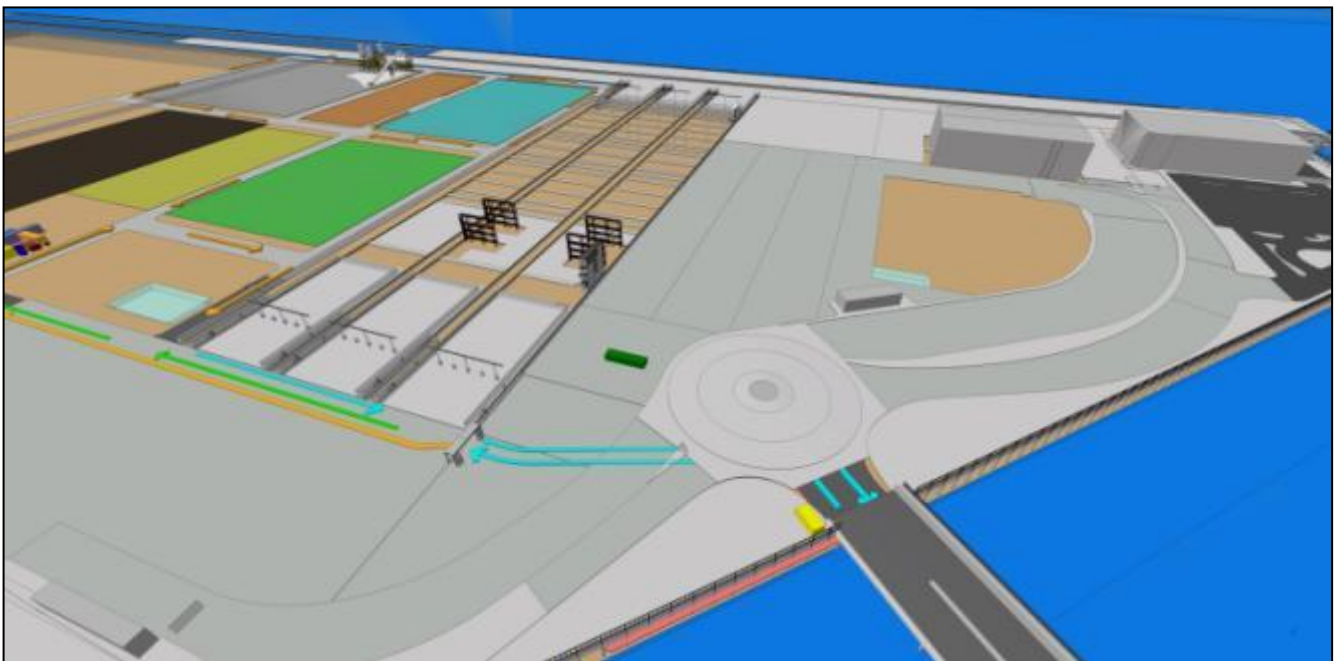


Sydney Port Botany Terminal 3

Monthly Environmental Monitoring Report

March 2014



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

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Revision History

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

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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 PM₁₀ particulate matter. No exceedances of project PM₁₀ particulate matter criteria were recorded during March 2014.

Dust and PM₁₀ 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 31st 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_{eq} levels exceeded the noise goals for noise emissions from the Port Botany Expansion Project at 4 of the 6 monitoring

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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

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Appendix 1 – Dust Monitoring Results

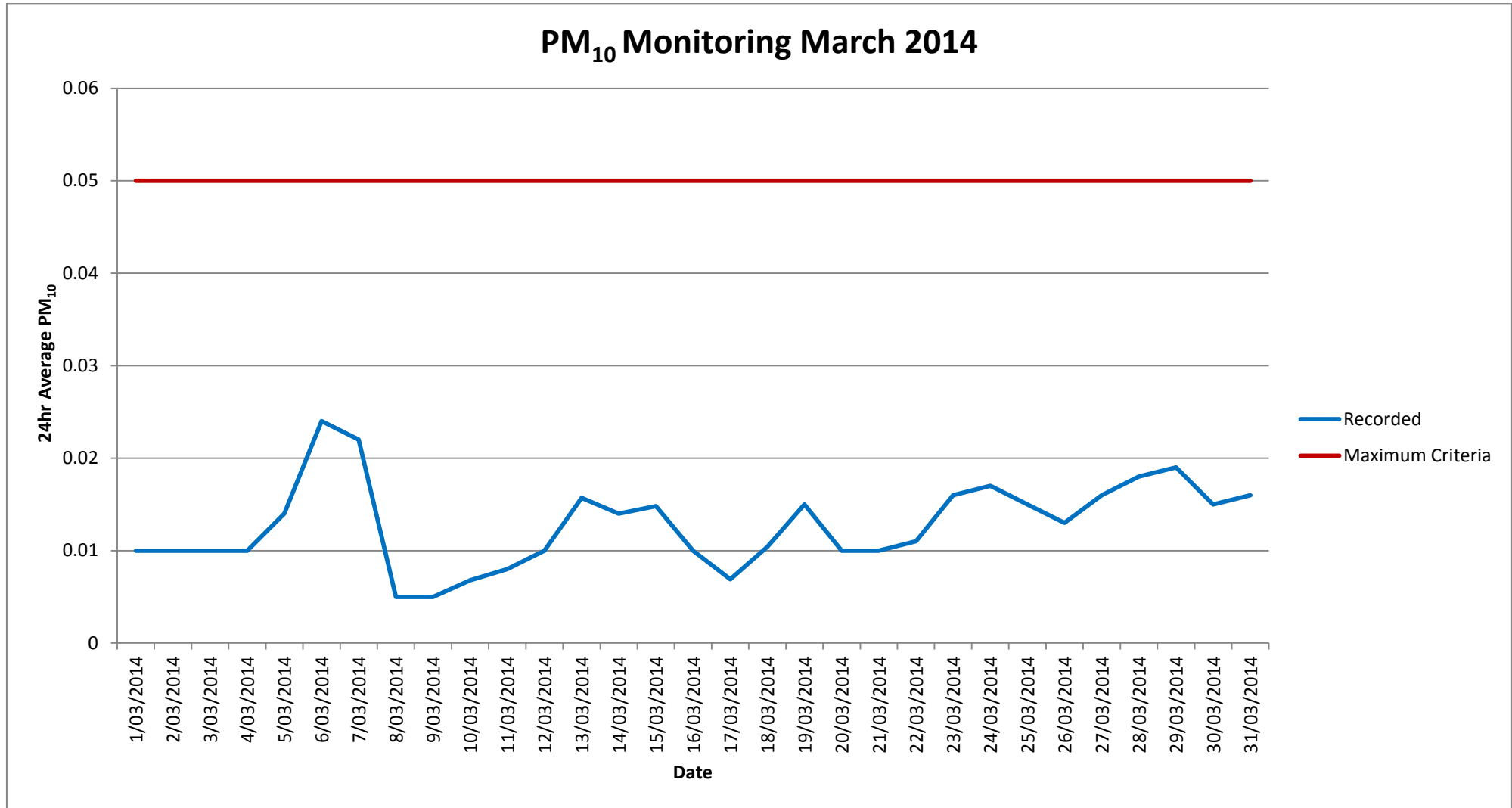
Dust Deposition Gauge Results - February 2014

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/m².month

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PM₁₀ Monitoring Results – March 2014



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Dust Monitoring Locations



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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 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	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

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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

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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