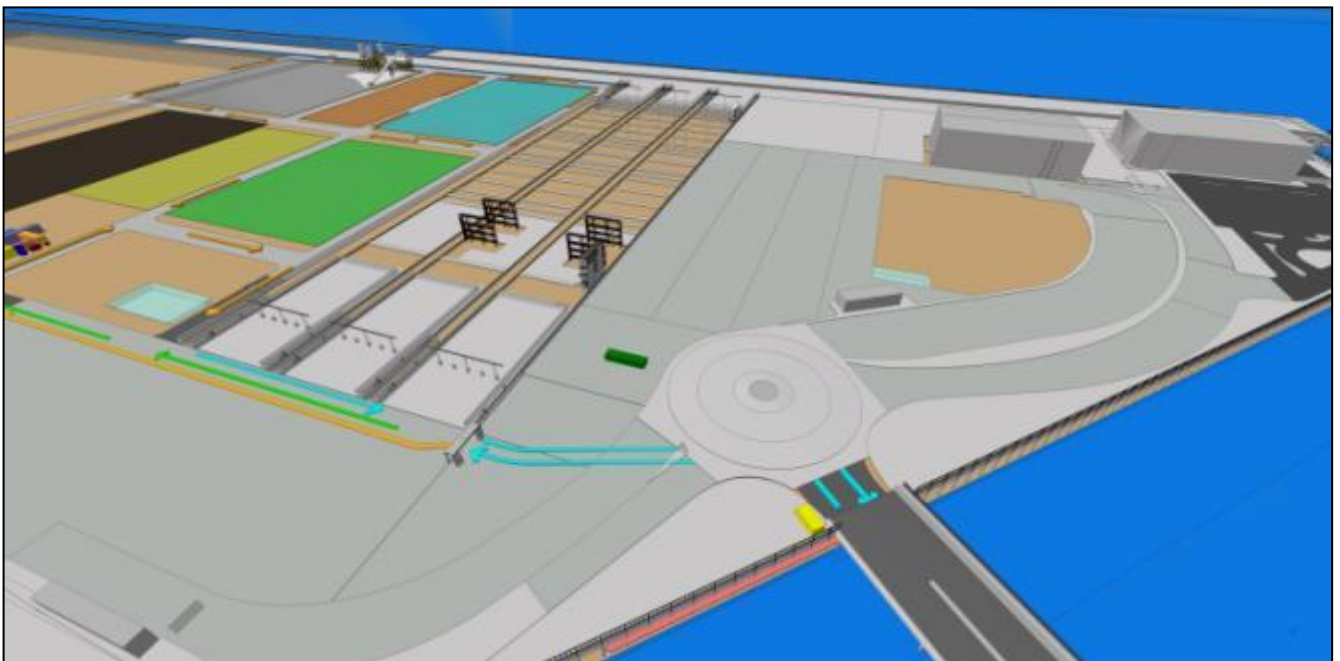


Sydney Port Botany Terminal 3

Monthly Environmental Monitoring Report

March 2013





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

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1.0 Introduction

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

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

No environmental complaints have been received this month in regards to the Terminal 3 expansion works.

1.1 Construction Activities

Construction activities undertaken for the month of March 2013 included the following:

- Earthworks and ground improvements
- Drainage activities
- Site utilities
- Precast concrete fabrication for utilities and services work
- Electrical substation construction
- Continuous Flight Augur piling for the stacking crane rail beams and noise walls
- Concrete batch plant operations
- Concrete paving

2.0 Dust Monitoring and Air Quality

Three dust deposition gauges are installed in the areas surrounding the Port Botany Expansion. Dust deposition results for March 2013 have yet to be received from our laboratory. February 2013 results are reported in Appendix 1. A real-time dust monitor has been installed at the Botany Golf Club for reporting of PM₁₀ particulate matter. No exceedances of project or EPA criteria have been observed during March 2013. Dust monitoring results are given in this report and are outlined in Appendix 1.

There have been no dust complaints received this month. All results are within EPA and Project criteria.

3.0 Noise Monitoring

Monthly construction noise monitoring was undertaken during March 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 27th March 2013. Work activities being undertaken on the Terminal 3 project included ground improvements and earthworks, stormwater drainage installation, CFA piling operations, batch plant operation, paving 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 all locations except one, 3 Anniversary Road, Botany. 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.

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Construction activities at the Terminal 3 project site were inaudible in all cases.

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.

Day-time noise monitoring results are shown in Appendix 2.

3.2 Night time noise monitoring

No night time compliance monitoring was required to be undertaken for active Terminal 3 project works. Noise trials have been undertaken for certain works involving concrete batch plant activities outside of normal construction hours and have indicated the associated activities to be inaudible at residential areas.

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 March 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 from the Terminal 3 site during March 2013 are outlined in Appendix 4. With the shorebird breeding season coming to an end, sightings of shorebirds around the Terminal 3 site have reduced.

6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during March 2013 for the Terminal 3 project site. 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 – Day-time Noise Monitoring Results**
- Appendix 3 – Water Monitoring Results**
- Appendix 4 – Terminal 3 Shorebird Observations**

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Appendix 1 – Dust Monitoring Results

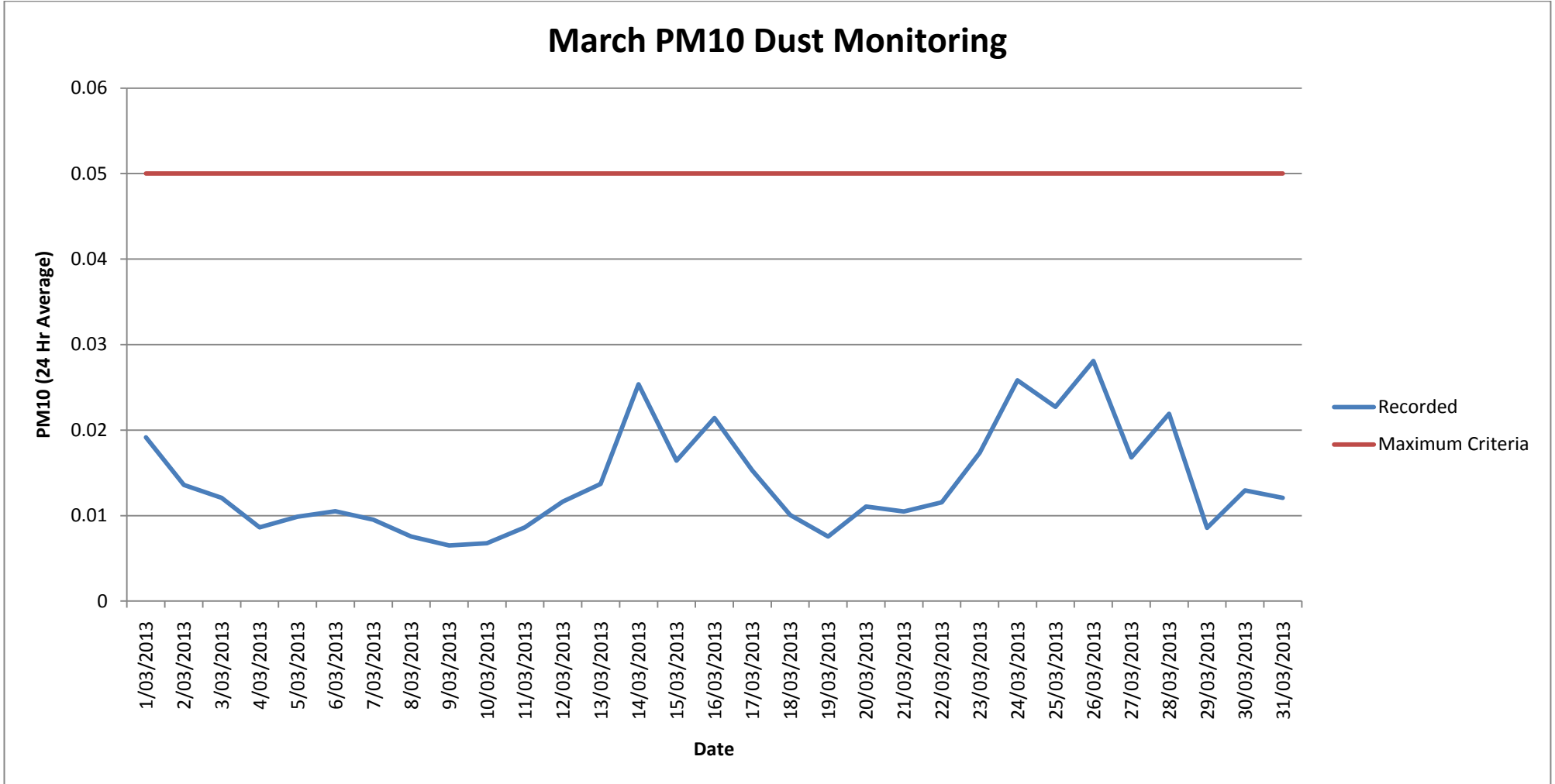
Dust Deposition Gauge Results - February 2013

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	1.6	0.8	<0.1	2.4	2.4	EN1300690-003	4	Within EPA guideline levels	Earthworks Drainage works Deliveries Paving Concrete batch plant CFA piling Structural works
2	14 The Esplanade	0.8	0.4	0.1	1.2	1.3	EN1300690-001	4	Within EPA guideline levels	
3	74 Australia Ave	1.3	0.6	0.2	1.9	2.1	EN1300690-003	4	Within EPA guideline levels	

All Units in g/m².month

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PM₁₀ Monitoring Results – March 2013



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Appendix 2 – Day-time Noise Monitoring Results

Noise Monitoring Results - SPBT3 March 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 ¹ (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	27/03/2013	12:40	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant Pavement Works	Standard Day	Fine	No	49	54	61	69	53	45	7	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise
Location 2 - Dent Street	34 Dent St	27/03/2013	13:35	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	47	52	59	65	63	58	7	Local traffic noise, aircraft noise
Location 3 - Jennings Street	42 Jennings St	27/03/2013	15:55	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	40	45	61	61	59	44	16	Local traffic noise, aircraft noise
Location 4 - North of Golf Course	3 Anniversary Rd	27/03/2013	14:30	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	57	62	62	69	59	55	0	Local traffic noise, aircraft noise
Location 5 - Australia Avenue	74 Australia Ave	27/03/2013	14:55	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	42	47	51	58	50	41	4	Local/distant traffic noise, aircraft noise
Location 6 - Military Road	73 Wassell St	27/03/2013	16:55	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	46	51	60	69	65	51	9	Noise from Bunnerong Rd, Local traffic noise

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

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Appendix 3 – Water Monitoring Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC3 - Outlet	1/03/2013	AM	Yes	Adjacent Bay	None	7.65	0.4
SC3 - Outlet	1/03/2013	PM	Yes	Adjacent Bay	None	7.98	1.2
SC3 - Outlet	4/03/2013	AM	Yes	Adjacent Bay	None	7.92	0.7
SC3 - Outlet	4/03/2013	PM	Yes	Adjacent Bay	None	7.73	0.3
SC3 - Outlet	5/03/2013	AM	Yes	Adjacent Bay	None	7.34	0.6
SC3 - Outlet	5/03/2013	PM	Yes	Adjacent Bay	None	7.90	1.1
SC3 - Outlet	6/03/2013	AM	Yes	Adjacent Bay	None	7.27	0.2
SC3 - Outlet	6/03/2013	PM	Yes	Adjacent Bay	None	7.12	0.8
SC3 - Outlet	7/03/2013	AM	Yes	Adjacent Bay	None	7.22	0.3
SC3 - Outlet	7/03/2013	PM	Yes	Adjacent Bay	None	7.72	0.6
SC3 - Outlet	8/03/2013	AM	Yes	Adjacent Bay	None	7.93	0.0
SC3 - Outlet	8/03/2013	PM	Yes	Adjacent Bay	None	8.03	0.0
SC3 - Outlet	11/03/2013	AM	Yes	Adjacent Bay	None	7.67	0,1
SC3 - Outlet	11/03/2013	PM	Yes	Adjacent Bay	None	7.87	0.3
SC3 - Outlet	12/03/2013	AM	Yes	Adjacent Bay	None	7.92	0.9
SC3 - Outlet	12/03/2013	PM	Yes	Adjacent Bay	None	7.23	1.0
SC3 - Outlet	13/03/2013	AM	Yes	Adjacent Bay	None	7.35	0.5
SC3 - Outlet	13/03/2013	PM	Yes	Adjacent Bay	None	7.64	0.6
SC3 - Outlet	14/03/2013	AM	Yes	Adjacent Bay	None	8.12	0.6
SC3 - Outlet	14/03/2013	PM	Yes	Adjacent Bay	None	8.01	0.4
SC3 - Outlet	15/03/2013	AM	Yes	Adjacent Bay	None	7.81	0.6
SC3 - Outlet	15/03/2013	PM	Yes	Adjacent Bay	None	7.39	0.3
SC3 - Outlet	18/03/2013	AM	Yes	Adjacent Bay	None	7.23	1.4
SC3 - Outlet	18/03/2013	PM	Yes	Adjacent Bay	None	7.05	1.3
SC3 - Outlet	19/03/2013	AM	Yes	Adjacent Bay	None	7.45	1.9
SC3 - Outlet	19/03/2013	PM	Yes	Adjacent Bay	None	7.42	1.2
SC3 - Outlet	20/03/2013	AM	Yes	Adjacent Bay	None	7.49	0.6
SC3 - Outlet	20/03/2013	PM	Yes	Adjacent Bay	None	7.13	1.1
SC3 - Outlet	21/03/2013	AM	Yes	Adjacent Bay	None	7.19	0.9
SC3 - Outlet	21/03/2013	PM	Yes	Adjacent Bay	None	7.37	0.8
SC3 - Outlet	22/03/2013	AM	Yes	Adjacent Bay	None	7.49	0.9
SC3 - Outlet	22/03/2013	PM	Yes	Adjacent Bay	None	7.36	1.8
SC3 - Outlet	25/03/2013	AM	Yes	Adjacent Bay	None	7.12	1.2
SC3 - Outlet	25/03/2013	PM	Yes	Adjacent Bay	None	7.89	2.6
SC3 - Outlet	26/03/2013	AM	Yes	Adjacent Bay	None	7.63	1.5
SC3 - Outlet	26/03/2013	PM	Yes	Adjacent Bay	None	7.93	0.5
SC3 - Outlet	27/03/2013	AM	Yes	Adjacent Bay	None	7.77	0.9
SC3 - Outlet	27/03/2013	PM	Yes	Adjacent Bay	None	7.49	2.1
Bay Reading	1/03/2013	AM	N/A	N/A	None	7.43	0.5
Bay Reading	7/03/2013	AM	N/A	N/A	None	7.36	0.2
Bay Reading	13/03/2013	AM	N/A	N/A	None	7.64	1.3
Bay Reading	26/03/2013	PM	N/A	N/A	None	7.32	1.6

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SC10 - SQID	1/03/2013	AM	Yes	Adjacent Bay	None	7.45	0.5
SC10 - SQID	1/03/2013	PM	Yes	Adjacent Bay	None	7.29	0.9
SC10 - SQID	4/03/2013	AM	Yes	Adjacent Bay	None	7.12	1.7
SC10 - SQID	4/03/2013	PM	Yes	Adjacent Bay	None	7.98	1.3
SC10 - SQID	5/03/2013	AM	Yes	Adjacent Bay	None	8.24	1.6
SC10 - SQID	5/03/2013	PM	Yes	Adjacent Bay	None	7.32	3.2
SC10 - SQID	6/03/2013	AM	Yes	Adjacent Bay	None	7.35	0.5
SC10 - SQID	6/03/2013	PM	Yes	Adjacent Bay	None	7.26	1.8
SC10 - SQID	7/03/2013	AM	Yes	Adjacent Bay	None	7.89	1.4
SC10 - SQID	7/03/2013	PM	Yes	Adjacent Bay	None	8.11	2.2
SC10 - SQID	8/03/2013	AM	Yes	Adjacent Bay	None	7.21	1.1
SC10 - SQID	8/03/2013	PM	Yes	Adjacent Bay	None	7.42	0.9
SC10 - SQID	11/03/2013	AM	Yes	Adjacent Bay	None	7.39	1.2
SC10 - SQID	11/03/2013	PM	Yes	Adjacent Bay	None	7.44	1.8
SC10 - SQID	12/03/2013	AM	Yes	Adjacent Bay	None	7.82	1.5
SC10 - SQID	12/03/2013	PM	Yes	Adjacent Bay	None	7.10	0.8
SC10 - SQID	13/03/2013	AM	Yes	Adjacent Bay	None	7.73	1.2
SC10 - SQID	13/03/2013	PM	Yes	Adjacent Bay	None	7.92	2.1
SC10 - SQID	14/03/2013	AM	Yes	Adjacent Bay	None	7.33	2.4
Estuary Reading	4/03/2013	PM	N/A	N/A	None	7.32	0.8
Estuary Reading	11/03/2013	PM	N/A	N/A	None	7.51	0.9



Appendix 4 – Terminal 3 Shorebird Observations

Shorebird Monitoring Database March 2013 - SPBT3 worksite				
Date	Bird Type	Location	Reported by	Action
05/03/13	2 x Pacific Golden Plover	SC10 Revetment	J Ambler	Birds were outside active worksite. No action required.
26/03/13	Pacific Golden Plover	SC10 Revetment	J Ambler	Birds were outside active worksite. No action required.