

May 2012 Air Quality Summary Report

Licence Number: 13336

Licensee: Barangaroo Delivery Authority

Licensee Address: Lvl 21, 201 Kent Street, Sydney

Sampling period: 1-31 May 2012

Date provided to Licensee: 29 June 2012

Date published: 6 July 2012

May 2012 Air Quality Summary Report

Barangaroo South

This report has been compiled to summarise results of air quality monitoring at Barangaroo South in May 2012 in accordance with [EPL number 13336](#). This data is for samples taken from 1 to 31 May 2012. The data was provided to the Barangaroo Delivery Authority (the Licencee) on 29 June 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 three 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

Note that EPL Points 14, 15, 16 & 17 have not been monitored to date, as they are associated with SISCO remediation works or water treatment works that have not commenced.

May monitoring results – air quality

During May, there were three exceedences of particulate matter criteria - at EPL Point 5 on 5 May, and EPL Point 13 on 9 and 10 May. Weather conditions on 9 and 10 May were conducive to dust creation with warm temperatures, no rain and strong wind gusts. 5 May was much cooler but with higher maximum wind gusts. 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.

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

Metallic Compounds (including Lead)

Date	Monitoring Location	Concentration (ug/m3)							
		Arsenic	Cadmium	Chromium	Copper	Nickel	Zinc	Lead	Mercury
2 May 2012	EPL Point 5	0.0011	<0.0003	0.0014	0.0217	0.0048	0.0388	0.0068	<0.0005
	EPL Point 8	0.0007	<0.0003	<0.0003	0.0216	0.002	0.0424	0.0058	<0.0005
	EPL Point 13	0.0007	<0.0003	<0.0003	0.0161	0.0016	0.0333	0.004	<0.0005
8 May 2012	EPL Point 5	0.0019	<0.0003	0.0054	0.0328	0.0035	0.0914	0.012	<0.0005
	EPL Point 8	0.0019	<0.0003	0.0066	0.0337	0.0038	0.252	0.0219	<0.0005
	EPL Point 13	0.0016	<0.0003	0.005	0.0265	0.003	0.0794	0.0087	<0.0005
14 May 2012	EPL Point 5	0.0009	<0.0003	0.0074	0.0317	0.0033	0.0937	0.0183	<0.0005
	EPL Point 8	0.0008	<0.0003	0.006	0.0268	0.0027	0.0909	0.0144	<0.0005
	EPL Point 13	0.0008	<0.0003	0.0057	0.0233	0.002	0.0663	0.0114	<0.0005
20 May 2012	EPL Point 5	0.0025	<0.0003	0.0032	0.0179	0.0018	0.0384	0.0126	<0.0005
	EPL Point 8	0.0026	<0.0003	0.0042	0.0259	0.0021	0.0529	0.0142	<0.0005
	EPL Point 13	0.0025	<0.0003	0.0034	0.0192	0.0016	0.0334	0.0124	<0.0005
26 May 2012	EPL Point 5	0.0004	<0.0003	0.0031	0.0287	0.0015	0.0341	0.0034	<0.0005
	EPL Point 8	0.0005	<0.0003	0.0044	0.0191	0.002	0.0588	0.0058	<0.0005
	EPL Point 13	0.0004	<0.0003	0.0035	0.0109	0.0017	0.0339	0.0026	<0.0005
EPL Point 5 Annual Average		-	-	-	-	-	-	0.0120	-
EPL Point 8 Annual Average		-	-	-	-	-	-	0.0100	-
EPL Point 13 Annual Average		-	-	-	-	-	-	0.0071	-
1 Hour Average Criteria (indicative purposes)		0.09	0.018	0.09	18	0.18	90	-	0.18
# of 1 hr Exceedences		0	0	0	0	0	0	-	0
Annual Average Criteria		-	-	-	-	-	-	0.5	-

Total Solid Particles (TSP)

Date	EPL Point 5 (µg/m3)	EPL Point 8 (µg/m3)	EPL Point 13 (µg/m3)
2 May 2012	47.1	44.8	34.8
8 May 2012	53.9	64.3	50.7
14 May 2012	84.3	70.7	26.9
20 May 2012	35.6	40.4	30.3
26 May 2012	38.4	46.3	32.4
Annual Average Criteria	90	90	90
Rolling Annual Average	46.1	78.3	68.3
Number of Exceedences	0	0	0

PM10

Monitoring Parameter	EPL Point 5	EPL Point 8	EPL Point 13
Average (ug/m ³)	21.4	22.9	24.1
Minimum (24hr) (ug/m ³)	5.6	8.1	13.6
Maximum (24hr) (ug/m ³)	50.3	34.4	56.4
24hr EPA Criteria (ug/m³)	50	50	50
Number of Exceedences (calendar 24 hr)	1	0	2

Polycyclic Aromatic Hydrocarbons (PAH)

Date	EPL Point 5		EPL Point 8		EPL Point 13	
	Total PAH (ng/m ³)	Benzo(a) pyrene (ng/m ³)	Total PAH (ng/m ³)	Benzo(a) pyrene (ng/m ³)	Total PAH (ng/m ³)	Benzo(a) pyrene (ng/m ³)
2 May 2012	<0.20	<0.20	0.24	<0.20	<0.20	<0.20
8 May 2012	0.55	<0.20	0.6	<0.20	0.87	<0.20
14 May 2012	1.79	<0.20	1.67	<0.20	0.67	<0.20
20 May 2012	2.09	0.28	1.7	0.28	1.82	0.31
26 May 2012	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20
1 Hour Avg Criteria (PAHs as BaP) (ng/m³)	400	400	400	400	400	400
Number of Exceedences	0	0	0	0	0	0

Volatile Organic Compounds (VOCs)

Monitoring Parameter	EPL Point 5	EPL Point 8	EPL Point 13
Average (ppm)	0.11	0.03	0.07
Minimum (ppm)	0.05	0.03	0.02
Maximum (ppm)	2.67	0.17	9.26
Limit	No licence limit, monitoring requirement only		
Number of Exceedences	N/A	N/A	N/A

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	5	5	5
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

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