliveries Batch Plant Pavement Works Rail Beam Construction Tamping Rail	Standard Day	Fine	No	46	51	56	63	60	51	5	Noise from Bunnerong Rd, Local traffic noise, local industry, adjacent park. Terminal 3 construction inaudible

**Note 1:** Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only



## SPBT3 Monthly Environmental Monitoring Report – March 14

### Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St

# SPBT3 Monthly Environmental Monitoring Report – March 14

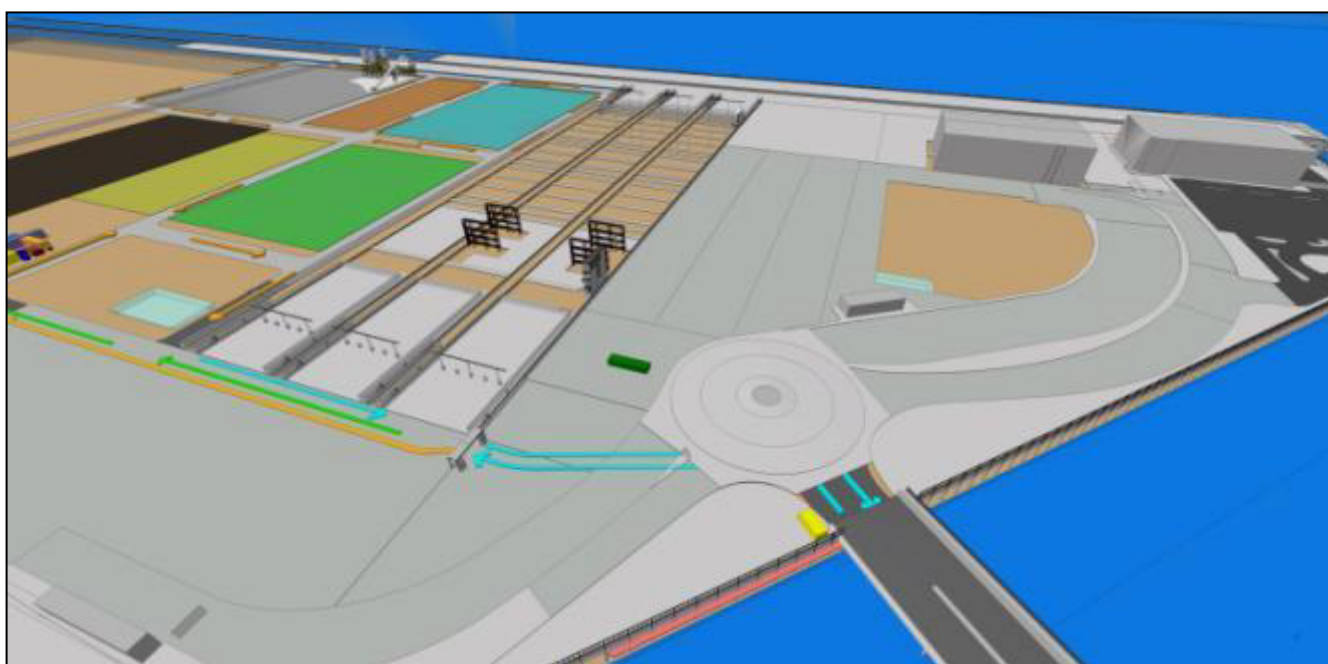
## Appendix 3 – March 2014 Dewatering Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC14	13/03/14	AM	Y	SC14 Stormwater	N	7.96	30.0
SC9	13/03/14	AM	Y	SC9 Stormwater	N	7.90	23.2
SC9	18/03/14	AM	Y	SC9 Stormwater	N	7.97	14.7

# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **April 2014**



Client:	SICTL
Client's Representative:	Mott McDonald
LORA Contract No.:	G52

**Controlled Copy no.:** 1

## Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0	01/05/14	Issue	JA	01/05/14	JA

# SPBT3 Monthly Environmental Monitoring Report – April 14

## Contents:

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Construction Activities.....	4
<b>2.0</b>	<b>Dust Monitoring and Air Quality.....</b>	<b>4</b>
<b>3.0</b>	<b>Noise Monitoring.....</b>	<b>4</b>
3.1	Day time noise monitoring .....	4
<b>4.0</b>	<b>Water Quality Monitoring .....</b>	<b>5</b>
4.1	Water Monitoring.....	5
<b>5.0</b>	<b>Shorebird Monitoring .....</b>	<b>5</b>
<b>6.0</b>	<b>Environmental Inspections and Audits .....</b>	<b>5</b>
<b>7.0</b>	<b>Appendices.....</b>	<b>6</b>
	<b>Appendix 1 – Dust Monitoring Results .....</b>	<b>7</b>
	<b>Appendix 2 – April 2014 Day Noise Monitoring Results .....</b>	<b>10</b>
	Noise Monitoring Locations.....	11
	<b>Appendix 3 – April 2014 Dewatering Results .....</b>	<b>12</b>



## SPBT3 Monthly Environmental Monitoring Report – April 14

### 1.0 Introduction

This report provides results for environmental monitoring activities associated with the Laing O'Rourke Terminal 3 expansion work at Port Botany for the month of April 2014.

As Laing O'Rourke works are set to be completed in May 2014, construction activities have reduced and monitoring has primarily been undertaken for air quality and noise.

No environmental complaints have been received by Laing O'Rourke this month in regards to the Terminal 3 construction works and all monitoring results have been within project criteria and targets.

#### 1.1 Construction Activities

Laing O'Rourke construction activities undertaken for the month of March 2014 included the following:

- Minor earthworks
- Concrete batch plant and paving operations
- Rail beam preparation and construction
- Rail installation

### 2.0 Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for April 2014 are yet to be received from our contracted laboratory. March 2014 results are reported in Appendix 1. All results received for the deposition gauges are within EPA guidelines and Project criteria.

No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter. No exceedances of project PM<sub>10</sub> particulate matter criteria were recorded during April 2014.

Dust and PM<sub>10</sub> monitoring results are outlined in Appendix 1.

### 3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during April 2014. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment.

#### 3.1 Day time noise monitoring

Noise measurements were undertaken on 17<sup>th</sup> April 2014. Work activities being undertaken on the Terminal 3 project included minor earthworks, rail construction and batch plant operation.

The Interim Construction Noise Guideline (2009, DECCW) sets out management levels for noise at residences and how they are to be applied. This guideline has been used in conjunction with the project Environmental Impact Statement to determine noise goals for the project. Recorded LA<sub>eq</sub> levels exceeded the noise goals for noise emissions from the Port Botany Expansion Project at 4 of the 6 monitoring locations, however at each monitoring location extraneous, non-project related noises were the dominant noise sources. These noise sources included road traffic, both local and main, and aircraft noise. No Terminal 3 construction activities were audible at any monitoring locations.

## SPBT3 Monthly Environmental Monitoring Report – April 14

---

It is noted that the intent of the Interim Construction Noise Guideline is to minimise noise impact from the construction works and is only applicable to the contribution of the noise from the Port Botany construction site. At the attended monitoring events, as has been noted on other stages of the Port Botany expansion project, the measured noise levels were controlled and dominated by other extraneous noise sources as listed above.

Noise monitoring results are shown in Appendix 2.

### 4.0 Water Quality Monitoring

Physical water parameters required to be monitored are pH, turbidity and visible oil and grease when dewatering activities are undertaken. Other contaminants may be tested for in areas of concern if the presence of contamination is observed.

#### 4.1 Water Monitoring

Minor dewatering activities took place during April 2014 after rainfall events. All dewatering was within project criteria. Results of Laing O'Rourke dewatering activities on the Terminal 3 site during April 2014 are shown in Appendix 3.

### 5.0 Shorebird Monitoring

No targeted shorebirds were observed on the Laing O'Rourke Terminal 3 site during April 2014.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during April 2014 for the Terminal 3 project site. Inspections have focused on erosion and sediment controls during wet weather through the month. No significant environmental issues were observed or identified.

### 7.0 Appendices

Appendix 1 – Dust Monitoring Results  
Appendix 2 – Noise Monitoring Results  
Appendix 3 – Dewatering Results



## SPBT3 Monthly Environmental Monitoring Report – April 14

### Appendix 1 – Dust Monitoring Results

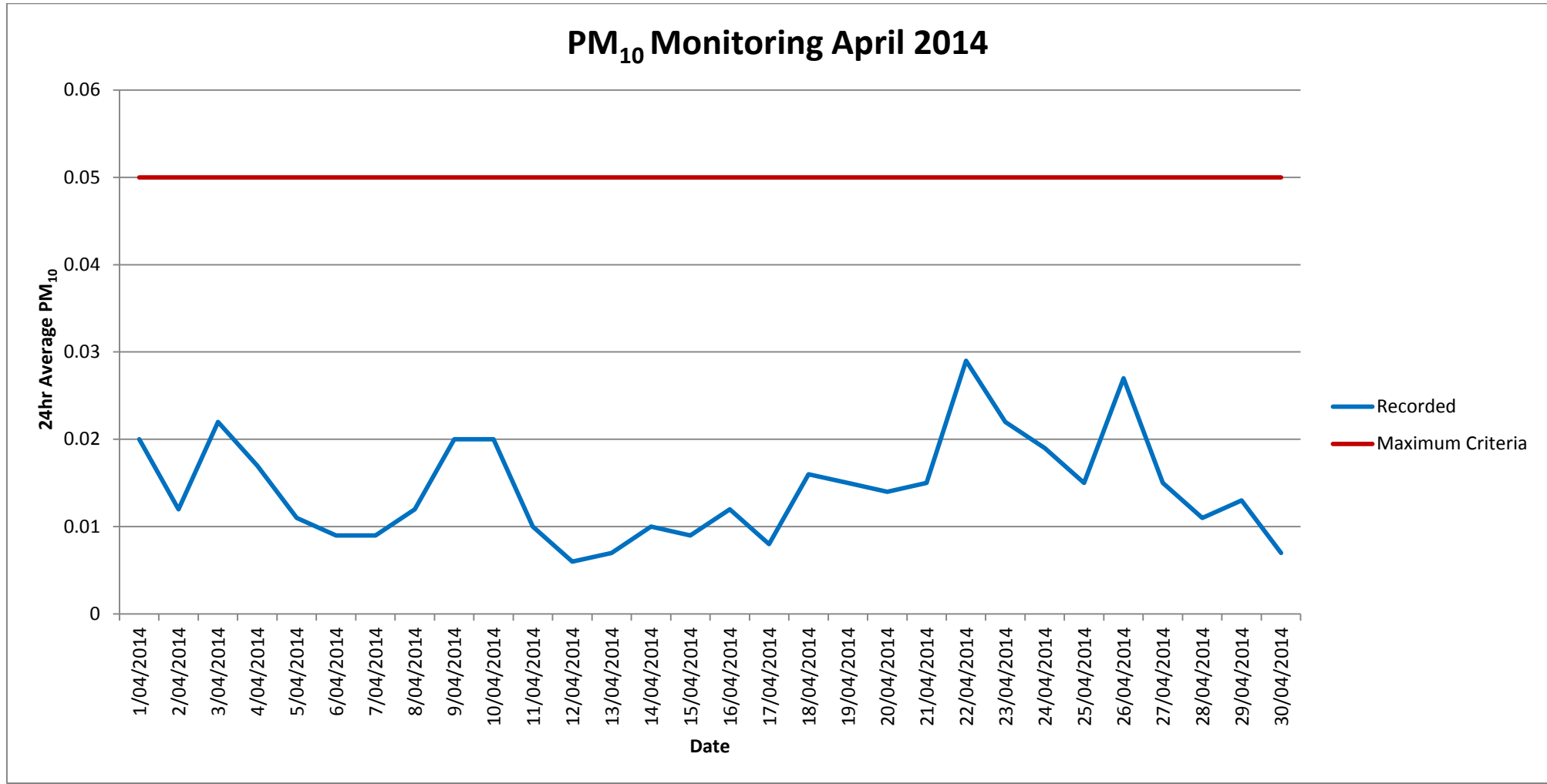
#### Dust Deposition Gauge Results - March 2014

No.	Monitoring Location	Ash	Combustible matter	Total Soluble matter	Total Insoluble matter	Total Solids	Sample ID (File Reference)	EPA Guideline (Total Insoluble matter)	Comments (i.e. any exceedances of EPA objectives)	Work Activities / Observations During Monitoring Period
1	Upper Penrhyn Estuary	2.0	0.4	3.8	2.4	6.2	EN1401353-003	4.0	Within EPA guideline levels	Earthworks Concrete batch plant Paving Rail Beam
2	Joseph Banks Park	0.4	0.2	3.0	0.6	3.6	EN1401353-001	4.0	Within EPA guideline levels	
3	Purcell Park	<0.1	0.1	2.1	0.1	2.2	EN1401353-002	4.0	Within EPA guideline levels	
4	Botany Golf Course	0.3	0.3	2.0	0.6	2.6	EN1401353-004	4.0	Within EPA guideline levels	

All Units in g/m<sup>2</sup>.month

# SPBT3 Monthly Environmental Monitoring Report – April 14

## PM<sub>10</sub> Monitoring Results – April 2014



## SPBT3 Monthly Environmental Monitoring Report – April 14

### Dust Monitoring Locations





## SPBT3 Monthly Environmental Monitoring Report – April 14

### Appendix 2 – April 2014 Day Noise Monitoring Results

Noise Sensitive Area	Monitoring Location	Date	Time (24hr) & Duration (mins)	Construction Activities	Standard or Out of Hours Works (Day/Evening/Night)	Weather Conditions	In Response to Complaint?	RBL (dBA) - from EIS	Noise Goal <sup>1</sup> (RBL+ 5dBA)	Recorded Noise Level LAeq (15 min) (dBA)	Recorded Noise Level LA1 (dBA)	Recorded Noise Level LA10 (dBA)	Recorded Noise Level L90 (dBA)	Noise Goal Difference (dBA)	Comments
Location 1 - Chelmsford Avenue	14 The Esplanade	17/04/2014	10:30	Material deliveries Pavement Works Rail Beam works	Standard Day	Fine	No	49	54	54	62	56	51	0	Noise from Foreshore Rd traffic, aircraft noise, local traffic, Residential construction main noise source, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	17/04/2014	9:30	Material deliveries Pavement Works Rail Beam works	Standard Day	Fine	No	47	52	62	76	56	51	10	Local traffic and foreshore road noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jennings St	17/04/2014	11:45	Material deliveries Pavement Works Rail Beam works	Standard Day	Fine	No	40	45	65	73	57	48	20	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4 - North of Golf Course	3 Anniversary Rd	17/04/2014	10:00	Material deliveries Pavement Works Rail Beam works	Standard Day	Fine	No	57	62	53	62	55	50	-9	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5 - Australia Avenue	74 Australia Ave	17/04/2014	11:15	Material deliveries Pavement Works Rail Beam works	Standard Day	Fine	No	42	47	57	70	55	48	10	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6 - Military Road	73 Wassell St	17/04/2014	12:15	Material deliveries Pavement Works Rail Beam works	Standard Day	Fine	No	46	51	53	64	55	47	2	Noise from Bunnerong Rd, Local traffic noise, local industry, adjacent park. Terminal 3 construction inaudible

Note 1: Noise goals are applicable to the noise contribution from the Terminal 3 Port Botany Expansion related construction activities only

## SPBT3 Monthly Environmental Monitoring Report – April 14

### Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St

Appendix 3 – April 2014 Dewatering Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC15	7/4/14	AM	Y	SC15 stormwater	N	7.0	26.8
SC09	7/4/14	AM	Y	SC09 stormwater	N	6.8	28.4
SC09	11/4/14	AM	Y	SC09 stormwater	N	7.1	26.3





**Knuckle Bay Civil Works**  
**PORT BOTANY REDEVELOPMENT**  
**PROJECT**

**MONTHLY ENVIRONMENTAL MONITORING**  
**REPORT**

**May 2014**

## Contents

1. Introduction .....	3
1.1. Background .....	3
1.2. Construction Activities .....	3
1.3. Environmental focus for May 2014 .....	4
2. Monitoring Data .....	4
3. Dust Monitoring and Air Quality .....	4
4. Noise Monitoring .....	5
5. Water Quality Monitoring .....	5
6. Shorebird Monitoring .....	5



## 1. Introduction

### 1.1. Background

The Port Botany Redevelopment Project, Knuckle Bay civil works involves the take-over from another contractor to complete the expansion of recently reclaimed land by Sydney Ports Corporation (SPC) adjacent to the current Patrick Stevedores Port Botany Terminal. This area is commonly known as the “Knuckle” area.

The Project will expand current Patrick Stevedores Operations from 1.15M Twenty Foot Equivalent Units (TEUs) to 1.50M TEU. The Knuckle area has a quay line dimension of approximately 400m with a north-south dimension of 465m.

The Project is subject to the Minister’s Conditions of Approval (MCoA), granted on 13 October 2005, and subsequent Modifications. This report presents the results of environmental monitoring activities undertaken in accordance with the requirements of the MCOA including:

- Dust monitoring
- Noise monitoring
- Water quality monitoring, and
- Shorebird observations.

### 1.2. Construction Activities

The following project activities were carried out during the reporting period:

- Site possession and clean up
- Environmental and Safety assessments
- Area 7 earthworks services up to asphalt pavement
- Area 10 earthworks complete into CTCR construction
- Area 12/14 partial earthworks completion up to first layer of CTCR

### 1.3. Environmental focus for May 2014

Upon taking possession of site on 12 May 2014 the initial focus was to consolidate and stabilise stockpiles, regrade haul roads and undertake a general site clean-up including reinstalling the rumble grid and removing waste from site.

During initial site inspections the storm water system was found to be backed up to approximately 90% of its capacity. This water was treated and tested by circulating hydrochloric acid and gypsum through the drainage system until acceptable discharge criteria was met. This process was repeated until the entire storm water drainage system was emptied.

The gross pollution traps (GPT's) were assessed and maintenance was carried out on the spear pumping system. Discharging the GPT's commenced on 23 May in order to prepare for GPT construction works scheduled for early June.

Other environmental works included weekly inspections, dewatering toolboxes, updating plans and site environmental action lists.

## 2. Monitoring Data

The environmental dust monitoring data presented in this report has been made available by Laing O'Rourke, the contractor for the Sydney International Container Terminal Limited (SICTL) currently undertaking construction activities associated with the Terminal 3 expansion at Port Botany.

Due to the concurrent nature of the construction activities undertaken by FH and Laing O'Rourke as part of the overall PBRP both parties agreed to share monthly environmental monitoring data. Due to the Laing O'Rourke works nearing completion the dust monitoring will be managed by Fulton Hogan for the remainder of the Knuckle works from June 2014 onwards.

## 3. Dust Monitoring and Air Quality

Four dust deposition gauges are installed in the areas surrounding the Port Botany redevelopment.

All results received for the deposition gauges were within EPA guidelines and Project criteria for the month of May. No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

The real-time dust monitor located at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter has been temporarily utilised by Fulton Hogan, from Laing O'Rourke, for the months of May and June 2014. From July onwards Fulton Hogan's own PM<sub>10</sub> dust monitor will be installed.

No exceedences of project PM<sub>10</sub> particulate matter criteria were recorded during May 2014. Dust and PM<sub>10</sub> monitoring results and location maps can be seen in attachment 1.

#### 4. Noise Monitoring

Monthly construction noise monitoring was undertaken during May 2014. Noise monitoring locations have been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 15 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment. Noise monitoring results and location maps are presented in attachment 2.

No noise related complaints were received by the Project for this reporting period.

#### 5. Water Quality Monitoring

Water was treated and discharged from the storm water drainage system between the dates of 19.5.2014 to 30.5.2014. In all instances discharge criteria were met, see attachment 3.

Discharging the gross pollution traps (GPT's) via the spear pump system commenced on 23.5.2014. During this time both GPT pump outlets were tested twice daily (estuary and portside pumps). Weekly ocean background water tests were also undertaken as an additional control, attachment 4.

#### 6. Shorebird Monitoring

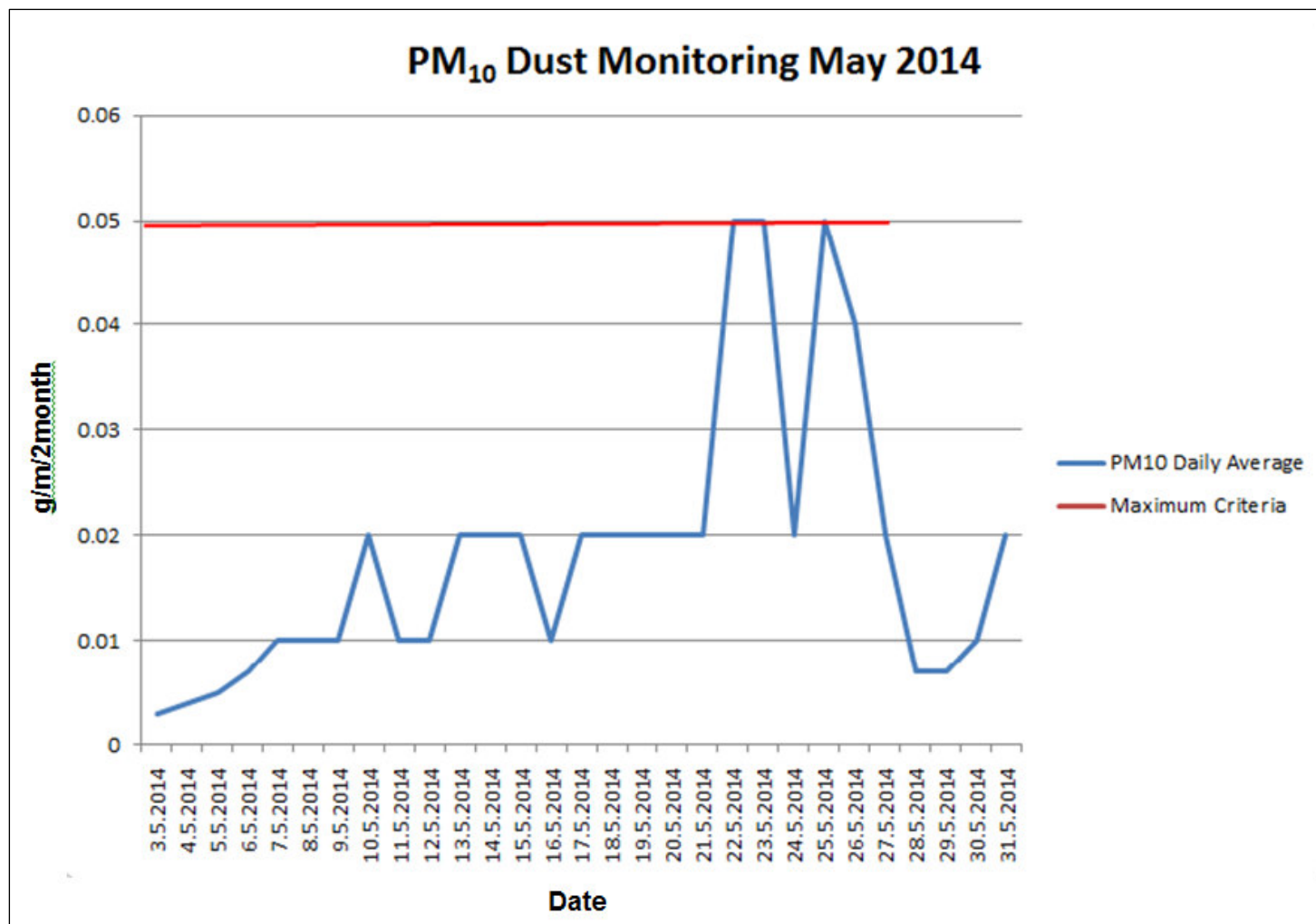
Shorebird monitoring was undertaken by Avisure Consultants between the dates 25-29 May 2014. A detailed report is expected in the first week of June however preliminary discussions with Avisure have indicated that the shore birds are no longer congregating onsite. The reasoning is thought to be the increased level of construction and site activity, however ongoing monitoring will still be required by Fulton Hogan personnel in the event they return. The full report will be circulated once received by Avisure consultants.

Attachment 1. Dust monitoring results.

No	Location	Ash	Combustible matter	Total soluble matter	Total Insoluble Matter	Sample ID	EPA Guideline	Comments
1	Purcell Park	0.1	0.3	2.7	0.4	EW1401492-001	4.0	Within criteria
2	Estuary	2.3	1.1	2.6	3.4	EW1401492-002	4.0	Within criteria
3	Golf Course	0.6	0.7	2.7	1.3	EW1401492-003	4.0	Within criteria
4	Joseph Bank Park	0.9	0.7	1.3	1.6	EW1401492-004	4.0	Within criteria

All units in g/m<sup>2</sup>/month. Dust limits are assessed as insoluble solids as per The Australian Standards (AS 3580.10.1-1991).

Summary taken from ALS report EW1401492.



PM<sub>10</sub> daily dust averages for the month of May, all readings are under the upper limit criteria of 0.05.

Note: The monitor malfunctioned during 1-2 May, no data available for these dates.



Dust Monitoring Locations



Attachment 2. Noise monitoring results.

**MONTHLY NOISE MONITORING RESULTS – Standard Hours<sup>1,2</sup> – Tuesday 20 May 2014**

Noise Sensitive Area	Monitoring Location	Time	Construction Activities	Weather Conditions	EIS Data (dBA)		Noise Level Measurements L <sub>Aeq,15min</sub> (dBA)						Comments
					RBL	Noise Goal (L <sub>Aeq</sub> )	L <sub>Aeq</sub>	L <sub>Aeq</sub> (est contribution)	L <sub>Aeq</sub> (est exceedance)	L <sub>A1</sub>	L <sub>A10</sub>	L <sub>90</sub>	
Location 1 Chelmsford Ave	14 The Esplanade	1520-1535	Typical excavation works. No loud activity reported.	Fine 50% Cloud	49	54	63	<43 <sup>3</sup>	0	74	66	53	Dominated by aircraft noise. Some local noise from residents and house construction. Port inaudible.
Location 2 Dent St	34 Dent St	1435-1450		Fine 50% Cloud	47	52	57	<40 <sup>3</sup>	0	66	60	50	Dominated by birds & aircraft noise. Continuous noise from Foreshore Drive. Port inaudible.
Location 3 Jennings St	42 Jennings St	1305-1320		Fine 50% Cloud	40	45	59	<32 <sup>3</sup>	0	73	59	42	Residential noise with occasional car pass-bys. Distant noise from Southern section of port audible on occasion unlikely to be Fulton Hogan (FH).
Location 4 North of Golf Course	3 Anniversary Rd	1455-1510		Fine 50% Cloud	57	62	55	<36 <sup>3</sup>	0	66	58	46	Dominated by birds & aircraft noise. Residential noise with occasional car pass-bys. Port inaudible
Location 5 Australia Ave	74 Australia Ave	1405-1420		Fine 50% Cloud	42	47	52	45 <sup>3</sup>	0	61	52	48	Southern section of port dominant – trucks and drilling not associated with FH. Continuous site noise from Western <sup>4</sup> section of port below background level (could be from FH). Birds, dogs and residential noise.
Location 6 Military Rd	73 Wassell St	1340-1355		Fine 50% Cloud	46	51	52	<37 <sup>3</sup>	0	59	54	47	Dominated by noise on Perry Street. Residential noise with occasional car pass-bys. Southern section of port marginally audible.

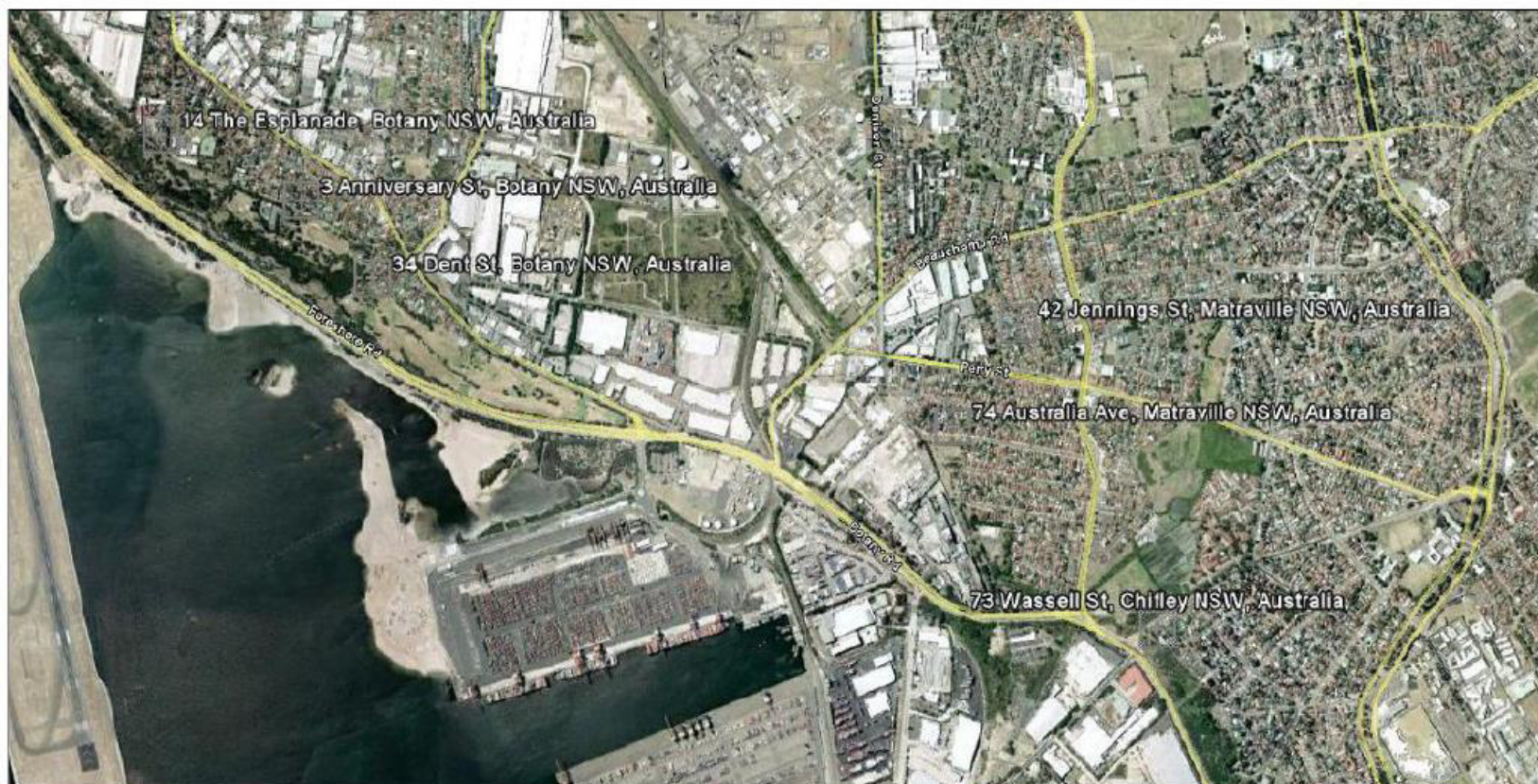
- Notes
1. Standard Hours for weekdays is defined as 7.00am to 6.00pm.
  2. Measurements not in response to a complaint.
  3. Estimated contribution from Port is shown in all measurements. In cases of inaudibility, activity was assumed to be more than 10dBA below the measured L<sub>90</sub> dBA.
  4. Works associated with FH are located within the western section of port, it is noted however FH not the only contractor in and around this section of the port.

Wilkinson Murray Pty Limited  
08305-FH

Fulton Hogan  
Port Botany Redevelopment



## Noise Monitoring Locations



Location 1	Location 2	Location 3	Location 4	Location 5	Location 6
14 The Esplanade	34 Dent St	42 Jennings St	3 Anniversary Rd	74 Australia Ave	73 Wassell St



## Attachment 3. Storm Water Discharge Summary

Port Botany Storm Water Discharge Summary: May 2014					
Discharge date	pH (BT)	NTU (BT)	treatment	pH (AT)	NTU (AT)
19.5.2014	8.5	67.4	HCL / Gypsum	7.94	13.1
22.5.2014	9.2	55	HCL / Gypsum	7.87	12.8
24.5.2014	8.25	4.11	na	na	na
30.5.2014	8.4	19.6	HCL / Gypsum	7.8	11.6

**(BT)** = Before treatment, **(AT)** = After treatment

Port Botany Water testing: GPT'S								
Date	GPT	pH	NTU	Water level	Last rain event	Additives	GPT Discharge pumps	Background weekly water test
14.5.2014	Estuary	7.16	67.4	100%	11.5.2014	na	Pumps inactive	PH 8.11 NTU 7.4
	Port	8.11	40.2	100%	11.5.2014	na	Pumps inactive	
15.5.2014	Estuary	na	na	100%	11.5.2014	na	Pumps inactive	
	Port	na	na	100%	11.5.2014	na	Pumps inactive	
16.5.2014	Estuary	na	na	100%	11.5.2014	na	Pumps inactive	
	Port	na	na	100%	11.5.2014	na	Pumps inactive	
17.5.2014	Estuary	na	na	100%	11.5.2014	na	Pumps inactive	
	Port	na	na	100%	11.5.2014	na	Pumps inactive	
19.5.2014	Estuary	na	na	100%	11.5.2014	na	Pumps inactive	
	Port	na	na	100%	11.5.2014	na	Pumps inactive	
20.5.2014	Estuary	7.4	12.0	100%	11.5.2014	na	Pumps inactive	
	Port	7.6	4.7	100%	11.5.2014	na	Pumps inactive	
21.5.2014	Estuary	8.3	12.9	100%	11.5.2014	na	Pumps inactive	PH 8.32 NTU 4.8
	Port	8.1	3.3	100%	11.5.2014	na	Pumps inactive	
22.5.2014	Estuary	7.9	11.5	100%	11.5.2014	na	Pumps inactive	
	Port	7.8	6.4	100%	11.5.2014	na	Pumps inactive	
23.5.2014 (AM)	Estuary	7.8	11	100%	11.5.2014	na	Pumps active	
	Port	7.9	4.8	100%	11.5.2014	na	Pumps active	
23.5.2014 (PM)	Estuary	7.6	3.1	100%	11.5.2014	na	Pumps active	
	Port	7.8	4	100%	11.5.2014	na	Pumps active	
24.5.2014 (AM)	Estuary	8.32	2	5%	11.5.2014	na	Pumps active	
	Port	8.42	1.03	5%	11.5.2014	na	Pumps active	
24.5.2014 (PM)	Estuary	7.82	2.49	5%	11.5.2014	na	Pumps active	
	Port	7.92	2.2	5%	11.5.2014	na	Pumps active	

<b>26.5.2014 (AM)</b>	Estuary	8.21	6.91	5%	11.5.2014	na	Pumps active	
	Port	8.15	6.09	5%	11.5.2014	na	Pumps active	
<b>26.5.2014 (PM)</b>	Estuary	7.5	6.07	5%	11.5.2014	na	Pumps active	
	Port	8.1	4.3	5%	11.5.2014	na	Pumps active	
<b>27.5.2014 (AM)</b>	Estuary	7.6	7.7	5%	11.5.2014	na	Pumps active	
	Port	8.2	3.9	5%	11.5.2014	na	Pumps active	
<b>27.5.2014 (PM)</b>	Estuary	7.62	6.38	5%	11.5.2014	na	Pumps active	
	Port	7.71	2.34	5%	11.5.2014	na	Pumps active	
<b>28.5.2014 (AM)</b>	Estuary	7.7	3.1	5%	11.5.2014	na	Pumps active	
	Port	7.55	4.2	5%	11.5.2014	na	Pumps active	
<b>28.5.2014 (PM)</b>	Estuary	7.77	9.4	5%	11.5.2014	na	Pumps active	
	Port	8.2	6.6	5%	11.5.2014	na	Pumps active	
<b>29.5.2014 (AM)</b>	Estuary	7.5	19.3	5%	11.5.2014	na	Pumps active	
	Port	7.5	5.81	5%	11.5.2014	na	Pumps active	
<b>29.5.2014 (PM)</b>	Estuary	7.6	15	5%	11.5.2014	na	Pumps active	
	Port	7.6	6	5%	11.5.2014	na	Pumps active	
<b>30.5.2014 (AM)</b>	Estuary	7.15	13.1	5%	11.5.2014	na	Pumps active	
	Port	7.9	6.51	5%	11.5.2014	na	Pumps active	
<b>30.5.2014 (PM)</b>	Estuary	7.6	12.3	5%	11.5.2014	na	Pumps active	PH 8.3 NTU 6.46
	Port	7.55	3.44	5%	11.5.2014	na	Pumps active	
<b>31.5.2014 (AM)</b>	Estuary	7.71	10.36	5%	11.5.2014	na	Pumps active	
	Port	7.78	1.75	5%	11.5.2014	na	Pumps active	
<b>31.5.2014 (PM)</b>	Estuary	7.58	11.03	5%	11.5.2014	na	Pumps active	
	Port	7.67	2.43	5%	11.5.2014	na	Pumps active	



# CLIENT MONTHLY ENVIRONMENTAL REPORT

**SICTL Container International Container  
Terminal Limited**

**Contract Number:** 350

**Report Number:** 01

**Period:** June 2014

Prepared By: Simon Fisher



## TABLE OF CONTENTS

### Contents

1. Progress .....	3
<b>1.1 Background.....</b>	<b>3</b>
<b>1.2 General Progress and Construction Activities .....</b>	<b>3</b>
<b>1.3 Environmental Action Summary.....</b>	<b>4</b>
2.0 Environmental Surveillance .....	5
<b>2.1 Environmental Inspections and Audit Findings.....</b>	<b>5</b>
<b>2.2 Environmental Noise Monitoring.....</b>	<b>5</b>
<b>2.3 Environmental Dust Monitoring and Air Quality .....</b>	<b>5</b>
<b>2.4 Water Quality Monitoring.....</b>	<b>6</b>
<b>2.5 Shorebird Monitoring and Predator Inspections.....</b>	<b>6</b>
3.0 Community .....	6
<b>3.1 Community Issues.....</b>	<b>6</b>
Appendix A – Site Photographs .....	7
Appendix B – Noise Monitoring Records.....	9
Appendix C – Dust and Air Quality Readings.....	10

# 1. Progress

## 1.1 Background

## 1.2 General Progress and Construction Activities

Burton started with the progression of the ground improvement works. Subgrade of the main stacking area ASC 4/5/6 has been shaped and conformed. The first layer of the ground improvement works have been completed. The piling platform has been prepared. A total of 24,000T has been imported to the project up to the end of June.

The piling works also commenced with Wagstaff Piling our major subcontractor who are on board to deliver the works. They completed 268 piles by the end of June.

The electrical conduit installation works also began with Downer joining Burton Contractors on site to deliver this section. The electrical conduit installation and backfill are ongoing.

Towards the end of the month, KNF Construction came on board to begin the FRP drainage works. Works on Beam H began including blinding slab, steel fixing and formwork installation.

### 1.3 Environmental Action Summary

**Table 1: Summary of environmental actions during June 2014**

Detail	This Month	Total To Date
Toolbox (Includes Environment)	3	3
Awareness/Alerts/Training	1	1
Inspections	6	6
Audits	0	0
Non-Conformances	2	2
Out of Hours Request	2	2
Unexpected Find of Contamination	0	0
Hazard Reports / Minor Incidents (Class 3)	0	2
Hazard Reports / Minor Incidents (Class 3) Closed Out	2	2
Reported Incidents (Classes 2 & 1)	0	0
Breaches/Fines	0	0
Innovation / Positive Actions	2	2



## 2.0 Environmental Surveillance

### 2.1 Environmental Inspections and Audit Findings

A total of 6 environmental inspection and audit was undertaken during the reporting period. These included a combination of 22 daily site inspections (not included in the project total), 2 weekly internal and external inspections, a monthly checklist, 3 post rainfall inspections and any additional monitoring that was undertaken during the reporting period. These inspections identified a total of 2 minor issues all of which have since been closed out within the required timeframes. The majority of issues identified during these inspections can be attributed to site establishment and have since been rectified through the implementation of additional checking mechanisms to ensure that all issues are being comprehensively addressed.

### 2.2 Environmental Noise Monitoring

Monthly construction noise monitoring was undertaken during June 2014. Noise monitoring was conducted at four of the locations outlined in the Environmental Impact Statement and the CEMP. The identification of these sites has been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities. Two shifts of additional noise monitoring were also undertaken during the reporting period to support the noise calculations that were calculated prior to Out of Hours Works and ensure that works were inaudible at residential noise-sensitive receivers.

Attended noise measurements were carried out for a period of 30 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment. Noise monitoring results and location maps are presented in Appendix B.

All noise monitoring conducted during the period indicated that the construction works were inaudible at residential noise-sensitive receivers. No noise related complaints were received by the Project for this reporting period.

### 2.3 Environmental Dust Monitoring and Air Quality

The environmental dust monitoring data presented in this report has been made available by Fulton Hogan, the contractor for Patrick currently undertaking construction activities associated with Ramp D and the Knuckle as part of Port Botany Expansion Project.

Due to the concurrent nature of the construction activities undertaken by Burtons and Fulton Hogan as part of the overall PBRP both parties agreed to share monthly environmental monitoring data.

Four dust deposition gauges are installed in the areas surrounding the Port Botany redevelopment. All results received for the deposition gauges were within EPA guidelines and Project criteria for the month of June. No residential properties or road networks have been impacted by dust emanating from the Burtons construction works and there have been no dust complaints received by the project during this monitoring period.

The real-time dust monitor located at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter has been temporarily utilised by Burton's, from Fulton Hogan, for the month of June 2014. From July onwards Fulton Hogan will install a PM<sub>10</sub> dust monitor, from which Burton's will be provided with the real-time data.

Two exceedences of project PM<sub>10</sub> particulate matter criteria were recorded during June 2014. These exceedences were recorded on the 26 June at 18:40pm and 20:30pm respectively. An investigation into the exceedences identified the following information:

- Sydney Airport Meteorological Station indicated that 44km/hr west-north westerly winds were being experienced in the area during this period, therefore it is improbable that the source of the particulate matter responsible for the exceedance was the Burton's construction site located to the south of the monitoring location;
- No site activities were being undertaken at the time for the exceedances; and
- No exceedances had occurred during work hours under the same conditions earlier in the day.

The investigation concluded that all appropriate and reasonable mitigation measures had been undertaken at the site and that construction works did not represent the source of the exceedance.

All other results were within the acceptable limits and the EPA Guidelines for the project. Dust and PM<sub>10</sub> monitoring results and location maps can be seen in Appendix C.

## **2.4 Water Quality Monitoring**

During the reporting period no water was discharged from site. A total of 99mm of rain was received throughout the month of June. This rainfall coincided with the establishment of the site and hence the water was managed within the site boundaries without the aid of a sediment basin. Immediately following the rain events, erosion and sediment controls including but not limited to a sediment basin and wheel wash were inspected and were deemed effective (as per the Soil and Water Management Plan).

## **2.5 Shorebird Monitoring and Predator Inspections**

Shorebird monitoring inspections were undertaken twice a day on site by the Site Foreman and Environmental Representative. These inspections indicated that no shorebirds or birds at all were observed to congregate on the site.

Daily monitoring inspections for targeted predator species (foxes, dogs and cats) were also undertaken by the Site Foreman and Environmental Representative, no indications of the presence of predators were found within the site.

# **3.0 Community**

## **3.1 Community Issues**

No community issues or complaints were received during this period.

Regards,

**Burton Contractors Pty Limited**

*Simon Fisher*

Simon Fisher

Environmental Coordinator

## Appendix A – Site Photographs





## Appendix B – Noise Monitoring Records

### Monthly Noise Monitoring Results – Standard Hours

26 June 2014

Context				EIS Data		Actual Measurements			
Noise Sensitive Area (EIS)	Monitoring Location	Sample Time	Weather Conditions	RBL	Noise Goal	Min	Max	LA10	Comments
Location 1	14 The Esplanade	1000-1030	20km/h winds, clear skies	49	59	40	65	63	Aircraft noise, traffic and wind. Construction works inaudible
Location 2	34 Dent St	1040-1110	20km/h winds, clear skies	47	57	42	58	60	Aircraft noise, traffic and wind. Construction works inaudible
Location 4	3 Anniversary Rd	1115-1145	20km/h winds, clear skies	57	67	58	67	64	Aircraft noise, traffic and wind. Construction works inaudible
Location 8	Cnr Botany Rd and Exell St	1200-1230	20km/h winds, clear skies	56	66	54	71	66	Aircraft noise, traffic and wind. Construction works inaudible

### Monthly Noise Monitoring Results – Out of Hours

14 June 2014

Context				EIS Data		Actual Measurements			
Noise Sensitive Area (EIS)	Monitoring Location	Sample Time	Weather Conditions	RBL	Noise Goal	Min	Max	LA10	Comments
Location 1	14 The Esplanade	0700-0730	30km/h winds, clear skies	49	54	38	68	63	Aircraft noise, traffic and wind. Construction works inaudible
Location 2	34 Dent St	0735-0805	30km/h winds, clear skies	47	52	42	58	62	Aircraft noise, traffic and wind. Construction works inaudible
Location 4	3 Anniversary Rd	1300-1330	40km/h winds, clear skies	57	62	59	68	65	Aircraft noise, traffic and wind. Construction works inaudible
Location 8	Cnr Botany Rd and Exell St	1340-1410	40km/h winds, clear skies	56	61	57	70	67	Aircraft noise, traffic and wind. Construction works inaudible



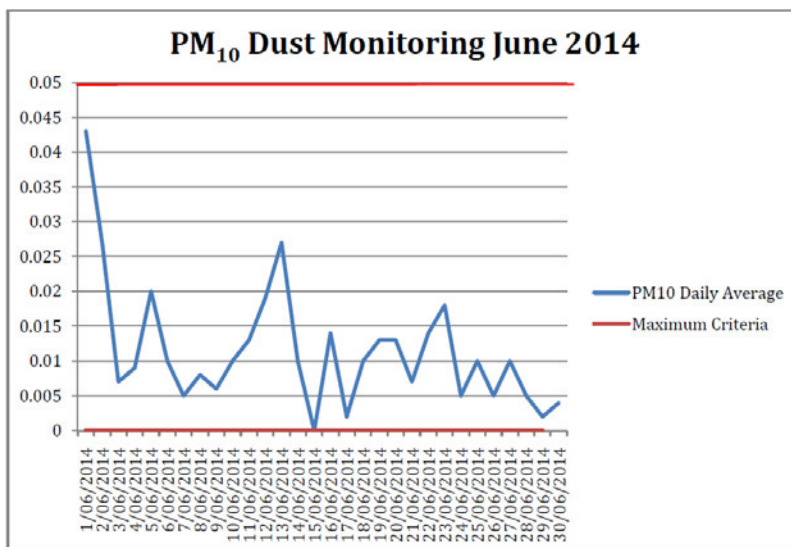
## Appendix C – Dust and Air Quality Readings

### Attachment 1. Dust monitoring results.

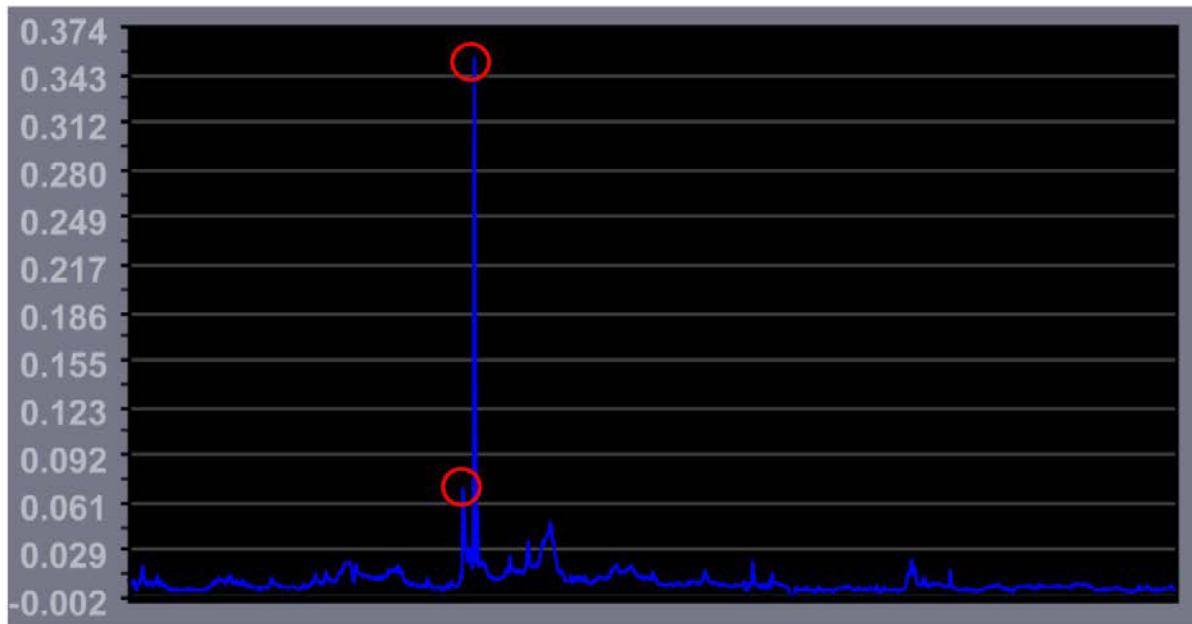
No	Location	Ash	Combustible matter	Total soluble matter	Total Insoluble Matter	Sample ID	EPA Guideline	Comments
1	Purcell Park	0.6	0.5	1.0	1.1	EW1401794-001	4.0	Within criteria
2	Estuary	1.1	0.7	0.2	1.8	EW1401794-002	4.0	Within criteria
3	Golf Course	0.4	0.4	0.1	0.8	EW1401794-003	4.0	Within criteria
4	Joseph Bank Park	0.4	0.5	0.2	0.9	EW1401794-004	4.0	Within criteria

All units in g/m<sup>2</sup>/month. Dust limits are assessed as insoluble solids as per The Australian Standards (AS 3580.10.1-1991).

Summary taken from ALS report EW1401794. Reporting period: 15.5.2014 – 13.06.2014.



PM<sub>10</sub> daily dust averages for the month of June. All readings are under the upper limit criteria of 0.05 with the exception of two readings at 18:40 and 20:30 on June 26 (0.069, 0.353mg/L).



Monthly PM10 real-time monitor showing exceedences on 26 June 2014 at 18:40 and 20:30 possibly due to high winds or an outside influence.

#### Dust Monitoring Locations







# CLIENT MONTHLY ENVIRONMENTAL REPORT

**SICTL Container International Container  
Terminal Limited**

**Contract Number:** 350  
**Report Number:** 02  
**Period:** July 2014

Prepared By: Simon Fisher



## TABLE OF CONTENTS

### Contents

1. Progress .....	3
<b>1.1 Background.....</b>	<b>3</b>
<b>1.2 General Progress and Construction Activities .....</b>	<b>3</b>
<b>1.3 Environmental Action Summary.....</b>	<b>4</b>
2.0 Environmental Surveillance .....	5
<b>2.1 Environmental Inspections and Audit Findings.....</b>	<b>5</b>
<b>2.2 Environmental Noise Monitoring.....</b>	<b>5</b>
<b>2.3 Environmental Dust Monitoring and Air Quality .....</b>	<b>5</b>
<b>2.4 Water Quality Monitoring.....</b>	<b>6</b>
<b>2.5 Shorebird Monitoring and Predator Inspections.....</b>	<b>6</b>
3.0 Community .....	6
<b>3.1 Community Issues.....</b>	<b>6</b>
Appendix A – Site Photographs .....	7
Appendix B – Noise Monitoring Records.....	10
Appendix C – Dust and Air Quality Readings.....	11

# 1. Progress

## 1.1 Background

## 1.2 General Progress and Construction Activities

Burton Contractors continued with progression of the piling works and ground improvement works.

Up to the end of July a total of 677 piles were installed by Wagstaff Piling.

The electrical conduit installation works with Downer also continued.

KNF Construction continued with FRP drainage works, which included blinding slabs and construction of Beams H I J K and L. The first 120m sections of each beam was completed as per program. The set out of sleeves for rail bolts also became underway.

The stormwater drainage works began with CNL plumbing as the subcontractor for the works. Works included pit and stormwater installation. Completion of the first 120m was achieved as per the construction program.

### 1.3 Environmental Action Summary

**Table 1: Summary of environmental actions during July 2014**

Detail	This Month	Total To Date
Toolbox (Includes Environment)	2	5
Awareness/Alerts/Training	1	2
Inspections	7	13
Audits	1	1
Non-Conformances	3	3
Out of Hours Request	4	6
Unexpected Find of Contamination	0	0
Hazard Reports / Minor Incidents (Class 3)	1	3
Hazard Reports / Minor Incidents (Class 3) Closed Out	1	3
Reported Incidents (Classes 2 & 1)	0	0
Breaches/Fines	0	0
Innovation / Positive Actions	1	3

## **2.0 Environmental Surveillance**

### ***2.1 Environmental Inspections and Audit Findings***

A total of 4 environmental inspections and audits were undertaken during the reporting period. These included a combination of 22 daily site inspections (not included in the project total), 3 weekly internal and external inspections, 1 monthly checklist, 3 post rainfall inspections and any additional monitoring that was undertaken during the reporting period. These inspections identified a total of 3 non-conformances and 1 minor issue(s) all of which have since been closed out within the required timeframes. The majority of issues identified during these inspections can be attributed to work crew interactions and have since been rectified through the implementation of additional checking mechanisms to ensure that all issues are being comprehensively addressed.

### ***2.2 Environmental Noise Monitoring***

Monthly construction noise monitoring was undertaken during July 2014. Noise monitoring was conducted at four of the locations outlined in the Environmental Impact Statement and the CEMP. The identification of these sites has been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities. Two shifts of additional noise monitoring were also undertaken during the reporting period to support the noise calculations that were calculated prior to Out of Hours Works and ensure that works were inaudible at residential noise-sensitive receivers.

Attended noise measurements were carried out for a period of 30 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment. Noise monitoring results and location maps are presented in Appendix B.

All noise monitoring conducted during the period indicated that the construction works were inaudible at residential noise-sensitive receivers. No noise related complaints were received by the Project for this reporting period.

### ***2.3 Environmental Dust Monitoring and Air Quality***

The environmental dust monitoring data presented in this report has been made available by Fulton Hogan, the contractor for Patrick currently undertaking construction activities associated with Ramp D and the Knuckle as part of Port Botany Expansion Project.

Due to the concurrent nature of the construction activities undertaken by Burtons and Fulton Hogan as part of the overall PBRP both parties agreed to share monthly environmental monitoring data.

Four dust deposition gauges are installed in the areas surrounding the Port Botany redevelopment. All results received for the deposition gauges were within EPA guidelines and Project criteria for the month of July. No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

The real-time dust monitor located at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter has been temporarily utilised by Burton's, from Fulton Hogan, for the month of July 2014.

Three exceedences of project PM<sub>10</sub> particulate matter criteria were recorded during July 2014. These exceedences were recorded on the 1, 3 and 23 July respectively. Investigation into the exceedences identified the following information:

- On the 3 and 23 July, Sydney Airport Meteorological Station indicated that strong west-north westerly winds were being experienced in the area during this period, therefore it is improbable that the source of the particulate matter responsible for the exceedance was the Burton's construction site located to the south of the monitoring location; and
- A number of controls were in place on site at the time the exceedance occurred and that no dust or particulate matter was observed leaving the site, controls included but weren't limited to use of a watercart and sweeper, compaction of stockpiles, sealing up of areas and prior placement and compaction of select material along entry and exit points.

The investigations concluded that all appropriate and reasonable mitigation measures had been undertaken at the site and that construction works did not represent the source of the exceedance.

All other results were within the acceptable limits and the EPA Guidelines for the project. Dust and PM<sub>10</sub> monitoring results and location maps can be seen in Appendix C.

## **2.4 Water Quality Monitoring**

During the reporting period no water was discharged from site. A total of 24.5 mm of rain was received throughout the month of July. This rainfall was managed within the site boundaries with the aid of a sediment basin. Immediately following the rain events, erosion and sediment controls including but not limited to a sediment basin and wheel wash were inspected and were deemed effective (as per the Soil and Water Management Plan).

## **2.5 Shorebird Monitoring and Predator Inspections**

Shorebird monitoring inspections were undertaken twice a day on site by the Site Foreman and Environmental Representative. These inspections indicated that no shorebirds or birds at all were observed to congregate on the site.

Daily monitoring inspections for targeted predator species (foxes, dogs and cats) were also undertaken by the Site Foreman and Environmental Representative, no indications of the presence of predators were found within the site.

# **3.0 Community**

## **3.1 Community Issues**

No community issues or complaints were received during this period.

Regards,

**Burton Contractors Pty Limited**

*Simon Fisher*

Simon Fisher

Environmental Coordinator

## Appendix A – Site Photographs









## Appendix B – Noise Monitoring Records

### Monthly Noise Monitoring Results – Standard Hours

23 July 2014

Context				EIS Data		Actual Measurements			
Noise Sensitive Area (EIS)	Monitoring Location	Sample Time	Weather Conditions	RBL	Noise Goal	Min	Max	LA10	Comments
Location 1	14 The Esplanade	1000-1030	10km/h winds, clear skies	49	59	48.3	59.7	68.2	Aircraft noise, traffic and wind. Construction works inaudible
Location 2	34 Dent St	1040-1110	20km/h winds, clear skies	47	57	44.1	53.8	53	Aircraft noise, traffic and wind. Construction works inaudible
Location 4	3 Anniversary Rd	1115-1145	20km/h winds, clear skies	57	67	52.7	73.4	68.5	Aircraft noise, traffic and wind. Construction works inaudible
Location 8	Cnr Botany Rd and Exell St	1200-1230	20km/h winds, clear skies	56	66	54	71	66	Aircraft noise, traffic and wind. Construction works inaudible

### Monthly Noise Monitoring Results – Out of Hours

5 July 2014

Context				EIS Data		Actual Measurements			
Noise Sensitive Area (EIS)	Monitoring Location	Sample Time	Weather Conditions	RBL	Noise Goal	Min	Max	LA10	Comments
Location 1	14 The Esplanade	0700-0730	30km/h winds, clear skies	49	54	44	68	61	Traffic and wind. Construction works inaudible
Location 2	34 Dent St	0710-0735	30km/h winds, clear skies	47	52	35	61	43	Traffic noise. Construction works inaudible
Location 4	3 Anniversary Rd	1300-1330	40km/h winds, clear skies	57	62	51	68	65	Aircraft noise, traffic and wind. Construction works inaudible
Location 8	Cnr Botany Rd and Exell St	1340-1410	40km/h winds, clear skies	56	61	35	60	42	Traffic noise. Construction works inaudible

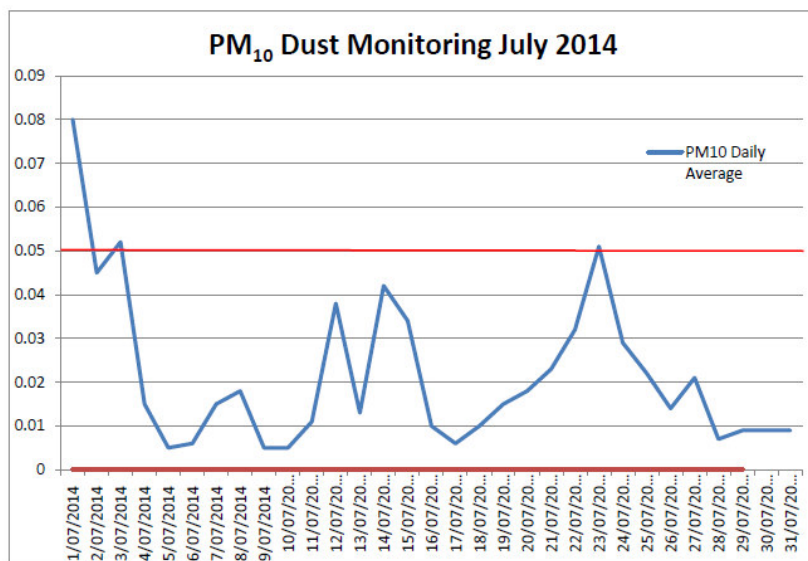


## Appendix C – Dust and Air Quality Readings

### PB Monitoring – JULY RESULTS 2014

No	Location	Ash	Combustible matter	Total soluble matter	Total Insoluble Matter	Sample ID	EPA Guideline	Comments
1	Purcell Park	1.2	0.2	0.2	1.4	EW1401794-001	4.0	Within criteria
2	Estuary	1.3	0.3	0.1	1.6	EW1401794-002	4.0	Within criteria
3	Golf Course	0.4	0.1	0.2	0.5	EW1401794-003	4.0	Within criteria
4	Joseph Bank Park	0.3	0.1	0.1	0.3	EW1401794-004	4.0	Within criteria

All units in g/m<sup>2</sup>/month. Dust limits are assessed as insoluble solids as per The Australian Standards (AS 3580.10.1-1991).  
 Summary taken from ALS report EW1402105. Reporting period: 16.6.2014 – 14.7.2014.



PM<sub>10</sub> daily dust averages for the month of July. Readings are generally under the upper limit criteria of 0.05 with the exception of three readings at on 1, 3 and 23 July 2014.

Dust Monitoring Locations





# CLIENT MONTHLY ENVIRONMENTAL REPORT

**SICTL Container International Container  
Terminal Limited**

**Contract Number:** 350

**Report Number:** 03

**Period:** August 2014

Prepared By: Simon Fisher



## TABLE OF CONTENTS

### Contents

1. Progress .....	3
<b>1.1 Background.....</b>	<b>3</b>
<b>1.2 General Progress and Construction Activities .....</b>	<b>3</b>
<b>1.3 Environmental Action Summary.....</b>	<b>4</b>
2.0 Environmental Surveillance .....	5
<b>2.1 Environmental Inspections and Audit Findings.....</b>	<b>5</b>
<b>2.2 Environmental Noise Monitoring.....</b>	<b>5</b>
<b>2.3 Environmental Dust Monitoring and Air Quality .....</b>	<b>5</b>
<b>2.4 Water Quality Monitoring.....</b>	<b>6</b>
<b>2.5 Shorebird Monitoring and Predator Inspections.....</b>	<b>6</b>
3.0 Community .....	6
<b>3.1 Community Issues.....</b>	<b>6</b>
Appendix A – Site Photographs .....	7
Appendix B – Noise Monitoring Records.....	9
Appendix C – Dust and Air Quality Readings.....	10



# 1. Progress

## 1.1 Background

## 1.2 General Progress and Construction Activities

Burton Contractors continued with the electrical conduit installation works with major subcontractor Downer. The two main electrical Pits P104 and P105 were installed on the northern end of the project.

KNF Construction continued with the FRP drainage works, which included construction of Beams H, I, J, K, and L along with the construction of the end beams on the northern end. Stripping formwork and cutting cast in sleeves continued. Reefer substation basement preparation works also commenced.

The stormwater drainage works were completed by CNL Plumbing under the management of Burton Contractors. The Major Liquid Detention Unit was also delivered and installed in Line 56 on the northern end of the project.

Structural steel components for the reefer gantries, walkways and holding down bolts commenced fabrication.

Hydro demolition works also commenced on Beam G closest to the SICTL operational zone.

### 1.3 Environmental Action Summary

**Table 1: Summary of environmental actions during August 2014**

Detail	This Month	Total To Date
Toolbox (Includes Environment)	2	7
Awareness/Alerts/Training	2	4
Inspections	12	25
Audits	1	2
Non-Conformances	1	4
Out of Hours Request	4	10
Unexpected Find of Contamination	0	0
Hazard Reports / Minor Incidents (Class 3)	3	6
Hazard Reports / Minor Incidents (Class 3) Closed Out	3	6
Reported Incidents (Classes 2 & 1)	0	0
Breaches/Fines	0	0
Innovation / Positive Actions	2	5

## **2.0 Environmental Surveillance**

### ***2.1 Environmental Inspections and Audit Findings***

A total of 13 environmental inspections and audits were undertaken during the reporting period. These included a combination of 21 daily site inspections (not included in the project total), 3 weekly internal and external inspections, 1 monthly checklist, 8 post rainfall inspections, an external project audit and any additional monitoring that was undertaken during the reporting period. These inspections identified a total of 1 non-conformance and 2 minor issues all of which have since been closed out within the required timeframes. The majority of issues identified during these inspections can be attributed to work crew interactions and have since been rectified through the implementation of additional checking mechanisms to ensure that all issues are being comprehensively addressed.

### ***2.2 Environmental Noise Monitoring***

Monthly construction noise monitoring was undertaken during August 2014. Noise monitoring was conducted at four of the locations outlined in the Environmental Impact Statement and the CEMP. The identification of these sites has been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 30 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment. Noise monitoring results and location maps are presented in Appendix B.

All noise monitoring conducted during the period indicated that the construction works were inaudible at residential noise-sensitive receivers. No noise related complaints were received by the Project for this reporting period.

### ***2.3 Environmental Dust Monitoring and Air Quality***

The environmental dust monitoring data presented in this report has been made available by Fulton Hogan, the contractor for Patrick currently undertaking construction activities associated with Ramp D and the Knuckle as part of Port Botany Expansion Project.

Due to the concurrent nature of the construction activities undertaken by Burtons and Fulton Hogan as part of the overall PBRP both parties agreed to share monthly environmental monitoring data.

Four dust deposition gauges are installed in the areas surrounding the Port Botany redevelopment. All results received for the deposition gauges were within EPA guidelines and Project criteria for the month of August. No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

The real-time dust monitor located at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter has been temporarily utilised by Burton's, from Fulton Hogan, for the month of August 2014.

Two exceedences of project PM<sub>10</sub> particulate matter criteria were recorded during August 2014. These exceedences were recorded on the 6 and 9 August respectively. Investigation into the exceedences identified the following information:

- On both days that the exceedences were recorded, Sydney Airport Meteorological Station indicated that strong north-westerly winds were being experienced in the area during this period, therefore it is improbable that the source of the particulate matter responsible for the exceedance was the Burton's construction site located to the south of the monitoring location; and
- A number of controls were in place on site at the time the exceedance occurred and that no dust or particulate matter was observed leaving the site, controls included but weren't limited to use of a watercart and sweeper, compaction of stockpiles, sealing up of areas and prior placement and compaction of select material along entry and exit points.

The investigations concluded that all appropriate and reasonable mitigation measures had been undertaken at the site and that construction works did not represent the source of the exceedance.

All other results were within the acceptable limits and the EPA Guidelines for the project. Dust and PM<sub>10</sub> monitoring results and location maps can be seen in Appendix C.

## **2.4 Water Quality Monitoring**

During the reporting period no water was discharged from site. A total of 262.45mm of rain was received throughout the month of August. This rainfall was managed within the site boundaries with the aid of a sediment basin. Immediately following the rain events, erosion and sediment controls including but not limited to a sediment basin and wheel wash were inspected and were deemed effective (as per the Soil and Water Management Plan).

## **2.5 Shorebird Monitoring and Predator Inspections**

Shorebird monitoring inspections were undertaken twice a day on site by the Site Foreman and Environmental Representative. These inspections indicated that no shorebirds or birds at all were observed to congregate on the site.

Daily monitoring inspections for targeted predator species (foxes, dogs and cats) were also undertaken by the Site Foreman and Environmental Representative, no indications of the presence of predators were found within the site.

# **3.0 Community**

## **3.1 Community Issues**

No community issues or complaints were received during this period.

Regards,

**Burton Contractors Pty Limited**

*Simon Fisher*

Simon Fisher

Environmental Coordinator

## Appendix A – Site Photographs







## Appendix B – Noise Monitoring Records

### Monthly Noise Monitoring Results – Standard Hours

16 August 2014

Context				EIS Data		Actual Measurements			
Noise Sensitive Area (EIS)	Monitoring Location	Sample Time	Weather Conditions	RBL	Noise Goal	Min	Max	LA10	Comments
Location 1	14 The Esplanade	1000-1030	20km/h winds, clear skies	49	59	40	65	63	Aircraft noise, traffic and wind. Construction works inaudible
Location 2	34 Dent St	1040-1110	20km/h winds, clear skies	47	57	42	58	60	Aircraft noise, traffic and wind. Construction works inaudible
Location 4	3 Anniversary Rd	1115-1145	20km/h winds, clear skies	57	67	58	67	64	Aircraft noise, traffic and wind. Construction works inaudible
Location 8	Cnr Botany Rd and Exell St	1200-1230	20km/h winds, clear skies	56	66	54	71	66	Aircraft noise, traffic and wind. Construction works inaudible

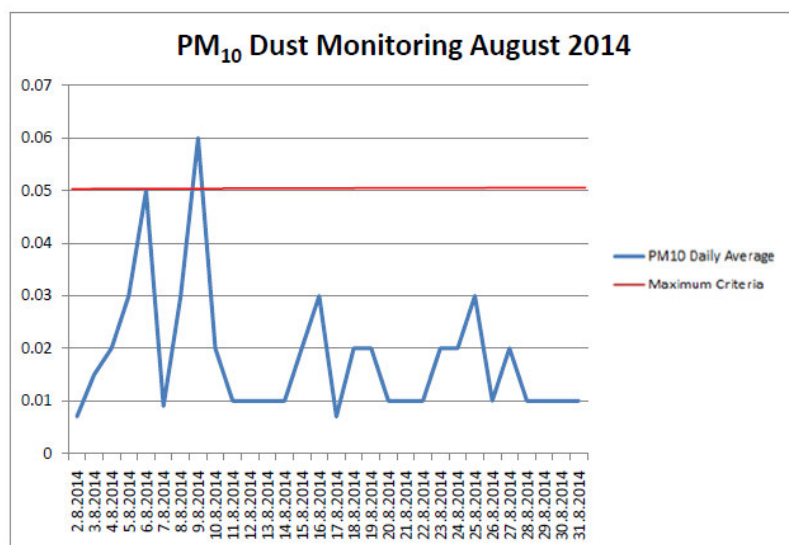


## Appendix C – Dust and Air Quality Readings

### PB Monitoring – AUGUST RESULTS 2014

No	Location	Ash	Combustible Matter	Total Soluble Matter	Total Insoluble Matter	Sample ID	EPA Guideline	Comments
1	Purcell Park	1.1	0.6	2.7	1.7	EW1402461-001	4.0	Within criteria
2	Estuary	1.5	0.7	2.1	2.2	EW1402461-002	4.0	Within criteria
3	Golf Course	0.4	0.4	2.4	0.8	EW1402461-003	4.0	Within criteria
4	Joseph Bank Park	0.3	0.2	2.0	0.5	EW1402461-004	4.0	Within criteria

All units in g/m<sup>2</sup>/month. Dust limits are assessed as insoluble solids as per The Australian Standards (AS 3580.10.1-1991). Summary taken from ALS report EW1402461. Reporting period: 14.07.2014 – 15.08.2014.



PM<sub>10</sub> daily dust averages for the month of August 2014. Readings are generally under the upper limit criteria of 0.05 with the exception of two readings on 6 and 9 July (0.05 and 0.06 respectively).

### Dust Monitoring Locations





# CLIENT MONTHLY ENVIRONMENTAL REPORT

**SICTL Container International Container  
Terminal Limited**

**Contract Number:** 350

**Report Number:** 04

**Period:** September 2014

Prepared By: Simon Fisher



## TABLE OF CONTENTS

### Contents

1. Progress .....	3
<b>1.1 Background.....</b>	<b>3</b>
<b>1.2 General Progress and Construction Activities .....</b>	<b>3</b>
<b>1.3 Environmental Action Summary.....</b>	<b>4</b>
2.0 Environmental Surveillance .....	5
<b>2.1 Environmental Inspections and Audit Findings.....</b>	<b>5</b>
<b>2.2 Environmental Noise Monitoring.....</b>	<b>5</b>
<b>2.3 Environmental Dust Monitoring and Air Quality .....</b>	<b>5</b>
<b>2.4 Water Quality Monitoring.....</b>	<b>6</b>
<b>2.5 Shorebird Monitoring and Predator Inspections.....</b>	<b>6</b>
3.0 Community .....	6
<b>3.1 Community Issues.....</b>	<b>6</b>
Appendix A – Site Photographs .....	7
Appendix B – Noise Monitoring Records.....	9
Appendix C – Dust and Air Quality Readings.....	10

## 1. Progress

### 1.1 Background

### 1.2 General Progress and Construction Activities

Burton Contractors continued with the electrical conduit installation works with major subcontractor Downer. The majority of the conduits and electrical pit were installed between Beams H, I, J and K during the month. Works on the fire and water mains also commenced during September.

KNF Construction continued with the drainage works, which included construction of the seaside end beams bringing the constructions of Beams H, I, J, K and L to near completion. Construction of the reefer substation continued with scaffolding completely erected and the first two floors poured. Construction of the plinth blinding layers also commenced.

The construction of the stormwater pit lids commenced in September and the benching of pits was completed to begin closing out the stormwater drainage works and allow the ground improvement works to follow through.

Structural steel components for the reefer gantries 1A and 2A were fabricated along with the walkways and holding down bolts. Fabrication of miscellaneous items also commenced including buffer stops, cable drums, tie downs and storm pins.

Beam G rectification works also continued with additional reo added along the top of the beam after the hydro demolition works were completed.

Taylor Rail commenced this month with rail deliveries and welding of the rail connections beginning on Beams J, K and L.

Ground improvement works continued on Automatic Stacking Cranes 4, 5 and 6 to prepare for construction of pavement SP1 between the plinths and RP4 truck marshalling area which is to follow.

### 1.3 Environmental Action Summary

**Table 1: Summary of environmental actions during September 2014**

Detail	This Month	Total To Date
Toolbox (Includes Environment)	1	8
Awareness/Alerts/Training	1	5
Inspections	5	30
Audits	0	2
Non-Conformances	0	4
Out of Hours Request	4	14
Unexpected Find of Contamination	0	0
Hazard Reports / Minor Incidents (Class 3)	0	5
Hazard Reports / Minor Incidents (Class 3) Closed Out	0	5
Reported Incidents (Classes 2 & 1)	0	0
Breaches/Fines	0	0
Innovation / Positive Actions	0	5

## **2.0 Environmental Surveillance**

### **2.1 Environmental Inspections and Audit Findings**

A total of 5 environmental inspections and audits were undertaken during the reporting period. These included a combination of 26 daily site inspections (not included in the project total), 3 weekly internal and external inspections, 1 monthly checklist, 1 post rainfall inspection and any additional monitoring that was undertaken during the reporting period. These inspections identified a total of 0 non-conformance and 0 minor issues.

### **2.2 Environmental Noise Monitoring**

Monthly construction noise monitoring was undertaken during September 2014. Noise monitoring was conducted at four of the locations outlined in the Environmental Impact Statement and the CEMP. The identification of these sites has been based on noise-sensitive receptors in the project Environmental Impact Statement and approved for the Port Botany Expansion construction activities.

Attended noise measurements were carried out for a period of 30 minutes at each location. During the monitoring event, observations were made on the weather as well as the surrounding noise sources and environment. Noise monitoring results and location maps are presented in Appendix B.

All noise monitoring conducted during the period indicated that the construction works were inaudible at residential noise-sensitive receivers. No noise related complaints were received by the Project for this reporting period.

### **2.3 Environmental Dust Monitoring and Air Quality**

The environmental dust monitoring data presented in this report has been made available by Fulton Hogan, the contractor for Patrick currently undertaking construction activities associated with Ramp D and the Knuckle as part of Port Botany Expansion Project.

Due to the concurrent nature of the construction activities undertaken by Burtons and Fulton Hogan as part of the overall PBRP both parties agreed to share monthly environmental monitoring data.

Four dust deposition gauges are installed in the areas surrounding the Port Botany redevelopment. All results received for the deposition gauges were within EPA guidelines and Project criteria for the month of September. No residential properties or road networks have been impacted by dust emanating from the Port expansion construction works and there have been no dust complaints received by the project during this monitoring period.

The real-time dust monitor located at the Botany Golf Club for reporting of PM<sub>10</sub> particulate matter has been temporarily utilised by Burton's, from Fulton Hogan, for the month of September 2014.

No exceedences of project PM<sub>10</sub> particulate matter criteria were recorded during September 2014.

All other results were within the acceptable limits and the EPA Guidelines for the project. Dust and PM<sub>10</sub> monitoring results and location maps can be seen in Appendix C.



## **2.4 Water Quality Monitoring**

During the reporting period no water was discharged from site. A total of 45mm of rain was received throughout the month of September. This rainfall was managed within the site boundaries with the aid of a sediment basin. Immediately following the rain events, erosion and sediment controls including but not limited to a sediment basin and wheel wash were inspected and were deemed effective (as per the Soil and Water Management Plan).

## **2.5 Shorebird Monitoring and Predator Inspections**

Shorebird monitoring inspections were undertaken twice a day on site by the Site Foreman and Environmental Representative. These inspections indicated that no shorebirds or birds at all were observed to congregate on the site.

Daily monitoring inspections for targeted predator species (foxes, dogs and cats) were also undertaken by the Site Foreman and Environmental Representative, no indications of the presence of predators were found within the site.

# **3.0 Community**

## **3.1 Community Issues**

No community issues or complaints were received during this period.

Regards,

**Burton Contractors Pty Limited**

*Simon Fisher*

Simon Fisher

Environmental Coordinator

## Appendix A – Site Photographs





## Appendix B – Noise Monitoring Records

### Monthly Noise Monitoring Results – Standard Hours

18 September 2014

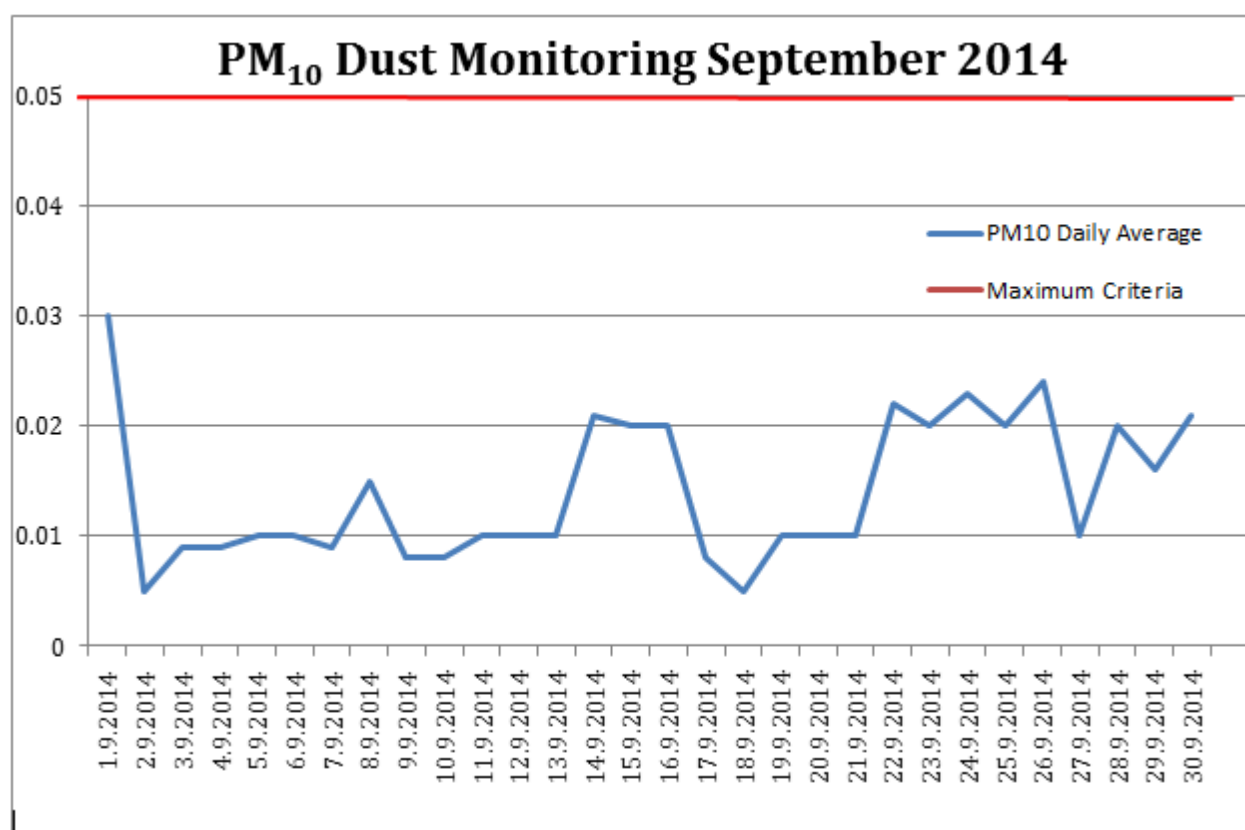
Context				EIS Data		Actual Measurements			
Noise Sensitive Area (EIS)	Monitoring Location	Sample Time	Weather Conditions	RBL	Noise Goal	Min	Max	LA10	Comments
Location 1	14 The Esplanade	1000-1030	20km/h winds, clear skies	49	59	38.7	51.9	64	Aircraft noise, traffic and wind. Construction works inaudible
Location 2	34 Dent St	1040-1110	20km/h winds, clear skies	47	57	44.1	47.9	51	Aircraft noise, traffic and wind. Construction works inaudible
Location 4	3 Anniversary Rd	1115-1145	20km/h winds, clear skies	57	67	52.2	64	63.3	Aircraft noise, traffic and wind. Construction works inaudible
Location 8	Cnr Botany Rd and Exell St	1200-1230	20km/h winds, clear skies	56	66	48	67	64	Aircraft noise, traffic and wind. Construction works inaudible

## Appendix C – Dust and Air Quality Readings

### PB Monitoring – SEPTEMBER RESULTS 2014

No	Location	Ash	Combustible Matter	Total Soluble Matter	Total Insoluble Matter	Sample ID	EPA Guideline	Comments
1	Purcell Park	0.9	0.6	1.2	1.5	EW1402795-001	4.0	Within criteria
2	Estuary	2.5	<0.1	1.5	2.5	EW1402795-002	4.0	Within criteria
3	Golf Course	0.2	0.4	2.5	0.6	EW1402795-003	4.0	Within criteria
4	Joseph Bank Park	0.4	0.4	3.6	0.8	EW1402795-004	4.0	Within criteria

All units in g/m<sup>2</sup>/month. Dust limits are assessed as insoluble solids as per The Australian Standards (AS 3580.10.1-1991). Summary taken from ALS report EW1402461. Reporting period: 14.08.2014 – 11.09.2014.



PM<sub>10</sub> daily dust averages for the month of September 2014. Readings were under the upper limit criteria of 0.05 g/m<sup>2</sup>/month.



Dust Monitoring Locations

