

## August 2012 Air Quality Summary Report

**Licence Number:** 13336

**Licensee:** Barangaroo Delivery Authority

**Licensee Address:** Lvl 21, 201 Kent Street, Sydney

**Sampling period:** 1-31 August 2012

**Date provided to Licensee:** 28 September 2012

**Date published:** 4 October 2012

# August 2012 Air Quality Summary Report

## Barangaroo South

This report has been compiled to summarise results of air quality monitoring at Barangaroo South in August 2012 in accordance with [EPL number 13336](#). This data is for samples taken from 1 to 31 August 2012. The data was provided to the Barangaroo Delivery Authority (the Licencee) on 20 September 2012.

Lend Lease conducts continuous air quality monitoring at Barangaroo South to measure air quality and assist the construction team implement appropriate environmental controls on site.

Air quality monitoring is carried out in accordance with all relevant authority and statutory requirements. Monitoring parameters include lead, metallic compounds, polycyclic aromatic hydrocarbons, total solid particles, particulate matter less than 10 microns (PM10), and volatile organic compounds.

## Location of ambient air quality monitors

Ambient air quality monitoring devices are located at four locations around the site as shown below:



*Approximate locations of air monitoring equipment*

These locations correspond to the following licenced monitoring locations:

Northern:	EPL Point 5
Eastern:	EPL Point 8
Southern:	EPL Point 13
Water Treatment Plant Air Quality:	EPL Point 17

Note that EPL Points 14, 15, 16 have not been monitored to date, as they are associated with SISCO remediation works that have not commenced.

## August monitoring results – air quality

During the month of August, there were no exceedences of air quality guidelines. The works onsite were undertaken in accordance with relevant management plans. General controls implemented during this reporting period included:

- Water cart spraying and road sweeping.
- Covering loads and stockpiles as appropriate.
- Housekeeping to keep exposed areas to a minimum.
- Ongoing monitoring of the air and odour quality.

The total suspended particles annual rolling average is below the annual goal and is trending downward.

## Metallic Compounds (including Lead)

Date	Monitoring Location	Concentration (ug/m <sup>3</sup> )							
		Arsenic	Cadmium	Chromium	Copper	Nickel	Zinc	Lead	Mercury
2 Aug 2012	EPL Point 5	0.0008	<0.0003	0.0041	0.0243	0.0050	0.0079	0.0537	<0.0005
	EPL Point 8	0.0010	<0.0003	0.0075	0.0363	0.0048	0.0130	0.0946	<0.0005
	EPL Point 13	0.0006	<0.0003	0.0036	0.0202	0.0026	0.0057	0.0433	<0.0005
6 Aug 2012	EPL Point 5	0.0004	<0.0003	0.0046	0.0153	0.0038	0.0067	0.0477	<0.0005
	EPL Point 8	0.0006	<0.0003	0.0058	0.0269	0.0040	0.0094	0.0676	<0.0005
	EPL Point 13	0.0005	<0.0003	0.0040	0.0121	0.0029	0.0078	0.0446	<0.0005
12 Aug 2012	EPL Point 5	<0.0003	<0.0003	0.0050	0.0127	0.0025	0.0100	0.0548	<0.0005
	EPL Point 8	0.0004	<0.0003	0.0032	0.0143	0.0015	0.0118	0.0384	<0.0005
	EPL Point 13	<0.0003	<0.0003	0.0032	0.0103	0.0015	0.0096	0.0306	<0.0005
18 Aug 2012	EPL Point 5	0.0005	<0.0003	0.0037	0.0090	0.0013	0.0042	0.0357	<0.0005
	EPL Point 8	0.0006	<0.0003	0.0041	0.0177	0.0018	0.0077	0.0588	<0.0005
	EPL Point 13	0.0004	<0.0003	0.0034	0.0132	0.0014	0.0049	0.0359	<0.0005
24 Aug 2012	EPL Point 5	0.0004	<0.0003	0.0032	0.0106	0.0017	0.0065	0.0354	<0.0005
	EPL Point 8	0.0007	<0.0003	0.0042	0.0217	0.0020	0.0075	0.0525	<0.0005
	EPL Point 13	0.0004	<0.0003	0.0036	0.0122	0.0019	0.0056	0.0344	<0.0005
30 Aug 2012	EPL Point 5	0.0016	<0.0003	0.0036	0.0262	0.0033	0.0167	0.0473	<0.0005
	EPL Point 8	0.0010	<0.0003	0.0057	0.0350	0.0048	0.0120	0.0889	<0.0005
	EPL Point 13	0.0007	0.0004	0.0036	0.0194	0.0033	0.0083	0.0457	<0.0005
EPL Point 5 Annual Avg		-	-	-	-	-	-	0.014	-
EPL Point 8 Annual Avg		-	-	-	-	-	-	0.008	-
EPL Point 13 Annual Avg		-	-	-	-	-	-	0.006	-
<b>1 Hour Average Criteria (indicative purposes)</b>		<b>0.09</b>	<b>0.018</b>	<b>0.09</b>	<b>18</b>	<b>0.18</b>	<b>90</b>	-	<b>0.18</b>
<b># of 1 hr Exceedences</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	-	<b>0</b>
<b>Annual Average Criteria</b>		-	-	-	-	-	-	<b>0.5</b>	-

## Total Solid Particles (TSP)

Date	EPL Point 5 (µg/m <sup>3</sup> )	EPL Point 8 (µg/m <sup>3</sup> )	EPL Point 13 (µg/m <sup>3</sup> )
2 August 2012	34.7	53.2	24.1
6 August 2012	56.3	66.6	53.0
12 August 2012	80.0	46.9	43.8
18 August 2012	26.9	39.3	27.5
24 August 2012	42.8	44.5	39.1
30 August 2012	53.2	85.4	53.9
<b>Annual Average Criteria</b>	<b>90</b>	<b>90</b>	<b>90</b>
<b>Rolling Annual Average</b>	45.2	51.1	38.7
<b>Number of Exceedences</b>	<b>0</b>	<b>0</b>	<b>0</b>

Environment Protection Licence number: 13336

Licencee: Barangaroo Delivery Authority, Level 21, AON/Maritime Trade Towers, 201 Kent Street, Sydney, 2000

These results have been made available in accordance with Environment Protection Authority requirements for publishing pollution monitoring data

PM10

Monitoring Parameter	EPL Point 5	EPL Point 8	EPL Point 13
Average (ug/m <sup>3</sup> )	19.7	19.4	20.4
Minimum (24hr) (ug/m <sup>3</sup> )	10.0	5.4	9.5
Maximum (24hr) (ug/m <sup>3</sup> )	38.7	36.5	42.5
<b>24hr EPA Criteria (ug/m<sup>3</sup>)</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Number of Exceedences (calendar 24 hr)</b>	<b>0</b>	<b>0</b>	<b>0</b>

Polycyclic Aromatic Hydrocarbons (PAH)

Date	EPL Point 5 (ng/m <sup>3</sup> )		EPL Point 8 (ng/m <sup>3</sup> )		EPL Point 13 (ng/m <sup>3</sup> )	
	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene
2 August 2012	1.71	0.31	2.56	0.31	1.23	0.24
6 August 2012	0.22	<0.20	0.84	<0.20	<0.20	<0.20
12 August 2012	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
18 August 2012	<0.20	<0.20	0.24	<0.20	<0.20	<0.20
24 August 2012	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
30 August 2012	0.61	<0.20	1.97	0.22	0.66	<0.20
<b>1 Hour Avg Criteria (PAHs as BaP) (ng/m<sup>3</sup>)</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>
<b>Number of Exceedences</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Volatile Organic Compounds (VOCs) – Ambient & WTP discharge

Monitoring Parameter	EPL Point 5	EPL Point 8	EPL Point 13	EPL Point 17
<b>Monitoring Type</b>	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>	<b>WTP emission</b>
Average (ppm)	0.1	0.1	0.3	0.0
Minimum (ppm)	0.0	0.0	0.0	0.0
Maximum (ppm)	0.3	1.1	1.3	0.7
<b>Limit</b>	<b>No licence limit, monitoring requirement only</b>			<b>20 mg/m<sup>3</sup> (10.2ppm)</b>
<b>Number of Exceedences</b>	N/A	N/A	N/A	<b>0</b>

Frequency

Parameter	Frequency	EPL Point 5	EPL Point 8	EPL Point 13
TSP, PAHs, metallic compounds	Monitoring frequency required by licence	24 Hours every 6 days		
	No. of samples required by licence	5	5	5
	No. of samples collected & analysed	6	6	6
PM10, VOCs	Monitoring frequency required by licence	Continuous		
	No. of samples required by licence	Continuous	Continuous	Continuous
	No. of samples collected & analysed	Continuous	Continuous	Continuous