



August 2017 Air Quality Summary Report

Barangaroo South – Remediation Works

Licence Number: 13336

Licensee: Barangaroo Delivery Authority

Licensee Address: Level 21, 201 Kent Street, Sydney

Sampling period: 1-31 August 2017

Date provided to Licensee: 20 September 2017

Date published: 20 September 2017

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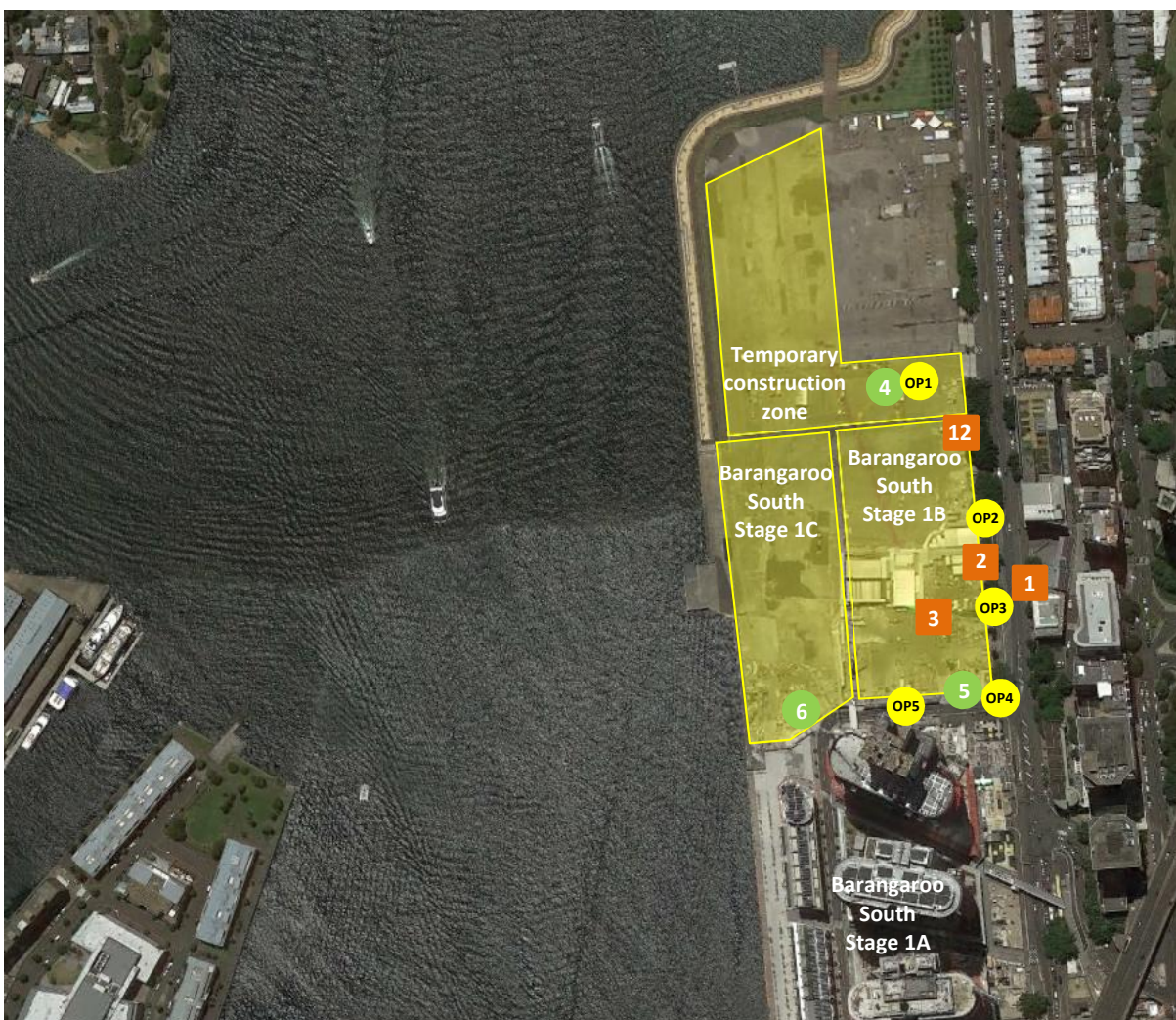
This report has been compiled to summarise results of air quality monitoring at Barangaroo South in August 2017 in accordance with [EPL number 13336](#). This data is for samples taken from 1 to 31 August 2017. The data was provided to the Barangaroo Delivery Authority (the Licencee) on 20 September 2017.

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 particulate matter less than 10 microns (PM10), total solid particles (TSP), metals, polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs).




Air quality monitoring locations

Air quality monitoring locations are located as shown below:



Approximate location of air monitoring equipment

Legend

-  Ambient Air Quality Monitoring – EPL Point
-  Ambient Odour Monitoring Point
-  Enclosure Discharge Point – EPL Point



Monitoring results – ISCO Remediation Trial

During August 2017, there were no works requiring air quality monitoring in accordance with the licence.

Monitoring results – Perimeter Retention Wall works

During August 2017 construction of the perimeter retention wall was undertaken in accordance with relevant management plans. However, none of the monitoring points were operational as the associated emissions points were no longer in use. These included EPL Points 2, 3, and 12.

Monitoring results – Ambient air quality

Monitoring at ambient locations around the construction site was undertaken as per the EPL 13336.

These locations correspond to the following licenced monitoring locations, as shown in the figure above:

- J Northern: EPL Point 4
- J Eastern: EPL Point 5
- J Southern: EPL Point 6

PM10

Monitoring Parameter	EPL Point 4 ($\mu\text{g}/\text{m}^3$)	EPL Point 5 ($\mu\text{g}/\text{m}^3$)	EPL Point 6 ($\mu\text{g}/\text{m}^3$)
Average	22.5	*	3.1
Minimum (24hr)	42.7	*	22.0
Maximum (24hr)	8.4	*	0.1

* PM10 monitor was unable to be operated due to site constraints.

Volatile Organic Compounds (VOCs) – Ambient

Monitoring Parameter	EPL Point 4 (ppm)	EPL Point 5 (ppm)	EPL Point 6 (ppm)
Average	0.00	0.027	0.015
Minimum (24hr)	0	0	0
Maximum (24hr)	0.2	0.2	0.1

Total Solid Particles (TSP)

Monitoring Parameter	EPL Point 4 - TSP ($\mu\text{g}/\text{m}^3$)	EPL Point 6 - TSP ($\mu\text{g}/\text{m}^3$)
06/08/2017	30.48	17.12
12/08/2017	41.66	25.72
18/08/2017	315.61	54.89
24/08/2017	181.58	43.69
30/08/2017	112.51	45.49
Rolling annual average	59.38	44.48
Annual average criteria	90	90



PAHs

Monitoring Parameter	EPL Point 4 (ng/m ³)		EPL Point 6 (ng/m ³)	
	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene
06/08/2017	<3	<2	<3	<2
12/08/2017	<3	<2	<3	<2
18/08/2017	<3	<2	<3	<2
24/08/2017	<3	<2	<3	<2
30/08/2017	<3	<2	<3	<2
1 Hour Average Criteria (indicative purposes) (PAHs as BaP) (ng/m ³)	400			

Metals

Date	Location	Concentration (ng/m ³)												
		Sb	As	Cd	Pb	Hg	Be	Cr	Co	Mn	Ni	Se	Sn	V
06/08/2017	EPL Point 4	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	4.2	<2.6	<13	<5.2	<2.6
	EPL Point 6	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	1.8	<2.6	<13	<5.2	<2.6
12/08/2017	EPL Point 4	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	5.4	<2.6	<13	<5.2	<2.6
	EPL Point 6	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	2.3	<2.6	<13	<5.2	<2.6
18/08/2017	EPL Point 4	<13	<5.2	<1.3	3.3	<0.5	<2.6	3.1	<1.3	39	4	<13	<5.2	4.6
	EPL Point 6	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	4.2	<2.6	<13	<5.2	<2.6
24/08/2017	EPL Point 4	<13	<5.2	<1.3	<2.6	<0.5	<2.6	2.3	<1.3	28	<2.6	<13	<5.2	2.7
	EPL Point 6	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	4.1	<2.6	<13	<5.2	<2.6
30/08/2017	EPL Point 4'	<13	<5.2	<1.3	<2.6	<0.5	<2.6	1.7	<1.3	18	<2.6	<13	<5.2	4.0
	EPL Point 6'	<13	<5.2	<1.3	<2.6	<0.5	<2.6	<1.3	<1.3	5	<2.6	<13	<5.2	2.8
EPL Point 4 Annual Average		-	-	-	22.7	-	-	-	-	-	-	-	-	-
EPL Point 6 Annual Average		-	-	-	22.4	-	-	-	-	-	-	-	-	-
1 Hour Average Criteria (indicative purposes)		9	90	18	-	180	4	90	-	18000	180	-	-	-
No. of 1 hr Exceedances		0	0	0	0	0	0	0	-	0	0	-	-	-
Annual Average Criteria					500									

Frequencies – Ambient Monitoring

Parameter	Frequency	EPL Point 4	EPL Point 5	EPL Point 6
TSP, PAHs, metallic compounds	Monitoring frequency required by licence	24 Hours every 6 days		
	No. of samples required by licence	5	N/A	5
	No. of samples collected & analysed	5	N/A	5
VOCs	Monitoring frequency required by licence	Daily (during work)		
	No. of samples required by licence	24	24	24
	No. of samples collected & analysed	24	24	24
PM10	Monitoring frequency required by licence	Continuous		
	No. of samples required by licence			
	No. of samples collected & analysed			

Note: EPL Point 5 PM10 monitor was unable to be operated due to site constraints.

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