



Your Ref: DP3733BK

Our Ref: 49428/332510236/3512/CBH/VKR/AREA 2 GW & LEACHATE/R244

7th August 2024

PPC Team
Natural Resources Wales
Rivers House
Fortran Road
St Mellons Business Park
Cardiff
CF3 0EY

Attn: Luke Burton

Dear Luke,

Re: DP3733BK – Docksway Disposal Site. Latest Area 2 Groundwater and Leachate Quality Monitoring Report, Round 244, June/July 2024.

Please find enclosed the results of the groundwater and leachate quality monitoring undertaken at Area 2 of Docksway Disposal Site. Groundwater and leachate monitoring is required quarterly at the site in order to comply with Conditions 3.6.1 and 3.6.2 of the Environmental Permit (DP3733BK). This report includes discussion of results obtained from monitoring during June and July 2024.

We enclose with this letter report, the laboratory analytical certificates.

Field Observations

Details of the field testing of the Area 2 groundwater and leachate samples during Round 244 are presented in Table 1, together with depths to groundwater and leachate.

Table 1 Field testing Results and Observations – June/July 2024

Monitoring Point	Dates Monitored	Depth to Groundwater/ Leachate (m)	pH	Electrical Conductivity (µS/cm)	Temperature (°c)	Dissolved Oxygen (%)
GW06_39	Destroyed					
GW07_40	26/06/2024	5.18	7.2	2049	15.5	10.1
GW12_30	26/06/2024	4.30	7.2	1970	13.6	12.9
GW09_31	26/06/2024	6.04	7.3	2540	16.2	15.5
GW03_09	26/06/2024	8.28	8.0	7650	25.4	54.8
GW09_32	Defective					
GW12_33	02/07/2024	8.12	7.2	2364	13.5	12.6
GW06_34	26/06/2024	8.57	7.8	964	27.1	14.3
GW09_35	02/07/2024	8.16	7.7	10120	15.3	31
GW06_36	02/07/2024	7.16	7.8	10670	17.8	43.4
GW06_37	02/07/2024	6.75	7.7	16680	14.6	8.9
GW06_13	02/07/2024	5.80	8.1	9751	12.8	21.4
GW12_38	02/07/2024	6.40	7.4	6725	13.1	68.7
GW06_14a	02/07/2024	4.25	7.4	4536	13.6	70.3

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Monitoring Point	Dates Monitored	Depth to Groundwater/ Leachate (m)	pH	Electrical Conductivity ($\mu\text{S}/\text{cm}$)	Temperature ($^{\circ}\text{C}$)	Dissolved Oxygen (%)
LF08_07 (leachate)	19/06/2024	16.00	7.4	6679	22.7	6.2
C1A (leachate)	19/06/2024	18.27	Not sampled, dip level only			
C1B (leachate)	19/06/2024	21.22	Not sampled, dip level only			
C1E (leachate)	19/06/2024	24.20	Not sampled, dip level only			
C1D (leachate)	Unable to access					
C2A (leachate)	19/06/2024	13.20	Not sampled, dip level only			
C2B (leachate)	Unable to dip and sample due to obstruction in well					
C2C (leachate)	19/06/2024	21.90	7.7	16300	27.0	0
C3A (leachate)	19/06/2024	14.50	Not sampled, dip level only			
C3B (leachate)	19/06/2024	17.42	7.6	16460	25.9	0
C4A (leachate)	19/06/2024	12.21	Not sampled, dip level only			
C4B (leachate)	19/06/2024	12.61	7.2	20430	24.0	0.2

Groundwater Laboratory Testing Results

Compliance Levels

The agreed Control Levels and Compliance Limits for Area 2 'priority contaminants' are reproduced in Tables 2 and 3 below.

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

Monitoring Well	Benzene	Naphthalene	Xylene	Arsenic
	Compliance Limit	Compliance Limit	Compliance Limit	Compliance Limit
	$\mu\text{g}/\text{l}$	$\mu\text{g}/\text{l}$	$\mu\text{g}/\text{l}$	$\mu\text{g}/\text{l}$
GW03_09	2	5	3	35
GW06_13	2	5	3	50
GW06_14a	2	5	3	25
GW06_34	2	5	3	65
GW06_36	2	5	3	30
GW06_37	2	5	3	60
GW06_39	2	5	3	50
GW07_40	2	5	3	35
GW09_31	13	5	3	80
GW09_32	3	5	3	30
GW09_35	2	5	3	50
GW12_30	1	1	1	160
GW12_33	1	1	1	560
GW12_38	1	1	1	26

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

Monitoring Well	Nickel		Potassium		Ammoniacal Nitrogen	
	Control Level	Compliance Limit	Control Level	Compliance Limit	Control Level	Compliance Limit
	µg/l	µg/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
GW12_30	25	30	35	40	10	12
GW12_33	5	6	50	55	15	18
GW12_38	25	30	65	70	10	12

Priority Contaminants

Hazardous Substances (formally List I Substances)

All of the hazardous substances specified as “priority contaminants” in the Area 2 Hydrogeological Risk Assessment and monitored in groundwater samples from compliance wells in July 2024 were recorded below the Compliance Limits.

Non-Hazardous Substances

None of the non-hazardous substances agreed as “priority contaminants” exceeded the well specific Control and Compliance Limits in the groundwater sampled during Round 244.

Leachate Measurements and Laboratory Test Results

Leachate levels were recorded at C1A, C1B, C1E, C2A, C2C, C3A, C3B, C4A, C4B and LF08_07 in July 2024 and the leachate head levels are indicated to be as follows:

Table6 Leachate Levels – July 2024

Monitoring Location	Leachate Head (m)
C1A	3.60
C1B	1.48
C1E	0.02
C2A	1.90
C2C	3.70
C3A	2.70
C3B	3.68
C4A	0.89
C4B	2.64
LF08_07 (Cell 1)	0.17

Five of the ten locations monitored were above the permitted level of 2m. Monitoring points C1D and C2B were unable to be dipped.

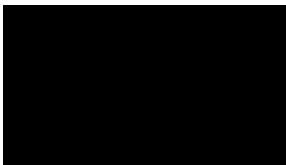
Leachate Removed

During April to June 2024, a total of 7,181,600kg of Leachate was removed from Area 2 (Cells 1 to 4 combined).

Concluding Remarks


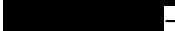
Stantec will continue to monitor and comment on the groundwater quality and leachate within subsequent reports. If you have any questions regarding the data, then please do not hesitate to contact us.

Yours sincerely,



Technical Director – Geoenvironmental Services
on behalf of Stantec UK Ltd

Encls: Laboratory Certificates

CC:  – NCC (Docksway Disposal Site)
 – NCC