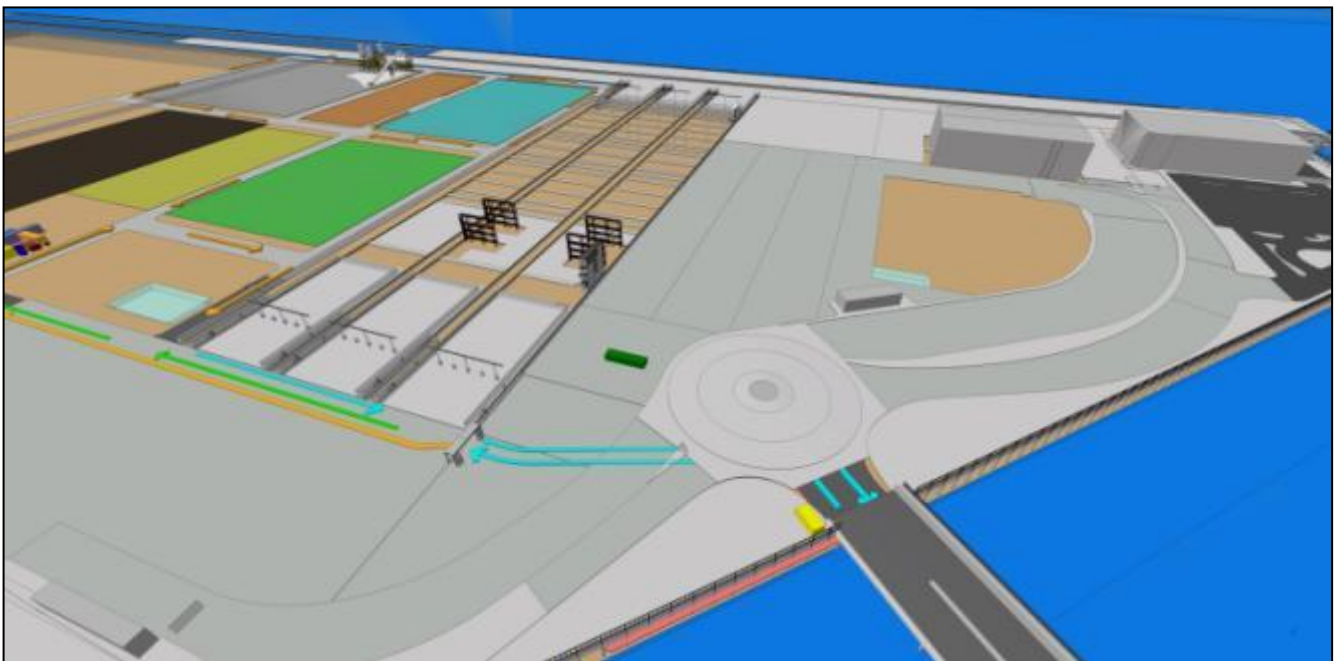


# **Sydney Port Botany Terminal 3**

## **Monthly Environmental Monitoring Report**

### **August 2013**



**SPBT3 Monthly Environmental Report – August 13**

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

**Controlled Copy no.:** 1

**Revision History**

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## SPBT3 Monthly Environmental Report – August 13

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## SPBT3 Monthly Environmental Report – August 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 August 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 August 2013 have yet to be received from our laboratory. July 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.

One exceedance of project criteria was observed during August 2013. The project real-time PM<sub>10</sub> monitor located at Botany Golf Course returned readings of 56µg/m<sup>3</sup> on 30/08/13, which is in excess of the project daily average criteria of 50µg/m<sup>3</sup>. It is noted, however, that the wind direction was predominately carrying from the north and north-east over the whole day as indicated on the Bureau of Meteorology records. As Botany Golf Course is located to the north-east of the Terminal 3 site, it is considered that these readings are not representative of the construction works taking place.

Surrounding construction contractors have been contacted regarding the above results, with limited works undertaken due the public holiday and wet weather conditions. It is likely that these results could be generated with lawn and landscaping works undertaken in close proximity to the real-time monitor at Botany Golf Course. No dust or emissions have been observed leaving the Port Botany expansion site and no complaints regarding air quality or dust have been received by the project. No observations of dust leaving the Terminal 3 site were recorded.

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 August 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.

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### 3.1 Day time noise monitoring

Noise measurements were undertaken on 16<sup>th</sup> August 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 two 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 August 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

Few shorebird sightings are being received across the Project, with all sightings being restricted to the adjacent Penrhyn Estuary. Shorebird observations from the Terminal 3 site during August 2013 are outlined in Appendix 4.

### 6.0 Environmental Inspections and Audits

Weekly environmental inspections have been undertaken during August 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 Report – August 13

### Appendix 1 – Dust Monitoring Results

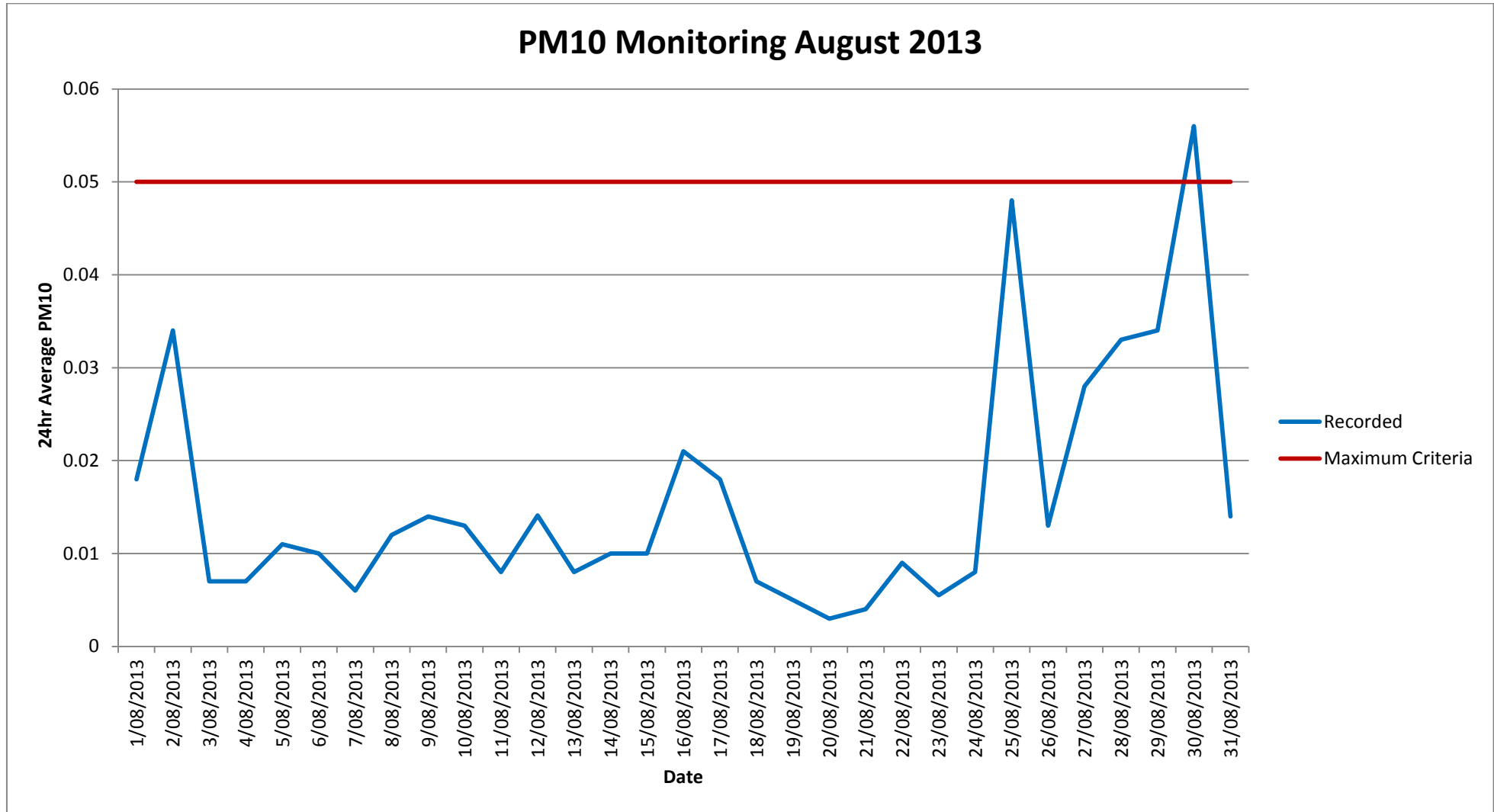
#### Dust Deposition Gauge Results - July 2013

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	0.9	0.7	2.2	1.6	3.8	EN1302719-003	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	1.0	0.7	1.4	2.1	EN1302719-001	4	Within EPA guideline levels	
3	74 Australia Ave	0.6	0.8	<0.1	1.4	1.4	EN1302719-002	4	Within EPA guideline levels	
4	Botany Golf Course	0.9	0.3	3.9	1.2	5.1	EN1302719-004	4	Within EPA guideline levels	

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

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## PM<sub>10</sub> Monitoring Results – August 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 <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	16/08/2013	10:30	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	49	54	51	58	55	46	-3	Noise from Foreshore Rd traffic, aircraft noise, local traffic, park noise. Terminal 3 construction inaudible
Location 2 - Dent Street	34 Dent St	16/08/2013	11:20	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	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 Jenning St	16/08/2013	12:05	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	40	45	60	73	60	48	15	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 4- North of Golf Course	3 Anniversary Rd	16/08/2013	10:50	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	57	62	53	62	55	49	-9	Local traffic noise, aircraft noise. Terminal 3 construction inaudible
Location 5- Australia Avenue	74 Australia Ave	16/08/2013	13:00	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	42	47	52	57	52	44	5	Local/distant traffic noise, aircraft noise, local industry. Terminal 3 construction inaudible
Location 6- Military Road	73 Wassell St	16/08/2013	12:35	Ground improvement works Drainage works Material deliveries Batch Plant Pavement Works	Standard Day	Fine	No	46	51	48	54	50	44	-3	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 – August 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-Aug	AM	Yes	Bay - SC07	No	7.2	1.2
SC07	1-Aug	PM	Yes	Bay - SC07	No	7.3	1.3
SC07	2-Aug	AM	Yes	Bay - SC07	No	7.3	2.4
SC07	2-Aug	PM	Yes	Bay - SC07	No	7.2	1.8
SC07	5-Aug	AM	Yes	Bay - SC07	No	7.1	0.6
SC07	5-Aug	PM	Yes	Bay - SC07	No	7.5	0.5
SC07	6-Aug	AM	Yes	Bay - SC07	No	7.1	1.3
SC07	6-Aug	PM	Yes	Bay - SC07	No	7.4	1.1
SC07	7-Aug	AM	Yes	Bay - SC07	No	6.9	2.5
SC07	7-Aug	PM	Yes	Bay - SC07	No	7.0	2.4
SC07	8-Aug	AM	Yes	Bay - SC07	No	7.5	2.1
SC07	8-Aug	PM	Yes	Bay - SC07	No	6.8	3.6
SC07	9-Aug	AM	Yes	Bay - SC07	No	6.9	2.4
SC07	9-Aug	PM	Yes	Bay - SC07	No	6.9	2.6
SC07	12-Aug	AM	Yes	Bay - SC07	No	7.2	1.8
SC07	12-Aug	PM	Yes	Bay - SC07	No	7.3	0.6
SC07	13-Aug	AM	Yes	Bay - SC07	No	7.6	0.4
SC07	13-Aug	PM	Yes	Bay - SC07	No	7.0	1.7
SC07	14-Aug	AM	Yes	Bay - SC07	No	7.1	1.3
SC07	14-Aug	PM	Yes	Bay - SC07	No	7.0	1.0
SC07	15-Aug	AM	Yes	Bay - SC07	No	6.8	2.6
SC07	15-Aug	PM	Yes	Bay - SC07	No	7.2	5.3
SC07	16-Aug	AM	Yes	Bay - SC07	No	7.3	5.4
SC07	16-Aug	PM	Yes	Bay - SC07	No	7.2	3.8
SC07	19-Aug	AM	Yes	Bay - SC07	No	7.1	2.9
SC07	19-Aug	PM	Yes	Bay - SC07	No	7.1	3.0
SC07	20-Aug	AM	Yes	Bay - SC07	No	6.9	2.6
SC07	20-Aug	PM	Yes	Bay - SC07	No	7.5	2.8
SC07	21-Aug	AM	Yes	Bay - SC07	No	7.4	2.7
SC07	21-Aug	PM	Yes	Bay - SC07	No	7.3	5.6
SC07	22-Aug	AM	Yes	Bay - SC07	No	7.1	5.1
SC07	22-Aug	PM	Yes	Bay - SC07	No	7.5	3.6
SC07	23-Aug	AM	Yes	Bay - SC07	No	7.5	4.8
SC07	23-Aug	PM	Yes	Bay - SC07	No	6.9	8.1
SC07	26-Aug	AM	Yes	Bay - SC07	No	6.8	1.6
SC07	26-Aug	PM	Yes	Bay - SC07	No	7.1	3.4
SC07	27-Aug	AM	Yes	Bay - SC07	No	7.4	1.8
SC07	27-Aug	PM	Yes	Bay - SC07	No	7.2	1.3
SC07	28-Aug	AM	Yes	Bay - SC07	No	7.3	2.5
SC07	28-Aug	PM	Yes	Bay - SC07	No	6.8	2.8
SC07	29-Aug	AM	Yes	Bay - SC07	No	6.9	2.4
SC07	29-Aug	PM	Yes	Bay - SC07	No	6.9	1.9
SC07	30-Aug	AM	Yes	Bay - SC07	No	7.2	4.8
SC07	30-Aug	PM	Yes	Bay - SC07	No	7	1.8

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Bay - SC07	1-Aug	AM	N/A	N/A	No	7.4	0.6
Bay - SC07	5-Aug	AM	N/A	N/A	No	7.5	0.8
Bay - SC07	12-Aug	AM	N/A	N/A	No	7.5	1.2
Bay - SC07	20-Aug	AM	N/A	N/A	No	7.2	1.8
Bay - SC07	26-Aug	AM	N/A	N/A	No	7.2	0.8
SC14a	2-Aug	AM	Yes	Estuary SC14	No	7.2	2.9
SC14a	2-Aug	PM	Yes	Estuary SC14	No	7.3	0.8
SC14a	5-Aug	AM	Yes	Estuary SC14	No	7.8	0.9
SC14a	5-Aug	PM	Yes	Estuary SC14	No	7.1	1.3
SC14a	6-Aug	AM	Yes	Estuary SC14	No	6.8	1.5
SC14a	6-Aug	PM	Yes	Estuary SC14	No	6.9	2.4
SC14a	7-Aug	AM	Yes	Estuary SC14	No	6.8	2.6
SC14a	7-Aug	PM	Yes	Estuary SC14	No	7.0	4.1
SC14a	8-Aug	AM	Yes	Estuary SC14	No	7.1	3.8
SC14a	8-Aug	PM	Yes	Estuary SC14	No	7.4	6.6
SC14a	9-Aug	AM	Yes	Estuary SC14	No	7.2	5.3
SC14a	9-Aug	PM	Yes	Estuary SC14	No	7.0	5.2
SC14a	12-Aug	AM	Yes	Estuary SC14	No	7.3	4.8
SC14a	12-Aug	PM	Yes	Estuary SC14	No	7.0	4.6
SC14a	13-Aug	AM	Yes	Estuary SC14	No	6.9	6.8
SC14a	13-Aug	PM	Yes	Estuary SC14	No	7.5	6.2
SC14a	14-Aug	AM	Yes	Estuary SC14	No	7.6	5.4
SC14a	14-Aug	PM	Yes	Estuary SC14	No	7.0	5.8
SC14a	15-Aug	AM	Yes	Estuary SC14	No	7.1	6.6
SC14a	15-Aug	PM	Yes	Estuary SC14	No	7.3	5.4
SC14a	16-Aug	AM	Yes	Estuary SC14	No	6.7	5.3
SC14a	16-Aug	PM	Yes	Estuary SC14	No	6.8	5.8
SC14a	19-Aug	AM	Yes	Estuary SC14	No	6.7	2.6
SC14a	19-Aug	PM	Yes	Estuary SC14	No	7.2	2.8
SC14a	20-Aug	AM	Yes	Estuary SC14	No	7.3	0.6
Estuary SC14	2-Aug	AM	N/A	N/A	No	7.2	1.2
Estuary SC14	6-Aug	AM	N/A	N/A	No	7.1	0.9
Estuary SC14	14-Aug	AM	N/A	N/A	No	7.2	1.0
SC14b	2-Aug	AM	Yes	Estuary SC14	No	6.8	1.8
SC14b	2-Aug	PM	Yes	Estuary SC14	No	6.8	1.6
SC14b	5-Aug	AM	Yes	Estuary SC14	No	6.9	2.8
SC14b	5-Aug	PM	Yes	Estuary SC14	No	6.8	2.6
SC14b	6-Aug	AM	Yes	Estuary SC14	No	7.2	2.3
SC14b	6-Aug	PM	Yes	Estuary SC14	No	7.3	5.4
SC14b	7-Aug	AM	Yes	Estuary SC14	No	6.9	5.3
SC14b	7-Aug	PM	Yes	Estuary SC14	No	7.0	2.8
SC14b	8-Aug	AM	Yes	Estuary SC14	No	7.1	2.4
SC14b	8-Aug	PM	Yes	Estuary SC14	No	7.2	1.6
SC14b	9-Aug	AM	Yes	Estuary SC14	No	7.1	1.8
SC14b	9-Aug	PM	Yes	Estuary SC14	No	7.1	1.8
SC14b	12-Aug	AM	Yes	Estuary SC14	No	7.0	1.4

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SC14b	12-Aug	PM	Yes	Estuary SC14	No	6.9	2.6
SC14b	13-Aug	AM	Yes	Estuary SC14	No	7.0	0.8
SC14b	13-Aug	PM	Yes	Estuary SC14	No	7.3	0.7
SC14b	14-Aug	AM	Yes	Estuary SC14	No	7.1	1.2
SC14b	14-Aug	PM	Yes	Estuary SC14	No	7.2	2.3
SC14b	15-Aug	AM	Yes	Estuary SC14	No	6.8	3
SC14b	15-Aug	PM	Yes	Estuary SC14	No	7.4	3.2
SC14b	16-Aug	AM	Yes	Estuary SC14	No	7.5	4.5
SC14b	16-Aug	PM	Yes	Estuary SC14	No	7.4	2.6
SC14b	19-Aug	AM	Yes	Estuary SC14	No	7.2	6.6
SC14b	19-Aug	PM	Yes	Estuary SC14	No	7.0	4.8
SC14b	20-Aug	AM	Yes	Estuary SC14	No	7.0	4.2
SC14b	20-Aug	PM	Yes	Estuary SC14	No	7.2	2.5
SC14b	21-Aug	AM	Yes	Estuary SC14	No	7.3	3.6
SC14b	21-Aug	PM	Yes	Estuary SC14	No	7.0	3.3
SC14b	22-Aug	AM	Yes	Estuary SC14	No	7.1	1.9
SC14b	22-Aug	PM	Yes	Estuary SC14	No	7.0	5.8
SC14b	23-Aug	AM	Yes	Estuary SC14	No	6.8	5.4
SC14b	23-Aug	PM	Yes	Estuary SC14	No	6.9	4.6
SC14b	26-Aug	AM	Yes	Estuary SC14	No	7.2	2.8
SC14b	26-Aug	PM	Yes	Estuary SC14	No	7.2	1.1
SC14b	27-Aug	AM	Yes	Estuary SC14	No	7.1	6.1
SC14b	27-Aug	PM	Yes	Estuary SC14	No	7.3	2.9
SC14b	28-Aug	AM	Yes	Estuary SC14	No	7.2	3.4
SC14b	28-Aug	PM	Yes	Estuary SC14	No	7.1	2.1
SC14b	29-Aug	AM	Yes	Estuary SC14	No	7.3	2.6
SC14b	29-Aug	PM	Yes	Estuary SC14	No	7.3	5.1
SC14b	30-Aug	AM	Yes	Estuary SC14	No	7.1	2.8
SC14b	30-Aug	PM	Yes	Estuary SC14	No	6.9	0.6
Estuary SC14	2-Aug	AM	N/A	N/A	No	7.2	1.8
Estuary SC14	6-Aug	AM	N/A	N/A	No	7.1	2.0
Estuary SC14	14-Aug	AM	N/A	N/A	No	7.0	1.2
Estuary SC14	20-Aug	AM	N/A	N/A	No	7.0	0.8
Estuary SC14	26-Aug	AM	N/A	N/A	No	7.3	0.6
SC14c	30-Aug	PM	Yes	Estuary SC14	No	7.0	6.2
Estuary SC14	30-Aug	PM	N/A	N/A	No	7.4	0.8

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

Date	Bird Type	Location	Reported by	Action
30/08/13	Pied Oyster Catcher	Roosting Island – Penrhyn Estuary	J Ambler	No action required, not within work area, no threat to birds apparent