



Your Ref: DP3733BK

Our Ref: 49428/332510236/3501/CBH/VKR/NC/AREA 2 GW & LEACHATE/R217

27th April 2022

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

**Attn: Guy Baskerville**

Dear Guy,

**Re: DP3733BK – Docksway Disposal Site. Latest Area 2 Groundwater and Leachate Quality Monitoring Report, Round 217, March 2022.**

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 March 2022.

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 217 are presented in Table 1, together with depths to groundwater and leachate.

**Table 1** Field testing Results and Observations – March 2022

Monitoring Point	Dates Monitored	Depth to Groundwater/ Leachate (m)	pH	Electrical Conductivity ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	Dissolved Oxygen (%)
GW06_39	8+9/3/22	3.61	8.7	5940	11.5	24.3
GW07_40	8+9/3/22	4.86	9.0	1461	11.9	34.2
GW12_30	8+9/3/22	4.10	8.7	2341	11.2	23.1
GW09_31	8+9/3/22	5.48	8.8	2232	12.0	38.5
GW03_09	8+9/3/22	7.94	9.2	8507	12.1	38.9
GW09_32	8+9/3/22	8.75	9.0	3437	11.8	28.7
GW12_33	8+9/3/22	7.82	8.9	1902	10.7	32.4
GW06_34	8+9/3/22	8.09	8.8	1304	11.9	21.0
GW09_35	8+9/3/22	7.40	8.9	8674	11.9	33.6
GW06_36	8+9/3/22	7.08	9.0	13580	10.6	17.2
GW06_37	8+9/3/22	6.77	9.0	16910	11.7	24.3
GW06_13	8+9/3/22	6.16	9.3	10140	11.0	31.7
GW12_38	8+9/3/22	7.07	9.0	2174	10.7	40.1
GW06_14a	8+9/3/22	4.30	9.2	11720	10.3	51.7

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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)	7+25/3/22	15.32	8.8	12851	10.2	27.4
C1A (leachate)	Unable to dip and sample					
C1B (leachate)	7+25/3/22	21.26	Not sampled (dip level only)			
C1E (leachate)	7+25/3/22	23.33				
C1D (leachate)	7+25/3/22	10.03				
C2A (leachate)	7+25/3/22	13.16				
C2B (leachate)	Unable to dip and sample					
C2C (leachate)	7+25/3/22	16.8	9.3	21732	19.3	13.1
C3A (leachate)	Not sampled (dip level only)					
C3B (leachate)	7+25/3/22	15.25	9.1	16202	17.8	23.2
C4A (leachate)	Not sampled (dip level only)					
C4B (leachate)	7+25/3/22	7.94	8.3	20530	20.1	42.2

## 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 March 2022 were recorded below the Control Level and Compliance Limits.

#### Non-Hazardous Substances

None of the non-hazardous substances agreed as “priority contaminants” exceeded the well specific Compliance Limits in the groundwater sampled during Round 217 with the exception of Ammoniacal Nitrogen at GW06\_36 where the concentration was recorded as 42.6mg/l.

### Leachate Measurements and Laboratory Test Results

Leachate levels were recorded at C1B, C1D, C1E C2A, C2C, C3A, C3B, C4A, C4B and LF08\_07 in March 2022 and the leachate head levels are indicated to be as follows:

Monitoring Location	Leachate Head (m)
C1B	1.66
C1D	1.88
C1E	1.33
C2A	1.94
C2C	3.50
C3A	0.74
C3B	3.15
C4A	2.39
C4B	3.16
LF08_07 (Cell 1)	1.17

Of the ten locations monitored, four (C2C, C3B, C4A and C4B) are above the permitted level of 2m. Monitoring points C1A and C2B was unable to be dipped. At the remaining monitoring points, leachate head levels are below the permitted level.

#### Leachate Removed

During January 2022 to March 2022 a total of 5,821,360kg 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,



**Kate Riley**  
**Senior Associate**  
on behalf of Stantec UK Ltd

Encls: Laboratory Certificates

CC: Silvia Gonzalez-Lopez – Newport City Council  
Robert Hughes – NCC (Docksway Disposal Site)  
Luke Embrey – NCC