

Your ref: DP3733BK

Our ref: 14739/3505/CBH/KR

18th September 2015

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Attn: Mr David Willey

Dear David

RE: DP3733BK - Docksway Disposal Site. Latest Area 2 Groundwater Quality Monitoring Report, Round 136.

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 in June 2015. 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 136 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 (%)
GW09_31	17/06/2015	5.45	7.9	6769	14.1	0.3
GW03_09	17/06/2015	8.00	7.7	9775	12.9	16.8
GW12_33	17/06/2015	8.00	7.4	2980	13.1	22.4
GW06_34	17/06/2015	7.90	7.6	1557	12.8	5.4
GW12_30	17/06/2015	5.00	7.1	2337	13.3	0.0
GW09_32	17/06/2015	8.00	7.5	5814	13.4	0.3
GW07_40	17/06/2015	4.50	7.9	2267	12.8	26.7
GW06_13	17/06/2015	6.45	7.8	8527	13.3	32.3
GW06_14a	17/06/2015	6.30	7.3	9572	14.5	38.0
GW09_35	17/06/2015	6.50	7.5	14030	13.4	18.0
GW06_36	17/06/2015	7.10	7.7	11880	14.1	8.8
GW06_37	17/06/2015	5.10	7.7	12560	13.6	40.3
GW12_38	17/06/2015	3.10	7.2	7778	13.9	46.3
GW06_39	17/06/2015	2.00	7.5	4442	12.6	5.7
LF08_07**				N/A		
C2B**				N/A		

** measured from top of monitoring stack



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 136.



Non-hazardous Substances

There were no exceedances of the well specific Compliance Limits for Nickel, Ammoniacal Nitrogen or Potassium (priority contaminants) in any of the Area 2 monitoring wells sampled during Round 136.

Leachate Measurements

Leachate levels were monitored in LF08_07, C1A, C1B, C1D and C1E (Cell 1) during Rounds 134 to 136, however leachate levels were not monitored at any of the Cell 2 locations during this period due to issues with safe access.

The leachate levels are presented in Table 5 and the volumes of leachate removed from Area 2 during April, May and June are presented in Table 6. The leachate was sampled at LF08_07 in accordance with the PPC Permit and the laboratory analytical certificates are attached to this letter report.

Table 5 – Quarterly Leachate Data from Cell 1 and Cell 2

Monitoring Well	Monitoring Round	Leachate Head Level (m)
Cell 1		
LF08_07	Round 134	3.26
	Round 135	3.20
	Round 136	3.13
C1A (Well 1)	Round 134	4.80
	Round 135	4.80
	Round 136	4.69
C1B (Well 2)	Round 134	2.81
	Round 135	2.87
	Round 136	2.48
C1D (Well 6)	Round 134	N/A
	Round 135	2.41
	Round 136	2.42
C1E (Well 7)	Round 134	2.56
	Round 135	2.46
	Round 136	2.51
Cell 2		
C2A	Round 134	N/A
	Round 135	N/A
	Round 136	N/A
C2B	Round 134	N/A
	Round 135	N/A
	Round 136	N/A
C2C	Round 134	N/A
	Round 135	N/A
	Round 136	N/A

Leachate Removed

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

Table 6 – Quarterly Leachate Data from Area 2

Monitoring Round	Leachate Removed (tonnes)
Round 134 April 2015	995
Round 135 May 2015	1000
Round 136 June 2015	1344



Concluding Remarks

There were no exceedances of the Compliance Limits during Round 136.

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