



April 2016 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: 1-30 April 2016

Date provided to Licensee: 24 May 2016

Date published: 30 May 2016

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Barangaroo South – Hickson Road Remediation Trial

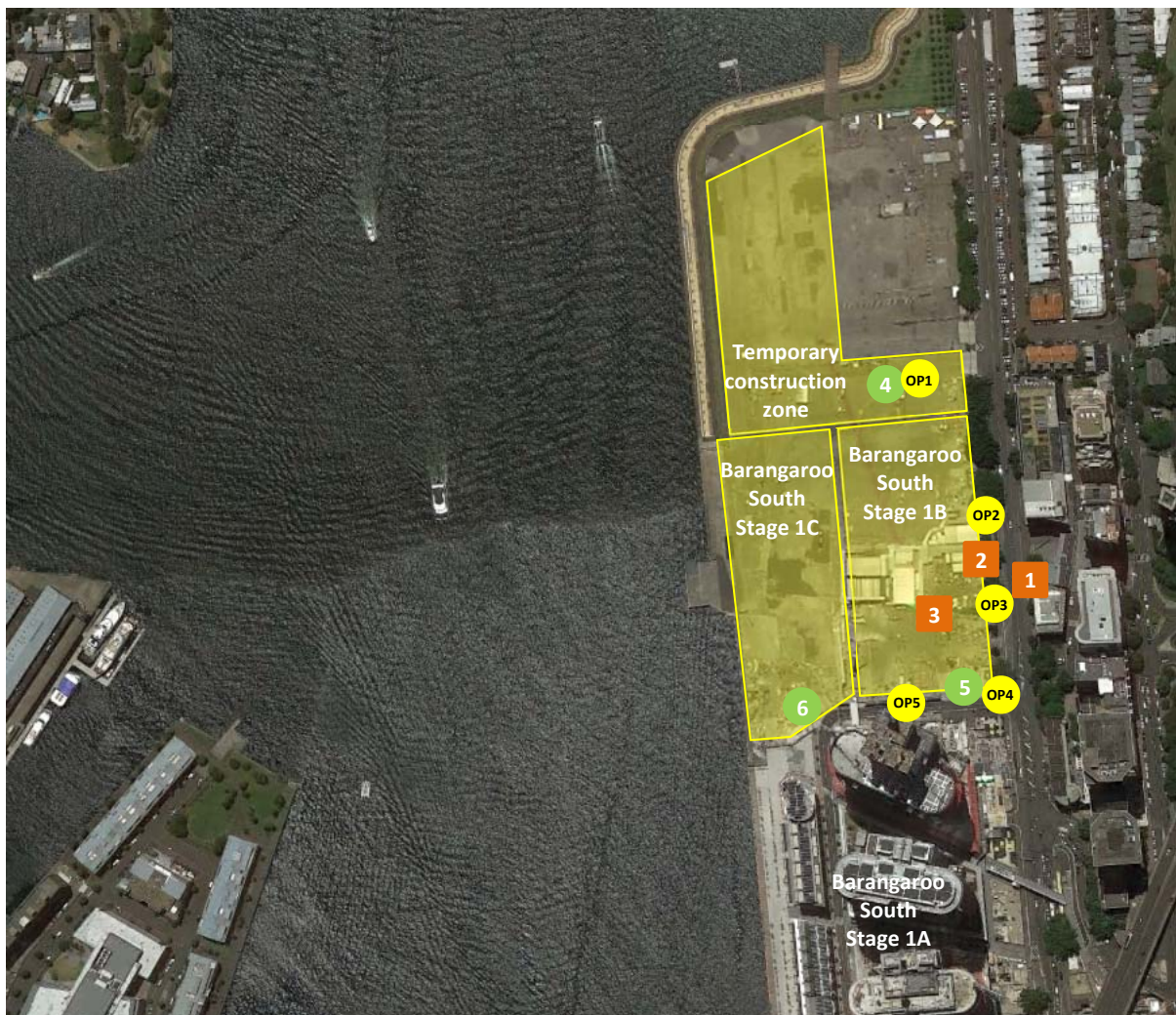
This report has been compiled to summarise results of air quality monitoring at Barangaroo South in April 2016 in accordance with [EPL number 13336](#). This data is for samples taken from 1 to 30 April 2016. The data was provided to the Barangaroo Delivery Authority (the Licencee) on 24 May 2016.

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 April 2016 remediation trial activities were undertaken in accordance with relevant management plans with specific controls implemented during this reporting period which included:

- Deodorising and Foaming unit to suppress odours
- Sealed vacuum unit with activated carbon filters
- Operation of Multi-phase extraction (MPE) units and the Soil Vapour Extraction (SVE) units to control vapours
- Sealed liquid extraction units
- Granulated Activated Carbon filter system

Volatile Organic Compounds (VOCs) – Hickson Road Trial discharge

Monitoring Parameter	EPL Point 1 1 hour average (mg/m ³)
Average (mg/m ³)	4.068
Minimum (mg/m ³)	0.366
Maximum (mg/m ³)	12.526
Limit	10 mg/m ³

Frequency

Parameter	Frequency	EPL Point 1
VOCs as n-propane equivalent	Monitoring frequency required by licence	Continuous
	No. of samples required by licence	
	No. of samples collected & analysed	



Monitoring results – Perimeter Retention Wall works

During April 2016 construction of the perimeter retention wall was undertaken in accordance with relevant management plans with specific controls implemented during this reporting period which included:

- Negative pressure excavation enclosures
- Granulated Activated Carbon filter system
- Emissions Control System

Volatile Organic Compounds (VOCs) – Perimeter Retention Wall

Monitoring Parameter	EPL Point 2 (mg/m ³)	EPL Point 3 1 hour average (mg/m ³)
Average (mg/m ³)	0.1	0.028
Minimum (mg/m ³)	0.0	0
Maximum (mg/m ³)	1.3	1.095
Limit	10 mg/m ³	5 mg/m ³

Frequency

Parameter	Frequency	EPL Point 2	EPL Point 3
VOCs as n-propane equivalent	Monitoring frequency required by licence	Daily (during work)	Continuous*
	No. of samples required by licence	7	
	No. of samples collected & analysed	7	

* The CEMs at EPL point 3 was operational from 20/04/16 to the end of the month



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:

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

PM10

Monitoring Parameter	EPL Point 4 (µg/m ³)	EPL Point 5 (µg/m ³)	EPL Point 6 (µg/m ³)
Average	20.6	6.6	5.4
Minimum (24hr)	13.4	2.7	0.1
Maximum (24hr)	39.8	21.2	19.3

Total Solid Particles (TSP)

Monitoring commenced in May. Results from these and other samples will be presented in next month's report.

Metals

Monitoring commenced in May. Results from these and other samples will be presented in next month's report.

PAHs

Monitoring commenced in May. Results from these and other samples will be presented in next month's report.

Volatile Organic Compounds (VOCs) – Ambient

Monitoring Parameter	EPL Point 4 (ppm)	EPL Point 5 (ppm)	EPL Point 6 (ppm)
Average	<0.1	<0.1	<0.1
Minimum (24hr)	<0.1	<0.1	<0.1
Maximum (24hr)	<0.1	<0.1	<0.1

Frequency

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	N/A	N/A	N/A
	No. of samples collected & analysed	N/A	N/A	N/A
VOCs	Monitoring frequency required by licence	Daily (during work)		
	No. of samples required by licence*	7	7	7
	No. of samples collected & analysed*	7	7	7
PM10	Monitoring frequency required by licence	Continuous		
	No. of samples required by licence			
	No. of samples collected & analysed			

* The VOC monitoring was operational from 20/04/16 to the end of the month

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