



Your ref: DP3733BK

Our ref: 14739/3505/CBH/VKR

12<sup>th</sup> September 2016

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**Attn: Mr David Willey**

Dear David

**RE: DP3733BK - Docksway Disposal Site. Latest Area 2 Groundwater Quality Monitoring Report, Round 149.**

Please find enclosed the results of the groundwater quality monitoring undertaken at Area 2 of Docksway Disposal Site. Groundwater monitoring is required quarterly at the site in order to comply with Conditions 3.6.1 and 3.6.2 of the site PPC Permit. This report includes discussion on results obtained from monitoring undertaken on 3<sup>rd</sup> August 2016. We enclose with this letter report the laboratory analytical certificates for the testing undertaken.

**Field Observations**

Details of the field testing of the Area 2 groundwater samples during Round 149 are presented in Table 1.

Table 1 – Field Testing Results and Observations

Monitoring Point	Date Monitored	Depth to Groundwater/Leachate (m)	pH	Electrical Conductivity (µS/cm)	Temperature (°c)	Dissolved Oxygen (%)
GW06_39	03/08/2016	3.85	7.8	8531	14.2	3.4
GW07_40	03/08/2016	4.40	8.2	2426	13.5	3.7
GW12_30	03/08/2016	4.80	7.4	2474	14.7	4.0
GW09_31	03/08/2016	5.35	7.9	4730	13.5	2.2
GW03_09	03/08/2016	8.30	7.4	3472	14.0	15.7
GW09_32	03/08/2016	7.84	7.6	2156	13.9	5.4
GW12_33	03/08/2016	8.50	7.7	3458	13.7	8.2
GW06_34	03/08/2016	7.88	8.0	2060	13.9	1.8
GW09_35	03/08/2016	7.54	7.8	13910	14.5	1.5
GW06_36	03/08/2016	7.10	7.9	7943	14.9	5.7
GW06_37	03/08/2016	5.60	8.0	12570	15.2	5.7
GW06_13	03/08/2016	7.20	8.1	8931	13.1	2.8
GW12_38	03/08/2016	7.10	7.6	2665	18.1	37.4
GW06_14a	03/08/2016	7.50	No data			
LF08_07**	03/08/2016	n/a	8.3	11130	21.1	87.9
C2B**	03/08/2016	n/a	8.1	18970	20.4	75.1

\*\* measured from top of monitoring stack

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## Laboratory Testing Results

### Compliance Levels

The Control and Compliance limits for Area 2 are reproduced in Tables 2 and 3.

Table 2 –PPC Permit Compliance Levels for Emissions to Groundwater (Hazardous Substances)

Monitoring Well	Benzene	Naphthalene	Xylene	EPH	Arsenic
	Compliance Limit	Compliance Limit	Compliance Limit	Compliance Limit	Compliance Limit
	ug/l	ug/l	ug/l	ug/l	ug/l
GW03_09	2	5	3	Not Required	35
GW06_13	2	5	3	Not Required	50
GW06_14a	2	5	3	Not Required	25
GW06_34	2	5	3	Not Required	65
GW06_36	2	5	3	Not Required	30
GW06_37	2	5	3	Not Required	60
GW06_39	2	5	3	Not Required	50
GW07_40	2	5	3	Not Required	35
GW09_31	13	5	3	Not Required	80
GW09_32	3	5	3	Not Required	30
GW09_35	2	5	3	Not Required	50

Table 3 –PPC Permit Compliance Levels for Emissions to Groundwater (Non-Hazardous Substances)

Monitoring Well	Nickel		Potassium		Ammoniacal Nitrogen	
	Control Level	Compliance Limit	Control Level	Compliance Limit	Control Level	Compliance Limit
	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l
GW03_09	8	10	160	180	30	35
GW06_13	12	14	100	110	30	35
GW06_14a	12	14	160	180	53	60
GW06_34	12	14	310	350	30	35
GW06_36	8	10	100	110	20	23
GW06_37	8	10	100	110	30	35
GW06_39	26.4	30	100	110	20	23
GW07_40	8	10	39.6	45	20	23
GW09_31	8	10	100	110	50	50
GW09_32	8	10	160	180	50	50
GW09_35	8	10	100	110	30	35

Compliance Limits have not yet been set for three replacement monitoring wells (GW12\_30, GW12\_33 and GW12\_38).

### Hazardous Substances (formally List I substances)

None of the hazardous substances agreed as “priority contaminants” exceeded the well specific Compliance Limits at the wells sampled during Round 149.



## Non-hazardous Substances

None of the non-hazardous substances agreed as “priority contaminants” exceeded the well specific Compliance Limits at the wells sampled during Round 149.

## **Leachate Measurements**

Leachate levels were not monitored in Area 2 during Round 149, or since March 2016 due to access problems to the monitoring locations.

The volumes of leachate removed from Area 2 during April, May, June and July are presented in Table 4. The leachate was sampled during R149 at LF08\_07 and C2B in accordance with the PPC Permit and the laboratory analytical certificates are attached to this letter report.

## Leachate Removed

The volume of leachate removed from Area 2 (both Cell 1 and Cell 2 combined) is summarised in Table 6 below:

Table 4 – Quarterly Leachate Data from Area 2

<b>Monitoring Round</b>	<b>Leachate Removed (tonnes)</b>
Round 146 April 2016	0
Round 147 May 2016	0
Round 148 June 2016	0
Round 149 July 2016	0

## Concluding Remarks

None of the hazardous or non-hazardous substances agreed as “priority contaminants” exceeded the well specific Compliance Limits at the wells sampled during Round 149.

We are unable to comment on leachate levels in Area 2 at the current time.

PBA will continue to monitor and comment on the groundwater quality within subsequent reports. If you have any questions regarding the data, then please do not hesitate to contact us.

Yours sincerely

## **Kate Riley**

For and on behalf of

**PETER BRETT ASSOCIATES LLP**

Cc. Gwyn Jones – NCC (Docksway Disposal Site)

Enc. Laboratory Analytical Testing Result