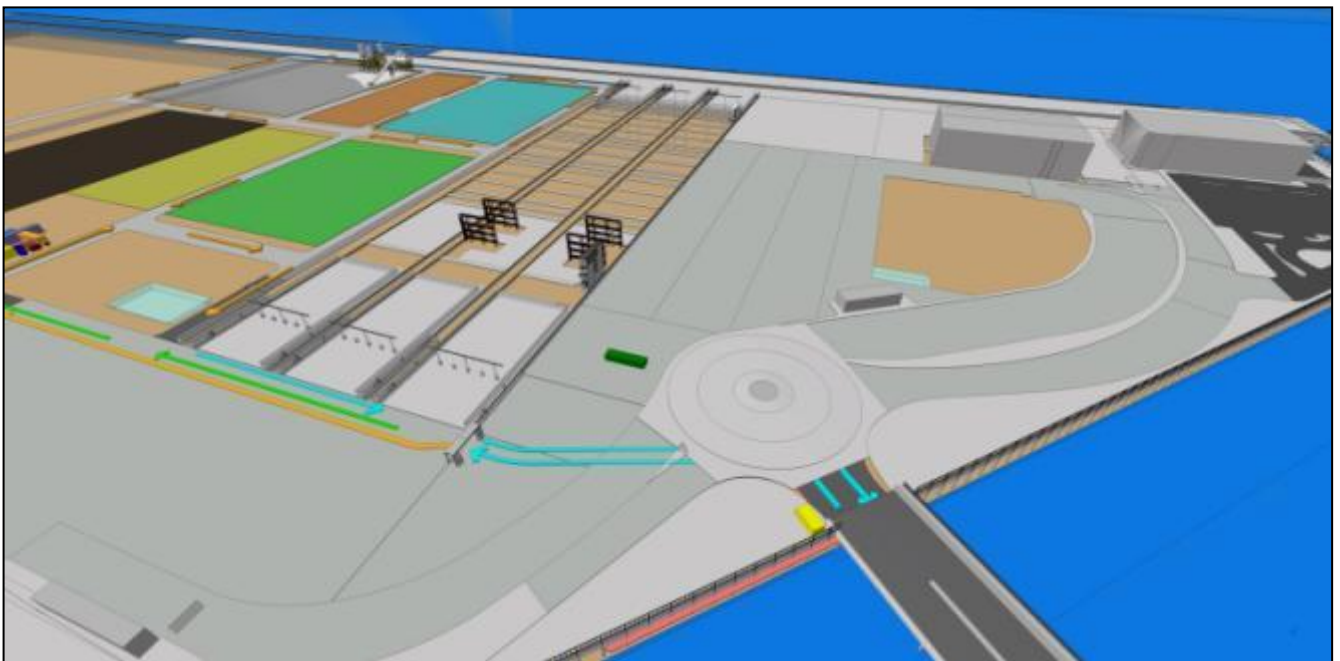


Sydney Port Botany Terminal 3

Monthly Environmental Monitoring Report

May 2013





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	01/06/13	Issue	JA	01/06/13	JA

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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 May 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

Construction activities undertaken for the month of May 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 (CFA) piling for the stacking crane rail beams and noise walls
- Concrete batch plant operations
- Concrete paving

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 May 2013 have yet to be received from our laboratory. April 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 May 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 May 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 9th May 2013. Work activities being undertaken on the Terminal 3 project included ground improvements and earthworks, stormwater drainage and services installation, 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 three 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.

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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.

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 May for dewatering activities undertaken during drainage works and headwall installation. 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 May 2013 are outlined in Appendix 4. With the shorebird breeding season over, sightings of target shorebirds around the Terminal 3 site have reduced.

6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during May 2013 for the Terminal 3 project site. Inspections have focused on erosion and sediment controls with high rainfall at the end of 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**

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Appendix 1 – Dust Monitoring Results

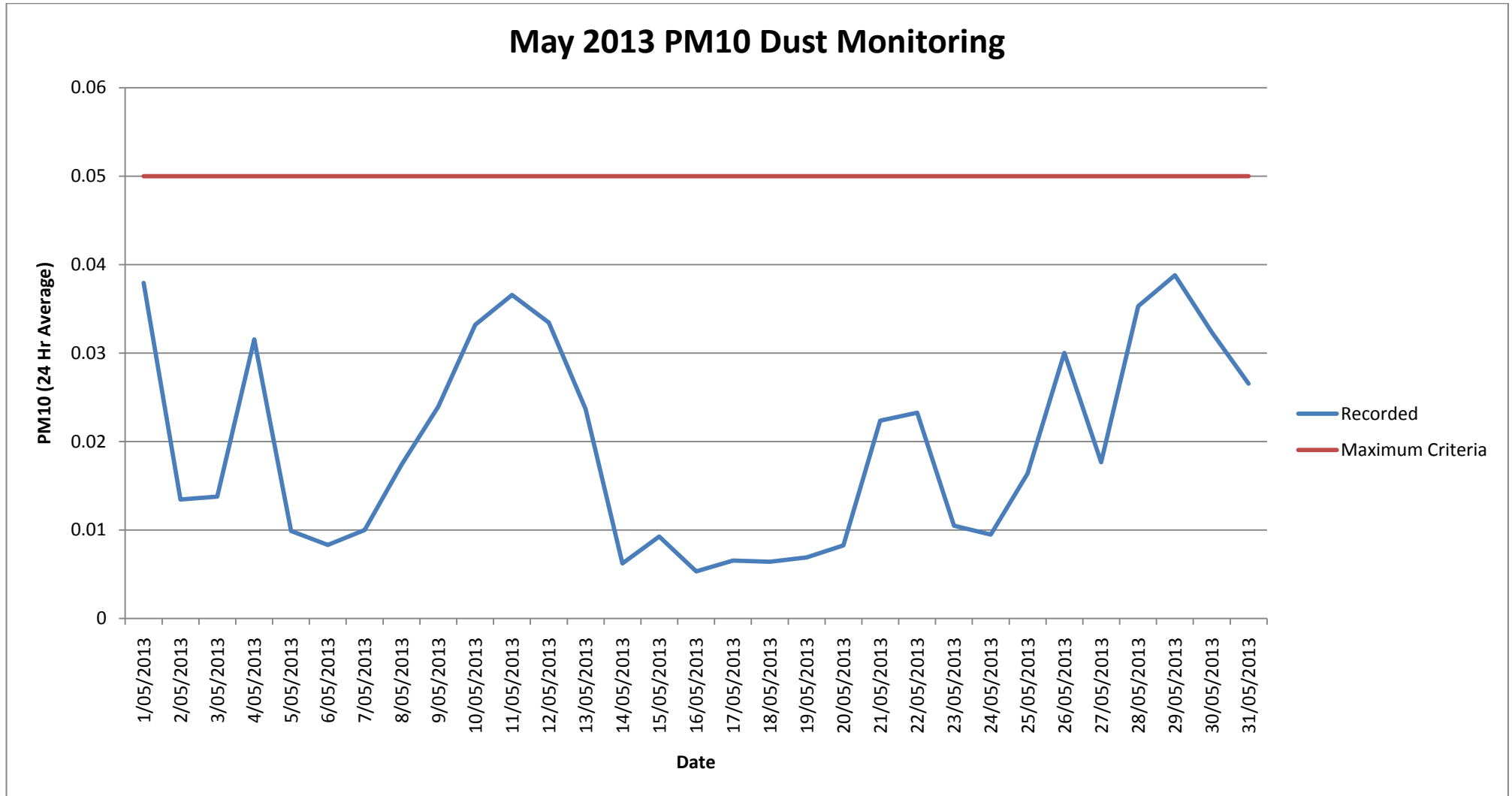
Dust Deposition Gauge Results - April 2013

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	0.6	0.2	1.0	0.8	1.8	EN1301784-003	4	Within EPA guideline levels	Earthworks Drainage works Deliveries Paving Concrete batch plant Structural works Utilities
2	14 The Esplanade	0.3	0.1	0.8	0.4	1.2	EN1301784-001	4	Within EPA guideline levels	
3	74 Australia Ave	1.0	0.3	0.6	1.3	1.9	EN1301784-002	4	Within EPA guideline levels	
4	Botany Golf Course	0.6	0.3	1.0	0.9	1.9	EN1301784-004	4	Within EPA guideline levels	

All Units in g/m².month

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PM₁₀ Monitoring Results – May 2013



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Appendix 2 – Noise Monitoring Results

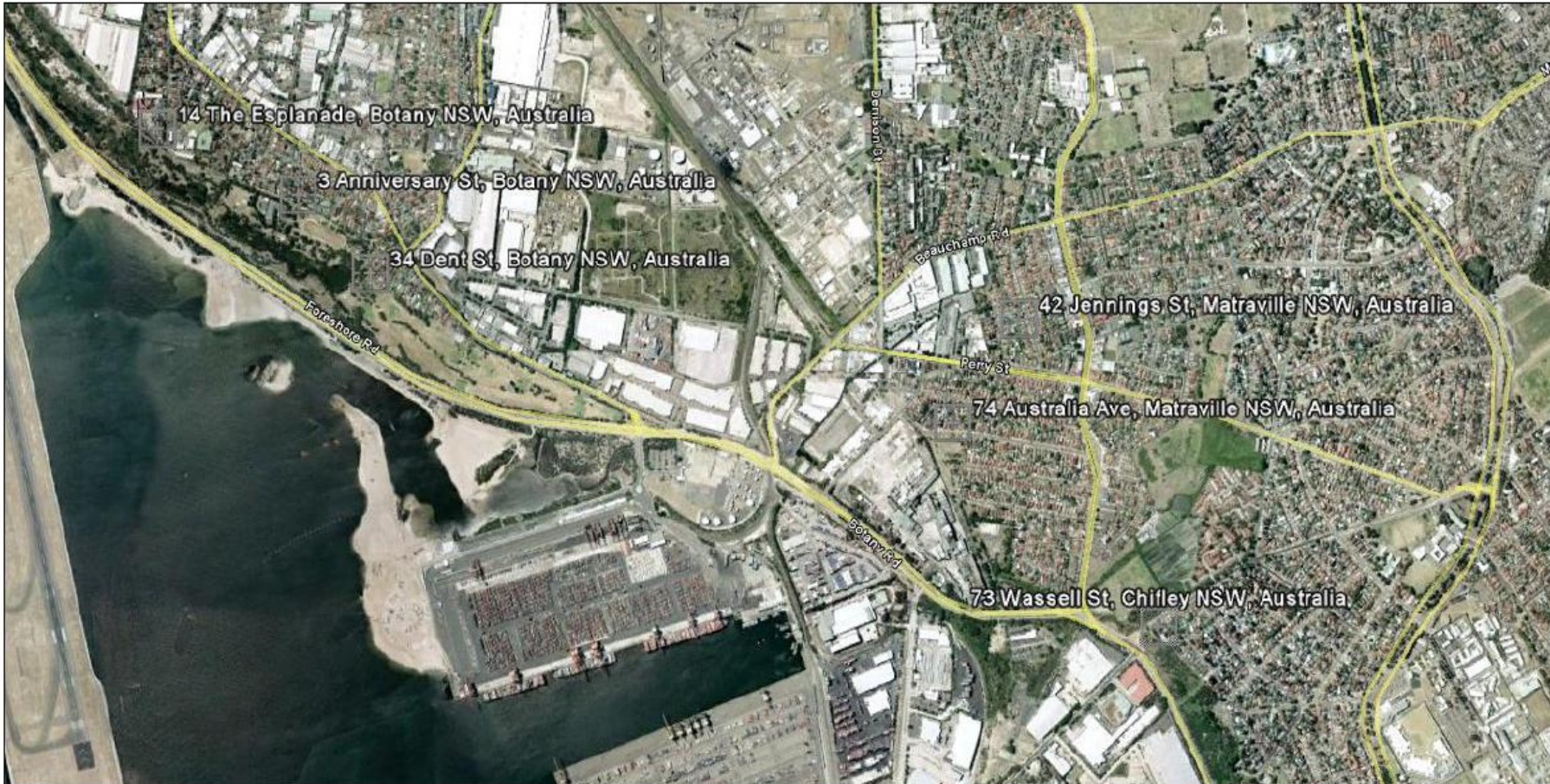
Day Monitoring

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 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	9/05/2013	11:00	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant Pavement Works	Standard Day	Fine	No	49	54	49	54	51	46	-5	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	9/05/2013	11:55	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	47	52	53	61	56	48	1	Local traffic noise, aircraft noise, park noise. Terminal 3 construction inaudible
Location 3 - Jennings Street	42 Jenning St	9/05/2013	12:30	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	40	45	63	74	66	48	18	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4- North of Golf Course	3 Anniversary Rd	9/05/2013	11:25	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	57	62	49	53	51	47	-13	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5- Australia Avenue	74 Australia Ave	9/05/2013	13:35	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	42	47	51	63	54	43	4	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6- Military Road	73 Wassell St	9/05/2013	13:00	Ground improvement works Drainage works Material deliveries CFA Piling Works Batch Plant	Standard Day	Fine	No	46	51	51	58	53	47	0	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

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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 – May 13 Terminal 3 Water Monitoring Results

Dewatering Location	Date	AM/PM	Meets Criteria	Discharge Location	Oil and Grease (visual)	Horiba Water Monitor	
						pH	Turbidity
SC12 - SQID	1/05/2013	AM	Yes	Adjacent Estuary	None	7.27	2.4
SC12 - SQID	1/05/2013	PM	Yes	Adjacent Estuary	None	7.25	2.6
SC12 - SQID	2/05/2013	AM	Yes	Adjacent Estuary	None	7.42	4.2
SC12 - SQID	2/05/2013	PM	Yes	Adjacent Estuary	None	7.32	4.8
SC12 - SQID	3/05/2013	AM	Yes	Adjacent Estuary	None	7.52	3.4
SC12 - SQID	3/05/2013	PM	Yes	Adjacent Estuary	None	7.24	3.2
SC12 - SQID	6/05/2013	AM	Yes	Adjacent Estuary	None	7.22	6.2
SC12 - SQID	6/05/2013	PM	Yes	Adjacent Estuary	None	7.32	4.3
SC12 - SQID	7/05/2013	AM	Yes	Adjacent Estuary	None	7.54	4.4
SC12 - SQID	7/05/2013	PM	Yes	Adjacent Estuary	None	7.43	6.4
SC12 - SQID	8/05/2013	AM	Yes	Adjacent Estuary	None	7.16	2.3
SC12 - SQID	8/05/2013	PM	Yes	Adjacent Estuary	None	7.52	2.1
SC12 - SQID	9/05/2013	AM	Yes	Adjacent Estuary	None	7.52	8.4
SC12 - SQID	9/05/2013	PM	Yes	Adjacent Estuary	None	7.65	5.4
SC12 - SQID	10/05/2013	AM	Yes	Adjacent Estuary	None	7.58	6.6
SC12 - SQID	10/05/2013	PM	Yes	Adjacent Estuary	None	7.54	2.4
SC12 - SQID	13/05/2013	AM	Yes	Adjacent Estuary	None	7.38	4.5
SC12 - SQID	13/05/2013	PM	Yes	Adjacent Estuary	None	7.36	6.6
SC12 - SQID	14/05/2013	AM	Yes	Adjacent Estuary	None	7.42	5.4
SC12 - SQID	14/05/2013	PM	Yes	Adjacent Estuary	None	7.40	5.2
SC12 - SQID	15/05/2013	AM	Yes	Adjacent Estuary	None	7.38	4.9
Estuary	1/05/2013	PM	N/A	N/A	No	7.69	1.6
Estuary	8/05/2013	PM	N/A	N/A	No	7.73	1.2
SC12a	14/05/2013	AM	Yes	Adjacent Estuary	None	7.35	4.8
SC12a	14/05/2013	PM	Yes	Adjacent Estuary	None	7.26	6.1
SC12a	15/05/2013	AM	Yes	Adjacent Estuary	None	7.31	8.3
SC12a	15/05/2013	PM	Yes	Adjacent Estuary	None	7.56	0.6
SC12a	16/05/2013	AM	Yes	Adjacent Estuary	None	7.63	0.3
SC12a	16/05/2013	PM	Yes	Adjacent Estuary	None	7.56	0.5
SC12a	17/05/2013	AM	Yes	Adjacent Estuary	None	7.68	1.4
SC12a	17/05/2013	PM	Yes	Adjacent Estuary	None	7.62	1.8
SC12a	20/05/2013	AM	Yes	Adjacent Estuary	None	7.54	3.5
SC12a	20/05/2013	PM	Yes	Adjacent Estuary	None	7.55	2.2
SC12a	21/05/2013	AM	Yes	Adjacent Estuary	None	7.6	6.6
SC12a	21/05/2013	PM	Yes	Adjacent Estuary	None	7.47	4.3
SC12a	22/05/2013	AM	Yes	Adjacent Estuary	None	7.62	4.6
SC12a	22/05/2013	PM	Yes	Adjacent Estuary	None	7.61	4.2
SC12a	23/05/2013	AM	Yes	Adjacent Estuary	None	7.58	3.9
SC12a	23/05/2013	PM	Yes	Adjacent Estuary	None	7.63	6.3
SC12a	24/05/2013	AM	Yes	Adjacent Estuary	None	7.59	5.1
SC12a	24/05/2013	PM	Yes	Adjacent Estuary	None	7.48	4.8
SC12a	27/05/2013	AM	Yes	Adjacent Estuary	None	7.46	5.2
SC12a	27/05/2013	PM	Yes	Adjacent Estuary	None	7.65	3.1
SC12a	28/05/2013	AM	Yes	Adjacent Estuary	None	7.63	8.2
SC12a	28/05/2013	PM	Yes	Adjacent Estuary	None	7.63	0.5

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SC12a	29/05/2013	AM	Yes	Adjacent Estuary	None	7.61	1.2
SC12a	29/05/2013	PM	Yes	Adjacent Estuary	None	7.53	2.3
SC12a	30/05/2013	AM	Yes	Adjacent Estuary	None	7.56	1.8
SC12a	30/05/2013	PM	Yes	Adjacent Estuary	None	7.61	0.4
SC12a	31/05/2013	AM	Yes	Adjacent Estuary	None	7.59	0.3
SC12a	31/05/2013	PM	Yes	Adjacent Estuary	None	7.58	1.3
Estuary	15/05/2013	PM	N/A	N/A	No	7.78	0.4
Estuary	22/05/2013	AM	N/A	N/A	No	7.76	0.6
Estuary	29/05/2013	AM	N/A	N/A	No	7.72	1.2



Appendix 4 – Terminal 3 Shorebird Observations May 2013

Date	Bird Type	Location	Reported by	Action
10/05/2013	4 x Red Capped Plover	Future Phase Area 3A	J Ambler	Birds were outside active worksite and at no risk. No action required.
29/05/2013	1 x Bar Tailed Godwit	Upper Estuary adjacent SC15	J Ambler	Birds were outside active worksite and at no risk. No action required.