

## May 2012 Water 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 Water Quality Summary Report

## Barangaroo South

This report has been compiled to summarise results of water quality monitoring at Barangaroo South during the month of 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 water quality monitoring at Barangaroo South to measure water quality and assist the construction team implement appropriate environmental controls on site.

Water quality monitoring is carried out in accordance with all relevant authority and statutory requirements. Ambient monitoring in Darling Harbour measures conductivity, pH, temperature and turbidity. The water treatment plant discharge point is monitored for a variety of parameters including volume.

### Location of water quality monitors

Water quality monitoring devices are positioned at three locations within Darling Harbour as shown below. The location of the water treatment plant discharge point is adjacent to the Nearfield 1 location.



*Approximate locations of water monitoring equipment*

These locations correspond to the following licenced monitoring locations:

Water Discharge Point 1:	EPL Point 1
Nearfield 1:	EPL Point 2
Nearfield 2:	EPL Point 3
Background:	EPL Point 4

### May monitoring results

During the month of May, there were no exceedances of the water quality criteria for ambient monitoring in Darling Harbour or the WTP discharge criteria.

## Water Discharge Point 1 – EPL Point 1

Pollutant	Units of measure	Monitoring frequency required by licence	Limit	Min. Value	Max. Value	Exceedence (yes/no)
Volume	kL	Daily	6480	220	2160	No
Ammonia(N)	µg/L	Varies*	910	50	910	No
Conductivity	uS/cm	Varies*	N/A	1800	39000	N/A
Cyanide (total)	µg/L	Varies*	4	ND	ND	No
Dissolved Oxygen	mg/L	Varies*	N/A	7.1	9.8	N/A
Oil & Grease	mg/L	Varies*	10	ND	ND	No
pH	pH	Varies*	6.5 - 8.5	6.7	8.1	No
Sulphate (S)	mg/L	Varies*	N/A	41	610	N/A
Suspended Solids	mg/L	Varies*	50	6	24	No
Turbidity (NTU)	NTU	Varies*	N/A	0.2	3.3	N/A
Benzene	µg/L	Varies*	500	ND	ND	No
Ethylbenzene	µg/L	Varies*	80	ND	ND	No
o-Xylene	µg/L	Varies*	350	ND	ND	No
Toluene	µg/L	Varies*	180	ND	ND	No
Total m+p-Xylenes	µg/L	Varies*	75	ND	ND	No
Arsenic (filtered)	µg/L	Varies*	2.3	0.6	1.9	No
Cadmium (filtered)	µg/L	Varies*	0.7	ND	ND	No
Copper (filtered)	µg/L	Varies*	1.3	1	1.3	No
Lead (filtered)	µg/L	Varies*	4.4	ND	ND	No
Mercury (filtered)	µg/L	Varies*	0.1	ND	ND	No
Nickel (filtered)	µg/L	Varies*	7	ND	ND	No
Zinc (filtered)	µg/L	Varies*	15	5	10	No
Chromium (hexavalent)	µg/L	Varies*	27	ND	ND	No
Chromium (trivalent)	µg/L	Varies*	4.4	ND	ND	No
Acenaphthene	µg/L	Varies*	2	ND	ND	No
Acenaphthylene	µg/L	Varies*	2	ND	ND	No
Anthracene	µg/L	Varies*	2	ND	ND	No
Benz(a)anthracene	µg/L	Varies*	2	ND	ND	No
Benzo(a)pyrene	µg/L	Varies*	2	ND	ND	No
Benzo(b)fluoranthene	µg/L	Varies*	2	ND	ND	No
Benzo(g,h,i)perylene	µg/L	Varies*	2	ND	ND	No
Benzo(k)fluoranthene	µg/L	Varies*	2	ND	ND	No
Chrysene	µg/L	Varies*	2	ND	ND	No
Dibenz(a,h)anthracene	µg/L	Varies*	2	ND	ND	No
Fluoranthene	µg/L	Varies*	2	ND	ND	No
Fluorene	µg/L	Varies*	2	ND	ND	No
Indeno(1,2,3-cd)pyrene	µg/L	Varies*	2	ND	ND	No
Naphthalene	µg/L	Varies*	50	ND	ND	No
Phenanthrene	µg/L	Varies*	2	ND	ND	No
Pyrene	µg/L	Varies*	2	ND	ND	No
Total PAH	µg/L	Varies*	80	ND	ND	No
Total PCB	µg/L	Varies*	N/A	ND	ND	N/A
Phenol	µg/L	Varies*	400	ND	ND	No
TRH C10-36 (Total)	µg/L	Varies*	250	ND	ND	No
TRH C10-C14	µg/L	Varies*	50	ND	ND	No
TRH C15-C28	µg/L	Varies*	100	ND	ND	No
TRH C29-C36	µg/L	Varies*	50	ND	ND	No
TRH C6-C9	µg/L	Varies*	20	ND	ND	No

NA – no licence limit, monitoring requirement only

ND – not detected

\* Once prior to discharge during batch operation; once daily during intermittent continuous operation; once daily for the first fourteen days of continuous operation, then weekly.

### Conductivity

Monitoring Parameter	EPL Point 2 (mS/cm)	EPL Point 3 (mS/cm)	EPL Point 4 (mS/cm)
Minimum	49.0	47.7	49.1
Maximum	54.4	54.2	54.0
Mean	52.5	52.3	52.6
Limit	No licence limit, monitoring requirement only		
Number of Exceedences	N/A	N/A	N/A
Monitoring frequency required by licence	Every 15 minutes		

### pH

Monitoring Parameter	EPL Point 2	EPL Point 3	EPL Point 4
Minimum	7.9	7.8	7.9
Maximum	8.4	8.3	8.3
Mean	8.1	8.0	8.1
Limit	No licence limit, monitoring requirement only		
Number of Exceedences	N/A	N/A	N/A
Monitoring frequency required by licence	Every 15 minutes		

### Temperature

Monitoring Parameter	EPL Point 2 (°C)	EPL Point 3 (°C)	EPL Point 4 (°C)
Minimum	16.28	15.82	16.57
Maximum	20.11	20.46	20.19
Mean	18.77	18.71	18.86
Limit	No licence limit, monitoring requirement only		
Number of Exceedences	N/A	N/A	N/A
Monitoring frequency required by licence	Every 15 minutes		

### Turbidity

Monitoring Parameter	EPL Point 2 (NTU)	EPL Point 3 (NTU)	EPL Point 4 (NTU)
Minimum	1.8	2.0	1.8
Maximum	13.8	19.7	13.6
Mean	3.1	4.8	3.0
Limit	Three consecutive readings over 50mg/L equivalent (63NTU)		
Number of Exceedences	0	0	0
Monitoring frequency required by licence	Every 15 minutes		

Environment Protection Licence number: 13336

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

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