

Your ref: DP3733BK

Our ref: 14739/075/CBH/VKR



27 June 2017

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Attn: Mr David Willey

Dear David

RE: DP3733BK - Docksway Disposal Site. Latest Area 2 Groundwater Quality Monitoring Report, Round 157, March 2017.

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 14th March 2017. 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 157 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	14/03/2017	3.85	7.14	5692	12.29	8.40
GW07_40	14/03/2017	4.40	7.95	2138	12.88	33.30
GW12_30	14/03/2017	4.90	6.96	2010	11.39	3.50
GW09_31	14/03/2017	5.30	7.18	1423	12.66	7.60
GW03_09	14/03/2017	8.45	7.17	5298	12.50	17.70
GW09_32	14/03/2017	7.80	7.09	1152	12.58	18.60
GW12_33	14/03/2017	8.40	7.19	3256	13.03	0.00
GW06_34	14/03/2017	8.10	7.36	1505	11.80	3.30
GW09_35	14/03/2017	8.20	7.31	13230	12.90	0.40
GW06_36	14/03/2017	7.40	7.45	11630	13.46	0.90
GW06_37	14/03/2017	6.60	7.51	13020	12.64	12.60
GW06_13	14/03/2017	7.30	7.80	5382	11.98	3.40
GW12_38	14/03/2017	6.40	7.30	2843	12.72	14.80
GW06_14a	14/03/2017	7.45	7.16	3172	13.08	27.60
LF08_07**	14/03/2017	N/A	7.59	9530	18.38	63.40
C2A**	14/03/2017	14.73	N/A	N/A	N/A	N/A
C2B**	14/03/2017	18.50	8.19	17260	10.05	69.30

** sampled from side risers closest to these leachate wells – due to access issues at the leachate wells

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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 157.

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 157.

Leachate Measurements

Leachate levels were not monitored in Area 2 in January and February 2017, or since March 2016 due to access issue to the leachate wells. Leachate levels were recorded at C2A and C2B in March 2017 and the leachate head levels are indicated to be 0.69m at C2A and 3.16m at C2B.

The volumes of leachate removed from Area 2 during January, February and March 2017 are presented in Table 4. The leachate was sampled during R157 from side risers closest to the monitoring locations at LF08_07 and C2B, 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 4 below:

Table 4 – Quarterly Leachate Data from Area 2

Monitoring Round	Leachate Removed (tonnes)
Round 155 January 2017	1513
Round 156 February 2017	1483
Round 157 March 2017	1579

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 157.

The leachate head recorded at C2B is above the permitted level of 2m, at 3.16m.

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