

## March 2013 Air Quality Summary Report

**Licence Number: 13336**

**Licensee: Barangaroo Delivery Authority**

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

**Sampling period: 1-31 March 2013**

**Date provided to Licensee: 24 April 2013**

**Date published: 03 May 2013**

# March 2013 Air Quality Summary Report

## Barangaroo South

This report has been compiled to summarise results of air quality monitoring at Barangaroo South in March 2013 in accordance with [EPL number 13336](#). This data is for samples taken from 1 to 31 March 2013. The data was provided to the Barangaroo Delivery Authority (the Licencee) on 24 April 2013.

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
- SISCO Air Quality: EPL Point 18 (close to EPL Point 8)

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

## Monitoring results

During March 2013 construction activities 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.

### Metallic Compounds (including Lead)

Date	Monitoring Location	Concentration ( $\mu\text{g}/\text{m}^3$ )							
		Arsenic	Cadmium	Chromium	Copper	Nickel	Zinc	Lead	Mercury
4 Mar 2013	EPL point 5	0.00015	0.00015	0.0059	0.0146	0.009	0.048	0.0036	0.00025
	EPL point 8	0.0005	0.00015	0.0091	0.0357	0.0062	0.119	0.009	0.00025
	EPL point 13	0.00015	0.00015	0.0047	0.0143	0.0023	0.0591	0.0043	0.00025
10 Mar 2013	EPL point 5	0.0003	0.00015	0.0035	0.0119	0.0029	0.025	0.0033	0.00025
	EPL point 8	0.00015	0.00015	0.0055	0.0148	0.0034	0.055	0.0041	0.00025
	EPL point 13	0.0003	0.00015	0.0051	0.0157	0.0021	0.0412	0.0038	0.00025
16 Mar 2013	EPL point 5	0.0005	0.00015	0.0037	0.0142	0.0029	0.0383	0.0077	0.00025
	EPL point 8	0.0005	0.00015	0.0038	0.0162	0.0049	0.0532	0.0066	0.00025
	EPL point 13	0.0006	0.00015	0.0040	0.0135	0.0024	0.0363	0.0050	0.00025
22 Mar 2013	EPL point 5	0.00015	0.00015	0.0044	0.0217	0.0019	0.0514	0.005	0.00025
	EPL point 8	0.0004	0.00015	0.0043	0.0305	0.0019	0.074	0.0058	0.00025
	EPL point 13	0.001	0.00015	0.006	0.0283	0.0038	0.0644	0.0088	0.00025
28 Mar 2013	EPL Point 5	0.0004	0.00015	0.0042	0.0246	0.0162	0.0507	0.0048	0.00025
	EPL Point 8	0.0007	0.00015	0.0046	0.0328	0.0236	0.0707	0.0066	0.00025
	EPL Point 13	0.0006	0.00015	0.0052	0.0222	0.0207	0.0435	0.0042	0.00025
EPL Point 5 Annual Avg		-	-	-	-	-	-	0.014	-
EPL Point 8 Annual Avg		-	-	-	-	-	-	0.010	-
EPL Point 13 Annual Avg		-	-	-	-	-	-	0.008	-

### Total Solid Particles (TSP)

Date	EPL Point 5 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 8 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 13 ( $\mu\text{g}/\text{m}^3$ )
4 March 2013	41.3	62.9	35.3
10 March 2013	29.4	56.0	35.3
16 March 2013	71.6	68.0	65.1
22 March 2013	71.8	79.1	137.0
28 March 2013	52.4	57.5	53.0

## PM10

Monitoring Parameter	EPL Point 5 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 8 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 13 ( $\mu\text{g}/\text{m}^3$ )
Average	23.5	25.0	27.3
Minimum (24hr)	11.2	11.0	14.1
Maximum (24hr)	40.7	43.0	49.9

## Polycyclic Aromatic Hydrocarbons (PAH)

Date	EPL Point 5 ( $\text{ng}/\text{m}^3$ )		EPL Point 8 ( $\text{ng}/\text{m}^3$ )		EPL Point 13 ( $\text{ng}/\text{m}^3$ )	
	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene
4 March 2013	0.10	0.10	0.49	0.10	0.10	0.10
10 March 2013	0.10	0.10	0.10	0.10	0.10	0.10
16 March 2013	0.10	0.10	0.10	0.10	0.10	0.10
22 March 2013	0.10	0.10	0.10	0.10	1.35	0.10
28 March 2013	0.10	0.10	0.10	0.10	0.10	0.10

## Volatile Organic Compounds (VOCs) – Ambient & WTP discharge

Monitoring Parameter	EPL Point				
	5	8	13	17	18
Monitoring Type	Ambient	Ambient	Ambient	WTP emission	SISCO emission
Average (ppm)	0.2	0.4	0.1	2.0	0.0
Minimum (ppm)	0.1	0.0	0.0	0.0	0.0
Maximum (ppm)	0.2	3.9	6.8	3.9	2.5
Limit	No licence limit, monitoring requirement only			20 $\text{mg}/\text{m}^3$ (10.2ppm)	
Number of Exceedences	N/A	N/A	N/A	0	0

## Frequency

Parameter	Frequency	EPL Point				
		5	8	13	17	18
TSP, PAHs, metallic compounds	Monitoring frequency required by licence	24 Hours every 6 days			NA	NA
	No. of samples required by licence	5	5	5	NA	NA
	No. of samples collected & analysed	5	5	4	NA	NA
PM10, VOCs	Monitoring frequency required by licence	Continuous				5/day
	No. of samples required by licence	Continuous	Continuous	Continuous	Continuous	5/day
	No. of samples collected & analysed	Continuous	Continuous	Continuous	Continuous	5/day