



St. Modwen Developments Limited

Coed Darcy

Crymlyn Tip - Environmental Monitoring Annual Report

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I Introduction

I.1 Overview

This report has been prepared to satisfy Condition 4.2.2 (a) of Crymlyn Tip Environmental Permit EPR/AP3990LR and subsequent variations (the Permit), which states:

'4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency [now Natural Resources Wales] by 31 January (or other date agreed in writing by [NRW] each year. The report(s) shall include as a minimum:

a) A review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this site and any agreed amendments thereto.'

This report covers the monitoring period January 1st 2020 to December 31st 2020.

I.2 Background

St. Modwen Developments Limited (St. Modwen) acquired responsibility for Crymlyn Tip (the Tip) in 2008, when they purchased the former Llandarcy Oil Refinery from BP. For the Tip to enter 'definitive' closure NRW must be satisfied that a Closure and Aftercare Management Plan has been produced.

In January 2018 Atkins were appointed by St. Modwen to undertake an environmental monitoring programme in line with the requirements of the Permit and to assist in the production of the Closure and Aftercare Management Plan.

I.3 Summary of Works

The environmental monitoring programme was initially undertaken by Atkins up until March 2019. As of April 2019, PJA took over responsibilities for elements of the monitoring and reporting of the findings on behalf of St. Modwen.

GeoEnvironmental Applications Ltd (GAL) have been contracted by St. Modwen to manage the recovery of local free phase oil within the Tip and its peripheries. Alongside the oil recovery, GAL carry out groundwater monitoring within boreholes/sumps and obtain monthly gas readings from available boreholes within/surrounding the Tip as part of the monitoring programme. The oil recovery and monitoring works carried out by GAL are overseen by PJA, who also collect groundwater and surface water samples on a monthly basis as part of the monitoring programme.



I.4 Supporting Documents

The last annual monitoring report covering the year 2019 was produced by PJA and submitted to NRW in April 2020:

- Coed Darcy – Crymlyn Tip Environmental Monitoring Annual Report, April 2020 –Ref: 4020/OUT/0027. Dated 08/04/2020.

A technical note was issued by PJA to NRW in November 2019, documenting works undertaken between April and September 2019:

- Coed Darcy – Crymlyn Tip Factual Summary Report, April – September 2019. Ref: 4020-PJA-19-XX TN-R-005. Dated 22/10/2019.

Additional information relating to the history, operation, previous assessments and risk assessments of the Tip are presented in the following reports:

- Atkins (2013) Coed Darcy – Hydrogeological Risk Assessment Crymlyn Tip;
- Atkins (2013) – Coed Darcy – Landfill Gas Risk Assessment and Gas Management Plan;
- Atkins (2017) – Coed Darcy Crymlyn Tip- Partial Surrender of Coed Darcy Wetlands. EPR/AP3990LR/S003 Site Condition Report. Ref 5041216-RAP-RPT-0001788;
- Atkins (2019) – Coed Darcy Crymlyn Tip – Environmental Permit Monitoring. Ref: 5041216. Dated: 31/01/2019;
- Natural Resources Wales (2019) – Compliance Assessment Report. Ref: CAR_NRW0034811. Dated: 13/03/2019; and
- PJA – Crymlyn Tip – Environmental Monitoring Annual Report. Ref: 04020/OUT/0027. Dated April 2020.

It is assumed that the reader has access to the above documentation and is familiar with previous assessments undertaken. This report is not intended to repeat or reproduce findings of previous assessments in any great detail.

I.5 Limitations

This report has been prepared by PJA, on behalf of St. Modwen, for submission to NRW. This report shall not be relied upon or transferred to any other parties. If an unauthorised third party comes into possession of this report, they rely on its contents at their own risk.



The findings within this report are based upon information gained from a variety of sources and field measurements as detailed within this report which PJA believes are reliable. Nevertheless, PJA cannot guarantee the authenticity or reliability of third-party information.

The conclusions made within this report are based on the guidance available at the time of writing.



2 Site Setting

2.1 Site Location and Description

The Tip is located in the historical 'Containment Area' in the western section of the wider Coed Darcy development at the former Llandarcy Oil Refinery. The 'Containment Area' also includes the a series of lagoons and wetlands. The containment area is shown in Appendix A on PJA drawing 04020-A-0110-P1: Notable Areas & NRW Discharge Consent Points.

The area covered by the Permit, and to which this report relates, is shown on drawing 04020-A-SK201-P2 and consists of the 'lower tip' in the west and the 'main tip' in the centre and east. To the north is Crymlyn Bog and to the south of the permitted area are the wetlands which were surrendered from the Permit in 2017.

2.2 Brief Site History

When the refinery opened in the early 1920s the 'Containment Area' comprised a series of lagoons and wetlands, congruent with Crymlyn Bog. The lagoons were initially constructed during the operational years of the refinery and were intended to intercept oil, preventing it from entering Crymlyn Bog. There are three lagoons within the Containment Area: Crymlyn Bog Lagoon (approx. 10,500m³), South Bay (approx. 4,450m³) and West Bay (approx. 1,500m³).

Prior to the Second World War an ash bund was constructed around the Containment Area to provide a containment area for oil, which may have otherwise flowed into Crymlyn Bog if the tank farm area had been struck by bombs during the war. The ash bund also contained drainage systems, serving the southern half of the former refinery.

In 1977 a waste disposal license was granted for the Containment Area. The license granted the deposition of refinery waste, including both inert and potentially hazardous materials. Waste was filled in the area north of the wetlands. No waste has been accepted since 1999 and the landfill has been non-operational since July 2001.

Remedial works have taken place within the wetlands (South Bay, West Bay and Crymlyn Bog Lagoon) between 2011 and 2015. These works were summarised as part of the submission for the partial surrender of the waterbodies from the permitted area. The partial surrender report (Atkins report reference- 5041216-RAP-RPT-0001788) was submitted to NRW and the Coed Darcy wetlands removed from the permitted area in 2017:

The remaining permitted area is outlined in red on drawing 04020-A-SK201-P2.



3 Environmental Setting

3.1 Geology

Published British Geological Survey records indicate superficial deposits at the Tip to predominantly comprise Peat underlain by Devensian Till; however Peat is absent from the eastern portion of the Tip. Bedrock of the Pennant Sandstone Formation underlies the superficial deposits.

Based on historical borehole logs Made Ground/waste thicknesses are variable but extend to depths in excess of 17mbgl locally. Made Ground generally comprises grey, brown and black sandy, gravelly clay, with sand, gravels and cobbles consisting of bricks, concrete, timber, metal, and ash. Much of the infill material is consistent with waste derived from refinery operations. There are areas where asbestos waste is reported to have been deposited as well as tank sludges, other industrial waste by-products, oil and tar residues.

Available borehole logs are presented in Appendix B.

3.2 Hydrogeology

Peat is classified as Unproductive Strata and Till is classified as a Secondary (Undifferentiated) Aquifer. The underlying bedrock is classified as a Secondary A Aquifer.

Following an investigation across the wider Llandarcy Oil Refinery, including the Tip, URS produced groundwater contour plots for the bedrock and superficial aquifers (URS Report: 39991-044-785: Final Factual Report Whole Site Investigation BP LLANDARCY REFINERY 12th August 2005). These plots indicate groundwater in the bedrock beneath the Tip flows from south to north across the permitted area. Artesian and sub-artesian conditions may be present in the bedrock around the boundary between the Tip and Crymlyn Bog. Monitoring of shallow groundwater beneath the Tip indicates possible local radial flow although this may be distorted by the presence of residual oil and by the heterogeneous nature of the waste material.

For reference the groundwater contour plots taken from the original URS report are presented in Appendix C.

3.3 Hydrology

A 'peripheral trench' separating the Tip from Crymlyn Bog to the north is a narrow channel that intercepts groundwater flowing to the north from the Tip. A plywood wall in the trench traps free phase oil, whilst allowing groundwater to flow underneath the plywood into the bog. Oil is periodically collected from the trench (and from sumps and boreholes within the Tip) and sent for offsite processing.



Three water bodies located in the south of the wider Containment Area, namely South Bay, West Bay and Crymlyn Bog Lagoon, were surrendered from the Permit in 2017.

3.3.1 South Bay

South Bay has a capacity of approximately 4,450m³ and is located to the south of the Tip. The waterbody was originally created to intercept uncontrolled discharge of free product from the refinery and prevent it from entering Crymlyn Bog.

3.3.2 West Bay

West Bay is approximately 1,500m³ in capacity and lies to the south west of the Tip. Similar to South Bay, West Bay was installed to intercept uncontrolled discharge of free product from the western section of southern tank farm and prevent it from entering Crymlyn Bog.

3.3.3 Crymlyn Bog Lagoon

Located to the south of the Tip, Crymlyn Bog Lagoon receives inputs from both South Bay and West Bay, prior to discharging into Crymlyn Bog. Discharge to the bog from Crymlyn Bog Lagoon is via a siphon valve and a historical oil-water interceptor located within the ash bund. The outfall from the siphon valve is a NRW consented discharge point, W3, under Environmental Permit EPR/ LB3293HN which is held by St. Modwen.



4 Surface Water and Groundwater Monitoring and Sampling

4.1 Monitoring and Sampling Locations

Current and proposed future monitoring and sampling locations are shown on PJA drawing 04020-A-SK201-P2 in Appendix A and are summarised in Table 1. The first two columns of Table 1 show nomenclature changes made during 2020 to ensure consistency with historical borehole logs. Laboratory analytical results for sampling undertaken during 2020 will reference the 'previous location ID' shown in the second column of the table.

Table 1: Summary of Monitoring and Sampling Locations

Corrected Location ID	Previous Location ID	Monitoring type	Response zone
SW1 –SW6	N/A	Surface water	Surface water
Sumps 14 – 21 & 24-28	N/A	Oil recovery	Made Ground
CBH2	BH2	Groundwater	Made Ground
CBH13	BH13/ BH01	Groundwater	Made Ground
CBH16	BH30	Groundwater	Made Ground
CBH19	BH19	Groundwater	Made Ground
CBH20	BH20	Gas & groundwater	Made Ground
CBH23	BH23	Gas & groundwater	Made Ground
CBH25	N/A	*will be monitored from January 2021	Made Ground
CBH32	BH32	Gas & groundwater	Made Ground
CBH39	N/A	*will be monitored from January 2021	Made Ground
CBH46	BH46	Gas & groundwater	No borehole log
CBH47	BH31	Groundwater	Made Ground
CBH48	N/A	*will be monitored from January 2021	Made Ground
CBH51	BH51	Gas & groundwater	Made Ground
CBH52	BH52	Gas & Groundwater	Made Ground
CBH54	N/A	*will be monitored from January 2021	Made Ground
CBH57	BH57	Gas & groundwater	Made Ground
CBH64	BHXI	Groundwater	Made Ground
CARW008	N/A	Gas & groundwater	Made Ground
CARW009	N/A	Gas & groundwater	Made Ground & Silt
CARW034	N/A	Groundwater	Made Ground & Silt
MSMW034D	N/A	*will be monitored from January 2021	Mudstone (Coal Measures)
MSMW034S	N/A	*will be monitored from January 2021	Gravel (Glacial Deposits)
MSMW91	MSMW027	Gas & groundwater	Gravel (Glacial Deposits)
MSMW155D	N/A	Gas & groundwater	No borehole log (presumed bedrock)
MSMW155S	N/A	Gas & groundwater	No borehole log (presumed superficial deposits)
MSMW231	BH49	Gas & groundwater	Made Ground
MSMW238	BH29	Groundwater	Made Ground



GAL carry out field measurements, monitoring of the groundwater levels and taking gas readings from locations installed with a gas bung and tap using a GA5000 gas analyser. PJA carry out monthly groundwater and surface water sampling. Sampling is carried out using a peristaltic pump where possible or bailer where excessive groundwater depth or the presence of free phase prevent the use of the pump.

4.2 Laboratory Analysis

A total of 125 groundwater samples and 66 surface water samples were scheduled for the following suite of laboratory analysis during 2020:

- Ammoniacal Nitrogen as N;
- Chloride;
- Dissolved metals;
- Total Petroleum Hydrocarbons Criteria Working Group (TPHCWG);
- BTEX compounds (Benzene, Toluene, Ethylbenzene and Xylenes); and
- Polycyclic Aromatic Hydrocarbons (PAH) (aqueous).

4.3 Surface Water Sampling Regime

The six surface water locations, SW1 to SW6, were all sampled on a monthly basis throughout 2020, with the exception of during April 2020 because of the Covid-19 pandemic.

4.4 Groundwater Sampling Regime

Table 2 shows when each of the groundwater locations have been sampled over the course of 2020. During each sampling visit, collection of groundwater samples is attempted from a number of locations within and surrounding the Tip to provide good spatial distribution. During some sampling rounds it may not have been possible to obtain a sample because of any one or a combination of the following factors:

- simultaneous oil recovery from a particular location by GAL (either pumped or vacuum tanker);
- difficulty in obtaining a sample due to the presence of free phase hydrocarbons;
- sampling equipment error; or
- time constraints.

Groundwater sampling was not carried out in any location in April 2020 because of the Covid-19 pandemic.



Table 2: Groundwater Sampling Regime

Sampling location	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
CBH 2	Ongoing oil recovery using skimmer pump											
CBH13	Ongoing oil recovery using skimmer pump											
CBH16	✓	✓	✓	-	✗	✗	✗	✗	✗	✗	✗	✗
CBH20	✓	✓	✓	-	✗	✓*	✓	✗	✗	✗	✗	✓
CBH23	✗	✗	✓	-	✓	✗	✓	✗	✓**	✓	✓	✓
CBH25	Newly located and not sampled in 2020											
CBH32	✗	✗	✗	-	✗	✗	✗	✗	✗	✓	✗	✗
CBH46	✗	✗	✗	-	✓	✓	✓	✓	✓	✓	✓	✓
CBH47	Ongoing oil recovery via submersible pump											
CBH51	✗	✓	✗	-	✗	✓	✗	✗	✗	✗	✗	✗
CBH52	✓	✓	✓	-	✓	✓	✗	✗	✓	✓	✓	✓
CBH57	✓	✓	✓	-	✗	✓	✓	✓	✓	✓	✓	✓
CBH64	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
CARW008	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
CARW009	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✗	✓
CARW034	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
MSMW034s	Found in December 2020											✓***
MSMW034d	Found in December 2020											✓***
MSMW91	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
MSMW155s	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
MSMW155d	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
MSMW231	✗	✗	✗	-	✓	✗	✗	✗	✗	✗	✗	✗
MSMW238	Ongoing oil recovery via submersible pump											
CBH48	Newly located and not sampled in 2020											
CBH39	Newly located and not sampled in 2020											
CBH54	Newly located and not sampled in 2020											

*Incorrectly labelled as BH24 in laboratory analytical results

**Incorrectly labelled as BH21 in laboratory analytical results

***Incorrectly labelled as BH34s and BH34d in laboratory analytical results



5 Groundwater and Non-aqueous Phase Liquid Monitoring Results

5.1 Introduction

Groundwater level and non-aqueous phase liquid (NAPL) monitoring was undertaken in boreholes and sumps at the Tip during 2020. Some of the boreholes were found during the course of the year so monitoring data for these locations is partial for 2020. Drawing 04020-A-SK201-P2 showing all monitoring locations is presented in Appendix A.

Available borehole logs, presented in Appendix B, have been reviewed to identify response zones for each of the monitoring locations. Response zones are constructed within either waste material, superficial deposits, or bedrock.

5.2 Groundwater Level Monitoring

Groundwater level monitoring was carried out in a total of 19 boreholes locations during 2020. A summary of the groundwater levels recorded during 2020 are provided in Table 3.

5.3 Non-Aqueous Phase Liquid Levels (NAPL)

Light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL) have been recorded in boreholes and/or sumps during 2020. A summary of LNAPL recorded in boreholes is presented in Table 4. LNAPL and DNAPL thicknesses recorded in sumps are presented in Table 5 and Table 6 respectively.

Plans visually displaying 'snapshots' of recorded NAPL thicknesses for months January, March, June, September and December 2020 are presented in Appendix D.



Table 3: Summary of Recorded Groundwater Levels in Boreholes

Monitoring Locations	Response Zone	Minimum		Maximum		Average	Variability
		Depth	Month	Depth	Month		
CBH2	Waste/Made Ground	2.22mbgl 11.26mAOD	March	9.05mbgl 4.43mAOD	April	3.80mbgl 9.68mAOD	6.83m
CBH13	Waste/Made Ground	2.84mbgl 12.153mAOD	April	9.3mbgl 5.69mAOD	September	6.83mbgl 8.16mAOD	6.46m
CBH16	Waste/Made Ground	3.95mbgl 10.60mAOD	March	7.14mbgl 7.41mAOD	April	5.46mbgl 9.09mAOD	3.19m
CBH19	Waste/Made Ground	7.03mbgl 8.56mAOD	March	8.56mbgl 7.03mAOD	April	7.78mbgl 7.82mAOD	1.53m
CBH20	Waste/Made Ground	5.55mbgl 9.76mAOD	August	6.82mbgl 8.47mAOD	March	6.50mbgl 8.82mAOD	1.27m
CBH23	Waste/Made Ground	4.83mbgl 9.77mAOD	February	8.31mbgl 6.29mAOD	April	5.71mbgl 8.9mAOD	3.48m
CBH32	Waste/Made Ground	6.57mbgl 9.66mAOD	April	8.83mbgl 7.40mAOD	October	8.76mbgl 7.46mAOD	2.26m
CBH47	Waste/Made Ground	3.11mbgl 11.19mAOD	August	6.09mbgl 8.22mAOD	July	5.17mbgl 9.13mAOD	2.98m
CBH48	Waste/Made Ground	1.28mbgl 11.99mAOD	October	2.29mbgl 10.98mAOD	September	2.32mbgl 10.95mAOD	1.01m
CBH51	Waste/Made Ground	3.78mbgl 10.86mAOD	April	6.77mbgl 7.87mAOD	October	6.22mbgl 8.42mAOD	2.99m
CBH52	Waste/Made Ground	+0.098mbgl 14.93mAOD	October	6.15mbgl 8.64mAOD	February	2.81mbgl 12.03mAOD	6.25m
CBH57	Waste/Made Ground	5.815mbgl 9.87mAOD	February	8.18mbgl 7.505mAOD	March	6.84mbgl 8.85mAOP	2.37m
CARW008	Waste/Made Ground	+0.22mbgl 11.30mAOD	October	0.56mbgl 10.52mAOD	April	0.41mbgl 10.67mAOD	0.78m
CARW009	Waste/Made Ground	+0.49mbgl 11.08mAOD	September	0.15mbgl 10.44mAOD	April/May	0.02mbgl 10.57mAOD	0.64m



Monitoring Locations	Response Zone	Minimum		Maximum		Average	Variability
		Depth	Month	Depth	Month		
MSMW91	Gravel (Glacial Deposits)	+0.14mbgl 9.48mAOD	December	2.11mbgl 7.23mAOD	May	2.05mbgl 7.29mAOD	2.25m
MSMW155s	Presumed Superficial Deposits	0.18mbgl 8.83mAOD	February	0.71mbgl 8.31mAOD	May	0.71mbgl 8.31mAOD	0.53m
MSMW155d	Presumed Bedrock	0.1mbgl 9.12mAOD	November	1.38mbgl 7.83mAOD	March	0.63mbgl 8.60mAOD	1.28m
MSMW231	Waste/Made Ground	6.46mbgl 8.10mAOD	February	7.64mbgl 6.92mAOD	May	7.62mbgl	1.18m
MSMW238	Waste/Made Ground	2.41mbgl 12.107mAOD	March	7.64mbgl 6.86mAOD	December	5.83mbgl 8.69mAOD	5.24m

Table 4: Summary of Recorded LNAPL in Boreholes

Borehole ID	Response Zone	Number of occurrences	LNAPL thickness		Average thickness
			Minimum (date)	Maximum (date)	
CBH2	Waste/Made Ground	7/12	0.00m (Jan, Feb Aug & Oct 2020)	0.35m (March 2020)	0.13m
CBH13	Waste/Made Ground	10/12	Skimmer Pump blocking access in July & Aug	1.9m (September 2020)	0.78m
CBH16	Waste/Made Ground	7/7	0.35m (February 2020) Pump in well for 5 months.	0.83m (May 2020)	0.55m
CBH19	Waste/Made Ground	5/12	Blocked pipe from June 2020	1.36m (January 2020)	0.42m
CBH20	Waste/Made Ground	1/12	0.00m (all excl. Jan 2020)	0.018m (January 2020)	0.00m
CBH32	Waste/Made Ground	12/12	0.002m (February 2020)	1.6m (November 2020)	0.40m
CBH46	Waste/Made Ground	11/12	0.01 (May 2020) (No record for Sept)	1.3m (November 2020)	0.38m
CBH47	Waste/Made Ground	3/12	0.00m (Dry Apr-Jun & Sept-Nov)	0.34m (March 2020)	0.26m



Borehole ID	Response Zone	Number of occurrences	LNAPL thickness		Average thickness
			Minimum (date)	Maximum (date)	
CBH48	Waste/Made Ground	1/4	0.00 (Sept, Oct & Nov 2020)	0.24 (December 2020)	N/A
CBH51	Waste/Made Ground	10/12	0.00m (November & April 2020)	0.195m (June 2020)	0.12m
CBH52	Waste/Made Ground	12/12	0.005m (June 2020)	0.51m (April 2020)	0.12m
CBH57	Waste/Made Ground	2/12	0.00m (all except Mar & June 2020)	0.048m (March 2020)	0.025m
CARW008	Made Ground	1/12	0.00m (all excl. Feb 2020)	0.003m (Feb 2020)	0.00m
CARW009	Made Ground	5/12	0.00m (Mar, May, Aug, Sept, Oct, Nov, Dec 2020)	0.012m (July 2020)	0.006m
MSMW231	Waste/Made Ground	10/12	0.00m (all exc Jan & Nov 2020))	0.48m (August 2020)	0.32m
MSMW238	Waste/Made Ground	6/12	0.00 (No reading in Jan & pumped from July-Dec 2020)	0.95m (May 2020)	0.42m

Table 5: Summary of Recorded LNAPL in Sumps

Sump ID	Response Zone	Number of occurrences	NAPL thickness		Average thickness
			Minimum	Maximum (date)	
18	Waste/Made Ground	11/12	0.00m (Jan 2020)	3.22m (May 2020)	0.44m
19	Waste/Made Ground	7/12	0.00m (Jan, Feb, Mar, Jun, Jul 2020)	2.42m (May 2020)	0.53m
20	Waste/Made Ground	10/12	0.00m (April & May 2020)	0.45m (December 2020)	0.16m
21	Waste/Made Ground	10/12	0.00m (Nov & Dec 2020)	0.27m (April 2020)	0.13m
24	Waste/Made Ground	7/12	0.00m (Jan, Apr, May, Sept, Oct 2020)	0.16m (December 2020)	0.097m
25	Waste/Made Ground	4/12	0.00m (Feb, Mar, Jun, Jul, Aug, Sept, Nov Dec 2020)	0.57m (October 2020)	0.20m



Sump ID	Response Zone	Number of occurrences	NAPL thickness		Average thickness
			Minimum	Maximum (date)	
27	Waste/Made Ground	10/12	0.00m (Jan & Oct 2020)	0.16m (June 2020)	0.11m

N.B. Only sumps where NAPL was detected are shown in the Table 5.

Table 6: Summary of Recorded DNAPL in Sumps

Borehole ID	Response Zone	Number of occurrences			Minimum thickness
			DNAPL depth	Depth to Base of sump	
18	Waste/Made Ground	1/12	3.30m (May 2020)	3.71m	0.41m
19	Waste/Made Ground	1/12	2.50m (May 2020)	3.67m	1.47m

5.4 Groundwater and NAPL Levels Discussion

5.4.1 Groundwater Levels

A review of groundwater level monitoring data collected over the last 12 months shows that generally the lowest levels were recorded in April and May 2020, and the highest levels between February and March 2020. This is in line with the rainfall data (shown on Graph 1 in Appendix E) which shows that precipitation was at its lowest in April and May 2020.

There is an average variability of 2.7m between the lowest and highest recorded groundwater level in any location which is similar to the degree of variability in groundwater levels reported in 2019.

Boreholes CBH2, CBH13 and CBH52 have the greatest variability in groundwater levels, where differences between the highest and lowest recorded water levels were in excess of 6m. These boreholes are all located in the central area of the Tip where a high degree of local heterogeneity would be expected in the waste material. Furthermore, these wells are used periodically for oil recovery, which will exert influence over groundwater levels.

Boreholes MSMW155s, CARW008 and CARW009 recorded the smallest variability in groundwater levels of 0.53m, 0.78m and 0.64m respectively. These boreholes are all located to the south of the landfilled area and in an area where saturated ash deposits are prevalent.

5.4.2 Non-Aqueous Phase Liquid (NAPL) Levels and Distribution

LNAPL has been detected in all but five borehole locations during 2020: MSMW91, MSMW155s, MSMW155d, CARW034 and CBH23. With the exception of CBH23 these boreholes are installed outside the main landfilled area in Made Ground, superficial deposits and bedrock.

The greatest LNAPL thickness of 1.9m was recorded CBH13 in September 2020. In locations CBH32 and CBH52 LNAPL was recorded most consistently, where it was present during all monitoring rounds. The least LNAPL was recorded in boreholes CBH20, CARW008 and CARW009. The 'CARW' boreholes are located to the south east of the landfilled area. CBH20 is located centrally in the Tip and the relatively small amount of free product in this location may be a result of the heterogenous nature of the waste materials and oil distribution.

Suspected DNAPL was recorded in Sumps 18 and 19 in May 2020 at thicknesses of 0.41m and 1.47m respectively. These sumps are installed in Waste/Made Ground and are located near the northern boundary between the 'lower Tip' and the central area of the Tip. DNAPL was not recorded on any other monitoring round in 2020.

NAPL monitoring records for January, March, September, and December are presented on drawings in Appendix D. These drawings show the spatial distribution and thickness of the LNAPL across the Tip. The central and eastern areas of the Tip are most impacted by LNAPL. The sumps and boreholes in the western half, (the 'lower Tip') record lesser thicknesses, and the presence of LNAPL is less frequent.

6 Groundwater and Surface Water Quality Assessment

6.1 Assessment Criteria

Results from laboratory analysis of groundwater and surface water samples obtained during 2020 have been screened against relevant Water Quality Standards.

Groundwater data have been screened against threshold concentrations in The Water Supply (Water Quality) Regulations 2018 and against Environmental Quality Standards (EQS) in The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. The threshold concentrations in The Water Supply (Water Quality) Regulations 2018 (referred to as DWS) have been used to give a broad indication of overall groundwater quality, however they are considered to be overly conservative in this instance because groundwater is not abstracted from the Tip for water supply purposes. EQS have been used because groundwater recharges Crymlyn Bog.

Surface water data have been screened against EQS in The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015, and the specified emission limits in EPR/LB3293HN for the site drainage from Coed Darcy. Whilst the emission limits are not strictly applicable to the SW1-SW6 surface water monitoring locations, they have been used to identify the presence of elevated concentrations of contaminants in surface waters in proximity to Crymlyn Bog. The Permit emission limit for 'visible oil and grease' of 5,000 µg/l has been used to assess total petroleum hydrocarbons in the absence of an EQS.

Laboratory analytical data screening is presented in Appendix E.

6.2 Groundwater

During 2020, 97 annual average EQS exceedances for metals were recorded in 52 groundwater samples. Where maximum allowable concentration (MAC) EQS are available, these were exceeded in two samples for cadmium and in two samples for lead. The recorded exceedances for copper, nickel and zinc do not take account of the bioavailability of the metals and the screening is therefore overly conservative. Laboratory analysis for pH, calcium and dissolved organic carbon will be included in future to enable the metals-bioavailability assessment tool to be used.

The DWS for arsenic was exceeded in 17 samples and the DWS for lead was exceeded in two samples.

The annual average EQS and DWS for benzene were exceeded in nine samples, and the MAC-EQS was exceeded in five of these samples. Annual average EQS for PAH compounds were recorded in 106 groundwater samples and DWS for benzo(a)pyrene and the sum of 4 PAH compounds were exceeded in 80 groundwater samples.

Graphs 1 and 2 in Appendix E show TPH concentrations recorded in groundwater samples taken from boreholes, plotted against average rainfall and average temperature respectively. It should be noted that TPH results from CBH16 in January (1,240,000µg/l) and CBH32 in October (1,680,000µg/l), and CBH52 in September (603,000µg/l) have been omitted from the graph to improve visual representation of the other data.

Overall, TPH concentrations in groundwater were relatively stable in most locations and generally less than 20,000 ug/l throughout 2020. The data from boreholes CARW008, CBH46, CBH16, CBH32 and CBH52 suggests that TPH concentrations appear to fluctuate more, with concentrations of TPH peaking over 20,000ug/l. However, for these boreholes the datasets are less complete than for other locations.

Based on the dataset from 2020, there appears to be no clear relationship between TPH concentration in groundwater and either average rainfall or temperature data.

6.3 Surface Waters

Over the twelve-month monitoring period 38 individual metals annual average EQS exceedances were recorded (for cadmium, chromium, copper, lead and zinc), and 32 individual annual average EQS PAH exceedances were recorded (for benzo(a)pyrene and fluoranthene) in the surface water samples. The recorded exceedances for copper and zinc, which were generally marginal, do not take account of the bioavailability of the metals and the screening is therefore overly conservative. Laboratory analysis for pH, calcium and dissolved organic carbon will be included in future to allow the metals-bioavailability assessment tool to be used. Sampling point W5 was recorded as having the highest number of exceedances (19) and sampling location W2 recorded the lowest number of exceedances (1).

During 2020 a single concentration of TPH was recorded above the wider Coed Darcy drainage emission limit of 5,000µg/l for oil and grease. This occurred at SW1 in May and the TPH concentration was recorded as 12,300µg/l.

Graphs 3 and 4 in Appendix E show TPH concentrations recorded in surface water samples against average monthly rainfall and average monthly temperature data respectively. The elevated TPH concentration at sampling location SW1 occurred in May 2020 in warmer temperatures following a period of dry weather. This may indicate that reduced rainfall resulted in a lack of dilution of TPH, while rising temperatures may have increased mobility of the free phase hydrocarbons. However, a similar trend was not seen in other surface water sampling locations.

An alternative explanation could be that during the gap in oil recovery as a result of the Covid-19 pandemic, free phase hydrocarbons accumulated in the peripheral trench around the location of SW1 which resulted in measurably higher dissolved phase concentrations in surface water. Concentrations of dissolved phase TPH were consistently low across the remainder of 2020 when oil recovery works were taking place.

7 Landfill Gas

7.1 Landfill Gas Monitoring

Landfill gas monitoring was undertaken at 14 boreholes in the Permit area and its surroundings, using a GA5000 gas analyser. Due to the age of the boreholes, a number of headworks are damaged and the boreholes therefore cannot be monitored for gas. Of the 14 boreholes that were monitored during 2020, eleven are located in the Permit Area, and three are located outside of the Permit boundary to the south and south west, as summarised in Table 7.

Table 7: Landfill Gas Monitoring Location Information

Monitoring locations in the Tip	Monitoring locations outside the Tip
CBH16	MSMW155S (located to the south west)
CBH20	MSMW155D (located to the south west)
CBH23	MSMW091 (located to the south west)
CBH32	
CBH46	
CBH51	
CBH52	
CBH57	
CARW008 (located outside fill area)	
CARW009 (located outside fill area)	
MSMW231	

7.2 Landfill Gas Concentrations

Landfill gas monitoring was undertaken by GAL during the periods January to February 2020 and April to December 2020. The minimum atmospheric pressure reading was recorded as 995mb in October 2020, whilst the highest atmospheric pressure was recorded as 1038 in May 2020. Monitoring rounds carried out in February, April, July and September were carried out during falling atmospheric pressure events, which represent conditions when positive flow of landfill gas is most likely to be recorded. Landfill gas monitoring data is presented in Appendix F.

Methane (CH₄)

Based on the graphs for boreholes outside of the Tip and boreholes in the Tip presented as Figure 1 and Figure 2 respectively, methane concentrations during 2020 appear to show some variability. Generally, methane concentrations within the Tip were below 10% with the exception of CBH20 in which recorded concentrations ranged from 94.6% (August) to 34.1% (December). The lowest methane concentration of <0.1% was recorded across several monitoring locations in the Tip throughout the year.

Outside the Permit area, the maximum methane concentration of 4.3% was detected in MSMW155d (assumed to be screened with a response zone in bedrock) in February 2020. The minimum methane concentration of <0.1% was recorded outside the former landfill area in all three monitoring locations on multiple monitoring rounds.

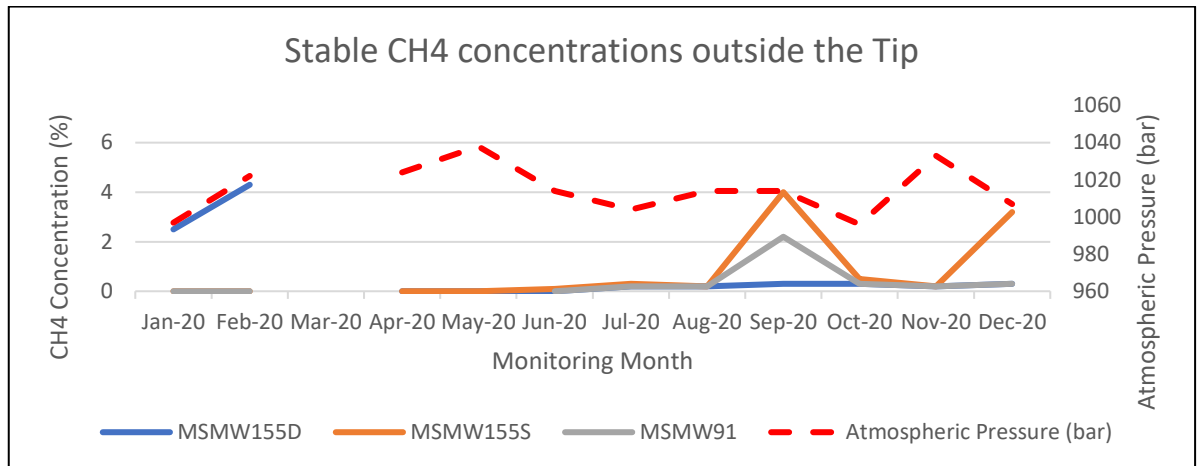


Figure 1: Methane Concentrations in Boreholes Outside the Tip

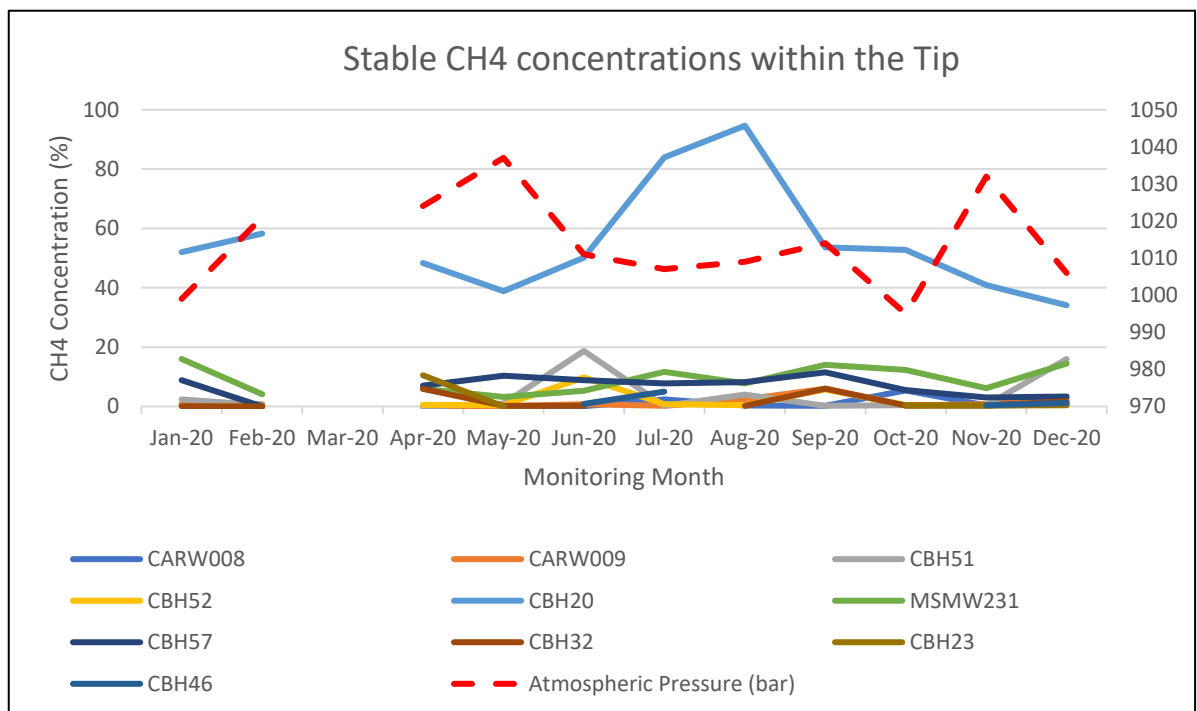


Figure 2: Methane Concentrations in Boreholes within the Tip

Carbon Dioxide (CO₂)

Based on monitoring data presented in the graphs below (Figure 3 and Figure 4) stable carbon dioxide concentrations in the Tip ranged from <0.1% to 12.3%. The maximum carbon dioxide concentration of 21.1% was detected in BH32 in April and the lowest concentration (<0.1%) detected in BH51 in April.

The maximum carbon dioxide concentration of 17.1% recorded outside of the Tip was in MSMW91 (screened in superficial deposits) in August 2020 and the lowest concentration of <0.1% was recorded in MSMW155d (screened in bedrock) in April, July and August.

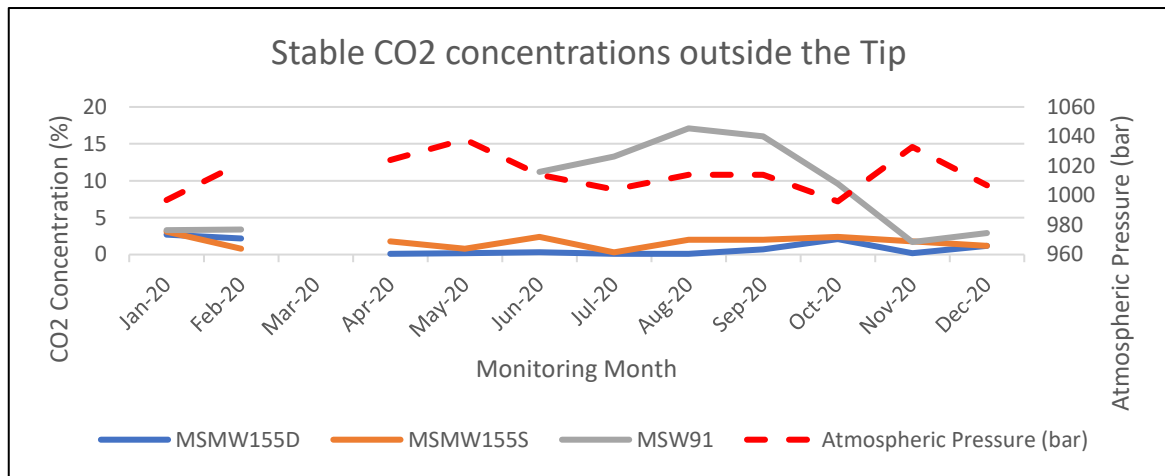


Figure 3: Carbon Dioxide Concentrations in Boreholes Outside the Tip

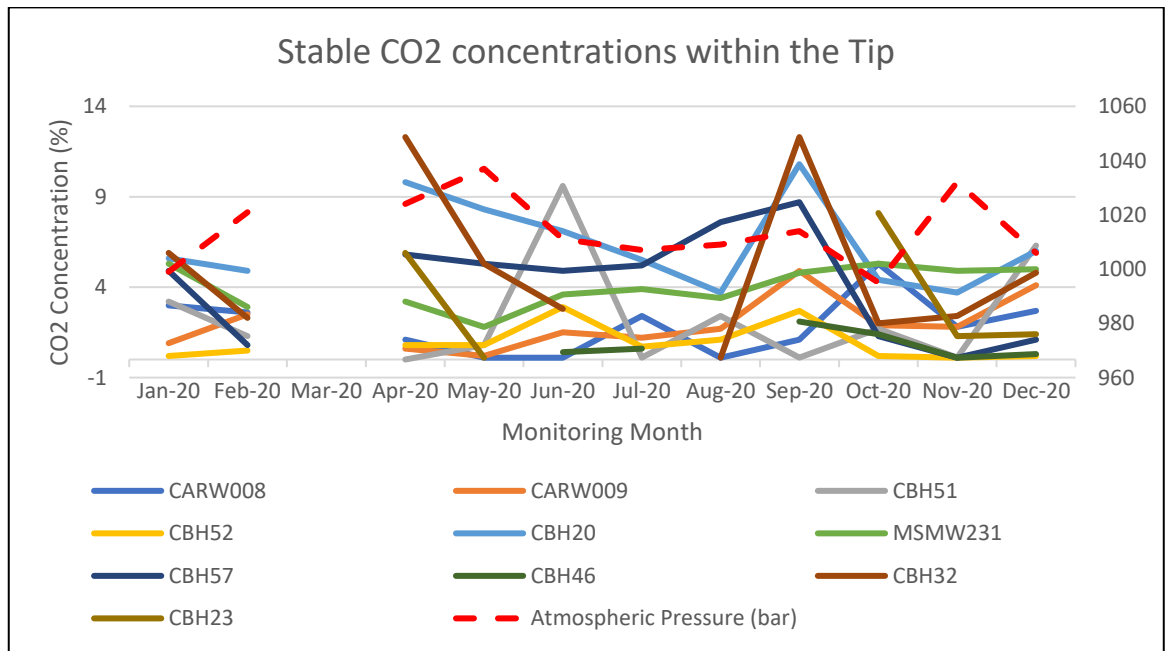


Figure 4: Carbon Dioxide Concentrations in Boreholes in the Tip

Oxygen (O₂)

Oxygen concentrations shown on the graphs presented as Figure 5 and Figure 6 in the Tip range from 0.1% to 21.4%, with the lowest concentration recorded in BH20 during September and the maximum concentration detected in BH52 during December.

Outside of the Tip oxygen concentrations ranged from 1.4% to 21.6%. The minimum concentration of 1.4% was recorded in MSMW91 in September and the maximum concentration of 21.6% was recorded in MSMW155d in April.

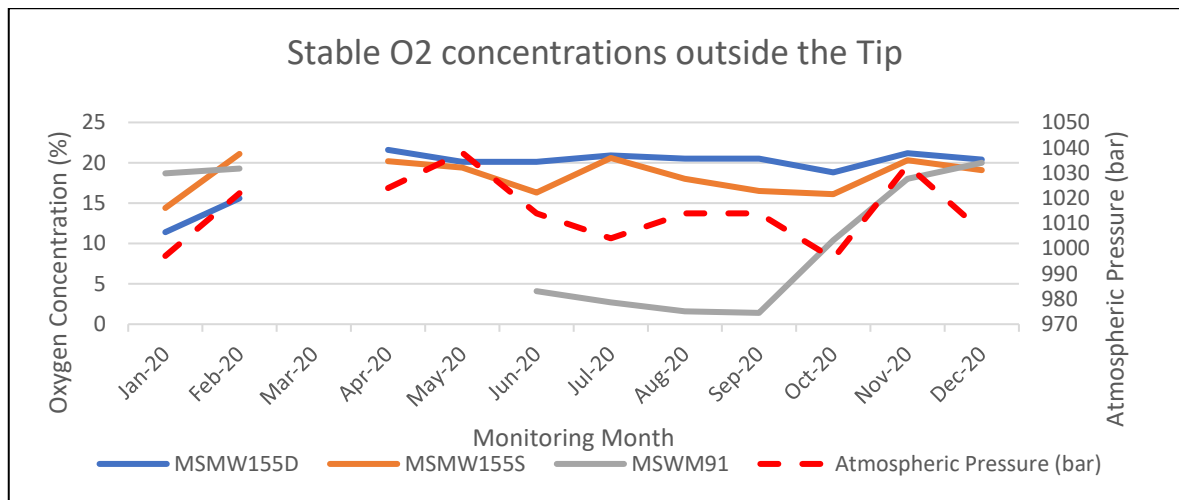


Figure 5: Oxygen Concentrations in Boreholes Outside the Tip

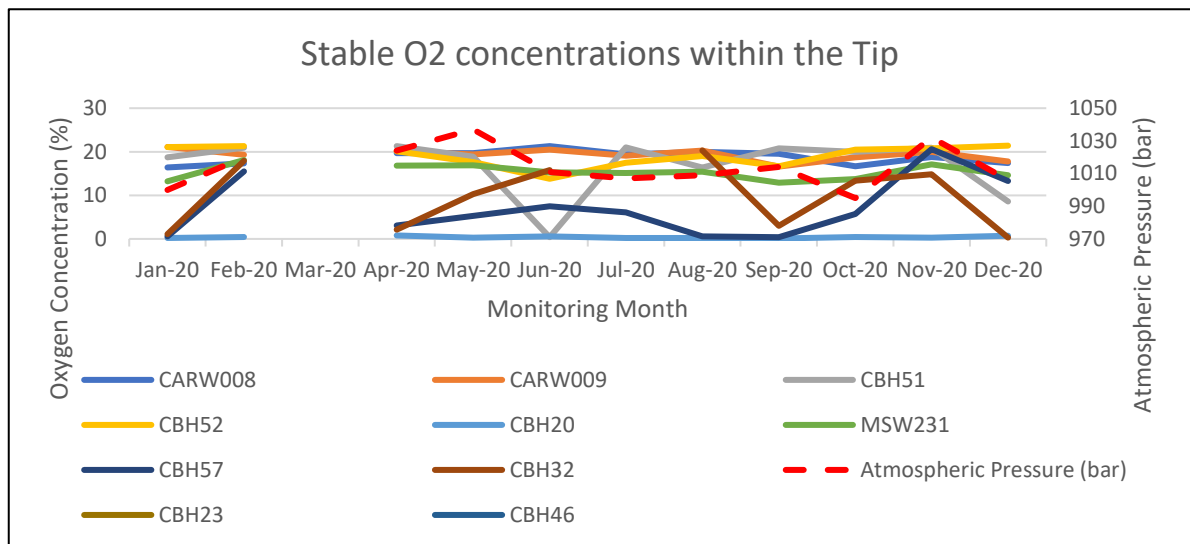


Figure 6: Oxygen Concentrations in Boreholes within the Tip

Landfill gas monitoring results recorded during 2020 are summarised in Table 8.

Based on the gas monitoring dataset for 2020, there does not appear to be an obvious link between boreholes with greater thicknesses of free phase hydrocarbons and elevated gas concentrations. Monitoring locations where elevated gas concentrations were detected generally have none or only minor amounts of free phase hydrocarbons present. The elevated methane concentration seen in CBH20 in August coincides with the highest annual temperatures, and the increased methane may be attributable to greater methanogenesis occurring in warmer temperatures although this relationship is not fully established.

7.3 Gas Flow Rates

Recorded gas flow rates were variable during 2020, ranging from -12.8 litres/hour (l/hr) in CARW008 in September 2020 to 14.0l/hr in CARW009 in April 2020 which coincided with a falling atmospheric pressure event. Both boreholes are located on the southern margin of the Tip with response zones primarily in Made Ground, but based on the exploratory hole logs they appear to be outside of the landfilled area.



Table 8: Landfill Gas Concentration Summary

Monitoring location	Location	Methane (%)		Carbon dioxide (%)		Oxygen (%)	
		Min	Max	Min	Max	Min	Max
CARW008	In waste on SE boundary	<0.1	5.4	0.1	5.3	16.4	21.3
CARW009	In waste on SE boundary	<0.1	6.0	0.2	4.9	16.6	21.1
CBH20	In waste within central section	34.1	94.6	3.7	10.8	0.1	0.8
CBH32	In waste within central section	<0.1	6.0	0.1	12.3	0.3	20.3
CBH46	In waste within central section	0.4	21.1	0.1	2.1	1.4	21.3
CBH51	In waste within central section	<0.1	18.7	<0.1	9.6	0.4	21.3
CBH52	In waste within central section	<0.1	9.8	0.1	2.9	13.8	21.4
CBH57	In waste within central section	<0.1	11.5	0.1	8.7	0.4	20.6
CBH23	In waste within central section	<0.1	10.5	0.1	8.1	4.7	20.2
MSMW231	In waste within central section	3.2	16	1.8	5.3	12.9	18.1
MSMW155s	Beyond W boundary of landfill area	<0.1	4.0	0.3	3.1	14.4	21.1
MSMW91	Beyond W boundary of landfill area	<0.1	2.2	1.7	17.1	1.4	20.0
MSMW155d	Beyond W boundary of landfill area	<0.1	4.3	0.1	2.7	11.4	21.6

8 Commentary

Groundwater levels, NAPL, groundwater quality, surface water quality and landfill gas continued to be monitored in and around the Tip during 2020.

Groundwater levels were most variable in boreholes located in the central area of the Tip during 2020, and least variable on the southern margin of the Tip beyond the extent of the landfilled area.

Generally, more consistent occurrences and greater thicknesses of LNAPL were recorded in the central and eastern areas of the Tip. The area in the west (the 'lower tip') which has previously undergone removal of bulk sources of free phase hydrocarbons has fewer recorded instances of LNAPL in boreholes and sumps.

Suspected DNAPL was measured only once in Sumps 18 and 19, in May 2020. These sumps are located on the northern boundary near the north east corner of the 'lower tip', and are believed to be installed in waste material and/or ash. The DNAPL is presumed to have originated from the main tip which is at a higher elevation, located to the south east of these sumps. During 2019, DNAPL was detected in five locations between January and March 2019. Two of these locations are upgradient of the sumps, CBH20 and CBH57, potentially suggesting a limited and localised DNAPL source within the central area of the Tip.

Elevated concentrations of metals, benzene and PAH compared to the Water Quality Standards were identified in groundwater samples recovered from boreholes located in the Tip. TPH concentrations in groundwater were relatively stable and generally less than 20,000 ug/l throughout 2020, although concentrations above 500,000µg/l were sporadically recorded in CBH16 in January, in CBH32 in October and in CBH52 in September.

Limited exceedances of the respective EQS for metals and PAH were recorded in surface water samples during 2020. Concentrations of TPH in surface water samples were generally low, with the exception of a concentration of 12,300 µg/l recorded at SW1 in May.

Consistent with the heterogeneous nature of the waste material and presence of free phase hydrocarbons in the Tip, methane and carbon dioxide have been recorded at variable concentrations during 2020.

Five additional wells have been located during 2020 which will provide greater spatial coverage across the Tip. Furthermore, due to ongoing work and data reviews a number of the previously monitored wells have had their original identities determined and original borehole logs located, which has confirmed borehole installation screening information.

Locating, identifying and assessing the condition of historical wells at the Tip is an ongoing process and it is proposed that additional samples are collected from these 'new' wells during 2021.

Oil recovery will continue from the peripheral trench in 2020 and will also target sumps and wells where LNAPL is consistently measured at recoverable thicknesses. Continued monitoring will show the impact this has on the NAPL distribution and thickness.

The groundwater level, NAPL, groundwater quality, surface water quality and landfill gas monitoring will continue throughout 2021 to increase the dataset which will in time inform suitable compliance and control limits to be used in the preparation of a closure and aftercare management plan. The monitoring results will also continue to be reviewed on a monthly basis to determine the efficacy of the current approach to oil recovery at the Tip and to identify if improvements can be made.

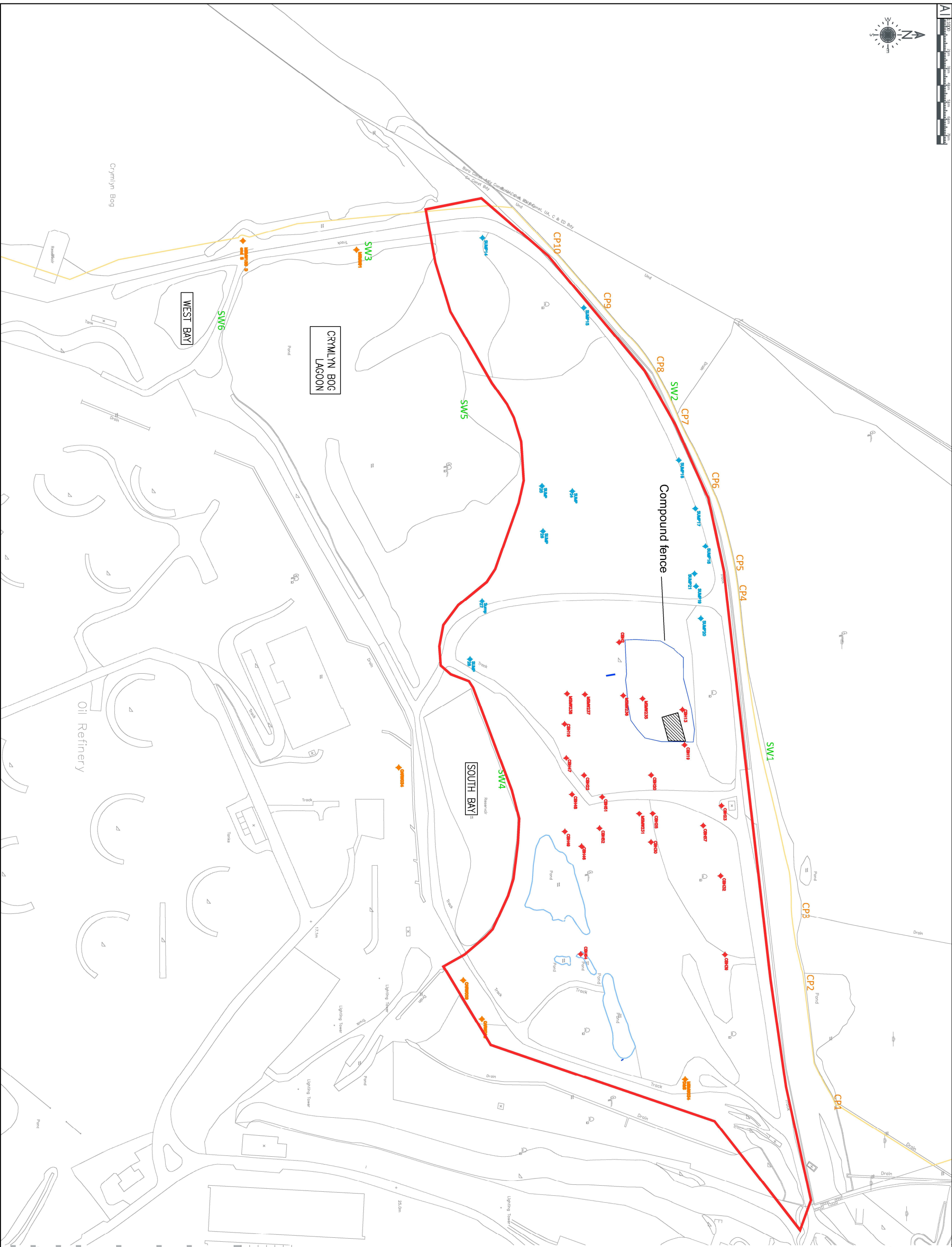


Appendix A Site Plans



- W1 - Ta Y Feed
- W2 - Crmlyn Bog Diffuse Discharge
- W3 - Crmlyn Bog Point Discharge
- W4 - Fremans Bund
- W5 - Llandarcy Bog Interceptor
- T-36* (Trade Effluent Discharge)

1	FOI / SEARCH	Requester's Name and Surname	Mr.
2	FOI / DATE	REQUEST DATE	31
3	 Since March 1992, St John's Ambulance has been a leading provider of first aid, first response, and first aid training in the UK. London: Birmingham Leeds: Glasgow, Leicester London: London Manchester: Manchester Newcastle: Newcastle		
4	CLIENT	St. John's Ambulance Ltd	
5	PROJECT	Good Darcy, Swansea	
6	DRAWING TITLE	Notable Areas & NRW Discharge Consent Points	
7	DRAWING SUB TITLE	INFORMATION	
8	JOI CODE	SKETCH	PLAN
9	NOI CODE	A	0110
10	NOI CODE	GA	LC
11	NOI CODE	GA	10/01/19



NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with regulations.

KEY

- Perimeter
- SW1 Surface water sampling locations
- Groundwater monitoring/sampling locations
- Sump locations
- CP7 Collection point

CLIENT
St Modwen Development Ltd

PROJECT
Coed Darcy

DRAWING TITLE
Crymllyn Tip
Monitoring Location Plan

INFORMATION
DRAWING REFERENCE: 04020 - A - SK201 - P2

SCALE
A @ 1:1000

DATE
27.01.21

REV **DATE** **REVISION NOTE** **BY**

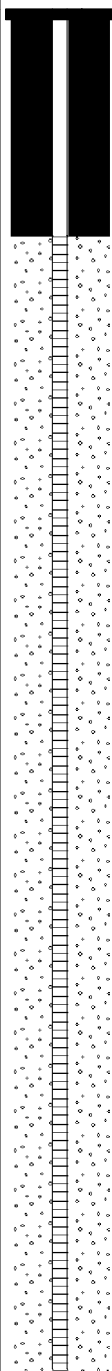
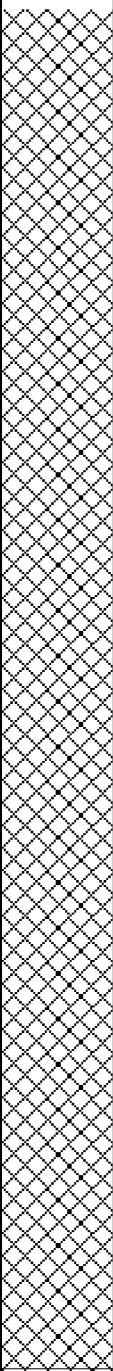
P1	13.02.20	Added more boreholes to location plan	JP

PJA
Scanlon, 146a
Longbridge, Birmingham
B31 2JQ, UK 0121 4750234
Birmingham, Bristol
Exeter, London, Reading
pja.co.uk



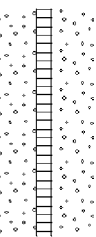
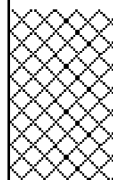
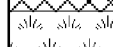
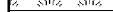
Appendix B Borehole Logs

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Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195534.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.50 - 10.50m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste Tip Fill.			
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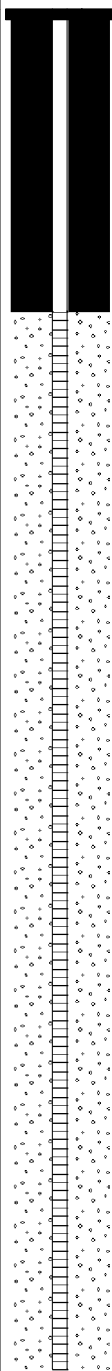
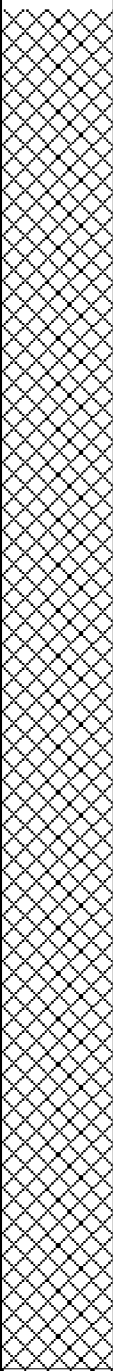
Comments:

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Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195534.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.50 - 10.50m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9 10 11 12 13 14 15 16 17 18					MADE GROUND: Waste Tip Fill.			
					PEAT:	10.20		
					End of Borehole	10.50		

Comments:

Project No: C1296	Date: 29 Jan 2009	Easting: 270343.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195572.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 2.00 - 12.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste Tip Fill.			
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
						Continued next sheet		

Comments:

Design and Construct Remediation

Date: 29 Jan 2009

Easting: 270343.000

Project No: C1296

Engineer: MS

Northing: 195572.000

Site Location: BP Former Llandarcy

Method: ODEX

Datum: -

Client: St. Modwen

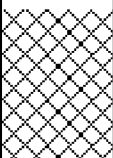
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Screen Position: 2.00 - 12.00m

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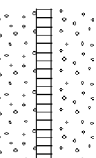
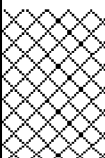
Comments:

Project No: C1296	Date: 9 Feb 2009	Easting: 270351.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195502.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 10.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
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1								
2								
3								
4								
5								
6								
7								
8								
9								
Continued next sheet								

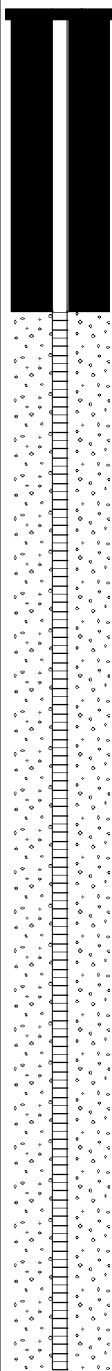
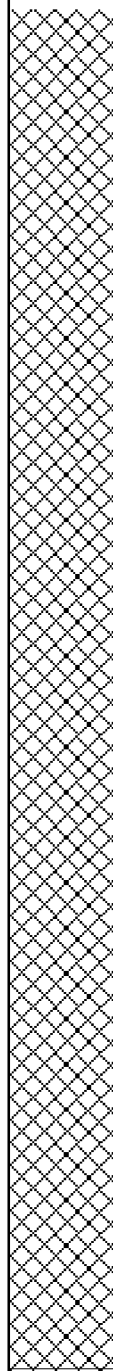
Comments:

Project No: C1296	Date: 9 Feb 2009	Easting: 270351.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195502.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 10.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					MADE GROUND: Waste Tip Fill.			
10					End of Borehole	10.00		
11								
12								
13								
14								
15								
16								
17								
18								

Comments:

Project No: C1296	Date: 29 Jan 2009	Easting: 270362.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195572.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 2.00 - 12.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste tip Fill.			
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
Continued next sheet								

Comments:

Design and Construct Remediation

Date: 29 Jan 2009

Easting: 270362.000

Project No: C1296

Engineer: MS

Northing: 195572.000

Site Location: BP Former Llandarcy

Method: ODEX

Datum: -

Client: St. Modwen

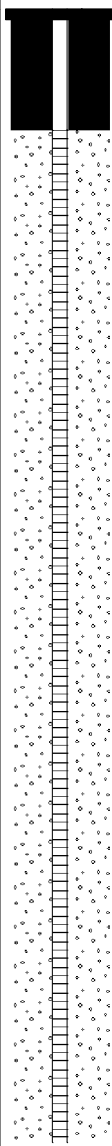
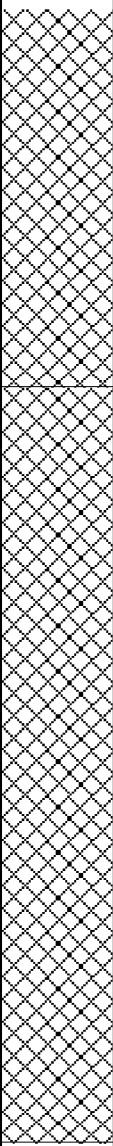
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Screen Position: 2.00 - 12.00m

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Comments:

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Client: St. Modwen	Method: CP	Datum: -
	Hole Diameter: 200mm	Screen Position: 0.80 - 7.50m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: mixture of compacted grey to black clay, gravels and cobbles (up to 10 cm) MADE GROUND: Mixture of black ash, brick fragments, gravel and brown clay. End of Borehole	2.50 7.50		

Comments:

Design and Construct Remediation

Date: 4 Feb 0009

Easting: 270401.000

Project No: C1296

Engineer: MS

Northing: 195595.000

Site Location: BP Former Llandarcy

Method: ODEX

Datum: -

Client: St. Modwen

Hole Diameter: 200mm

Screen Position: 2.00 - 12.00m

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Comments:

Design and Construct Remediation

Date: 4 Feb 0009

Easting: 270401.000

Project No: C1296

Engineer: MS

Northing: 195595.000

Site Location: BP Former Llandarcy

Method: ODEX

Datum: -

Client: St. Modwen

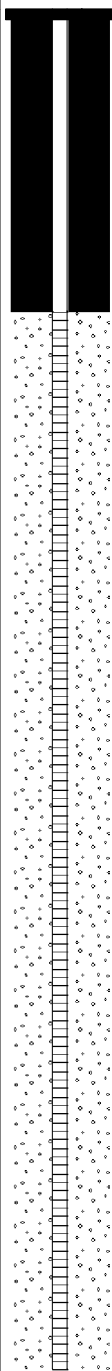
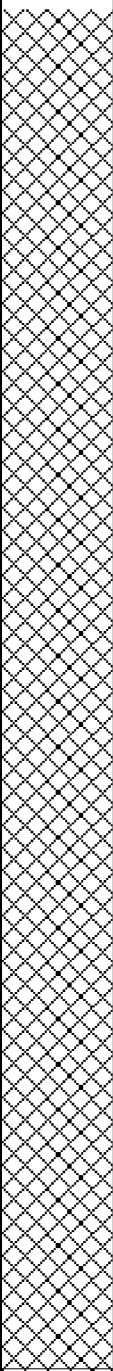
Hole Diameter: 200mm

Screen Position: 2.00 - 12.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					MADE GROUND: Waste tip Fill.	11.90 12.00		
10					PEAT: End of Borehole			
11								
12								
13								
14								
15								
16								
17								
18								

Comments:

Project No: C1296	Date: 30 Jan 2009	Easting: 270405.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195554.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 2.00 - 12.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste tip Fill.			
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
						Continued next sheet		

Comments:

Design and Construct Remediation

Date: 30 Jan 2009

Easting: 270405.000

Project No: C1296

Engineer: MS

Northing: 195554.000

Site Location: BP Former Llandarcy

Method: ODEX

Datum: -

Client: St. Modwen

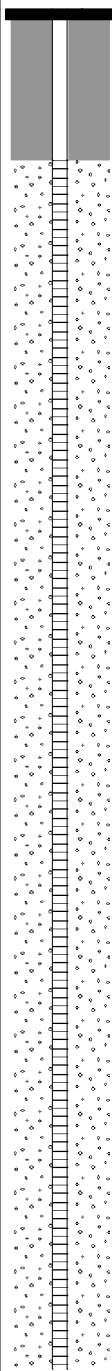
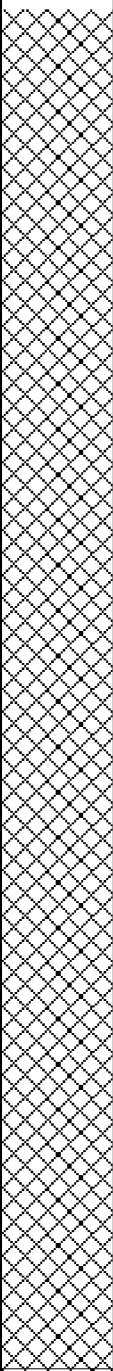
Hole Diameter: 200mm

Screen Position: 2.00 - 12.00m

[illegible]

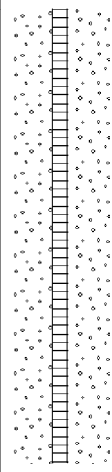
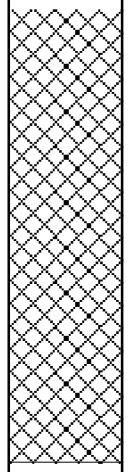
Comments:

Project No: C1296	Date: 4 Feb 0009	Easting: 270442.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195595.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 12.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste tip Fill.			
					Continued next sheet			

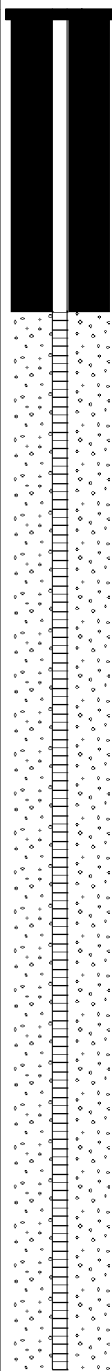
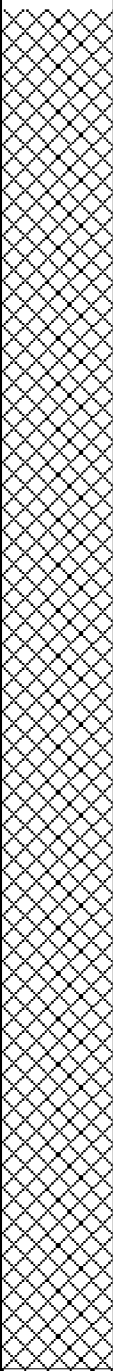
Comments:

Project No: C1296	Date: 4 Feb 0009	Easting: 270442.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195595.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 12.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					MADE GROUND: Waste tip Fill.	12.00		
10								
11								
12								
13								
14								
15								
16								
17								
18								
					End of Borehole			

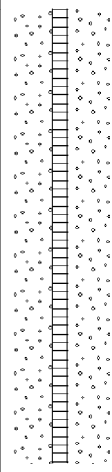
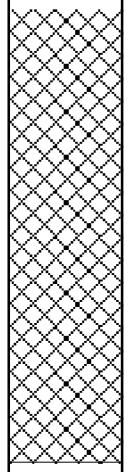
Comments:

Project No: C1296	Date: 5 Feb 2009	Easting: 270489.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195598.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 2.00 - 12.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste tip Fill.			
					Continued next sheet			

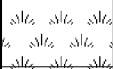
Comments:

Project No: C1296	Date: 5 Feb 2009	Easting: 270489.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195598.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 2.00 - 12.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					MADE GROUND: Waste tip Fill.			
10								
11								
12								
13								
14								
15								
16								
17								
18								
					End of Borehole	12.00		

Comments:

Project No: C1296	Date: 23 Jul 2009	Easting: 270372.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195500.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste Tip Fill.			
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
					Continued next sheet	8.60		

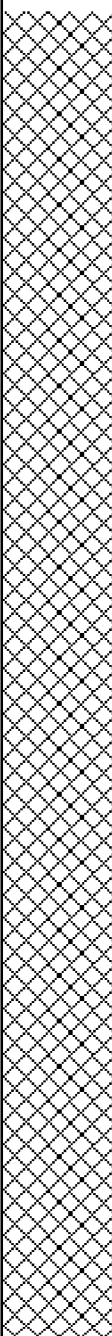
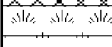
Comments:

Project No: C1296	Date: 23 Jul 2009	Easting: 270372.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195500.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					PEAT: End of Borehole	9.00		
10								
11								
12								
13								
14								
15								
16								
17								
18								

Comments:

Project No: C1296	Date: 23 Jul 2009	Easting: 270394.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195502.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE				
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					MADE GROUND: Waste Tip fill.				
1									
2									
3									
4									
5									
6									
7									
8									
9									
Continued next sheet						8.80			

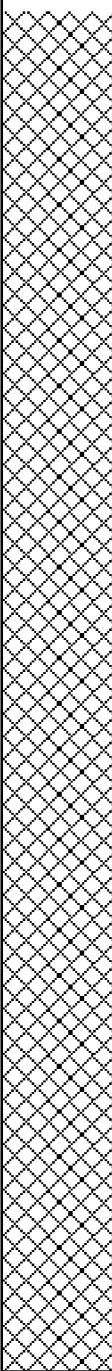
Comments:

Project No: C1296	Date: 23 Jul 2009	Easting: 270394.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195502.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					PEAT: End of Borehole	9.00		
10								
11								
12								
13								
14								
15								
16								
17								
18								

Comments:

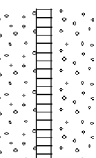
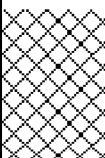
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Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195523.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 10.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE				
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					MADE GROUND: Waste Tip fill.				
1									
2									
3									
4									
5									
6									
7									
8									
9									
Continued next sheet									

Continued next sheet

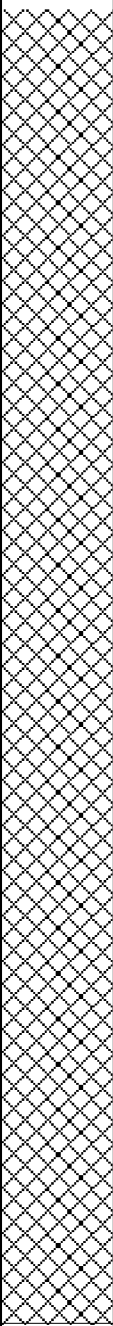
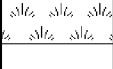
Comments:

Project No: C1296	Date: 22 Jul 2009	Easting: 270393.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195523.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 10.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					MADE GROUND: Waste Tip fill.			
10					End of Borehole	10.00		
11								
12								
13								
14								
15								
16								
17								
18								

Comments:

Project No: C1296	Date: 22 Jul 2009	Easting: 270415.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195525.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					MADE GROUND: Waste Tip fill.			
1								
2								
3								
4								
5								
6								
7								
8								
9								
					Continued next sheet	8.70		

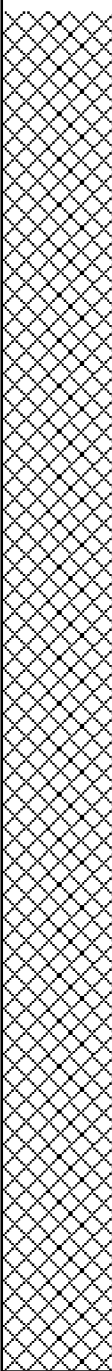
Comments:

Project No: C1296	Date: 22 Jul 2009	Easting: 270415.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195525.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					PEAT: End of Borehole	9.00		
10								
11								
12								
13								
14								
15								
16								
17								
18								

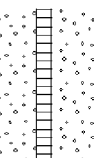
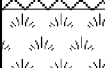
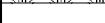
Comments:

Project No: C1296	Date: 24 Jul 2009	Easting: 270410.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195585.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 10.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE				
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					MADE GROUND: Waste Tip fill.				
1									
2									
3									
4									
5									
6									
7									
8									
9									
Continued next sheet									

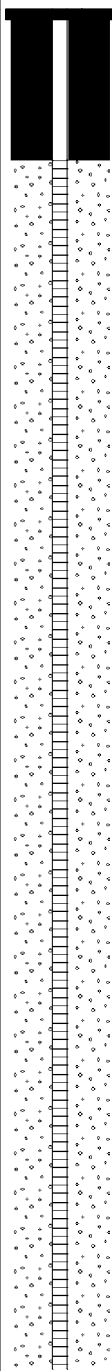
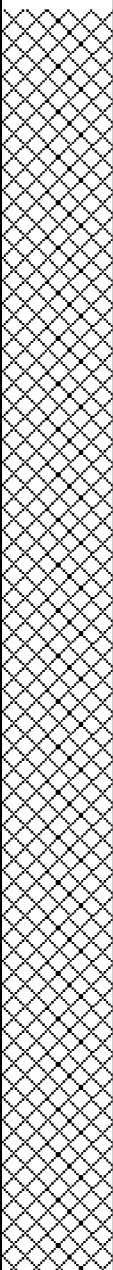
Comments:

Project No: C1296	Date: 24 Jul 2009	Easting: 270410.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195585.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 10.00m

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
9					MADE GROUND: Waste Tip fill.			
					PEAT:	9.60		
					End of Borehole	10.00		
10								
11								
12								
13								
14								
15								
16								
17								
18								

Comments:

Project No: C1296	Date: 29 Jul 2009	Easting: 270483.000
Site Location: BP Former Llandarcy	Engineer: MS	Northing: 195513.000
Client: St. Modwen	Method: ODEX	Datum: -
	Hole Diameter: 200mm	Screen Position: 1.00 - 9.00m

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
					MADE GROUND: Waste Tip fill.			
					PEAT:	8.40		
					End of Borehole			

Comments:

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: CARW008		PAGE 1 of 1		
	NUMBER	TYPE					DRILLING DATES: 17/01/01		DRILLING METHODS : Percussive		
							DRILLER : Geotechnical		BOREHOLE DIAMETER : ~100mm		
							LOGGED BY : URS		SCREEN TYPE & DIAM: UPVC 50mm		
							CHECKED BY :		SCREEN SLOT SIZE: 1mm		
					0.0		DESCRIPTION	COMMENTS	0.0		
					0.5		Loose, black, sandy, fine GRAVEL comprising Ash. MADE GROUND	Dry, NVO			
			*47.6		0.5		Sticky, black sandy GRAVEL, some grease. (MADE GROUND)	Sticky product. Mod odour	0.5		
			*37.4		1.0		As above but fine-medium GRAVEL. (MADE GROUND)	Damp from 0.85m, wet from 1.0m. Mod odour	1.0		
			*237		2.0				2.0		
			*3.5		2.5		Soft, brown, silty CLAY	Dry, NVC, slight odour	2.5		
					3.0		Soft, very light brown CLAY. Drilled to 3.0m, collapsed to 2.0m	Dry-moist. NVO	3.0		
					3.5		End of Borehole		3.5		
					4.0				4.0		
					4.5				4.5		
LOCATION / NOTES: NVO = No visual or olfactory evidence						LEGEND Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table		BOREHOLE LOG Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery App'd: _____ Date: 05/09/2002 Drawn : SS _____ Ref: _____ Scale: As scale _____ Job No: 39991-016 Drg. Size: A4 _____ BOREHOLE LOG			

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: CARW009		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 09/01/01 - 10/01/01		DRILLING METHODS :	
							DRILLER : Geotechnical		BOREHOLE DIAMETER :	
							LOGGED BY : SC		SCREEN TYPE & DIAM:	
							CHECKED BY :		SCREEN SLOT SIZE:	
					0.0		DESCRIPTION	COMMENTS	0.0	
					0.5		Soft-loose, black, fine-coarse GRAVEL with patches of sandy silt. Grades into gravelly, silty SAND from 0.6m. Lump of sticky grease at 0.65m MADE GROUND	Wet, slight odour	0.5	
			*4.2		1.0		Soft, med brown, slightly clayey, slightly sandy SILT with occasional gravels and cobbles. (MADE GROUND)	Wet. Manure-like odour	1.0	
			*3.4		1.5		Med-soft grey/black clayey SILT.	Damp. Manure odour, some staining	1.5	
			*3.5		2.0		Very soft, brown/grey/black, slightly gravelly, clayey, sandy SILT.	Very damp, slight odour, some staining. Odour decreases with depth	2.0	
			*14.5		2.5		More clayey at 2.0m, but remains soft.		2.5	
			*2.2		3.0		Becomes sandier and firmer (compressed) from 2.3m		3.0	
			*1.5		3.5		Firm, grey (with some orange streaks), clayey, very sandy SILT.	Moist. NVO. Some chicken wire	3.5	
			*1.3		4.0		Becoming more clayey from 3.2m		4.0	
			*0.5		4.5		Loose, med brown, gravelly SAND. Very gravelly from 3.5m		4.5	
				5.0		Med-dense, med brown, gravelly, very sandy SILT		5.0		
						End of Borehole				

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence		Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery URS App'd: _____ Date: 05/09/2002 Drawn: SS Ref: _____ Scale: As scale Job No: 39991-016 Drg. Size: A4 BOREHOLE LOG	

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: CARW034		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 20/06/01		DRILLING METHODS : Percussive	
							DRILLER : Geotechnical		BOREHOLE DIAMETER : ~100mm	
							LOGGED BY : NL		SCREEN TYPE & DIAM: UPVC 50mm	
							CHECKED BY :		SCREEN SLOT SIZE: 1mm	
					0.0		DESCRIPTION		COMMENTS	0.0
					0.5		Soft, brown, silty PEAT		Strong odour	0.5
					1.0	SAMPLE LOST DUE TO HIGH WATER CONTENT		1.0		
					1.5		Mottled orange/grey sandy SILT with some clay and occasional gravel.		Sheen and odour. Some free phase product. Heavy staining throughout.	1.5
					2.0	Gravel concentration increasing with depth, resulting in harder drilling.		2.0		
				2.5		End of Borehole			2.5	
					3.0					3.0
					3.5					3.5
					4.0					4.0
					4.5					4.5
					5.0					5.0
					5.5					5.5
					6.0					6.0

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence	Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery 	
		App'd:	Date: 04/09/2002
		Drawn : SS	Ref:
		Scale: As scale	Job No: 39991-016
		Drg. Size: A4	BOREHOLE LOG

BOREHOLE CONSTRUCTION		SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW034D1/D2		PAGE 1 of 2	
		NUMBER	TYPE					START DATE: 21/4/99	DRILLING METHOD: ROTARY AIR FLUSH	FINISH DATE: 21/4/99	BOREHOLE DIAMETER: 165 mm
D2	D1							DESCRIPTION	COMMENTS		
						0		Grey-dark grey sandy gravelly CLAY with sandstone and brick fragments (MADE GROUND)	Strong hydrocarbon odour		0
						1.0			Moist		1.0
						2.0					2.0
						3.0		Dark brown-black peaty, gravelly CLAY with wood fragments (MADE GROUND)	Strong hydrocarbon odour		3.0
						4.0		Grey clayey GRAVEL	Damp - wet No odour		4.0
						5.0		Dense brown gravelly, silty CLAY (BOULDER CLAY)	Dry No hydrocarbon odour		5.0
						6.0		Dense brown clayey GRAVEL	Productive at 8.2 m but cased out at 9.6 m		6.0
						7.0					7.0
						8.0					8.0
						9.0					9.0
						10			Moist		10

LOCATION / NOTES: 1. All measurements in m below ground level		LEGEND Disturbed Sample Undisturbed Sample * Headspace Analysis † Down Borehole Analysis ▽ Groundwater Table ▽ Perched Water Table	BOREHOLE LOG Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/MC/BRS Date MAY 99 Job No. 39991-004-401	 DAMES & MOORE GROUP
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BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW034D1/D2		PAGE 2 of 2		
	NUMBER	TYPE					START DATE: 21/4/99		DRILLING METHOD: ROTARY AIR FLUSH		
							FINISH DATE: 21/4/99		BOREHOLE DIAMETER: 165 mm		
							DRILLER: R1		SCREEN TYPE & DIAMETER: 50/19 mm ID UPVC		
							LOGGED BY: MC APPR'D BY:		SCREEN SLOT SIZE: 0.5/1 mm		
						DESCRIPTION		COMMENTS			
						Gravelly CLAY (BOULDER CLAY)		Moist			
						Dense coarse grey silty, sandy GRAVEL becoming more clayey at 11 m		No water in hole			
						ROCKHEAD - Dark grey MUDSTONE with occasional silty and sandy layers.					
LOCATION / NOTES: 1. All measurements in m below ground level						LEGEND ☒ Disturbed Sample ☐ Undisturbed Sample * Headspace Analysis † Down Borehole Analysis Groundwater Table Perched Water Table		BOREHOLE LOG Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD App'd DRAFT Ref. CR/MC/BRs Date MAY 99 Job No. 39991-004-401			
								DAMES & MOORE GROUP			

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW091		PAGE 1 of 1	
	NUMBER	TYPE					START DATE: 5/3/99		DRILLING METHOD: Hydraulic Percussive	
							FINISH DATE: 5/3/99		BOREHOLE DIAMETER: 100 mm	
			DRILLER: GEOTECHNICAL		SCREEN TYPE & DIAMETER: 50 mm UPVC					
			LOGGED BY: SG APPR'D BY:		SCREEN SLOT SIZE: 1 mm					
						DESCRIPTION	COMMENTS			
						0	Soft, brown sandy SILT with some clay.	Slight hydrocarbon odour.	0	
						1.0	Soft to very soft, orange-brown sandy SILT with occasional gravel.		1.0	
						2.0	Soft, grey slightly gravelly sandy SILT with frequent cobbles.	Strong hydrocarbon odour.	2.0	
						2.0	Gravel at 1.9m	Heavy black staining at 1.9m	2.0	
						3.0			3.0	
						3.0		Very strong hydrocarbon odour.	3.0	
						4.0	Gravel at 3.5m		4.0	
						4.0			4.0	
						5.0			5.0	
						6.0			6.0	
						7.0			7.0	
						8.0			8.0	
						9.0			9.0	
						10			10	

LOCATION / NOTES:		LEGEND		BOREHOLE LOG	
1. All measurements in m below ground level (mbgl)		Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table		Job Title SOIL & GROUNDWATER INVESTIGATION Location LLANDARCY REFINERY Client BP LLANDARCY LTD	
2. DUP GG = MSMW091-1.5m.				App'd DRAFT Ref. CR/MC/BRS Date MAY 99 Job No. 39991-004-401	
				DAMES & MOORE	

BOREHOLE CONSTRUCTION		SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW156D, S1, S2		PAGE 1 of 2	
		NUMBER	TYPE					START DATE: 9/4/99	DRILLING METHOD: Cable Percussion/Rotary		
								FINISH DATE: 9/4/99		BOREHOLE DIAMETER: 200/165 mm	
								DRILLER: CP2/R1		SCREEN TYPE & DIAMETER: 50 mm ID UPVC	
								LOGGED BY: JC/DB APPR'D BY:		SCREEN SLOT SIZE: 0.5 mm	
D S2 S1						0		DESCRIPTION		COMMENTS	
						0		Loose mottled brown and grey sandy clayey SILT with frequent medium to coarse slag gravel, sandstone and brick fragments (MADE GROUND)	Dry	0	
						1.0			Slight hydrocarbon odour	1.0	
						2.0			Soft dark brown and yellow PEAT	Very strong hydrocarbon odour and staining from 1.6-3.0m	2.0
						3.0				Damp	3.0
						4.0				No odour in peat from 3.0m	4.0
						5.0					5.0
						6.0			becoming lighter in colour and red-brown at 5.5m		6.0
						7.0			Soft grey-brown CLAY	No hydrocarbon odour	7.0
						8.0				Dry beneath bentonite seal	8.0
						9.0			clay becoming gravelly at 9.0m	No odour	9.0
10		Loose grey-brown gravel	Water strike at 10m - productive	10							

LOCATION / NOTES:

- All measurements in m below ground level (mbgl)
- Cable Percussion to 7.5 m, Rotary with ODEX from 7.5m to 14.0 m
- Temporary 200 mm casing installed to 7.5 m during Rotary drilling and well installation

LEGEND

- Disturbed Sample
- Undisturbed Sample
- Headspace Analysis
- Down Borehole Analysis
- Groundwater Table
- Perched Water Table

BOREHOLE LOG

Job Title **SOIL & GROUNDWATER INVESTIGATION**

Location **LLANDARCY REFINERY**

Client **BP LLANDARCY LTD**

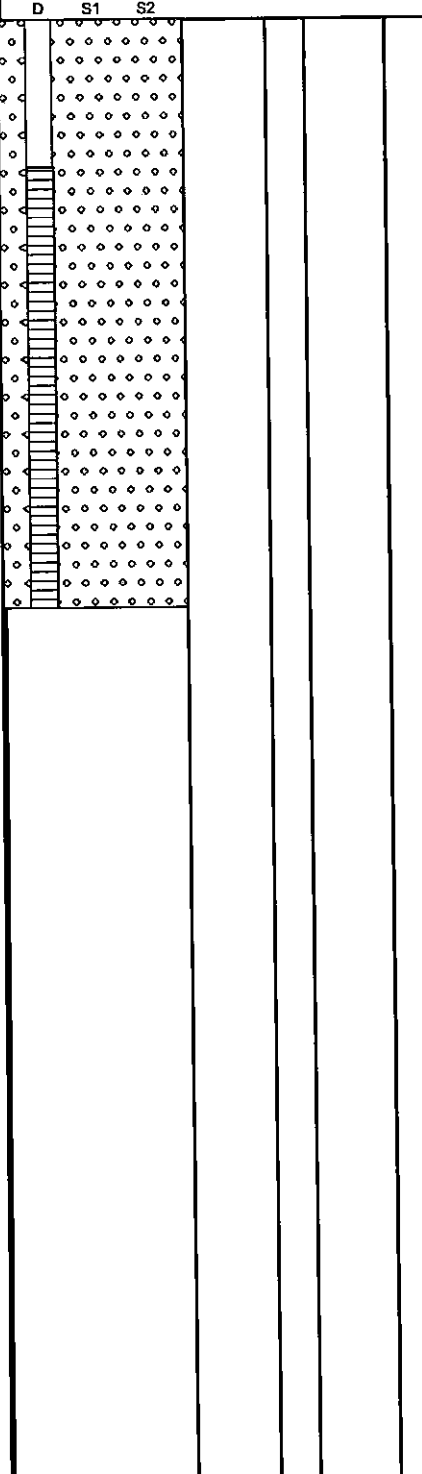
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Ref. **CR/MC/BR5**

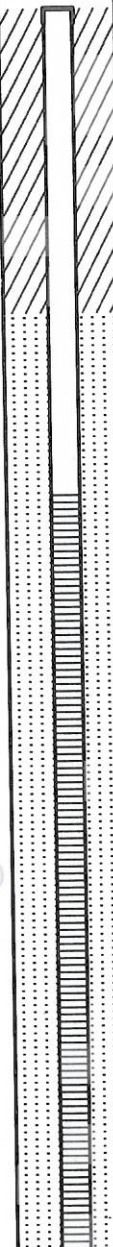
Date **MAY 99**

Job No. **39991-004-401**

DAMES & MOORE

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW156D, S1, S2		PAGE 2 of 2	
	NUMBER	TYPE					START DATE: 9/4/99		DRILLING METHOD: Cable Percussion/Rotary	
							FINISH DATE: 9/4/99		BOREHOLE DIAMETER: 200 mm	
							DRILLER: RD1		SCREEN TYPE & DIAMETER: 50 mm ID UPVC	
							LOGGED BY: JC/DB APPR'D BY:		SCREEN SLOT SIZE: 1 mm	
						DESCRIPTION		COMMENTS		
						10 Loose grey-brown gravel				
						11				
						12 gravel becoming more dense		No odour		
						13				
						14 ROCKHEAD - Soft grey MUDSTONE (BEDROCK)		No odour		
						15 Borehole terminated at 14.0 mbgl				
						16				
						17				
						18				
						19				
						20				

LOCATION / NOTES:		LEGEND		BOREHOLE LOG	
1. All measurements in m below ground level (mbgl)		☒ Disturbed Sample		Job Title SOIL & GROUNDWATER INVESTIGATION	
2. Cable Percussion to 7.5 m, Rotary with		☐ Undisturbed Sample		Location LLANDARCY REFINERY	
		* Headspace Analysis		Client BP LLANDARCY LTD	
		† Down Borehole Analysis		App'd DRAFT	
		 Groundwater Table		Ref. CR/MC/BRS	
		 Perched Water Table		Date MAY 99	
				Job No. 39991-004-401	
				 DAMES & MOORE	

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW231		PAGE 1 of 2	
	NUMBER	TYPE					DRILLING DATES: 03/04/01 - 05/04/01		DRILLING METHODS: Rotary Air Flush	
							DRILLER: Tectonics		BOREHOLE DIAMETER: 250mm	
							LOGGED BY: PW		SCREEN TYPE & DIAM: HDPE 100mm	
							CHECKED BY:		SCREEN SLOT SIZE: 1mm	
DESCRIPTION							COMMENTS			
							Dark brown sandy/clayey fine-coarse GRAVEL. MADE GROUND Intermittent hard bands of concrete/rubble.	Oil/Free Product from 4.0m Wet/Oily	0.0	
									0.5	
									1.0	
									1.5	
Fine-medium GRAVEL with silt and clay. MADE GROUND.							Wet/Oily	2.0		
								2.5		
								3.0		
								3.5		
Medium, subangular GRAVEL fill with peat/fibrous plant remains. MADE GROUND							Saturated with H/C	4.0		
								4.5		
								5.0		
								5.5		
Decreasing fibrous material from 8.0m Increasing amounts of ash and clinker.							Very poor returns	6.0		
								6.5		
								7.0		
								7.5		
								8.0		
								8.5		
								9.0		
								9.5		
								10.0		

LOCATION / NOTES: NVO = No visual or olfactory evidence	LEGEND  Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table	BOREHOLE LOG Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery	
			App'd: _____ Date: 04/09/2002 Drawn: SS Ref: _____ Scale: As scale Job No: 39991-016 Drg. Size: A4 BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW231		PAGE 2 of 2				
	NUMBER	TYPE					DRILLING DATES: 03/04/01 - 05/04/01		DRILLING METHODS : Rotary Air Flush				
							DRILLER : Tectonics		BOREHOLE DIAMETER : 250mm				
							LOGGED BY : PW		SCREEN TYPE & DIAM: HDPE 100mm				
							CHECKED BY :		SCREEN SLOT SIZE: 1mm				
					Small amounts of fibrous material, abundant ash and clinker. MADE GROUND		COMMENTS						
					Gravelly CLAY. Borehole terminated and backfilled to 11m								
					End of Borehole								
					LOCATION / NOTES:				LEGEND			BOREHOLE LOG	
NVO = No visual or olfactory evidence			Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table			Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery 							
			<table border="1"> <tr> <td>App'd:</td> <td>Date: 04/09/2002</td> </tr> <tr> <td>Drawn : SS</td> <td>Ref:</td> </tr> <tr> <td>Scale: As scale</td> <td>Job No: 39991-016</td> </tr> <tr> <td>Drg. Size: A4</td> <td>BOREHOLE LOG</td> </tr> </table>			App'd:	Date: 04/09/2002	Drawn : SS	Ref:	Scale: As scale	Job No: 39991-016	Drg. Size: A4	BOREHOLE LOG
App'd:	Date: 04/09/2002												
Drawn : SS	Ref:												
Scale: As scale	Job No: 39991-016												
Drg. Size: A4	BOREHOLE LOG												

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW238		PAGE 1 of 3	
	NUMBER	TYPE					DRILLING DATES: 05/04/01		DRILLING METHODS : Rotary Air Flush	
							DRILLER : Tectonics		BOREHOLE DIAMETER : 250mm	
							LOGGED BY : PW		SCREEN TYPE & DIAM: HDPE 100mm	
							CHECKED BY :		SCREEN SLOT SIZE: 1mm	
						DESCRIPTION	COMMENTS			
						0.0 Light-dark brown, silty/clayey/sandy med-coarse GRAVEL fill with brick fragments, wood, plastic liner and clinker. MADE GROUND		0.0		
						0.5 Dark grey, gravelly/sandy CLAY with brick fragments and pipe lagging. MADE GROUND		0.5		
						1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0		1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0		
						As above plus abundant lagging foam between 4.0 and 5.0m. MADE GROUND	Saturated with dark, black H/C Abundant free product from 4.5m			

LOCATION / NOTES:	LEGEND	BOREHOLE LOG	
NVO = No visual or olfactory evidence	Disturbed Sample ■ Undisturbed Sample * Headspace Analysis + Down Borehole Analysis ~ Groundwater Table ~ Perched Water Table	Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery	
			App'd: _____ Date: 04/09/2002 Drawn : SS Ref: _____ Scale: As scale Job No: 39991-016 Drg. Size: A4 BOREHOLE LOG

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW238		PAGE 2 of 3
	NUMBER	TYPE					DRILLING DATES: 05/04/01		DRILLING METHODS : Rotary Air Flush
							DRILLER : Tectonics		BOREHOLE DIAMETER : 250mm
							LOGGED BY : PW		SCREEN TYPE & DIAM: HDPE 100mm
							CHECKED BY :		SCREEN SLOT SIZE: 1mm
					5.5				COMMENTS
					6.0				
					6.5				
					7.0		Gravelly CLAY with abundant fibrous plant material (possibly peat). MADE GROUND		
					7.5		As above with decreasing gravel to fine-medium/coarse SAND with increasing clay. MADE GROUND		
					8.0		Decreasing clay and increasing fine-coarse, subrounded, reworked GRAVEL with clinker/rubble. MADE GROUND		
					8.5				
					9.0				
					9.5				
					10.0				

LOCATION / NOTES:

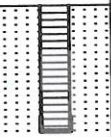
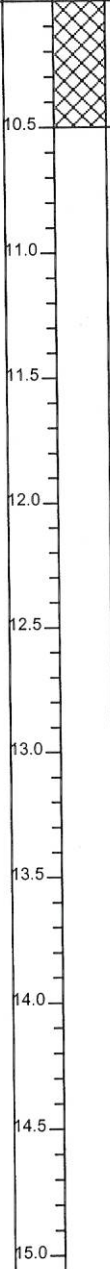
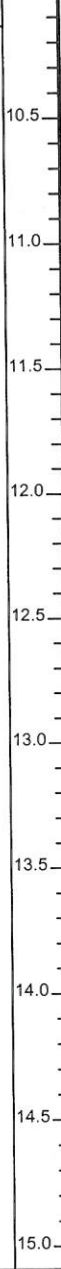
NVO = No visual or olfactory evidence

LEGEND

- [] Disturbed Sample
- [■] Undisturbed Sample
- * Headspace Analysis
- + Down Borehole Analysis
- Groundwater Table
- ~ Perched Water Table

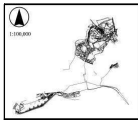
BOREHOLE LOG

Job Title: Containment Area Investigation			
Location: Llandarcy Refinery			
Client: BP Llandarcy Refinery			
	App'd:	Date: 04/09/2002	
	Drawn : SS	Ref:	
	Scale: As scale	Job No: 39991-016	
	Drg. Size: A4	BOREHOLE LOG	

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: MSMW238		PAGE 3 of 3		
	NUMBER	TYPE					DRILLING DATES: 05/04/01		DRILLING METHODS : Rotary Air Flush		
							DRILLER : Tectonics		BOREHOLE DIAMETER : 250mm		
							LOGGED BY : PW		SCREEN TYPE & DIAM: HDPE 100mm		
							CHECKED BY :		SCREEN SLOT SIZE: 1mm		
						End of Borehole		COMMENTS			
											
LOCATION / NOTES: NVO = No visual or olfactory evidence						LEGEND  Disturbed Sample  Undisturbed Sample  Headspace Analysis  Down Borehole Analysis  Groundwater Table  Perched Water Table		BOREHOLE LOG Job Title: Containment Area Investigation Location: Llandarcy Refinery Client: BP Llandarcy Refinery			
								App'd: _____ Date: 04/09/2002 Drawn : SS Ref: _____ Scale: As scale Job No: 39991-016 Drg. Size: A4 BOREHOLE LOG			



Appendix C URS groundwater drawings



LEGEND

- Shallow Wells (Typically 10m to 15m deep)
- Deep Wells (Typically 20m to 30m deep)
- Interpolated Groundwater Contours (Typically 1m Contour Interval)
- Test

Contours based on groundwater elevation C data collected in September 2003

REVISE	DATE	CHK	APPD
1 - INITIAL DRAFT	MAY 04	SS	

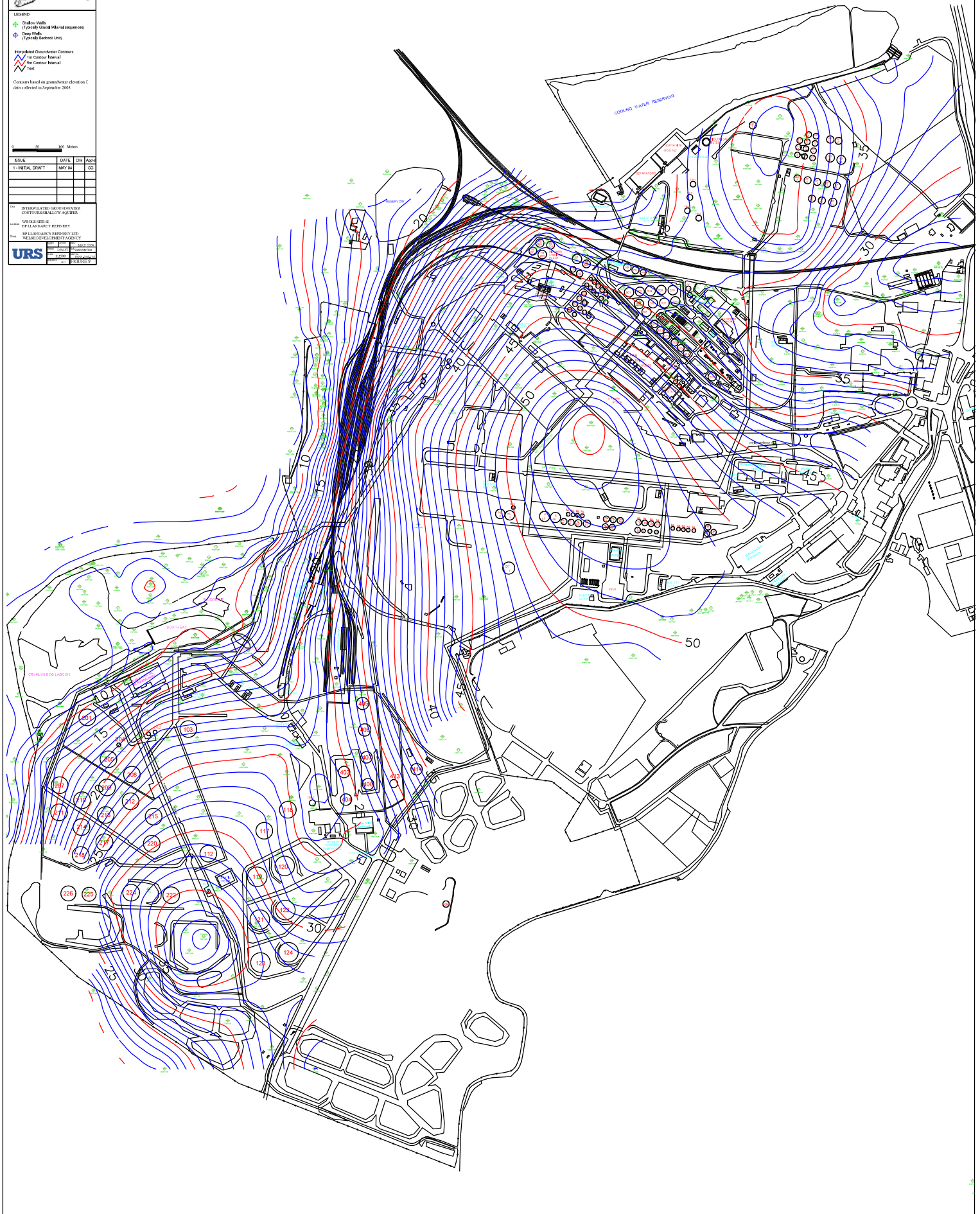
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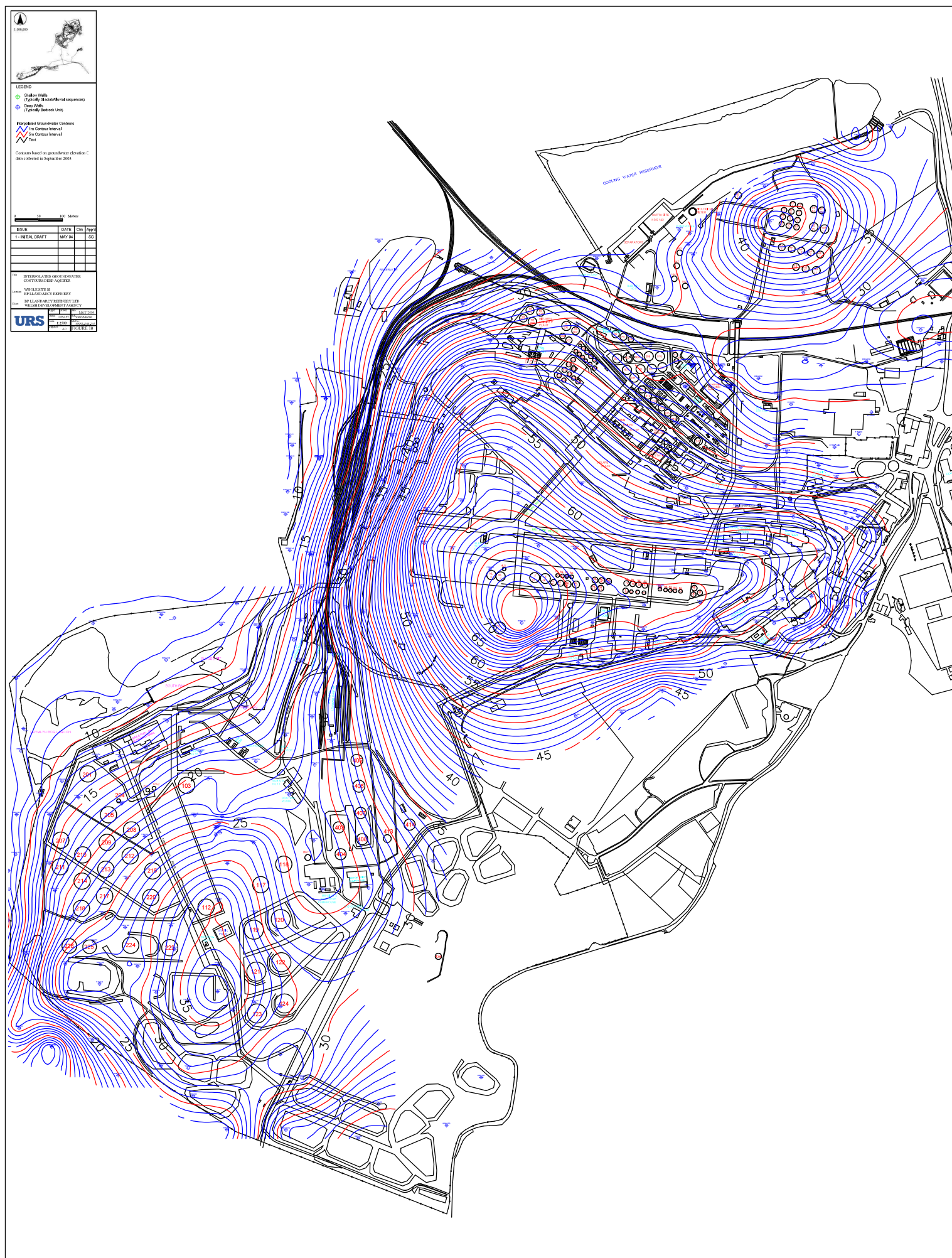
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OF LANDSCAPE RECOVERY LTD

WELL SITE IS

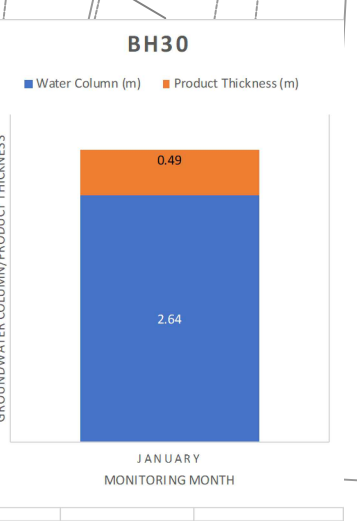
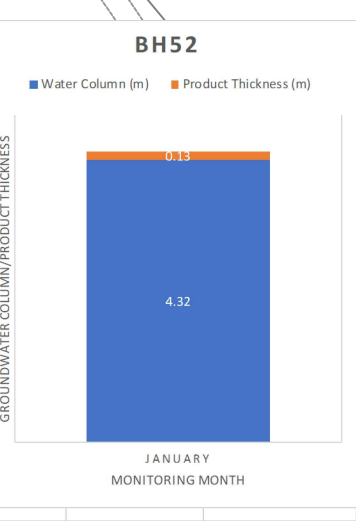
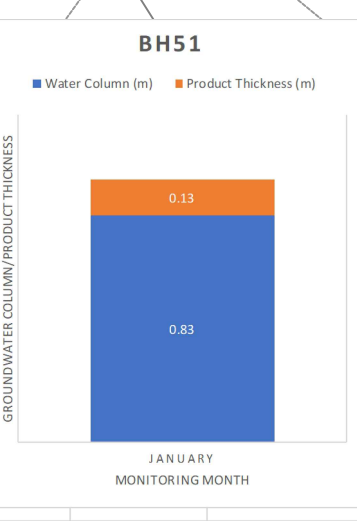
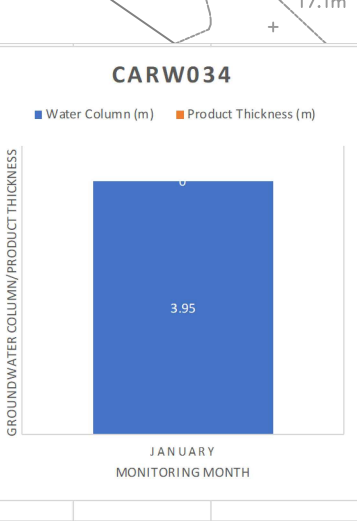
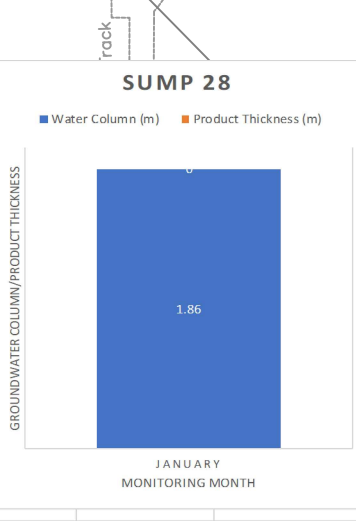
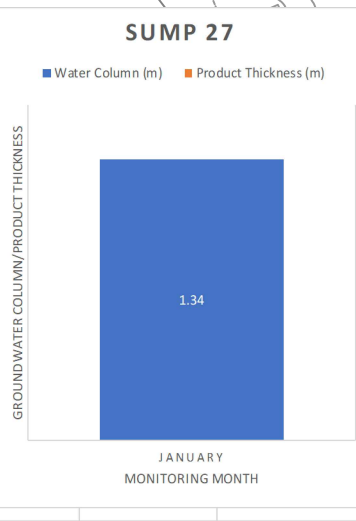
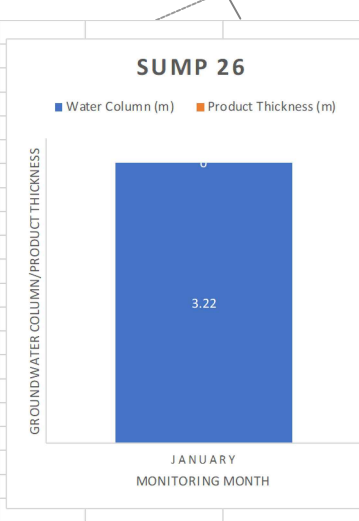
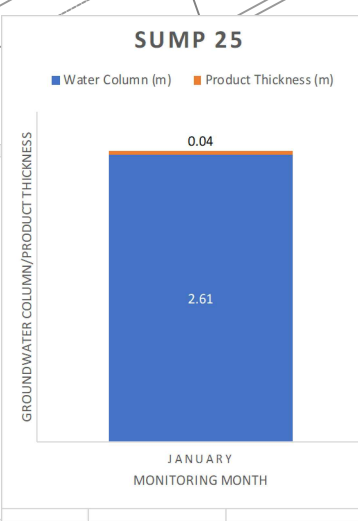
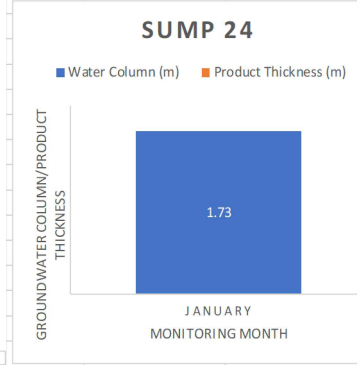
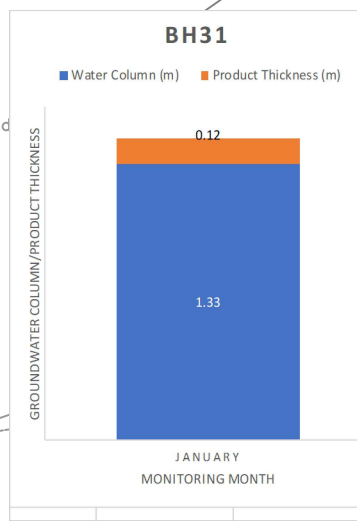
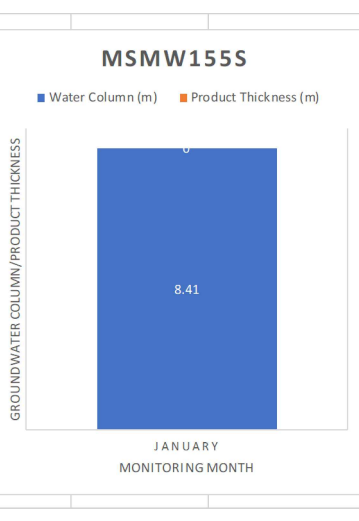
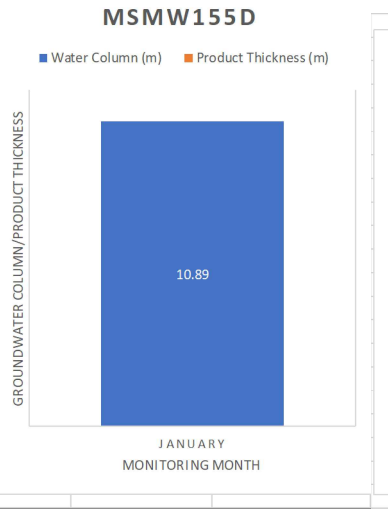
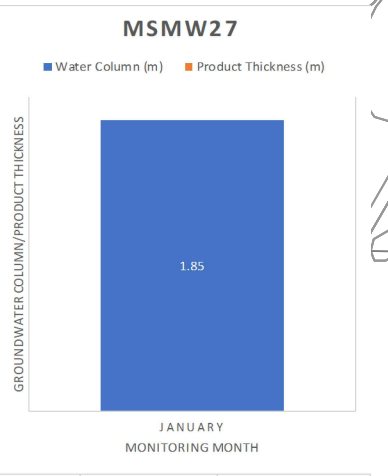
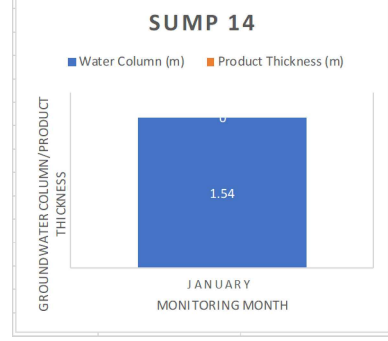
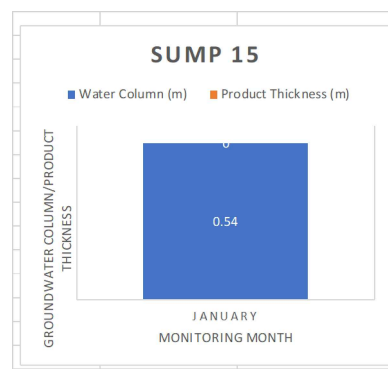
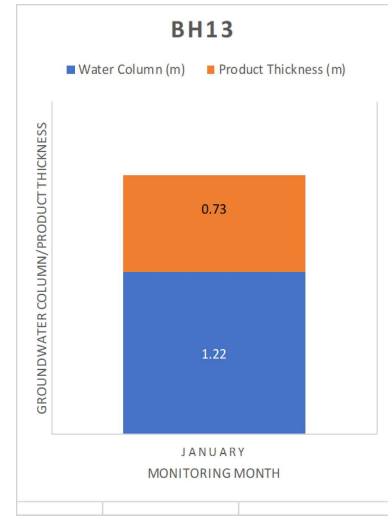
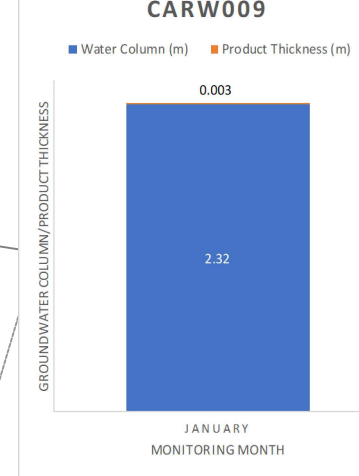
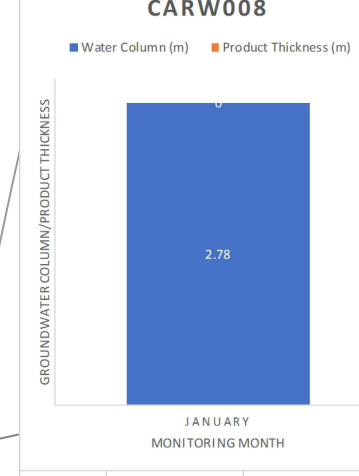
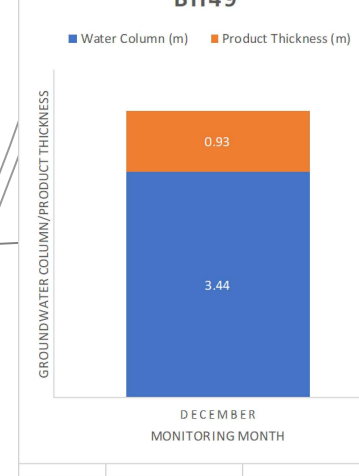
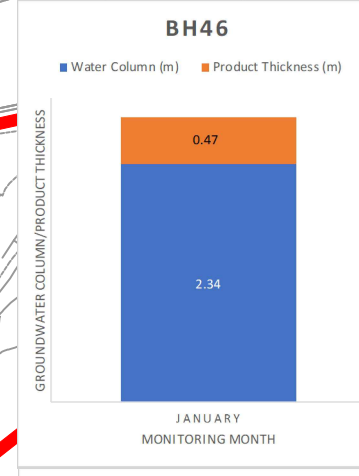
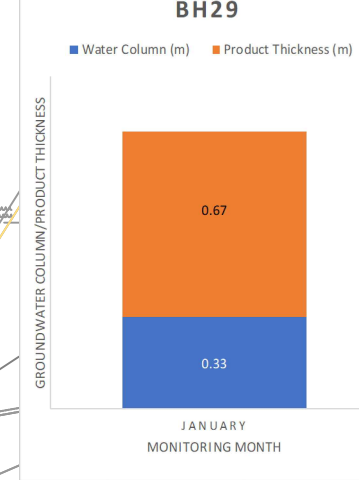
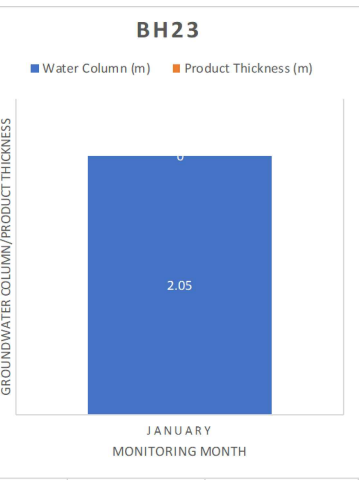
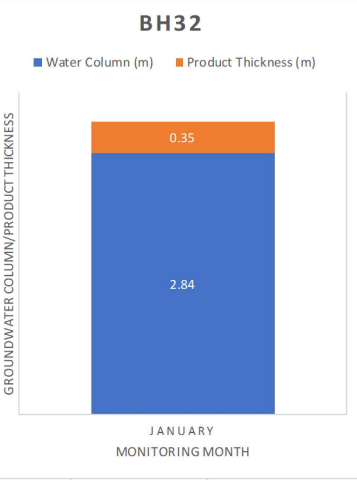
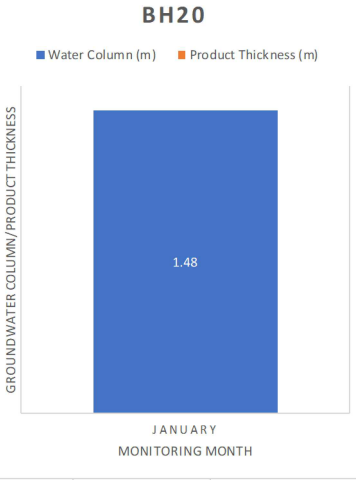
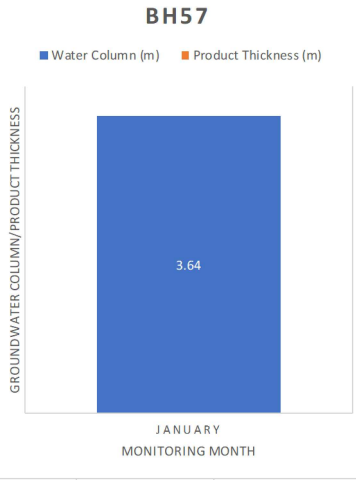
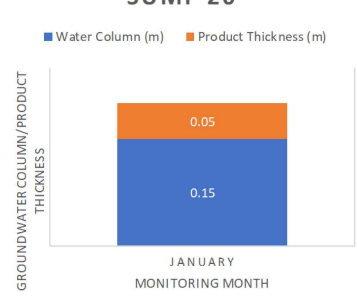
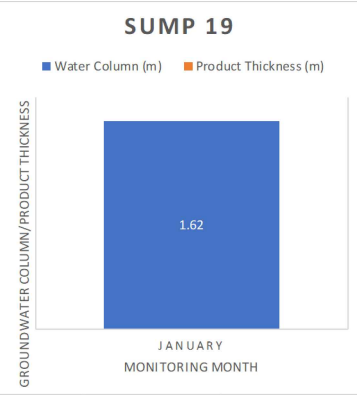
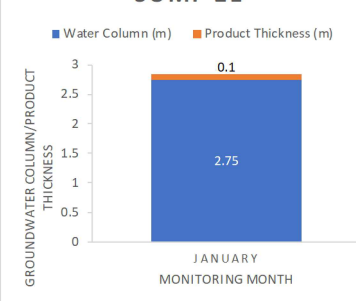
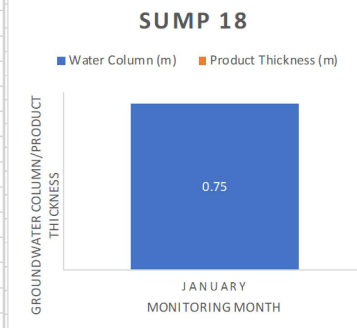
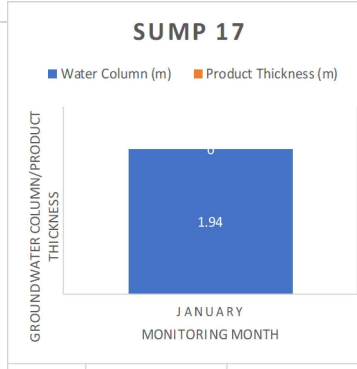
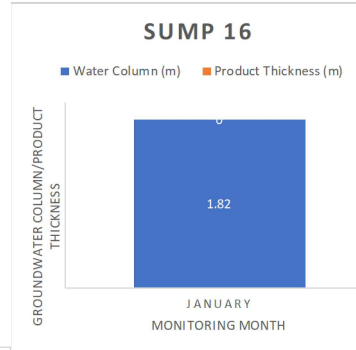
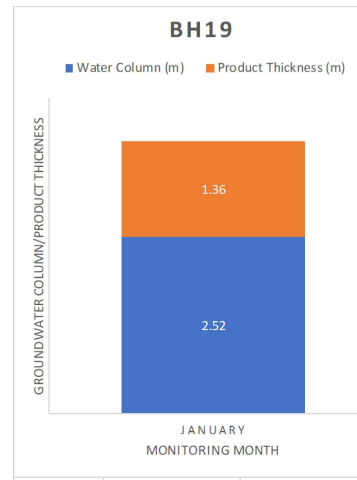
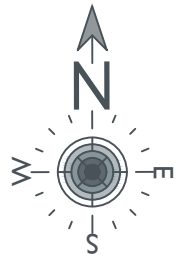
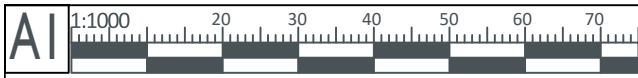
URS







Appendix D NAPL thickness and distribution

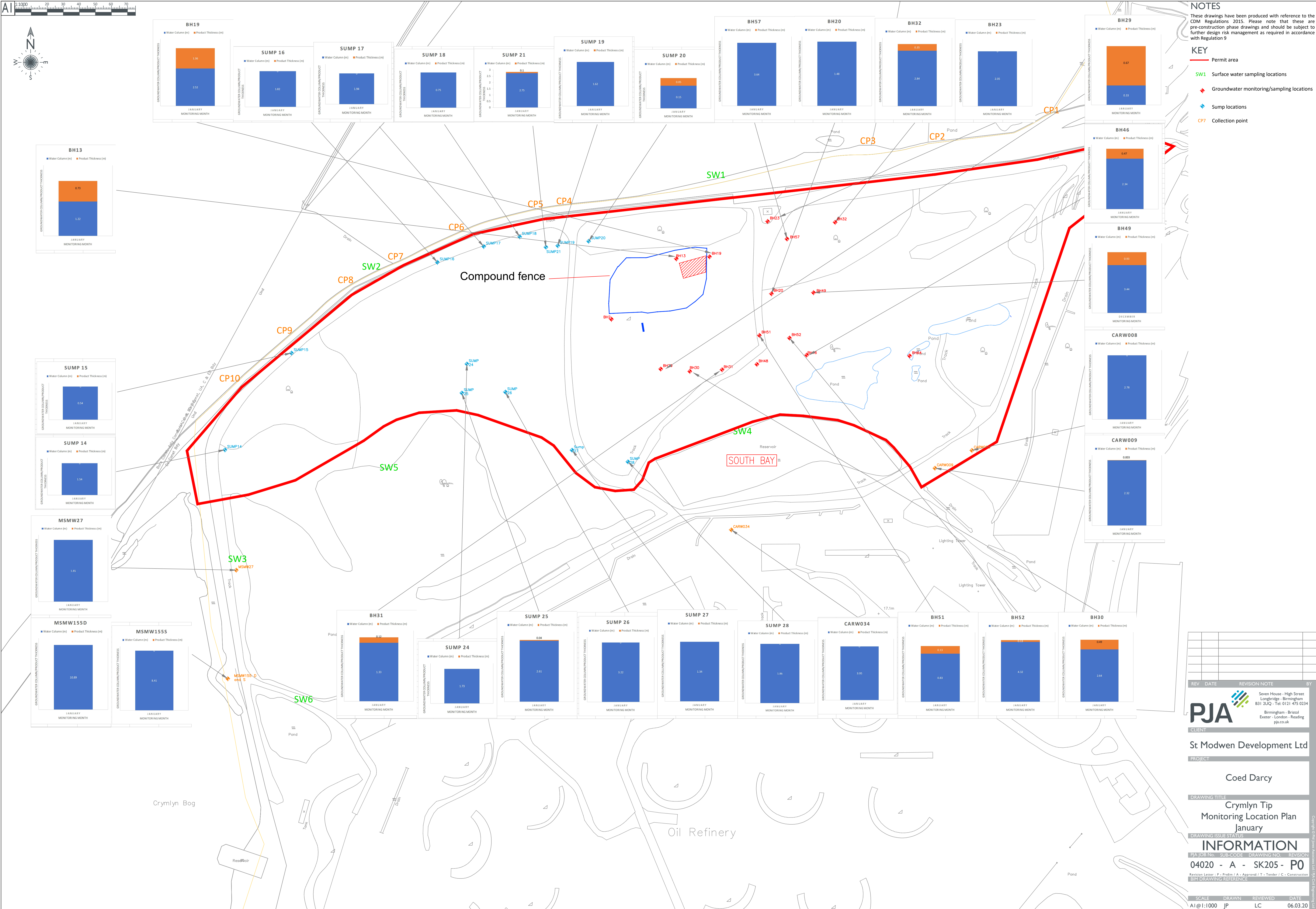


NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

KEY

- Permit area
- SW1 Surface water sampling locations
- Groundwater monitoring/sampling locations
- Sump locations
- CP7 Collection point



Client: St Modwen Development Ltd

Project: Coed Darcy

Drawing Title: Crymlyn Tip Monitoring Location Plan January

Drawing Issue Status: INFORMATION

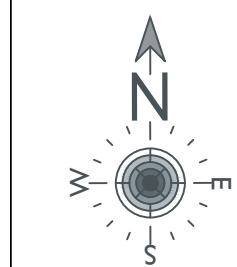
Revision Letter: P - Prelim / A - Approval / T - Tender / C - Construction

Scale: A1@1:1000

Drawn: JP

Reviewed: LC

Date: 06.03.20



NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

KEY

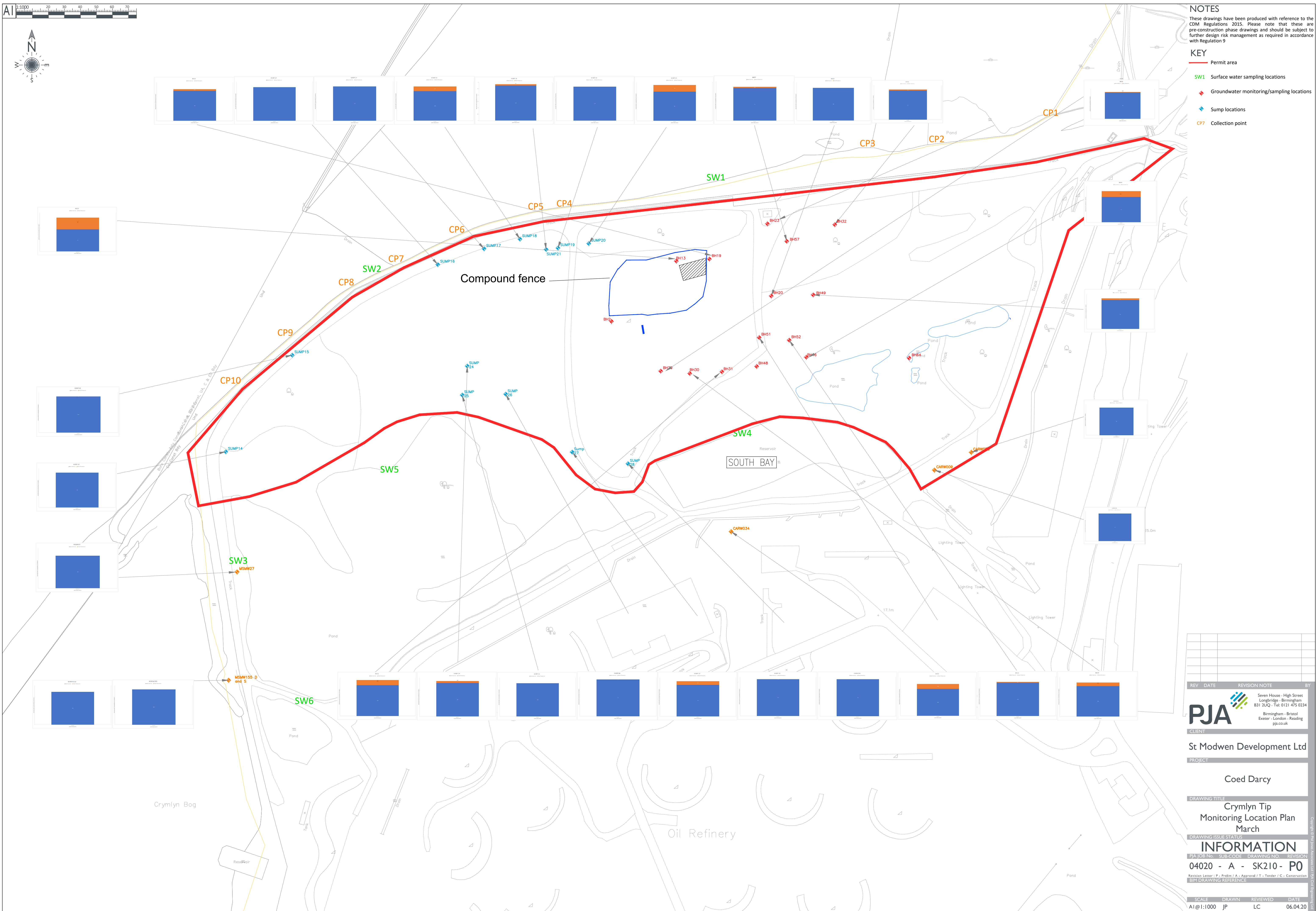
— Permit area

SW1 Surface water sampling locations

 Groundwater monitoring/sampling locations

 Sump locations

CP7 Collection point



REV	DATE	REVISION NOTE	BY
		 Seven House - High Street Longbridge - Birmingham B31 2UQ . Tel: 0121 475 0234 Birmingham - Bristol Exeter - London - Reading pja.co.uk	

CLIENT

St Modwen Development Ltd

PROJECT

Coed Darcy

DRAWING TITLE

Crymlyn Tip

Monitoring Location Plan
March

DRAWING ISSUE STATUS
INFORMATION

PJA JOB No.	SUB-CODE	DRAWING NO.	REVISION
04020	- A -	SK210-	P0

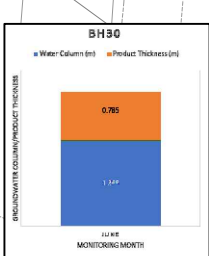
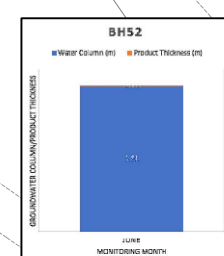
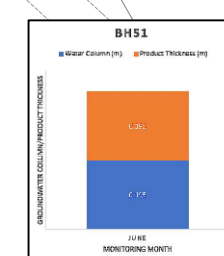
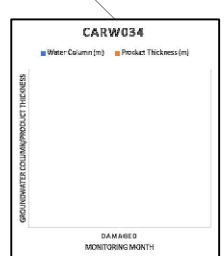
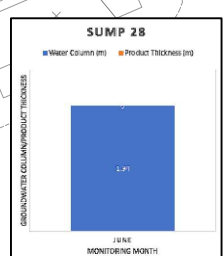
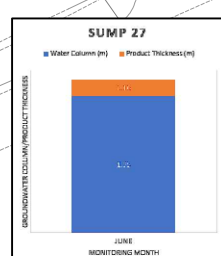
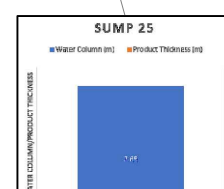
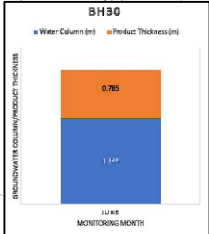
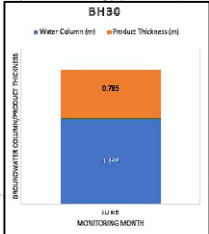
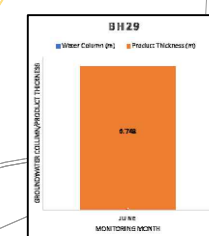
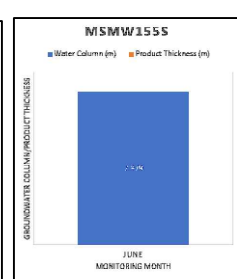
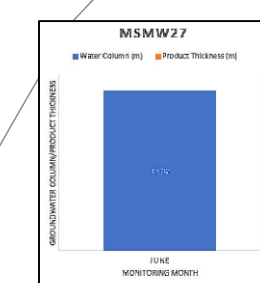
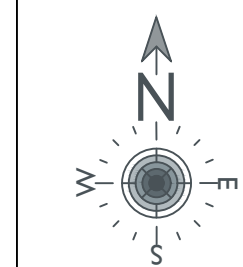
Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

SIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
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A1@1:1000	IP	LC	06.04.20

Time (min)	Temp (°C)	Flow rate (mL/min)	Wavelength (nm)
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20	25	1.0	254
30	25	1.0	254
40	25	1.0	254
50	25	1.0	254
60	25	1.0	254
70	25	1.0	254
80	25	1.0	254
90	25	1.0	254
100	25	1.0	254
110	25	1.0	254
120	25	1.0	254
130	25	1.0	254
140	25	1.0	254
150	25	1.0	254
160	25	1.0	254
170	25	1.0	254
180	25	1.0	254
190	25	1.0	254
200	25	1.0	254
210	25	1.0	254
220	25	1.0	254
230	25	1.0	254
240	25	1.0	254
250	25	1.0	254
260	25	1.0	254
270	25	1.0	254
280	25	1.0	254
290	25	1.0	254
300	25	1.0	254
310	25	1.0	254
320	25	1.0	254
330	25	1.0	254
340	25	1.0	254
350	25	1.0	254
360	25	1.0	254
370	25	1.0	254
380	25	1.0	254
390	25	1.0	254
400	25	1.0	254
410	25	1.0	254
420	25	1.0	254
430	25	1.0	254
440	25	1.0	254
450	25	1.0	254
460	25	1.0	254
470	25	1.0	254
480	25	1.0	254
490	25	1.0	254
500	25	1.0	254
510	25	1.0	254
520	25	1.0	254
530	25	1.0	254
540	25	1.0	254
550	25	1.0	254
560	25	1.0	254
570	25	1.0	254
580	25	1.0	254
590	25	1.0	254
600	25	1.0	254
610	25	1.0	254
620	25	1.0	254
630	25	1.0	254
640	25	1.0	254
650	25	1.0	254
660	25	1.0	254
670	25	1.0	254
680	25	1.0	254
690	25	1.0	254
700	25	1.0	254
710	25	1.0	254
720	25	1.0	254
730	25	1.0	254
740	25	1.0	254
750	25	1.0	254
760	25	1.0	254
770	25	1.0	254
780	25	1.0	254
790	25	1.0	254
800	25	1.0	254
810	25	1.0	254
820	25	1.0	254
830	25	1.0	254
840	25	1.0	254
850	25	1.0	254
860	25	1.0	254
870	25	1.0	254
880	25	1.0	254
890	25	1.0	254
900	25	1.0	254
910	25	1.0	254
920	25	1.0	254
930	25	1.0	254
940	25	1.0	254
950	25	1.0	254
960			



CP7 Collection point

Compound fence

SOUTH BAY 1990-1991

REV	DATE	REVISION NOTE	BY
		 Seven House - High Street Longbridge - Birmingham B31 2UQ - Tel: 0121 475 0234 Birmingham - Bristol Exeter - London - Reading pja.co.uk	

CLIENT

St Modwen Development Ltd

PROJECT

Coed Darcy

DRAWING TITLE

Crymlyn Tip
Monitoring Location Plan
June 2020

DRAFTING ISSUE STATUS

INFORMATION

PJA JOB No.	SUB-CODE	DRAWING NO.	REVISION
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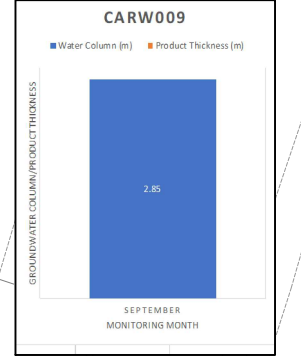
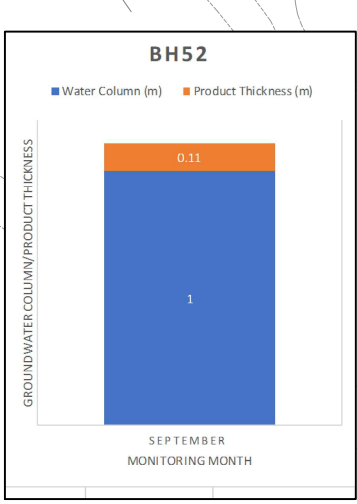
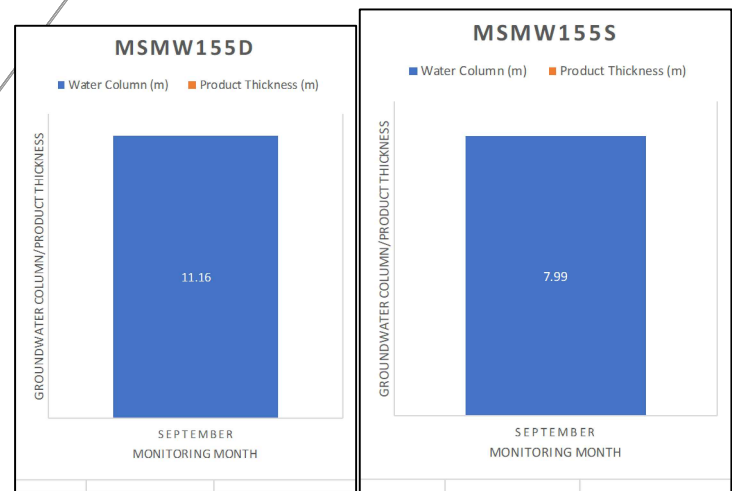
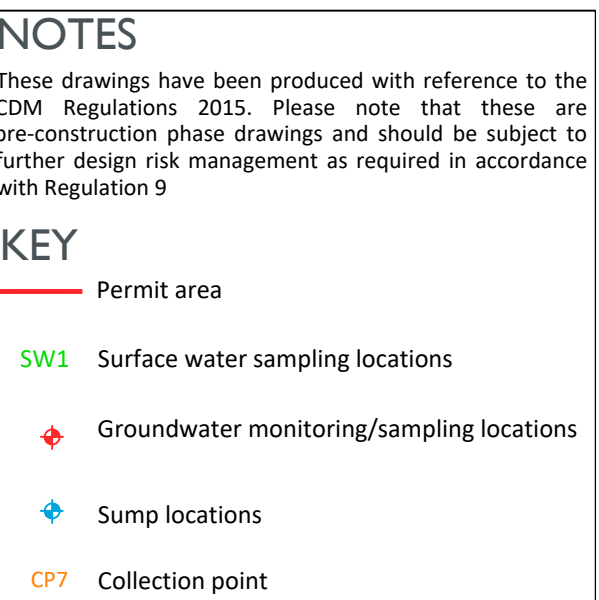
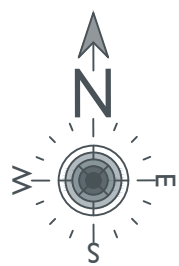
04020 - A - SK213 - P0

Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
AS @ 1:1000	IAI	RI	14.07.20

AL@1:1000	JAL	BI	14.07.20
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SOUTH BAY

Coed Darcy

Crymlyn Tip
Monitoring Location Plan
September 2020

INFORMATION

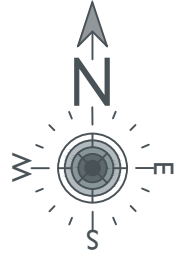
OB No.	SUB-CODE	DRAWING NO.	REVI
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020 - A - SK216 - P

DRAWING REFERENCE

DATE	DRAWN	REVIEWED	DAT
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1:1000	JP	BI	02.1
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NOTES
These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

- KEY**
- Permit area
 - SW1 Surface water sampling locations
 - Groundwater monitoring/sampling locations
 - Sump locations
 - CP7 Collection point

REV	DATE	REVISION NOTE	BY
1	2020.12.01	Issue for information	JAL

CLIENT
St Modwen Development Ltd

PROJECT
Coed Darcy

DRAWING TITLE
Crymlyn Tip
Monitoring Location Plan
December 2020

DRAWING ISSUE STATUS
INFORMATION

Revision Letter P - Prelim / A - Approval / T - Tender / C - Construction
Revision No. 04020 - A - SK219 - P0

SCALE AI at 1:1000
DRAWN JAL
REVIEWED BI
DATE 22.01.21



Appendix E Groundwater & Surface Water Laboratory Results

	21591371	21591407	21591390	21591419	21591430	21591552	21591536	21591575	21591324	21591339	21591351	21820558	21820589	21820570	21820618	21820629	
SDG ID	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200305-35	200305-35	200305-35	200305-35	200305-35	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	
Sample Description	BH 52	BH 57	BH XI	BH20	BH30	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 52	BH 57	BH XI	BH20	BH30	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	29/01/2020	29/01/2020	29/01/2020	29/01/2020	29/01/2020	28/01/2020	28/01/2020	29/01/2020	29/01/2020	29/01/2020	29/01/2020	03/03/2020	03/03/2020	03/03/2020	03/03/2020	03/03/2020	
Received On	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	
Date Complete	09/02/2020	11/02/2020	09/02/2020	09/02/2020	11/02/2020	11/02/2020	10/02/2020	10/02/2020	09/02/2020	11/02/2020	09/02/2020	14/03/2020	13/03/2020	13/03/2020	13/03/2020	17/03/2020	
Laboratory data																	
Ammoniacal Nitrogen as N	mg/l	<0.2	<0.2	0.279	1.1	1.44	0.851	2.17	0.436	1.26	<0.2	<0.2	<0.2	<0.2	0.252	1.06	0.674
Chloride	mg/l	15	13	28.2	32.2	33.6	22.2	21.4	11.2	20.7	21.3	14.8	18.7	14.5	26.9	41.6	15.2
Arsenic (diss.filt)	µg/l	2.26	1.84	4.2	2.01	2.78	0.92	0.789	32.5	1.67	1.72	5.18	2.41	<0.5	3.4	1.93	2.66
Boron (diss.filt)	µg/l	38	<10	208	68.1	101	52.1	34.1	<10	63	<10	64.8	47.8	<10	157	94	67.5
Cadmium (diss.filt)	µg/l	<0.08	<0.08	0.954	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.604	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.04	<1	<1
Copper (diss.filt)	µg/l	4.44	1.94	51	1.62	0.301	<0.3	0.502	0.537	<0.3	<0.3	0.39	4.35	10.4	42	<0.3	<0.3
Lead (diss.filt)	µg/l	<0.2	0.233	15.3	0.733	<0.2	<0.2	<0.2	0.257	<0.2	<0.2	0.226	0.24	0.224	16.5	<0.2	0.286
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01
Nickel (diss.filt)	µg/l	1.4	0.982	17.2	0.94	0.827	1.05	<0.4	2.07	<0.4	1.14	2.17	1.36	1.01	13.9	0.564	0.518
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.15	<1	<1
Zinc (diss.filt)	µg/l	16.3	5.89	208	4.14	3.3	<1	1.02	6.9	<1	1.56	10.1	23.3	5.87	151	<1	3.39
Aliphatics >C10-C12	µg/l	52	<10	<10	24	370	41	353	32	11	<10	<10	51	<10	<10	47	637
Aliphatics >C12-C16 (aq)	µg/l	420	<10	<10	133	57400	<1000	650	506	<10	<10	282	2490	<10	<10	12	8770
Aliphatics >C16-C21 (aq)	µg/l	752	<10	<10	200	156000	1580	1920	1270	<10	<10	615	3990	<10	<10	14	15700
Aliphatics >C21-C35 (aq)	µg/l	2400	20	<10	1240	756000	1350	1800	2060	<10	<10	1060	12600	<10	<10	22	70300
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	13	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	11
Aliphatics >C6-C8	µg/l	<10	<10	<10	17	90	<10	25	<10	<10	<10	<10	15	<10	<10	27	111
Aliphatics >C8-C10	µg/l	17	<10	<10	14	127	18	50	11	<10	<10	<10	17	<10	<10	28	282
Aromatics >EC10-EC12	µg/l	35	<10	<10	16	246	27	235	21	<10	<10	<10	34	<10	<10	31	425
Aromatics >EC12-EC16 (aq)	µg/l	94	<10	<10	56	11700	<1000	479	199	32	<10	31	409	51	<10	<10	2570
Aromatics >EC16-EC21 (aq)	µg/l	358	<10	<10	109	47000	<1000	1030	595	11	<10	251	1820	126	<10	<10	7410
Aromatics >EC21-EC35 (aq)	µg/l	1260	15	<10	752	215000	<1000	890	1270	<10	<10	1200	7100	431	<10	<10	26300
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	µg/l	12	<10	<10	<10	85	12	36	<10	<10	<10	<10	11	<10	<10	19	188
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GRO >C5-C12	µg/l	125	<50	<50	83	932	112	705	81	<50	<50	<50	134	<50	<50	157	1650
GRO Surrogate % recovery**	%	106	101	100	95	99	104	98	104	107	100	102	98	95	96	93	107
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Sum of detected BTEX	µg/l	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
liphatics & Aromatics >C5-35 (aq)	µg/l	5410	35	<10	2580	1240000	3040	7480	5990	77	<10	3440	28500	612	14	205	133000
Total Aliphatics >C12-C35 (aq)	µg/l	3570	20	<10	1580	970000	2930	4370	3840	<10	<10	1960	19100	<10	<10	48	94800
total Aromatics >EC12-EC35 (aq)	µg/l	1710	15	<10	917	274000	<1000	2400	2070	43	<10	1480	9330	608	<10	<10	36300

	21591371	21591407	21591390	21591419	21591430	21591552	21591536	21591575	21591324	21591339	21591351	21820558	21820589	21820570	21820618	21820629	
SDG ID	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200305-35	200305-35	200305-35	200305-35	200305-35	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	
Sample Description	BH 52	BH 57	BH XI	BH20	BH30	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 52	BH 57	BH XI	BH20	BH30	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	29/01/2020	29/01/2020	29/01/2020	29/01/2020	29/01/2020	28/01/2020	28/01/2020	29/01/2020	29/01/2020	29/01/2020	29/01/2020	03/03/2020	03/03/2020	03/03/2020	03/03/2020	03/03/2020	
Received On	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	
Date Complete	09/02/2020	11/02/2020	09/02/2020	09/02/2020	11/02/2020	11/02/2020	10/02/2020	10/02/2020	09/02/2020	11/02/2020	09/02/2020	14/03/2020	13/03/2020	13/03/2020	13/03/2020	17/03/2020	
Laboratory data																	
Acenaphthene (aq)	µg/l	<0.1	<0.005	<0.005	<0.25	<5	<0.5	<0.25	0.0421	4.44	<0.005	<0.005	<0.005	<0.005	0.0132	0.274	16.6
Acenaphthylene (aq)	µg/l	<0.1	<0.005	<0.005	<0.25	<5	<0.5	<0.25	0.0384	<0.005	<0.005	0.0697	<0.005	<0.005	<0.005	0.0498	1.51
Anthracene (aq)	µg/l	<0.1	<0.005	0.0187	<0.25	<5	<0.5	<0.25	<0.005	0.286	<0.005	<0.005	<0.005	0.0133	0.0101	0.0347	6.61
Benzo(a)anthracene (aq)	µg/l	<0.1	0.00819	0.0348	<0.25	<5	<0.5	<0.25	<0.005	0.0287	<0.005	0.0717	2.35	0.0631	0.0401	<0.005	<0.01
Benzo(a)pyrene (aq)	µg/l	<0.04	0.0218	0.0448	<0.1	<2	<0.2	<0.1	0.0883	<0.002	<0.002	<0.002	2.35	0.0815	0.0538	0.101	<0.004
Benzo(b)fluoranthene (aq)	µg/l	<0.1	0.0315	0.0656	<0.25	<5	<0.5	<0.25	0.137	<0.005	<0.005	0.199	2.54	0.127	0.0851	<0.005	<0.01
Benzo(g,h,i)perylene (aq)	µg/l	<0.1	0.0118	<0.005	<0.25	<5	<0.5	<0.25	0.0931	<0.005	<0.005	0.335	1.25	0.0708	0.0494	0.0476	1.33
Benzo(k)fluoranthene (aq)	µg/l	<0.1	0.0115	0.0178	<0.25	<5	<0.5	<0.25	0.0406	<0.005	<0.005	<0.005	0.985	0.0407	0.0389	<0.005	<0.01
Indeno(1,2,3-cd)pyrene (aq)	µg/l	<0.1	<0.005	<0.005	<0.25	<5	<0.5	<0.25	0.0622	<0.005	<0.005	0.199	0.749	0.0655	0.0397	<0.005	<0.01
SUM OF 4 PAH		0	0.0548	0.0834	<0.25	<5	<0.5	<0.25	0.3329	<0.005	<0.005	0.733	5.524	0.304	0.2131	0.0476	1.33
Chrysene (aq)	µg/l	<0.1	0.0201	0.0451	<0.25	<5	<0.5	<0.25	<0.005	0.0242	<0.005	0.226	4.96	0.0834	0.0596	<0.005	<0.01
Dibenzo(a,h)anthracene (aq)	µg/l	<0.1	<0.005	0.0076	<0.25	<5	<0.5	<0.25	<0.005	<0.005	<0.005	<0.005	0.423	<0.005	0.016	<0.005	<0.01
Fluoranthene (aq)	µg/l	<0.1	0.0248	0.0788	<0.25	<5	<0.5	<0.25	0.107	0.971	<0.005	0.0368	3.67	0.0906	0.0717	0.205	6.98
Fluorene (aq)	µg/l	<0.1	0.00554	0.013	<0.25	<5	<0.5	<0.25	0.0701	0.733	0.0118	<0.005	<0.005	<0.005	0.0123	0.255	19
Naphthalene (aq)	µg/l	<0.2	<0.01	<0.01	<0.5	<10	<1	<0.5	0.0386	2.98	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	2.67
H, Total Detected USEPA 16 (aq)	µg/l	<1.64	0.183	0.462	<4.1	<82	<8.2	<4.1	1.3	10.2	<0.082	1.28	28.7	0.79	0.625	1.53	86.5
Phenanthrene (aq)	µg/l	<0.1	0.0173	0.0626	<0.25	<5	<0.5	<0.25	<0.005	0.269	<0.005	<0.005	<0.005	0.0641	0.0586	0.226	19.5
Pyrene (aq)	µg/l	<0.1	0.0308	0.0736	<0.25	<5	<0.5	<0.25	0.586	0.511	0.0183	0.14	9.45	0.0894	0.0766	0.294	12.3

	21820603	21820727	21820710	21820739	21820514	21820525	21820544	22002976	22002997	22002987	22003018	22003042	22003051	22003223	22003192	22003241									
SDG ID	200305-35	200305-35	200305-35	200305-35	200305-35	200305-35	200305-35	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37									
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised									
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy									
Project	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit									
Sample Description	BH51	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 52	BH 57	BH XI	BH20	BH23	BH30	CARW008	CARW009	CARW034									
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised									
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00									
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER									
Date Sampled	03/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	01/04/2020	31/03/2020	31/03/2020	01/04/2020	01/04/2020	01/04/2020	31/03/2020	31/03/2020	31/03/2020									
Received On	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020									
Date Complete	14/03/2020	13/03/2020	14/03/2020	13/03/2020	14/03/2020	14/03/2020	14/03/2020	10/04/2020	10/04/2020	14/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020									
Laboratory data																									
Ammoniacal Nitrogen as N	mg/l	2.89	0.564	2.24	0.548	1.12	<0.2	<0.2	1.16	0.93	0.42	1.4	2.61	2.76	0.486	1.66	0.427								
Chloride	mg/l	21.4	23.4	25.1	15.6	19.1	21.3	24.1																	
Arsenic (diss.filt)	µg/l	2.07	1.98	1.61	31.2	3.19	<0.5	3.93	3.82	12.7	19.9	3.41	0.705	5.31	2.16	3.95	39.9								
Boron (diss.filt)	µg/l	126	34.8	37.9	<10	54.7	14.4	51.3	79.5	15.6	179	184	46.1	357	42.6	41.9	<10								
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08								
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	3.13	5.7	<1	<1	<1	<1	<1	1.32								
Copper (diss.filt)	µg/l	<0.3	<0.3	<0.3	0.43	<0.3	<0.3	<0.3	0.373	0.858	7.53	0.697	<0.3	<0.3	<0.3	0.545	0.678								
Lead (diss.filt)	µg/l	<0.2	<0.2	<0.2	0.26	<0.2	0.411	<0.2	<0.2	0.306	4.76	0.31	<0.2	<0.2	<0.2	0.327	0.336								
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
Nickel (diss.filt)	µg/l	0.891	3.63	<0.4	2.35	<0.4	0.4	1.69	1.58	1.92	15.8	0.651	5.91	0.832	3.46	0.717	1.58								
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1								
Vanadium (diss.filt)	µg/l	6.15	<1	<1	<1	<1	<1	<1	2.29	2.44	1.35	1.45	<1	4.4	<1	1.21	<1								
Zinc (diss.filt)	µg/l	<1	<1	<1	6.85	1.35	2.96	6.42	5.01	5.24	133	6.69	4.38	3.04	1.35	5.21	5.08								
Aliphatics >C10-C12	µg/l	1240	20	340	52	<10	<10	<10	125	<10	<10	28	92	627	50	1880	48								
Aliphatics >C12-C16 (aq)	µg/l	5550	<10	1570	<10	<10	<10	365	426	<10	<10	17	6710	2290	112	6720	344								
Aliphatics >C16-C21 (aq)	µg/l	5840	<10	4690	<10	<10	<10	841	687	<10	<10	17	9590	4000	390	19000	951								
Aliphatics >C21-C35 (aq)	µg/l	17400	42	4260	<10	<10	<10	1380	2430	42	<10	162	27300	20300	519	21000	1630								
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	22	<10	10	<10								
Aliphatics >C6-C8	µg/l	49	<10	26	18	<10	<10	<10	24	<10	<10	29	26	171	20	96	12								
Aliphatics >C8-C10	µg/l	332	12	58	23	<10	<10	<10	34	<10	<10	20	38	290	30	409	15								
Aromatics >EC10-EC12	µg/l	824	13	227	34	<10	<10	<10	83	<10	<10	18	61	418	33	1250	32								
Aromatics >EC12-EC16 (aq)	µg/l	2070	<10	776	<10	<10	<10	43	171	<10	<10	26	159	769	121	3160	238								
Aromatics >EC16-EC21 (aq)	µg/l	2800	<10	2150	<10	<10	<10	329	410	<10	<10	11	642	1800	325	10400	468								
Aromatics >EC21-EC35 (aq)	µg/l	9140	206	2480	<10	<10	<10	1610	1470	22	<10	109	2990	7770	578	13300	1120								
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	23	<10	<10	<10	<10	<10	<10	<10	<10								
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10								
Aromatics >EC8-EC10	µg/l	228	<10	41	15	<10	<10	<10	23	<10	<10	13	26	195	20	274	10								
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	23	<7	<7	<7	<7	<7	<7	<7	<7								
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5								
GRO >C5-C12	µg/l	2680	64	700	149	<50	<50	<50	320	<50	<50	115	247	1720	158	3920	120								
GRO Surrogate % recovery**	%	95	87	88	96	100	100	100	95	108	113	113	96	90	111	90	106								
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8								
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3								
o-Xylene	µg/l	7	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3								
Sum of detected BTEX	µg/l	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28								
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11								
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4								
liphatics & Aromatics >C5-35 (aq)	µg/l	45500	312	16600	149	<10	<10	4580	5920	101	<10	458	47600	38700	2200	77500	4870								
Total Aliphatics >C12-C35 (aq)	µg/l	28800	42	10500	<10	<10	<10	2580	3540	42	<10	196	43600	26600	1020	46700	2920								
total Aromatics >EC12-EC35 (aq)	µg/l	14000	206	5410	<10	<10	<10	1980	2050	22	<10	146	3790	10300	1020	26900	1820								

	21820603	21820727	21820710	21820739	21820514	21820525	21820544	22002976	22002997	22002987	22003018	22003042	22003051	22003223	22003192	22003241	
SDG ID	200305-35	200305-35	200305-35	200305-35	200305-35	200305-35	200305-35	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	200406-37	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy - Februar	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	
Sample Description	BH51	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 52	BH 57	BH XI	BH20	BH23	BH30	CARW008	CARW009	CARW034	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	03/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	01/04/2020	31/03/2020	31/03/2020	01/04/2020	01/04/2020	01/04/2020	31/03/2020	31/03/2020	31/03/2020	
Received On	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	
Date Complete	14/03/2020	13/03/2020	14/03/2020	13/03/2020	14/03/2020	14/03/2020	14/03/2020	10/04/2020	10/04/2020	14/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	
Laboratory data																	
Acenaphthene (aq)	µg/l	4.57	0.47	1.55	0.258	3.36	<0.005	<0.005	0.881	0.033	0.0335	0.325	0.729	7.12	0.36	3.67	0.366
Acenaphthylene (aq)	µg/l	0.841	0.0977	0.544	<0.005	0.0385	<0.005	<0.005	0.0768	<0.005	0.00863	<0.005	1.17	0.387	0.103	1.71	0.0805
Anthracene (aq)	µg/l	<0.025	<0.005	<0.005	<0.005	0.121	<0.005	<0.005	0.0996	0.00825	0.0446	0.0274	<0.1	2.14	<0.005	<0.005	<0.005
Benzo(a)anthracene (aq)	µg/l	0.643	<0.005	<0.005	0.0423	<0.005	<0.005	<0.005	0.494	0.0173	<0.005	<0.005	3.96	1.15	<0.005	<0.005	0.199
Benzo(a)pyrene (aq)	µg/l	<0.01	0.0226	<0.002	0.0429	<0.002	<0.002	0.307	0.451	0.0259	0.239	0.0142	6.92	0.877	0.0459	<0.002	0.308
Benzo(b)fluoranthene (aq)	µg/l	1.1	0.0482	<0.005	0.063	<0.005	<0.005	0.39	0.406	0.039	0.383	0.0163	9.6	0.872	0.0902	0.665	0.48
Benzo(g,h,i)perylene (aq)	µg/l	<0.025	0.029	<0.005	0.0452	<0.005	<0.005	0.411	0.142	0.00759	0.19	<0.005	4.85	<0.025	0.0426	<0.005	0.365
Benzo(k)fluoranthene (aq)	µg/l	0.412	0.0199	<0.005	0.0224	<0.005	<0.005	<0.005	0.117	0.0167	0.12	<0.005	2.67	0.411	0.0256	0.192	0.166
Indeno(1,2,3-cd)pyrene (aq)	µg/l	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	0.36	0.173	0.0167	0.167	<0.005	4.45	<0.025	0.0273	<0.005	0.276
SUM OF 4 PAH		1.512	0.0971	<0.005	0.1306	<0.005	<0.005	1.161	0.838	0.07999	0.86	0.0163	21.57	1.283	0.1857	0.857	1.287
Chrysene (aq)	µg/l	1.6	<0.005	<0.005	0.103	<0.005	<0.005	<0.005	0.936	0.0437	<0.005	<0.005	4.92	2.21	<0.005	<0.005	0.218
Dibenzo(a,h)anthracene (aq)	µg/l	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0628	<0.005	0.0415	<0.005	1.44	<0.025	0.0112	<0.005	0.094
Fluoranthene (aq)	µg/l	2.04	<0.005	0.606	0.103	0.625	<0.005	<0.005	0.935	0.0493	0.348	0.0514	7.26	2.77	0.127	<0.005	0.325
Fluorene (aq)	µg/l	4.54	1.08	2.16	0.439	0.275	<0.005	<0.005	0.562	0.0397	0.0344	0.313	0.899	7.02	0.891	5.76	0.97
Naphthalene (aq)	µg/l	0.173	0.0648	<0.01	0.0322	0.431	<0.01	<0.01	<0.01	0.0106	0.0153	0.105	0.276	<0.05	0.0569	<0.01	0.0492
H, Total Detected USEPA 16 (aq)	µg/l	22.5	1.83	7.25	1.47	5.25	<0.082	1.47	7.14	0.421	2.18	1.07	61.2	32.3	2.15	17.6	5.24
Phenanthrene (aq)	µg/l	3.63	<0.005	0.928	0.14	0.065	<0.005	<0.005	0.0948	0.043	0.236	0.15	<0.1	4.1	0.107	5.58	0.812
Pyrene (aq)	µg/l	2.98	<0.005	1.46	0.175	0.325	<0.005	<0.005	1.71	0.0703	0.32	0.0668	12.1	3.23	0.267	<0.005	0.533

	22002948	22002958	22002967	22218462	22218444	22218453	22218471	22218480	22218546	22218537	22218555	22218424	22218415	22218438	22412561	22412580	
SDG ID	200406-37	200406-37	200406-37	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200703-4	200703-4	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	
Sample Description	MSMW155D	MSMW155S	MSMW27	BH 49	BH 52	BH XI	BH23	BH46	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 52	BH 57	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	31/03/2020	31/03/2020	31/03/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	01/07/2020	01/07/2020	
Received On	06/04/2020	06/04/2020	06/04/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	03/07/2020	03/07/2020	
Date Complete	10/04/2020	10/04/2020	10/04/2020	09/06/2020	09/06/2020	10/06/2020	09/06/2020	09/06/2020	09/06/2020	09/06/2020	10/06/2020	10/06/2020	10/06/2020	09/06/2020	13/07/2020	13/07/2020	
Laboratory data																	
Ammoniacal Nitrogen as N	mg/l	1.07	<0.2	<0.2	4.17	1.74	2.68	6.11	13	0.777	1.88	2.52	<0.2	0.984	0.241	1.52	3.59
Chloride	mg/l				23.3	26.4	29.1	23.3	94.8	30.2	23	12.1	21.6	19.1	21.4	16.4	19.6
Arsenic (diss.filt)	µg/l	2.25	<0.5	3.41	10	3.43	51.4	8.32	5.4	<0.5	0.646	29	<0.5	1.81	1.4	4.85	6.97
Boron (diss.filt)	µg/l	52.8	<10	55.9	15.4	91.1	135	44.8	477	57.2	45.6	22.5	<10	48.9	69.2	127	21.2
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<1	<1	2.37	<1	1.21	<1	2.13	<1	<1	1.01	<1	<1	<1	<1	<1
Copper (diss.filt)	µg/l	<0.3	<0.3	<0.3	<0.3	<0.3	1.23	<0.3	<0.3	<0.3	<0.3	0.556	<0.3	<0.3	<0.3	1.42	0.671
Lead (diss.filt)	µg/l	0.227	<0.2	<0.2	<0.2	<0.2	1.13	0.299	<0.2	<0.2	<0.2	0.418	<0.2	<0.2	<0.2	1.33	0.408
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (diss.filt)	µg/l	0.426	0.659	1.44	0.675	1.57	6.75	1.8	6.43	<0.4	<0.4	2.18	0.803	<0.4	1.53	2.46	1.34
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	<1	<1	<1	2.01	4.95	5.47	<1	14.5	1.04	1.22	1.66	<1	1.4	<1	4	3.28
Zinc (diss.filt)	µg/l	4.02	3.77	1.97	8.33	1.89	17.6	2.89	1.37	2.53	2.38	14.5	12.4	2.8	6.91	9.39	12.2
Aliphatics >C10-C12	µg/l	<10	<10	98	<10	396	<10	98	237	80	223	51	<10	<10	<10	843	<10
Aliphatics >C12-C16 (aq)	µg/l	<10	<10	234	88	12000	<10	686	1250	49	100	159	<10	<10	4090	12100	891
Aliphatics >C16-C21 (aq)	µg/l	15	<10	355	208	19000	<10	1340	1520	232	531	355	<10	<10	5900	17200	1420
Aliphatics >C21-C35 (aq)	µg/l	72	<10	701	694	55200	<10	3340	2820	186	430	445	<10	<10	7110	54400	3910
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	<10	<10	<10	79	<10	10	<10	<10	<10	<10	17	<10
Aliphatics >C6-C8	µg/l	<10	<10	15	<10	30	<10	28	83	19	28	13	<10	<10	<10	53	<10
Aliphatics >C8-C10	µg/l	<10	<10	28	<10	110	<10	45	71	37	45	21	<10	<10	<10	232	<10
Aromatics >EC10-EC12	µg/l	<10	<10	65	<10	264	<10	65	158	53	149	34	<10	<10	<10	562	<10
Aromatics >EC12-EC16 (aq)	µg/l	<10	<10	30	24	3080	<10	183	248	30	162	35	<10	<10	509	2920	151
Aromatics >EC16-EC21 (aq)	µg/l	<10	<10	148	74	9020	<10	633	670	130	211	91	<10	<10	2070	8820	529
Aromatics >EC21-EC35 (aq)	µg/l	<10	<10	523	598	30600	<10	3130	1810	141	230	235	<10	<10	5150	30900	2610
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	172	<10	<10	<10	<10	<10	<10	27	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	µg/l	<10	<10	19	<10	74	<10	30	49	25	31	14	<10	<10	<10	155	<10
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	172	<7	<7	<7	<7	<7	<7	27	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GRO >C5-C12	µg/l	<50	<50	229	<50	886	<50	273	850	219	487	136	<50	<50	<50	1890	<50
GRO Surrogate % recovery**	%	108	117	97	119	119	119	113	118	106	99	108	100	108	104	112	112
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Sum of detected BTEX	µg/l	<28	<28	<28	<28	<28	<28	<28	172	<28	<28	<28	<28	<28	<28	<28	<28
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
liphatics & Aromatics >C5-35 (aq)	µg/l	87	<10	2220	1690	130000	<10	9580	9160	987	2150	1460	<10	<10	24800	128000	9500
Total Aliphatics >C12-C35 (aq)	µg/l	87	<10	1290	990	86100	<10	5370	5580	467	1060	959	<10	<10	17100	83700	6210
total Aromatics >EC12-EC35 (aq)	µg/l	<10	<10	701	696	42700	<10	3940	2730	301	603	361	<10	<10	7730	42700	3290

	22002948	22002958	22002967	22218462	22218444	22218453	22218471	22218480	22218546	22218537	22218555	22218424	22218415	22218438	22412561	22412580
SDG ID	200406-37	200406-37	200406-37	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200703-4	200703-4
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit
Sample Description	MSMW155D	MSMW155S	MSMW27	BH 49	BH 52	BH XI	BH23	BH46	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 52	BH 57
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER
Date Sampled	31/03/2020	31/03/2020	31/03/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	01/07/2020	01/07/2020
Received On	06/04/2020	06/04/2020	06/04/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	03/07/2020	03/07/2020
Date Complete	10/04/2020	10/04/2020	10/04/2020	09/06/2020	09/06/2020	10/06/2020	09/06/2020	09/06/2020	09/06/2020	09/06/2020	10/06/2020	10/06/2020	10/06/2020	09/06/2020	13/07/2020	13/07/2020
Laboratory data																
Acenaphthene (aq) µg/l	4.51	<0.005	0.0219	0.0836	12.7	0.0188	0.732	<0.005	0.183	1.03	<0.005	<0.005	0.121	<0.01	11.7	<0.01
Acenaphthylene (aq) µg/l	0.0336	<0.005	0.0425	<0.01	1.42	<0.005	0.341	0.148	<0.005	0.319	<0.005	<0.005	<0.005	0.337	1.1	0.0279
Anthracene (aq) µg/l	0.18	<0.005	<0.005	0.0647	5.76	0.0221	0.225	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	5.83	0.0985
Benzo(a)anthracene (aq) µg/l	<0.005	<0.005	<0.005	0.161	10.2	0.111	1.46	0.725	<0.005	<0.005	<0.005	<0.005	<0.005	2.35	8.97	0.318
Benzo(a)pyrene (aq) µg/l	0.00977	<0.002	0.143	0.186	8.8	0.134	2.29	0.98	0.0378	0.0261	0.0313	<0.002	<0.002	2.48	10.4	0.359
Benzo(b)fluoranthene (aq) µg/l	0.0145	<0.005	0.203	0.306	9.47	0.195	3.53	1.11	0.055	<0.005	0.0387	<0.005	<0.005	4.11	8.8	0.49
Benzo(g,h,i)perylene (aq) µg/l	<0.005	<0.005	0.103	0.178	4.13	0.115	2.54	0.623	0.0274	<0.005	0.0281	<0.005	<0.005	1.7	5.12	0.327
Benzo(k)fluoranthene (aq) µg/l	<0.005	<0.005	0.0736	0.113	2.85	0.0834	1.45	0.365	0.017	<0.005	0.0179	<0.005	<0.005	1.47	3.1	0.202
Indeno(1,2,3-cd)pyrene (aq) µg/l	<0.005	<0.005	0.0897	0.106	2.66	0.0796	1.92	0.363	<0.005	<0.005	<0.005	<0.005	<0.005	1.66	3.18	0.266
SUM OF 4 PAH	0.0145	<0.005	0.4693	0.703	19.11	0.473	9.44	2.461	0.0994	<0.005	0.0847	<0.005	<0.005	8.94	20.2	1.285
Chrysene (aq) µg/l	0.0394	<0.005	<0.005	0.353	19.9	0.14	2.04	1.01	<0.005	<0.005	<0.005	<0.005	<0.005	2.67	8.4	0.666
Dibenzo(a,h)anthracene (aq) µg/l	<0.005	<0.005	<0.005	0.0473	1.49	0.0276	0.509	0.116	<0.005	<0.005	<0.005	<0.005	<0.005	0.584	1.65	0.113
Fluoranthene (aq) µg/l	0.737	<0.005	0.0861	0.402	21.8	0.196	3.16	0.661	<0.005	0.0954	<0.005	<0.005	0.0663	4.02	19.3	0.626
Fluorene (aq) µg/l	0.191	<0.005	0.00868	0.148	13.7	0.0214	0.911	<0.005	0.145	1.21	<0.005	0.00568	<0.005	<0.01	9.1	0.195
Naphthalene (aq) µg/l	0.249	<0.01	<0.01	0.0385	1.42	0.0103	0.74	0.041	0.0499	1.43	<0.01	<0.01	<0.01	0.06	<0.02	0.0403
H, Total Detected USEPA 16 (aq) µg/l	6.43	<0.082	1.13	3.18	168	1.5	26.5	9.5	0.735	4.54	0.188	<0.082	0.591	26.3	140	5.37
Phenanthrene (aq) µg/l	0.0818	<0.005	<0.005	0.419	16.2	0.157	1.03	<0.005	<0.005	0.231	<0.005	<0.005	<0.005	<0.01	9.77	0.752
Pyrene (aq) µg/l	0.377	0.00601	0.363	0.569	35.8	0.193	3.67	3.36	0.22	0.203	0.0721	<0.005	0.404	4.87	33.4	0.888

	22412570	22412608	22412590	22412599	22412678	22412667	22412688	22412533	22412543	22412552	22579320	22579311	22579329	22579409	22579400	22579426	
SDG ID	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200731-1	200731-1	200731-1	200731-1	200731-1	200731-1	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	
Sample Description	BH XI	BH24	BH46	BH51	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH XI	BH20	CARW008	CARW009	CARW034	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	
Received On	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	
Date Complete	08/07/2020	13/07/2020	10/07/2020	13/07/2020	09/07/2020	13/07/2020	09/07/2020	08/07/2020	13/07/2020	08/07/2020	07/08/2020	07/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	
Laboratory data																	
Ammoniacal Nitrogen as N	mg/l	1	1.28	4.6	5.89	0.966	1.66	0.911	<0.2	1.02	0.471	2.44	0.521	1.62	0.708	1.88	0.659
Chloride	mg/l	21.5	46.7	47.8	46.5	26.3	25.7	9.2	21.8	19.4	22.4	15.5	19.4	41.5	23.3	26.1	9.2
Arsenic (diss.filt)	µg/l	19.3	4.63	9.07	1.48	<0.5	0.509	23.9	1.19	2.26	2.68	4.83	18.7	2.51	0.749	0.633	1.81
Boron (diss.filt)	µg/l	145	171	353	498	72.2	67.6	35.4	<10	74.6	68.3	24.2	126	160	77.7	52.3	35.2
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.0992	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<1	1.22	<1	<1	<1	<1	<1	<1	<1	<1	1.06	1.02	<1	<1	<1
Copper (diss.filt)	µg/l	1.21	0.7	0.455	<0.3	<0.3	<0.3	5.26	<0.3	0.301	0.756	0.638	4.12	1.41	<0.3	<0.3	2.25
Lead (diss.filt)	µg/l	1.1	0.521	0.24	<0.2	<0.2	<0.2	1.94	<0.2	0.316	0.734	<0.2	2.77	<0.2	<0.2	<0.2	<0.2
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0126	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (diss.filt)	µg/l	9.62	1.41	5.74	1.43	<0.4	<0.4	3.6	1.34	0.482	6.29	2.06	8.52	1.66	12.3	6.03	3.76
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	3.75	1.77	13.9	7.69	<1	<1	1.01	<1	<1	<1	1.38	1.48	2.35	<1	<1	<1
Zinc (diss.filt)	µg/l	10.3	15.1	2.86	2.39	1.85	2.18	6.31	3.35	4.86	16.8	6.7	17.8	6.12	3.93	9.61	2.19
Aliphatics >C10-C12	µg/l	<10	196	294	242	46	340	53	<10	<10	13	<10	<10	122	51	380	27
Aliphatics >C12-C16 (aq)	µg/l	<20	1960	69	2220	127	1730	58	<10	<10	492	29	35	356	45	586	262
Aliphatics >C16-C21 (aq)	µg/l	<20	2240	123	2480	386	5480	288	<10	<10	663	77	84	497	179	1730	550
Aliphatics >C21-C35 (aq)	µg/l	128	8680	212	8150	376	5400	326	<10	<10	980	221	331	2690	146	1500	681
Aliphatics >C5-C6	µg/l	<10	<10	62	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10
Aliphatics >C6-C8	µg/l	<10	66	108	24	20	25	<10	<10	<10	<10	<10	<10	60	14	29	<10
Aliphatics >C8-C10	µg/l	<10	103	95	71	27	52	10	<10	<10	<10	<10	<10	64	23	58	<10
Aromatics >EC10-EC12	µg/l	<10	131	196	161	31	227	35	<10	<10	<10	<10	<10	81	34	253	18
Aromatics >EC12-EC16 (aq)	µg/l	<20	698	16	847	157	1010	12	<10	40	53	<10	<10	118	107	465	100
Aromatics >EC16-EC21 (aq)	µg/l	<20	1600	45	1190	299	3040	98	<10	21	286	<10	40	250	145	864	221
Aromatics >EC21-EC35 (aq)	µg/l	59	8170	145	3760	365	3720	344	<10	<10	687	22	169	1800	182	1070	468
Aromatics >EC5-EC7	µg/l	<10	<10	336	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	µg/l	<10	68	74	48	18	36	<10	<10	<10	<10	<10	<10	43	15	40	<10
Benzene	µg/l	<7	<7	336	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GRO >C5-C12	µg/l	<50	575	1170	555	146	690	114	<50	<50	<50	<50	<50	381	144	770	65
GRO Surrogate % recovery**	%	114	101	120	106	108	113	110	111	111	110	107	107	106	116	106	106
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Sum of detected BTEX	µg/l	<28	<28	336	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
liphatics & Aromatics >C5-35 (aq)	µg/l	187	23900	1780	19200	1860	21100	1240	<10	83	3200	359	659	6090	948	6980	2350
Total Aliphatics >C12-C35 (aq)	µg/l	128	12900	404	12800	889	12600	672	<10	<10	2140	327	450	3550	370	3820	1490
total Aromatics >EC12-EC35 (aq)	µg/l	59	10500	206	5800	821	7770	454	<10	61	1030	22	209	2170	434	2390	789

	22412570	22412608	22412590	22412599	22412678	22412667	22412688	22412533	22412543	22412552	22579320	22579311	22579329	22579409	22579400	22579426	
SDG ID	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200731-1	200731-1	200731-1	200731-1	200731-1	200731-1	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	
Sample Description	BH XI	BH24	BH46	BH51	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH XI	BH20	CARW008	CARW009	CARW034	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	
Received On	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	
Date Complete	08/07/2020	13/07/2020	10/07/2020	13/07/2020	09/07/2020	13/07/2020	09/07/2020	08/07/2020	13/07/2020	08/07/2020	07/08/2020	07/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	
Laboratory data																	
Acenaphthene (aq)	µg/l	0.0518	1.51	<0.005	0.502	1.01	1.93	<0.005	<0.005	6.32	<0.005	0.0295	0.0951	0.363	0.824	1.27	<0.005
Acenaphthylene (aq)	µg/l	<0.01	0.33	0.0347	0.0717	0.2	0.497	<0.005	<0.005	0.0443	<0.005	<0.005	0.0401	<0.005	0.132	<0.005	<0.005
Anthracene (aq)	µg/l	0.0504	0.385	<0.005	0.062	<0.005	<0.005	<0.005	<0.005	0.347	<0.005	0.0145	0.106	0.042	<0.005	<0.005	<0.005
Benzo(a)anthracene (aq)	µg/l	0.221	0.62	0.0314	0.066	0.0315	<0.005	<0.005	<0.005	0.0386	0.22	0.0327	0.51	0.0734	<0.005	<0.005	0.0249
Benzo(a)pyrene (aq)	µg/l	0.273	0.88	0.181	0.053	0.0489	<0.002	0.0285	<0.002	<0.002	0.268	0.0288	0.636	0.148	<0.002	<0.002	0.0416
Benzo(b)fluoranthene (aq)	µg/l	0.464	1	0.205	0.0657	0.0778	<0.005	0.0352	<0.005	<0.005	0.378	0.0479	1.03	0.135	<0.005	0.0433	0.052
Benzo(g,h,i)perylene (aq)	µg/l	0.266	0.625	0.111	<0.025	0.049	0.105	0.0339	<0.005	<0.005	0.162	0.0411	0.62	0.047	<0.005	0.0255	0.0268
Benzo(k)fluoranthene (aq)	µg/l	0.165	0.489	0.0615	0.0276	0.0255	<0.005	<0.005	<0.005	<0.005	0.151	0.0184	0.375	0.0364	<0.005	<0.005	0.0122
Indeno(1,2,3-cd)pyrene (aq)	µg/l	0.227	0.376	<0.005	<0.025	0.0376	<0.005	<0.005	<0.005	<0.005	<0.005	0.0245	0.588	<0.005	<0.005	<0.005	<0.005
SUM OF 4 PAH		1.122	2.49	0.3775	0.0933	0.1899	0.105	0.0691	<0.005	<0.005	0.691	0.1319	2.613	0.2184	<0.005	0.0688	0.091
Chrysene (aq)	µg/l	0.287	0.797	0.031	0.105	0.0496	<0.005	<0.005	<0.005	0.0231	0.383	0.0685	0.678	0.229	<0.005	<0.005	0.0382
Dibenzo(a,h)anthracene (aq)	µg/l	0.0678	<0.01	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0104	0.138	<0.005	<0.005	<0.005	<0.005
Fluoranthene (aq)	µg/l	0.384	1.88	0.0253	0.166	<0.005	0.507	<0.005	<0.005	1.5	0.126	0.0604	0.839	0.237	0.0534	0.252	0.0576
Fluorene (aq)	µg/l	0.058	1.66	0.0304	0.494	2.34	2.28	<0.005	<0.005	0.8	<0.005	0.0356	0.112	0.336	1.77	1.7	<0.005
Napthalene (aq)	µg/l	<0.02	<0.02	<0.01	<0.05	0.0991	3.29	<0.01	<0.01	3.19	<0.01	0.01	0.0374	0.0776	0.0736	<0.01	0.0108
H, Total Detected USEPA 16 (aq)	µg/l	3.17	15.4	1.2	2.2	4.16	11.2	0.187	<0.082	13.4	2.44	0.626	7.25	2.3	2.99	4.59	0.482
Phenanthrene (aq)	µg/l	0.316	2.68	<0.005	0.375	<0.005	1.21	<0.005	<0.005	0.402	<0.005	0.101	0.58	0.267	<0.005	0.624	<0.005
Pyrene (aq)	µg/l	0.338	2.15	0.486	0.211	0.19	1.38	0.0897	<0.005	0.764	0.755	0.103	0.855	0.304	0.137	0.667	0.218

	22579285	22579294	22579303	22579338	22579347	22726132	22726119	22726146	22726231	22726219	22726246	22726083	22726095	22726107	22934262	22934276	
SDG ID	200731-1	200731-1	200731-1	200731-1	200731-1	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	201001-67	201001-67	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	
Sample Description	MSMW155D	MSMW155S	MSMW27	BH23	BH46	BH 57	BH XI	BH46	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH XI	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	UNSPEC_LIQUID	UNSPEC_LIQUID	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	
Date Sampled	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	25/08/2020	25/08/2020	25/08/2020	24/08/2020	24/08/2020	24/08/2020	25/08/2020	25/08/2020	24/08/2020	29/09/2020	29/09/2020	
Received On	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	01/10/2020	01/10/2020	
Date Complete	07/08/2020	07/08/2020	10/08/2020	07/08/2020	07/08/2020	04/09/2020	04/09/2020	04/09/2020	04/09/2020	04/09/2020	03/09/2020	04/09/2020	04/09/2020	03/09/2020	14/10/2020	14/10/2020	
Laboratory data																	
Ammoniacal Nitrogen as N	mg/l	<0.2	0.937	0.298	1.87	2.14	<0.2	0.894	<0.2	0.578	1.79	1.19	<0.2	1.14	<0.2	3.1	2.44
Chloride	mg/l	21.5	19.2	34.1	22.1	21.7	11.3	18.4	15.5	20.1	24.3	8.6	22.8	21	38.8	15.9	27.2
Arsenic (diss.filt)	µg/l	1.55	2.33	3.87	3.26	4.62	2.26	14.7	3.03	0.982	0.585	2.15	1.59	2.45	7.44	7.9	12.5
Boron (diss.filt)	µg/l	<10	62.3	152	51.2	180	14.8	89.8	69.5	72.8	48.1	21.8	<10	49.6	120	21.7	168
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	1.07	1.3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper (diss.filt)	µg/l	<0.3	<0.3	2	2.62	1.59	4.83	4.43	18.1	<0.3	<0.3	0.664	<0.3	<0.3	1.53	<0.3	1.23
Lead (diss.filt)	µg/l	<0.2	<0.2	1.36	<0.2	<0.2	0.304	1.23	0.546	<0.2	<0.2	<0.2	<0.2	<0.2	0.984	<0.2	0.508
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (diss.filt)	µg/l	0.875	<0.4	6.33	3.68	3.33	1.52	4.41	3.33	0.955	<0.4	4.13	0.45	<0.4	8.59	0.468	3.74
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	<1	<1	1.08	<1	8.77	<1	<1	4.05	<1	<1	<1	<1	<1	<1	<1	2.12
Zinc (diss.filt)	µg/l	5.39	7.81	3.3	31.9	4.06	11.7	22.2	6.65	<1	1.7	3.13	1.65	<1	143	<1	2.47
Aliphatics >C10-C12	µg/l	<10	<10	186	<10	518	<10	<10	166	62	383	105	<10	10	<10	<10	<10
Aliphatics >C12-C16 (aq)	µg/l	<10	<10	3740	166	1470	<10	<10	735	24	390	133	<10	<10	106	<10	<10
Aliphatics >C16-C21 (aq)	µg/l	<10	<10	4900	243	2200	<10	<10	1130	236	1530	248	<10	<10	125	14	<10
Aliphatics >C21-C35 (aq)	µg/l	<10	<10	6170	593	4310	21	22	2140	157	1200	342	<10	<10	177	62	<10
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	39	<10	16	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	µg/l	<10	<10	11	<10	95	<10	<10	15	15	26	12	<10	<10	<10	<10	<10
Aliphatics >C8-C10	µg/l	<10	<10	27	<10	116	<10	<10	36	25	48	25	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	µg/l	<10	<10	124	<10	345	<10	<10	111	41	255	70	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	µg/l	<10	58	603	63	286	<10	<10	223	112	360	111	<10	<10	41	<10	<10
Aromatics >EC16-EC21 (aq)	µg/l	<10	26	2390	146	921	<10	<10	614	205	697	142	<10	<10	61	<10	<10
Aromatics >EC21-EC35 (aq)	µg/l	<10	<10	4880	708	2400	21	25	1540	262	777	295	<10	<10	178	<10	<10
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	89	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	µg/l	<10	<10	18	<10	79	<10	<10	24	17	34	17	<10	<10	<10	<10	<10
Benzene	µg/l	<7	<7	<7	<7	89	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GRO >C5-C12	µg/l	<50	<50	372	<50	1280	<50	<50	356	165	752	233	<50	<50	<50	<50	<50
GRO Surrogate % recovery**	%	108	112	99	105	111	106	104	105	100	104	102	101	102	93	81	92
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Sum of detected BTEX	µg/l	<28	<28	<28	<28	89	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Aliphatics & Aromatics >C5-35 (aq)	µg/l	<10	111	23000	1940	12900	42	78	6740	1160	5710	1500	<10	32	688	76	<10
Total Aliphatics >C12-C35 (aq)	µg/l	<10	<10	14800	1000	7990	21	22	4000	417	3120	723	<10	<10	408	76	<10
Total Aromatics >EC12-EC35 (aq)	µg/l	<10	84	7870	917	3610	21	25	2380	579	1830	548	<10	<10	280	<10	<10

	22579285	22579294	22579303	22579338	22579347	22726132	22726119	22726146	22726231	22726219	22726246	22726083	22726095	22726107	22934262	22934276
SDG ID	200731-1	200731-1	200731-1	200731-1	200731-1	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	200827-23	201001-67	201001-67
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit
Sample Description	MSMW155D	MSMW155S	MSMW27	BH23	BH46	BH 57	BH XI	BH46	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH XI
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	UNSPEC_LIQUID	UNSPEC_LIQUID	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER
Date Sampled	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	25/08/2020	25/08/2020	25/08/2020	24/08/2020	24/08/2020	24/08/2020	25/08/2020	25/08/2020	24/08/2020	29/09/2020	29/09/2020
Received On	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	01/10/2020	01/10/2020
Date Complete	07/08/2020	07/08/2020	10/08/2020	07/08/2020	07/08/2020	04/09/2020	04/09/2020	04/09/2020	04/09/2020	04/09/2020	03/09/2020	04/09/2020	04/09/2020	03/09/2020	14/10/2020	14/10/2020
Laboratory data																
Acenaphthene (aq) µg/l	0.0237	7.12	0.631	0.0167	<0.05	<0.005	0.0151	0.0333	0.752	1.39	0.231	<0.005	0.819	<0.005	0.0771	0.0623
Acenaphthylene (aq) µg/l	<0.005	0.0449	0.412	0.0293	<0.05	<0.005	0.00904	0.156	0.132	0.42	0.0135	<0.005	0.0487	0.00787	<0.005	<0.005
Anthracene (aq) µg/l	<0.005	0.343	<0.005	<0.005	0.137	0.00937	0.0286	0.485	0.0497	<0.005	<0.005	<0.005	<0.005	<0.005	0.0168	0.0135
Benzo(a)anthracene (aq) µg/l	<0.005	0.0217	2.44	0.101	0.554	0.0283	0.153	0.83	<0.005	<0.005	<0.005	<0.005	<0.005	0.0213	0.0423	0.0443
Benzo(a)pyrene (aq) µg/l	<0.002	<0.002	2.08	0.147	0.568	0.0375	0.175	0.707	<0.002	<0.002	0.0294	<0.002	<0.002	0.0382	0.037	0.0603
Benzo(b)fluoranthene (aq) µg/l	<0.005	<0.005	3.57	0.225	0.648	0.0671	0.314	0.742	<0.005	0.0388	0.0231	<0.005	<0.005	0.069	0.0585	0.11
Benzo(g,h,i)perylene (aq) µg/l	<0.005	<0.005	1.78	0.15	0.439	0.0243	0.159	0.368	<0.005	<0.005	0.0146	<0.005	<0.005	0.0288	0.0417	0.0466
Benzo(k)fluoranthene (aq) µg/l	<0.005	<0.005	1.15	0.0951	0.199	0.0238	0.0975	0.239	<0.005	<0.005	<0.005	<0.005	<0.005	0.0193	0.0185	0.036
Indeno(1,2,3-cd)pyrene (aq) µg/l	<0.005	<0.005	1.34	0.103	0.231	<0.005	0.116	0.258	<0.005	<0.005	0.0109	<0.005	<0.005	0.0373	0.0293	0.0437
SUM OF 4 PAH	<0.005	<0.005	7.84	0.5731	1.517	0.1152	0.6865	1.607	<0.005	0.0388	0.0486	<0.005	<0.005	0.1544	0.148	0.2363
Chrysene (aq) µg/l	<0.005	0.0232	3.18	0.122	0.449	0.0397	0.124	1.23	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.055	0.0757
Dibenzo(a,h)anthracene (aq) µg/l	<0.005	<0.005	0.511	0.0443	0.0783	<0.005	0.0393	0.0993	<0.005	<0.005	<0.005	<0.005	<0.005	0.00957	0.00872	<0.005
Fluoranthene (aq) µg/l	<0.005	1.49	5.61	0.144	0.568	0.0441	0.233	1.58	0.0755	0.186	0.0332	<0.005	0.3	0.019	0.0622	0.0978
Fluorene (aq) µg/l	<0.005	0.841	<0.005	<0.005	<0.05	0.0114	0.0195	0.107	1.67	1.69	0.0985	<0.005	0.043	<0.005	0.0844	0.0173
Naphthalene (aq) µg/l	<0.01	3.97	0.0734	0.0361	0.786	<0.01	0.0177	0.0289	0.0684	0.231	<0.01	<0.01	0.0295	<0.01	<0.01	0.0104
H, Total Detected USEPA 16 (aq) µg/l	<0.082	15.1	29.1	1.59	6.7	0.382	1.93	10.7	3	4.9	0.579	<0.082	1.61	0.277	0.706	0.796
Phenanthrene (aq) µg/l	<0.005	0.447	<0.005	0.0492	<0.05	0.0421	0.211	0.508	0.0583	0.465	<0.005	<0.005	<0.005	<0.005	0.0866	0.0799
Pyrene (aq) µg/l	<0.005	0.756	6.33	0.323	2.04	0.054	0.217	3.38	0.19	0.476	0.124	<0.005	0.374	0.0267	0.0873	0.0981

	22934221	22934037	22934245	22934420	22934453	22934399	22934355	22934332	22934304	23202758	23202770	23202746	23202721	23202605	23202732	23202827
SDG ID	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201107-110	201107-110	201107-110	201107-110	201107-110	201107-110	201107-110
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit
Sample Description	BH21	BH46	BH52	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH XI	BH23	BH32	BH46	BH52	CARW008
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER
Date Sampled	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020
Received On	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020
Date Complete	14/10/2020	13/10/2020	14/10/2020	13/10/2020	13/10/2020	13/10/2020	14/10/2020	14/10/2020	13/10/2020	17/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	17/11/2020
Laboratory data																
Ammoniacal Nitrogen as N	mg/l	2.41	13.3	1.2	0.774	1.53	1.65	<0.2	0.914	0.276	0.2	1.45	0.207	0.281	0.2	0.357
Chloride	mg/l	62.7	144	18	28.5	23.1	11.4	22.1	20.6	29.3	21.1	40	20.1	17.5	35	24.3
Arsenic (diss.filt)	µg/l	2.5	5.52	2.76	0.617	<5	42.5	1.94	2.48	1.38	2.39	3.13	1.16	1.04	4.51	1.92
Boron (diss.filt)	µg/l	172	597	120	72.5	<100	22.1	13	64.8	149	14.9	85.2	34.4	10	83	60.7
Cadmium (diss.filt)	µg/l	<0.08	<0.88	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.0853	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<11	<1	<1	<10	<1	<1	<1	<1	1	1	1	1	1	1
Copper (diss.filt)	µg/l	<0.3	<3.3	<0.3	<0.3	<3	0.892	<0.3	<0.3	0.402	1.72	6.58	4.72	1.26	3.56	0.3
Lead (diss.filt)	µg/l	<0.2	<2.2	<0.2	<0.2	<2	0.32	<0.2	<0.2	<0.2	0.211	1.13	0.293	0.2	0.2	0.2
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.0138	0.01	0.01	0.01
Nickel (diss.filt)	µg/l	0.633	13.5	2.63	8.43	<4	3.18	0.789	<0.4	5.26	1.05	8.76	2.5	1.25	4	2.13
Selenium (diss.filt)	µg/l	<1	<11	<1	<1	<10	<1	<1	<1	<1	1	1	1	1	1	1
Vanadium (diss.filt)	µg/l	1.86	25.6	7.2	<1	<10	<1	<1	<1	<1	1	1	1	1	3.94	1
Zinc (diss.filt)	µg/l	1.5	<11	<1	<1	<10	4.67	1.41	2.05	22.1	4.65	32.8	24.1	2.56	2.71	11.4
Aliphatics >C10-C12	µg/l	24	588	2860	34	369	63	<10	<10	15	10	10	10	270	537	18
Aliphatics >C12-C16 (aq)	µg/l	<10	1530	85800	228	822	379	<10	<10	206	10	10	117	23400	14500	10
Aliphatics >C16-C21 (aq)	µg/l	<10	1610	107000	707	2690	875	<10	<10	277	10	10	229	118000	15800	156
Aliphatics >C21-C35 (aq)	µg/l	<10	3000	302000	723	2050	736	<10	<10	58	10	10	704	1040000	28300	321
Aliphatics >C5-C6	µg/l	<10	118	55	<10	21	<10	<10	<10	<10	10	10	10	11	10	10
Aliphatics >C6-C8	µg/l	15	159	233	<10	49	<10	<10	<10	<10	10	10	10	48	18	10
Aliphatics >C8-C10	µg/l	14	201	1300	18	73	12	<10	<10	<10	10	10	10	158	79	11
Aromatics >EC10-EC12	µg/l	16	392	1910	23	246	42	<10	<10	10	10	10	10	180	358	12
Aromatics >EC12-EC16 (aq)	µg/l	<10	962	10700	42	610	174	<10	<10	23	10	10	38	6970	4730	116
Aromatics >EC16-EC21 (aq)	µg/l	<10	1030	25600	204	1410	623	<10	<10	144	10	10	90	52500	7230	173
Aromatics >EC21-EC35 (aq)	µg/l	<10	1770	64600	99	1590	453	<10	<10	320	26	10	631	445000	17000	260
Aromatics >EC5-EC7	µg/l	<10	734	22	<10	<10	<10	<10	<10	<10	10	10	10	10	10	10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	10	10	10	10	10
Aromatics >EC8-EC10	µg/l	<10	153	870	12	50	<10	<10	<10	<10	10	10	10	106	52	10
Benzene	µg/l	<7	734	22	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	7	<5	<5	<5	<5	<5	<5	<5	5	5	5	5	5	5
GRO >C5-C12	µg/l	81	2350	7260	97	807	130	<50	<50	<50	50	50	50	774	1050	56
GRO Surrogate % recovery**	%	89	92	92	82	87	87	85	82	83	92	107	97	90	96	108
m,p-Xylene	µg/l	<8	8	<8	<8	<8	<8	<8	<8	<8	8	8	8	8	8	8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	3	3	3	3	3	3
o-Xylene	µg/l	<3	4	<3	<3	<3	<3	<3	<3	<3	3	3	3	3	3	3
Sum of detected BTEX	µg/l	<28	757	<28	<28	<28	<28	<28	<28	<28	28	28	28	28	28	28
Sum of detected Xylenes	µg/l	<11	12	<11	<11	<11	<11	<11	<11	<11	11	11	11	11	11	11
Toluene	µg/l	<4	4	<4	<4	<4	<4	<4	<4	<4	4	4	4	4	4	4
Aliphatics & Aromatics >C5-35 (aq)	µg/l	81	12200	603000	2100	9990	3370	<10	<10	1060	30	10	1830	1680000	88600	1080
Total Aliphatics >C12-C35 (aq)	µg/l	<10	6140	495000	1660	5560	1990	<10	<10	541	10	10	1050	1180000	58600	477
Total Aromatics >EC12-EC35 (aq)	µg/l	<10	3760	101000	345	3620	1250	<10	<10	487	26	10	759	505000	29000	549

	22934221	22934037	22934245	22934420	22934453	22934399	22934355	22934332	22934304	23202758	23202770	23202746	23202721	23202605	23202732	23202827
SDG ID	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201107-110	201107-110	201107-110	201107-110	201107-110	201107-110	201107-110
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit
Sample Description	BH21	BH46	BH52	CARW008	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH XI	BH23	BH32	BH46	BH52	CARW008
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER
Date Sampled	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	29/09/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020
Received On	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020
Date Complete	14/10/2020	13/10/2020	14/10/2020	13/10/2020	13/10/2020	13/10/2020	14/10/2020	14/10/2020	13/10/2020	17/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	17/11/2020
Laboratory data																
Acenaphthene (aq) µg/l	0.333	34.7	108	0.817	1.56	0.703	<0.005	7.01	0.382	0.005	0.0111	0.0267	7.71	88.8	27.9	0.455
Acenaphthylene (aq) µg/l	0.0369	0.554	118	0.866	1.78	0.946	<0.005	0.0371	0.436	0.005	0.005	0.005	8.79	86.9	32.2	0.45
Anthracene (aq) µg/l	0.0277	8.75	40.3	<0.005	<0.005	<0.01	<0.005	0.407	<0.005	0.005	0.0153	0.005	0.1	39.9	13.2	0.0386
Benzo(a)anthracene (aq) µg/l	0.0151	1.44	<0.25	<0.005	<0.005	<0.01	<0.005	0.0305	0.167	0.005	0.0579	0.005	0.1	8.69	0.005	0.005
Benzo(a)pyrene (aq) µg/l	0.00869	1.04	30.1	0.0657	<0.002	<0.004	<0.002	<0.002	0.112	<0.002	0.0712	0.115	0.04	9.42	<0.002	<0.002
Benzo(b)fluoranthene (aq) µg/l	0.0138	1.17	30.1	0.107	<0.005	<0.01	<0.005	<0.005	0.164	<0.005	0.118	0.161	0.1	10.8	<0.005	<0.005
Benzo(g,h,i)perylene (aq) µg/l	<0.005	0.628	14.5	0.0603	0.0356	0.143	<0.005	<0.005	0.0524	<0.005	0.062	0.164	0.1	5.2	<0.005	<0.005
Benzo(k)fluoranthene (aq) µg/l	0.00505	0.423	8.69	0.0359	<0.005	<0.01	<0.005	<0.005	0.0764	<0.005	0.0556	0.0572	0.1	4.02	<0.005	<0.005
Indeno(1,2,3-cd)pyrene (aq) µg/l	<0.005	0.472	8.81	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	0.0547	0.0939	0.1	3.31	<0.005	<0.005
SUM OF 4 PAH	0.01885	2.693	62.1	0.2032	0.0356	0.143	<0.005	<0.005	0.2928	<0.005	0.2903	0.4761	0.4	23.33	<0.005	<0.005
Chrysene (aq) µg/l	0.0226	1.85	<0.25	<0.005	<0.005	<0.01	<0.005	0.0195	0.245	<0.005	0.0763	0.005	0.1	8.73	<0.005	<0.005
Dibenzo(a,h)anthracene (aq) µg/l	<0.005	0.149	<0.25	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	0.0175	0.0334	0.1	1.37	<0.005	<0.005
Fluoranthene (aq) µg/l	0.0533	4.6	87.7	0.164	<0.005	0.404	<0.005	1.47	0.408	0.0228	0.106	0.11	0.1	29.5	38.5	0.0406
Fluorene (aq) µg/l	0.275	29.8	135	1.89	2.09	1.58	<0.005	1.1	0.121	0.005	0.0108	0.0211	17	87.9	33	1.04
Naphthalene (aq) µg/l	0.0543	8.29	<0.5	0.0866	<0.01	0.0616	<0.01	5.73	<0.01	0.01	0.0103	0.026	0.2	0.01	0.01	0.0554
H, Total Detected USEPA 16 (aq) µg/l	1.01	120	909	4.38	6.33	5.36	<0.082	17.2	2.59	0.082	0.853	1.03	75.8	493	240	2.22
Phenanthrene (aq) µg/l	0.0928	19.7	217	<0.005	0.86	0.769	<0.005	0.714	<0.005	0.0227	0.0905	0.0479	42.4	77.4	39.6	0.0455
Pyrene (aq) µg/l	0.071	6.2	111	0.285	<0.005	0.756	0.00557	0.715	0.426	0.0258	0.0954	0.178	0.1	31.6	55.7	0.0919

	23202840	23202815	23202805	23202794	23202783	23344302	23344293	23344230	23344284	23344313	23344376	23344366	23344327	23344356	23344341	23516988
SDG ID	201107-110	201107-110	201107-110	201107-110	201107-110	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	210108-121
Status	Authorised	Authorised	Authorised	Authorised	Authorised											
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy											
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monitoring											
Sample Description	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH23	BH46	BH52	BH XI	CARW008	CARW034	MSMW27	MSMW155D	MSMW155S	BH 57
Status	Authorised	Authorised	Authorised	Authorised	Authorised											
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER
Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	1/7/2021
Received On	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	1/8/2021
Date Complete	19/11/2020	19/11/2020	17/11/2020	19/11/2020	19/11/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	1/14/2021
Laboratory data																
Ammoniacal Nitrogen as N	mg/l	1.37	0.493	0.2	1.14	0.2	0.372	0.878	1.49	0.2	3.56	0.741	0.334	0.2	0.2	0.425
Chloride	mg/l	24.9	9.8	22.7	22.1	21.6	23.1	25.8	47.5	18.8	35.5	26.7	14.4	23.6	22.1	12.6
Arsenic (diss.filt)	µg/l	0.56	26.1	2.1	3.27	2.81	7.16	1.44	5.22	2.24	20.8	2.06	27.5	6.53	1.88	4.8
Boron (diss.filt)	µg/l	44.9	10	11.4	53.2	64.8	15.4	51.4	125	47.2	145	60.9	100	84.3	10.7	10.4
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	1	1	1	1	1	1.01	1	1.52	1	1.09	1	1	1	1	<1
Copper (diss.filt)	µg/l	0.3	0.681	0.3	0.3	0.515	0.954	2.56	0.314	3.3	1.09	0.3	0.633	0.652	0.3	0.47
Lead (diss.filt)	µg/l	0.2	0.27	0.2	0.2	0.477	0.2	0.559	0.2	0.2	0.276	0.34	0.338	0.372	0.2	<0.2
Mercury (diss.filt)	µg/l	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	<0.01
Nickel (diss.filt)	µg/l	0.4	2.05	0.74	0.4	2.14	1.47	2.67	3.29	1.73	3.94	3.42	2.2	3.85	0.933	0.445
Selenium (diss.filt)	µg/l	1	1	1	1	1	1	1	1	1	1	1	1	1	1	<1
Vanadium (diss.filt)	µg/l	1	1	1	1	1	1	1	9.34	1	1.61	1	1	1	1	1.55
Zinc (diss.filt)	µg/l	7.39	3.58	1.34	1.06	4.27	2.05	17.3	1.31	17.8	5.55	4.25	4.83	15.3	3.14	2.49
Aliphatics >C10-C12	µg/l	304	122	10	10	10	10	10	136	78	10	25	56	10	10	<10
Aliphatics >C12-C16 (aq)	µg/l	976	668	10	10	31	20	57	76	648	10	97	1680	92	23	<10
Aliphatics >C16-C21 (aq)	µg/l	4360	1280	10	10	138	20	150	88	940	10	372	4380	113	105	11
Aliphatics >C21-C35 (aq)	µg/l	4240	1680	10	10	247	20	435	123	2560	10	276	4690	106	80	81
Aliphatics >C5-C6	µg/l	10	10	10	10	10	10	10	15	10	10	10	10	10	10	<10
Aliphatics >C6-C8	µg/l	22	10	10	10	10	10	10	33	10	10	10	10	10	10	<10
Aliphatics >C8-C10	µg/l	47	19	10	10	10	10	10	33	15	10	12	15	10	10	<10
Aromatics >EC10-EC12	µg/l	202	81	10	10	10	10	10	91	52	10	16	37	10	10	<10
Aromatics >EC12-EC16 (aq)	µg/l	378	234	12	35	84	20	10	257	68	10	104	475	10	10	<10
Aromatics >EC16-EC21 (aq)	µg/l	1750	421	10	18	100	20	84	101	106	10	244	1730	10	62	<10
Aromatics >EC21-EC35 (aq)	µg/l	2640	972	10	10	292	20	444	138	292	10	314	3880	10	101	45
Aromatics >EC5-EC7	µg/l	10	10	10	10	10	10	10	50	10	10	10	10	10	10	<10
Aromatics >EC7-EC8	µg/l	10	10	10	10	10	10	10	10	10	10	10	10	10	10	<10
Aromatics >EC8-EC10	µg/l	33	13	10	10	10	10	10	24	10	10	10	10	10	10	<10
Benzene	µg/l	<7	<7	<7	<7	<7	<7	50	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	5	5	5	5	5	5	5	5	5	5	5	5	5	5	<5
GRO >C5-C12	µg/l	614	251	50	50	50	50	50	382	166	50	69	132	50	50	50
GRO Surrogate % recovery**	%	103	93	95	91	94										
m,p-Xylene	µg/l	8	8	8	8	8	8	8	8	8	8	8	8	8	8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
o-Xylene	µg/l	3	3	3	3	3	3	3	3	3	3	3	3	3	3	<3
Sum of detected BTEX	µg/l	28	28	28	28	28	28	28	50	28	28	28	28	28	28	
Sum of detected Xylenes	µg/l	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
Toluene	µg/l	4	4	4	4	4	4	4	4	4	4	4	4	4	4	<4
liphatics & Aromatics >C5-35 (aq)	µg/l	15000	5510	12	57	900	20	1170	1170	4780	10	1480	17000	311	371	137
Total Aliphatics >C12-C35 (aq)	µg/l	9570	3630	10	10	416	20	642	287	4140	10	745	10800	311	208	92
Total Aromatics >EC12-EC35 (aq)	µg/l	4770	1630	12	53	476	20	528	496	466	10	662	6090	10	163	45

	23202840	23202815	23202805	23202794	23202783	23344302	23344293	23344230	23344284	23344313	23344376	23344366	23344327	23344356	23344341	23516988
SDG ID	201107-110	201107-110	201107-110	201107-110	201107-110	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	201202-12	210108-121
Status	Authorised	Authorised	Authorised	Authorised	Authorised											
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy											
Project	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monit	Coed Darcy Tip Monitoring											
Sample Description	CARW009	CARW034	MSMW155D	MSMW155S	MSMW27	BH 57	BH23	BH46	BH52	BH XI	CARW008	CARW034	MSMW27	MSMW155D	MSMW155S	BH 57
Status	Authorised	Authorised	Authorised	Authorised	Authorised											
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER
Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020	1/7/2021
Received On	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	1/8/2021
Date Complete	19/11/2020	19/11/2020	17/11/2020	19/11/2020	19/11/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	1/14/2021
Laboratory data																
Acenaphthene (aq)	µg/l	1.18	0.395	0.005	6.43	0.208	0.0182	0.0277	15.7	2.13	0.0186	0.496	0.45	0.005	0.0222	0.0317
Acenaphthylene (aq)	µg/l	1.43	0.456	0.005	0.0316	0.251	0.0122	0.0291	0.0938	2.46	0.00527	0.136	0.712	0.005	0.0337	0.0054
Anthracene (aq)	µg/l	0.005	0.005	0.005	0.373	0.005	0.01	0.00737	0.738	0.55	0.0148	0.0603	0.05	0.005	0.005	0.0133
Benzo(a)anthracene (aq)	µg/l	0.005	0.005	0.005	0.0135	0.005	0.0238	0.0444	0.111	0.616	0.0421	0.0257	0.262	0.005	0.005	0.0319
Benzo(a)pyrene (aq)	µg/l	<0.002	<0.002	<0.002	<0.002	<0.002	0.017	0.0981	0.0541	0.349	0.0363	<0.002	0.316	0.0289	<0.002	0.0479
Benzo(b)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	0.0332	0.141	0.0744	0.42	0.0745	0.0195	0.463	0.0381	0.0123	0.0816
Benzo(g,h,i)perylene (aq)	µg/l	0.111	0.0785	<0.005	<0.005	<0.005	0.01	0.104	0.0492	0.187	0.0581	0.0237	0.159	0.0305	<0.005	0.0431
Benzo(k)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	0.0157	0.0612	0.0202	0.221	0.0219	<0.005	0.0602	0.0152	<0.005	0.0277
Indeno(1,2,3-cd)pyrene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	0.0143	0.0685	0.0251	0.116	0.0442	<0.005	0.05	<0.005	<0.005	<0.005
SUM OF 4 PAH		0.111	0.0785	<0.005	<0.005	<0.005	0.0732	0.3747	0.1689	0.944	0.1987	0.0432	0.7322	0.0838	0.0123	0.1524
Chrysene (aq)	µg/l	<0.005	0.005	0.005	0.0141	0.005	0.0262	0.119	0.185	1.4	0.0658	0.0365	0.655	0.005	0.005	0.0548
Dibenzo(a,h)anthracene (aq)	µg/l	<0.005	0.005	0.005	0.005	0.005	0.01	0.0176	0.005	0.0666	0.0105	0.005	0.05	0.005	0.005	<0.005
Fluoranthene (aq)	µg/l	<0.005	0.182	<0.005	1.15	0.138	0.0257	0.0693	0.568	1.26	0.0574	0.0771	0.636	0.0155	0.0228	0.068
Fluorene (aq)	µg/l	1.38	0.905	0.005	1.08	0.0933	0.0182	0.0173	12	2.09	0.0108	1.3	0.548	0.005	0.0362	0.0229
Naphthalene (aq)	µg/l	0.01	0.0327	0.01	5.21	0.01	0.02	0.0145	1.65	0.213	0.0155	0.0951	0.104	0.01	0.0245	<0.01
H, Total Detected USEPA 16 (aq)	µg/l	4.83	3.06	0.082	15.6	0.904	0.257	1	35.6	15.4	0.598	2.55	6.46	0.207	0.278	0.546
Phenanthrene (aq)	µg/l	0.725	0.593	0.005	0.735	0.116	0.0269	0.0294	3.66	1.54	0.0669	0.0535	0.711	0.005	0.0781	0.0423
Pyrene (aq)	µg/l	0.005	0.414	0.005	0.604	0.0979	0.0255	0.154	0.597	1.76	0.0553	0.228	1.38	0.0786	0.0482	0.0755

	23517001	23516951	23516883	23516942	23516969	23516978	23517012	23517060	23516960	23517051	23517021	23517041	23517031				
SDG ID.	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121				
Status																	
Project Site																	
Project																	
Sample Description	BH20	BH23	BH46	BH52	BH34D	BH34S	BH XI	CARW008	CARW009	CARW034	MSMW27	MSMW155D	MSMW155S				
Status																	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00				
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER				
Date Sampled	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	WHO DWG / UK DWD	EQS Freshwater (AA)	EQS Freshwater (MAC)	EQS 90 percentile
Received On	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021				
Date Complete	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021				
Laboratory data																	
Ammoniacal Nitrogen as N	mg/l	1.19	0.7	2.51	<0.2	0.2	2.87	1.02	0.2	1.25	0.334	0.2	0.2	0.915	0.5		0.3
Chloride	mg/l	29.7	15.2	38.9	15.8	27.2	32.7	35.7	24.5	24.2	9.8	17.3	21.6	21.8	250	300	
Arsenic (diss.filt)	µg/l	2.22	4.58	3.96	4.51	2.66	2.93	2.98	2.56	2.32	23.5	6.06	2.05	2.62	10	50	
Boron (diss.filt)	µg/l	79.9	38.6	149	38.8	14.6	49.8	153	30.8	36.5	10	65.6	10	67	1000		
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	5	0.08	0.45
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	1	1	1.49	1	1	1	1	1	1	50	4.7	
Copper (diss.filt)	µg/l	<0.3	1.36	0.704	1.13	0.3	0.3	9.57	0.579	0.3	0.371	0.454	0.3	0.3	2000	1	
Lead (diss.filt)	µg/l	0.204	0.257	0.233	<0.2	0.2	0.2	1.72	0.258	0.2	0.224	0.448	0.2	0.2	10	1.2	14
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1		0.07
Nickel (diss.filt)	µg/l	<0.4	1.5	5.43	1.52	1.15	0.497	10.7	12	0.835	1.73	2.55	0.607	0.4	20	4	34
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	1	1	1	1	1	1	1	1	1	10		
Vanadium (diss.filt)	µg/l	<1	<1	3.63	<1	1	1.45	1	1	1.07	1	1	1	1.15		20	
Zinc (diss.filt)	µg/l	3.49	18	3.5	2.77	2.1	1.38	75.1	7.42	10	6.72	8.86	2.05	2.53		10.9	
Aliphatics >C10-C12	µg/l	29	<10	539	26	10	193	10	11	193	27	10	10	10			
Aliphatics >C12-C16 (aq)	µg/l	61	<10	1880	2140	10	10	10	10	1310	225	19	10	10			
Aliphatics >C16-C21 (aq)	µg/l	100	11	2850	4110	10	10	10	10	4680	795	48	10	10			
Aliphatics >C21-C35 (aq)	µg/l	619	35	5340	12700	10	10	10	10	4190	935	43	10	10			
Aliphatics >C5-C6	µg/l	<10	<10	15	<10	10	13	10	10	10	10	10	10	10			
Aliphatics >C6-C8	µg/l	30	<10	58	<10	10	58	10	10	13	10	10	10	10			
Aliphatics >C8-C10	µg/l	18	<10	127	11	10	408	10	10	36	10	10	10	10			
Aromatics >EC10-EC12	µg/l	20	<10	359	17	10	129	10	10	129	18	10	10	10			
Aromatics >EC12-EC16 (aq)	µg/l	23	<10	704	386	10	126	10	10	423	123	10	10	30			
Aromatics >EC16-EC21 (aq)	µg/l	32	<10	1430	1830	10	11	10	10	1880	298	11	10	11			
Aromatics >EC21-EC35 (aq)	µg/l	354	32	3350	7030	10	10	10	10	2480	610	22	10	10			
Aromatics >EC5-EC7	µg/l	<10	<10	117	<10	10	10	10	10	10	10	10	10	10			
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	10	10	10	10	10	10	10	10	10			
Aromatics >EC8-EC10	µg/l	12	<10	88	<10	10	272	10	10	25	10	10	10	10			
Benzene	µg/l	<7	<7	117	<7	<7	9	<7	<7	<7	<7	<7	<7	<7	1	10	50
Ethylbenzene	µg/l	<5	<5	<5	<5	5	5	5	5	5	5	5	5	5	300		
GRO >C5-C12	µg/l																
GRO Surrogate % recovery**	%																
m,p-Xylene	µg/l	<8	<8	<8	<8	8	8	8	8	8	8	8	8	8			
Methyl tertiary butyl ether (MTBE)	µg/l														15		
o-Xylene	µg/l	<3	<3	<3	<3	3	3	3	3	3	3	3	3	3			
Sum of detected BTEX	µg/l																
Sum of detected Xylenes	µg/l															30	
Toluene	µg/l	<4	<4	<4	<4	4	4	4	4	4	4	4	4	4		74	
liphatics & Aromatics >C5-35 (aq)	µg/l	1300	78	16900	28300	10	1220	10	32	15400	3050	143	10	62			
Total Aliphatics >C12-C35 (aq)	µg/l	780	46	10100	19000	10	10	10	10	10200	1960	110	10	10			
Total Aromatics >EC12-EC35 (aq)	µg/l	409	32	5490	9240	10	137	10	10	4790	1030	33	10	41			

	23517001	23516951	23516883	23516942	23516969	23516978	23517012	23517060	23516960	23517051	23517021	23517041	23517031				
SDG ID.	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121				
Status																	
Project Site																	
Project																	
Sample Description	BH20	BH23	BH46	BH52	BH34D	BH34S	BH XI	CARW008	CARW009	CARW034	MSMW27	MSMW155D	MSMW155S				
Status																	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00				
Sample Type	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER	GROUND_WATER				
Date Sampled	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	WHO DWG / UK DWD	EQS Freshwater (AA)	EQS Freshwater (MAC)	EQS 90 percentile
Received On	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021				
Date Complete	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021				
Laboratory data																	
Acenaphthene (aq) µg/l	0.266	0.0301	20	1.23	<0.005	0.294	0.0242	0.235	1.51	0.263	0.005	0.005	6.47				
Acenaphthylene (aq) µg/l	0.317	0.0306	0.969	1.51	<0.005	0.0878	0.005	0.261	1.89	0.0585	0.005	0.005	6.57				
Anthracene (aq) µg/l	0.0214	<0.005	4.71	0.501	<0.005	0.0246	0.00837	<0.005	<0.005	0.204	0.005	<0.005	0.347		0.1	0.1	
Benzo(a)anthracene (aq) µg/l	<0.005	<0.005	2.69	6.54	<0.005	0.005	0.00917	<0.005	<0.005	0.065	0.0193	<0.005	0.0344				
Benzo(a)pyrene (aq) µg/l	<0.002	0.0227	1.7	2.59	<0.002	<0.002	0.0148	<0.002	<0.002	0.062	0.0148	0.029	<0.002	0.01	0.00017	0.27	
Benzo(b)fluoranthene (aq) µg/l	<0.005	0.031	1.77	2.56	<0.005	<0.005	0.0223	<0.005	<0.005	0.0938	0.0434	<0.005	0.00831			0.017	
Benzo(g,h,i)perylene (aq) µg/l	0.0143	0.0377	1.05	1.43	<0.005	<0.005	0.005	<0.005	0.0618	0.0611	0.0262	<0.005	<0.005			0.0082	
Benzo(k)fluoranthene (aq) µg/l	<0.005	0.00975	0.684	1.09	<0.005	<0.005	0.0123	<0.005	<0.005	0.0317	0.0184	<0.005	<0.005			0.017	
Indeno(1,2,3-cd)pyrene (aq) µg/l	<0.005	0.0276	0.755	0.973	<0.005	<0.005	0.005	<0.005	<0.005	0.005	0.005	<0.005	<0.005				
SUM OF 4 PAH	0.0143	0.10605	4.259	6.053	<0.005	<0.005	0.0446	<0.005	0.0618	0.1916	0.093	<0.005	0.00831	0.1			
Chrysene (aq) µg/l	<0.005	<0.005	2.53	3.51	<0.005	0.005	0.0164	<0.005	<0.005	0.181	0.0457	<0.005	0.0309				
Dibenzo(a,h)anthracene (aq) µg/l	<0.005	<0.005	0.235	0.461	<0.005	0.005	0.005	<0.005	<0.005	0.005	0.005	<0.005	<0.005				
Fluoranthene (aq) µg/l	0.0793	0.0201	5.71	4.76	<0.005	0.0248	0.0292	0.0276	0.005	0.158	0.0265	<0.005	1.11		0.0063	0.12	
Fluorene (aq) µg/l	0.269	0.0187	13.2	1.21	<0.005	0.297	0.005	0.577	2.18	0.349	0.005	<0.005	0.785				
Naphthalene (aq) µg/l	0.173	0.0144	0.501	0.209	0.0107	0.0732	0.01	0.0367	3.37	0.124	0.01	0.01	2.5		2	130	
H, Total Detected USEPA 16 (aq) µg/l	1.43	0.291	67.7	37.9	0.082	0.906	0.184	1.2	10.2	2.21	0.275	0.082	19				
Phenanthrene (aq) µg/l	0.178	0.0109	3.17	1.24	0.014	0.069	0.019	<0.005	1.16	0.207	0.005	<0.005	0.578				
Pyrene (aq) µg/l	0.111	0.0371	8.04	8.12	0.00728	0.0358	0.0284	0.0661	0.005	0.352	0.0667	<0.005	0.556				

		21591312	21591449	21591466	21591480	21591499	21591517	21820493	21820645	21820656	21820669	21820683	21820695	22002938	22003070	22003089	22003111	22003132
SDG ID		200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200305-35	200305-35	200305-35	200305-35	200305-35	200305-35	200406-37	200406-37	200406-37	200406-37	200406-37
Status		Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site		Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project		Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Sample Description		SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5
Status		Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth		0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type		SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V
Date Sampled		28/01/2020	28/01/2020	28/01/2020	28/01/2020	28/01/2020	28/01/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	31/03/2020	31/03/2020	31/03/2020	31/03/2020	31/03/2020
Received On		31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020
Date Complete		10/02/2020	09/02/2020	09/02/2020	09/02/2020	10/02/2020	11/02/2020	13/03/2020	14/03/2020	16/03/2020	17/03/2020	14/03/2020	14/03/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020
Ammoniacal Nitrogen as N	mg/l	4.17	1.04	<0.2	<0.2	<0.2	<0.2	3.51	0.312	<0.2	<0.2	<0.2	<0.2	3.51	0.299	<0.2	<0.2	0.384
Chloride	mg/l	27.2	19.3	18	16.1	14.1	13.8	30.9	19.4	15.2	17.3	14.7	14.4					
Arsenic (diss.filt)	µg/l	0.668	0.518	0.631	0.898	0.645	<0.5	1.04	<0.5	0.723	0.858	0.559	0.536	0.668	0.607	0.825	1.04	0.739
Boron (diss.filt)	µg/l	142	89	28.9	48.9	34	17.2	194	55	24.9	43.1	25.6	19.2	163	56.9	32.2	49.5	30.7
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper (diss.filt)	µg/l	<0.3	<0.3	2.59	1.26	1.76	0.95	0.323	<0.3	1.76	1.39	1.89	1.45	<0.3	<0.3	1.9	1.7	1.34
Lead (diss.filt)	µg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.548	<0.2	0.241	<0.2	0.395	0.296	<0.2	0.277	0.48	0.361	0.976
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (diss.filt)	µg/l	0.446	<0.4	1.59	1.66	1.03	0.469	<0.4	<0.4	0.708	1.56	0.682	0.428	<0.4	0.461	0.908	1.5	1.02
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (diss.filt)	µg/l	15.9	<1	12.9	4.63	4.62	2.01	7.13	<1	5.85	5.56	7.16	3.98	3.54	3.81	16	9.22	6.51
Aliphatics >C10-C12	µg/l	68	<10	<10	<10	<10	<10	63	<10	<10	<10	<10	<10	98	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	µg/l	13	<10	<10	<10	<10	18	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	µg/l	80	<10	<10	<10	<10	62	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	µg/l	15	<10	<10	<10	<10	<10	28	<10	<10	<10	<10	<10	30	<10	<10	<10	<10
Aliphatics >C8-C10	µg/l	42	<10	<10	<10	<10	<10	44	<10	<10	<10	<10	<10	57	<10	<10	<10	<10
Aromatics >EC10-EC12	µg/l	45	<10	<10	<10	<10	<10	42	<10	<10	<10	<10	<10	65	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	µg/l	116	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	94	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	µg/l	30	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	µg/l	38	<10	<10	<10	<10	<10	45	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	µg/l	28	<10	<10	<10	<10	<10	29	<10	<10	<10	<10	<10	38	<10	<10	<10	<10
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GRO >C5-C12	µg/l	205	<50	<50	<50	<50	<50	212	<50	<50	<50	<50	<50	297	<50	<50	<50	<50
GRO Surrogate % recovery**	%	87	105	99	103	105	102	88	95	97	88	93	95	102	94	110	111	97
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Sum of detected BTEX	µg/l	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Total Aliphatics & Aromatics >C5-35 (aq)	µg/l	481	12	<10	<10	<10	80	258	<10	12	11	<10	10	411	<10	12	15	<10
Total Aliphatics >C12-C35 (aq)	µg/l	93	<10	<10	<10	<10	80	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	µg/l	184	<10	<10	<10	<10	<10	45	<10	<10	<10	<10	<10	114	<10	<10	<10	<10

Coed Darcy Crymlyn Tip 2020 Surface Water Quality Assessment

	21591312	21591449	21591466	21591480	21591499	21591517	21820493	21820645	21820656	21820669	21820683	21820695	22002938	22003070	22003089	22003111	22003132	
SDG ID	200131-17	200131-17	200131-17	200131-17	200131-17	200131-17	200305-35	200305-35	200305-35	200305-35	200305-35	200305-35	200406-37	200406-37	200406-37	200406-37	200406-37	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Project	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy Tip M	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	
Sample Description	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_WATE	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	
Date Sampled	28/01/2020	28/01/2020	28/01/2020	28/01/2020	28/01/2020	28/01/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	02/03/2020	31/03/2020	31/03/2020	31/03/2020	31/03/2020	31/03/2020	
Received On	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	31/01/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	
Date Complete	10/02/2020	09/02/2020	09/02/2020	09/02/2020	10/02/2020	11/02/2020	13/03/2020	14/03/2020	16/03/2020	17/03/2020	14/03/2020	14/03/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	10/04/2020	
Acenaphthene (aq)	µg/l	0.144	<0.005	<0.005	0.0373	0.00591	<0.005	<0.005	<0.005	<0.005	0.029	<0.005	<0.005	0.137	<0.005	0.0158	0.0357	0.0356
Acenaphthylene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0149	<0.005	0.00849	0.0117	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (aq)	µg/l	<0.002	<0.002	<0.002	0.00932	<0.002	<0.002	<0.002	0.0308	<0.002	0.0268	0.0279	<0.002	<0.002	<0.002	0.00544	0.00443	
Benzo(b)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0601	<0.005	0.0528	0.058	<0.005	<0.005	0.00806	0.0135	0.0128	
Benzo(g,h,i)perylene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0322	<0.005	0.0267	0.0337	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(k)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0252	<0.005	0.0194	0.0191	<0.005	<0.005	<0.005	0.00742	<0.005	
Indeno(1,2,3-cd)pyrene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0265	<0.005	0.0291	0.0294	<0.005	<0.005	0.01	0.0141	0.0089	
Chrysene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0177	<0.005	0.0219	0.0152	<0.005	<0.005	<0.005	<0.005	<0.005	
Dibenzo(a,h)anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00965	<0.005	0.00883	0.0104	<0.005	<0.005	<0.005	<0.005	0.0153	
Fluoranthene (aq)	µg/l	0.0117	<0.005	<0.005	0.0203	<0.005	<0.005	<0.005	0.0229	<0.005	0.0211	0.0241	0.00748	<0.005	0.00703	0.0133	0.00791	
Fluorene (aq)	µg/l	0.12	<0.005	<0.005	0.0192	0.00562	<0.005	0.0561	0.0343	<0.005	<0.005	<0.005	<0.005	0.127	<0.005	0.0146	0.0183	0.021
Naphthalene (aq)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0178	<0.01	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	<0.01	<0.01
PAH, Total Detected USEPA 16 (aq)	µg/l	0.314	<0.082	<0.082	0.113	<0.082	<0.082	<0.082	0.289	<0.082	0.246	0.26	0.317	<0.082	<0.082	0.13	0.13	
Phenanthrene (aq)	µg/l	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0123	<0.005	0.00535	0.00624	0.0125	
Pyrene (aq)	µg/l	0.0259	<0.005	0.0149	0.0266	0.0114	<0.005	<0.005	<0.005	0.0315	<0.005	0.031	0.0307	0.0119	<0.005	0.0114	0.0157	0.0113
Aliphatics >C16-C35 Aqueous	µg/l	93	<10	<10	<10	<10	80	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

	22003161	22218406	22218489	22218499	22218508	22218519	22218528	22412521	22412617	22412626	22412635	22412644	22412653	22579276	22579355	22579364	22579373	22579382	22579391	22726069
SDG ID	200406-37	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200731-1	200731-1	200731-1	200731-1	200731-1	200731-1	200827-23
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Sample Description	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V
Date Sampled	31/03/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	24/08/2020
Received On	06/04/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	27/08/2020
Date Complete	10/04/2020	09/06/2020	10/06/2020	10/06/2020	10/06/2020	10/06/2020	10/06/2020	13/07/2020	13/07/2020	09/07/2020	08/07/2020	09/07/2020	13/07/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	04/09/2020
Ammoniacal Nitrogen as N	mg/l	<0.2	2.24	<0.2	0.243	<0.2	<0.2	<0.2	1.48	0.377	<0.2	<0.2	2.67	<0.2	0.785	<0.2	0.556	<0.2	<0.2	<0.2
Chloride	mg/l		21.1	18.3	18.9	18.5	15.2	16	23.4	15.8	15.7	18.2	12.4	12.9	19	16.2	14.4	18.3	15.5	12.2
Arsenic (diss.filt)	µg/l	<0.5	1.12	0.684	1.17	1.47	0.8	<0.5	3.21	0.781	1.31	1.44	2.95	0.642	0.551	0.612	0.837	1.17	0.857	0.604
Boron (diss.filt)	µg/l	21.7	199	61.9	64.9	59.5	46.2	17.9	177	101	55.1	60.1	65.8	30.1	99.1	127	54.5	62	50.7	25.1
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	0.083	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper (diss.filt)	µg/l	0.913	0.402	<0.3	0.483	2.21	1.19	0.641	<0.3	<0.3	1.46	0.916	0.651	1.07	0.376	<0.3	0.988	0.673	1.32	0.488
Lead (diss.filt)	µg/l	0.366	<0.2	<0.2	0.41	0.835	0.237	0.415	0.258	<0.2	0.331	<0.2	0.605	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (diss.filt)	µg/l	0.615	0.796	<0.4	0.69	2.25	0.931	<0.4	0.531	<0.4	1.25	1.26	2.71	<0.4	0.655	<0.4	1.23	1.08	1.12	<0.4
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	<1	1.05	<1	<1	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (diss.filt)	µg/l	21.9	6.19	20.9	21	22.6	1.75	10.5	14.5	3.35	5.68	49.6	11.5	2.5	2.88	2.55	5.14	<1	2.79	1.97
Aliphatics >C10-C12	µg/l	<10	54	<10	<10	<10	<10	<10	64	<10	<10	<10	<10	<10	20	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	µg/l	<10	570	<10	<10	<10	<10	<10	<20	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	µg/l	<10	1710	<10	<10	<10	58	<10	<20	<10	<10	<10	147	<10	<10	<10	302	<10	<10	<10
Aliphatics >C21-C35 (aq)	µg/l	<10	5970	<10	<10	<10	69	<10	<20	<10	<10	<10	403	<10	<10	<10	863	<10	<10	<10
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	µg/l	<10	12	<10	<10	<10	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	µg/l	<10	30	<10	<10	<10	<10	<10	48	<10	<10	<10	<10	<10	15	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	µg/l	<10	36	<10	<10	<10	<10	<10	42	<10	<10	<10	<10	<10	13	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	µg/l	<10	334	<10	<10	<10	<10	<10	20	<10	<10	<10	<10	<10	24	<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	µg/l	<10	675	<10	<10	<10	13	<10	<20	<10	<10	<10	41	<10	<10	<10	73	<10	<10	<10
Aromatics >EC21-EC35 (aq)	µg/l	<10	2890	<10	<10	<10	12	<10	<20	<10	<10	<10	127	<10	<10	<10	298	<10	<10	<10
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	µg/l	<10	20	<10	<10	<10	<10	<10	32	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GRO >C5-C12	µg/l	<50	155	<50	<50	<50	<50	<50	210	<50	<50	<50	<50	<50	69	<50	<50	<50	<50	<50
GRO Surrogate % recovery**	%	97	102	108	110	111	104	112	114	118	108	121	114	115	111	107	105	107	102	115
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Methyl tertiary butyl ether (MTBE)	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Sum of detected BTEX	µg/l	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28
Sum of detected Xylenes	µg/l	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Total Aliphatics & Aromatics >C5-35 (aq)	µg/l	<10	12300	<10	<10	<10	155	<10	230	<10	<10	<10	718	<10	93	<10	1540	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	µg/l	<10	8250	<10	<10	<10	127	<10	<20	<10	<10	<10	550	<10	<10	<10	1170	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	µg/l	<10	3900	<10	<10	<10	25	<10	20	<10	<10	<10	168	<10	24	<10	371	<10	<10	<10

	22003161	22218406	22218489	22218499	22218508	22218519	22218528	22412521	22412617	22412626	22412635	22412644	22412653	22579276	22579355	22579364	22579373	22579382	22579391	22726069
SDG ID	200406-37	200529-12	200529-12	200529-12	200529-12	200529-12	200529-12	200703-4	200703-4	200703-4	200703-4	200703-4	200703-4	200731-1	200731-1	200731-1	200731-1	200731-1	200731-1	200827-23
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Project	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy
Sample Description	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00
Sample Type	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V
Date Sampled	31/03/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	27/05/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020	24/08/2020
Received On	06/04/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	29/05/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	31/07/2020	27/08/2020
Date Complete	10/04/2020	09/06/2020	10/06/2020	10/06/2020	10/06/2020	10/06/2020	10/06/2020	13/07/2020	13/07/2020	09/07/2020	08/07/2020	09/07/2020	13/07/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020	04/09/2020
Acenaphthene (aq)	µg/l	<0.005	0.174	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.0193	0.0805	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthylene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0156
Anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (aq)	µg/l	0.00523	0.148	<0.002	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.002	0.0192	<0.002	<0.002	<0.002	0.0131	<0.002	0.0118	<0.002
Benzo(b)fluoranthene (aq)	µg/l	0.00992	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	0.0424	<0.005	<0.005	<0.005	0.0446	<0.005	0.0232	<0.005
Benzo(g,h,i)perylene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	0.0176	<0.005	<0.005	<0.005	0.0169	<0.005	0.0122	<0.005
Benzo(k)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	0.0166	<0.005	<0.005	<0.005	0.0169	<0.005	0.00975	<0.005
Indeno(1,2,3-cd)pyrene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chrysene (aq)	µg/l	0.00633	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00939	<0.005
Dibenzo(a,h)anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoranthene (aq)	µg/l	0.00853	<0.005	<0.005	<0.005	<0.005	0.00914	<0.005	<0.01	<0.005	<0.005	0.0173	0.0504	<0.005	<0.005	<0.005	<0.005	<0.005	0.0154	<0.005
Fluorene (aq)	µg/l	<0.005	0.267	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.00958	0.0435	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Naphthalene (aq)	µg/l	<0.01	0.0658	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.0105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0127
PAH, Total Detected USEPA 16 (aq)	µg/l	<0.082	1.09	<0.082	<0.082	<0.082	<0.082	<0.082	<0.164	<0.082	<0.082	<0.082	0.405	<0.082	<0.082	<0.082	0.169	<0.082	0.11	<0.082
Phenanthrene (aq)	µg/l	0.00773	0.176	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.0089	0.0553	<0.005	<0.005	<0.005	<0.005	<0.005	0.00805	<0.005
Pyrene (aq)	µg/l	0.0102	0.263	<0.005	<0.005	<0.005	0.023	<0.005	<0.01	<0.005	0.0178	0.0171	0.0686	<0.005	0.0156	<0.005	0.0776	0.0185	0.0205	0.0117
Aliphatics >C16-C35 Aqueous	µg/l	<10	7680	<10	<10	<10	127	<10	<20	<10	<10	<10	550	<10	<10	<10	1170	<10	<10	<10

	22726157	22726172	22726182	22726194	22726204	22934195	22934168	22934142	22934122	22934096	22934066	23202708	23202698	23202687	23202668	23202657	23202631	23344275	23344266	23344257	
SDG ID	200827-23	200827-23	200827-23	200827-23	200827-23	201001-67	201001-67	201001-67	201001-67	201001-67	201001-67	201107-110	201107-110	201107-110	201107-110	201107-110	201107-110	201202-12	201202-12	201202-12	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised				
Project Site	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy				
Project	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Coed Darcy	Tip Monitoring			
Sample Description	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	
Status	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised	Authorised				
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	
Sample Type	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	SURFACE_V	CE_WATER	CE_WATER	CE_WATER	
Date Sampled	24/08/2020	24/08/2020	24/08/2020	24/08/2020	24/08/2020	28/09/2020	28/09/2020	28/09/2020	28/09/2020	28/09/2020	28/09/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	30/11/2020	30/11/2020	30/11/2020	
Received On	27/08/2020	27/08/2020	27/08/2020	27/08/2020	27/08/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	01/10/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	02/12/2020	02/12/2020	02/12/2020	
Date Complete	03/09/2020	04/09/2020	03/09/2020	04/09/2020	04/09/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020	19/11/2020	19/11/2020	18/11/2020	17/11/2020	17/11/2020	17/11/2020	10/12/2020	10/12/2020	10/12/2020	
Ammoniacal Nitrogen as N	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	0.913	<0.2	0.4	<0.2	1.13	<0.2	3.45	<0.2	<0.2	<0.2	<0.2	3.68	<0.2	<0.2	
Chloride	mg/l	18.1	15.1	17.9	12.2	11.3	27.6	20.3	19.9	17	16.3	11.4	27.8	21.3	20.2	17.2	14.9	12.6	24.8	21.5	20.4
Arsenic (diss.filt)	µg/l	<0.5	0.961	1.45	1.24	0.917	0.896	0.566	1.28	1.35	1.11	0.565	0.929	<0.5	1.14	0.904	<3	<0.5	0.545	0.5	0.745
Boron (diss.filt)	µg/l	89.6	47.2	61.5	50.3	20.5	153	63.9	68.5	61.8	54.4	25.7	158	28.8	43.1	61.7	<60	25.6	174	47.6	41.2
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.48	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	µg/l	<1	1.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6	<1	<1	<1	8.22
Copper (diss.filt)	µg/l	0.516	2.8	0.886	2.92	1.01	<0.3	<0.3	0.909	1.01	<0.3	0.68	<0.3	0.371	2.75	1.46	<1.8	1.33	0.3	0.3	2.18
Lead (diss.filt)	µg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.24	<0.2	<1.2	<0.2	0.2	0.2	0.2
Mercury (diss.filt)	µg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01
Nickel (diss.filt)	µg/l	<0.4	0.764	0.739	1.26	<0.4	0.558	<0.4	1.2	0.892	1.07	<0.4	<0.4	<0.4	1.29	1.42	<2.4	0.52	0.4	0.4	1.17
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6	<1	<1	<1	<1
Vanadium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<6	<1	<1	<1	<1
Zinc (diss.filt)	µg/l	1.03	3.13	1.15	3.79	1.7	7.39	2.36	3.58	<1	1.12	8.45	40.1	2.15	9.35	4.15	6.02	4.83	15.4	1.19	4.44
Aliphatics >C10-C12	µg/l	<10	<10	<10	<10	<10	21	<10	<10	<10	<10	<10	37	<10	<10	<10	<10	<10	42	<10	<10
Aliphatics >C12-C16 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	26	<10	15	20	<10	<10
Aliphatics >C16-C21 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	<10
Aliphatics >C21-C35 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	<10
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10
Aliphatics >C6-C8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	11	<10	<10
Aliphatics >C8-C10	µg/l	<10	<10	<10	<10	<10	15	<10	<10	<10	<10	<10	25	<10	<10	<10	<10	<10	25	<10	<10
Aromatics >EC10-EC12	µg/l	<10	<10	<10	<10	<10	14	<10	<10	<10	<10	<10	25	<10	<10	<10	<10	<10	28	<10	<10
Aromatics >EC12-EC16 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	84	18	<10	<10	<10	<10	20	<10	<10
Aromatics >EC16-EC21 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	21	<10	<10	<10	<10	<10	20	<10	<10
Aromatics >EC21-EC35 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	<10
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10
Aromatics >EC8-EC10	µg/l	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	17	<10	<10	<10	<10	<10	16	<10	<10
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	&	

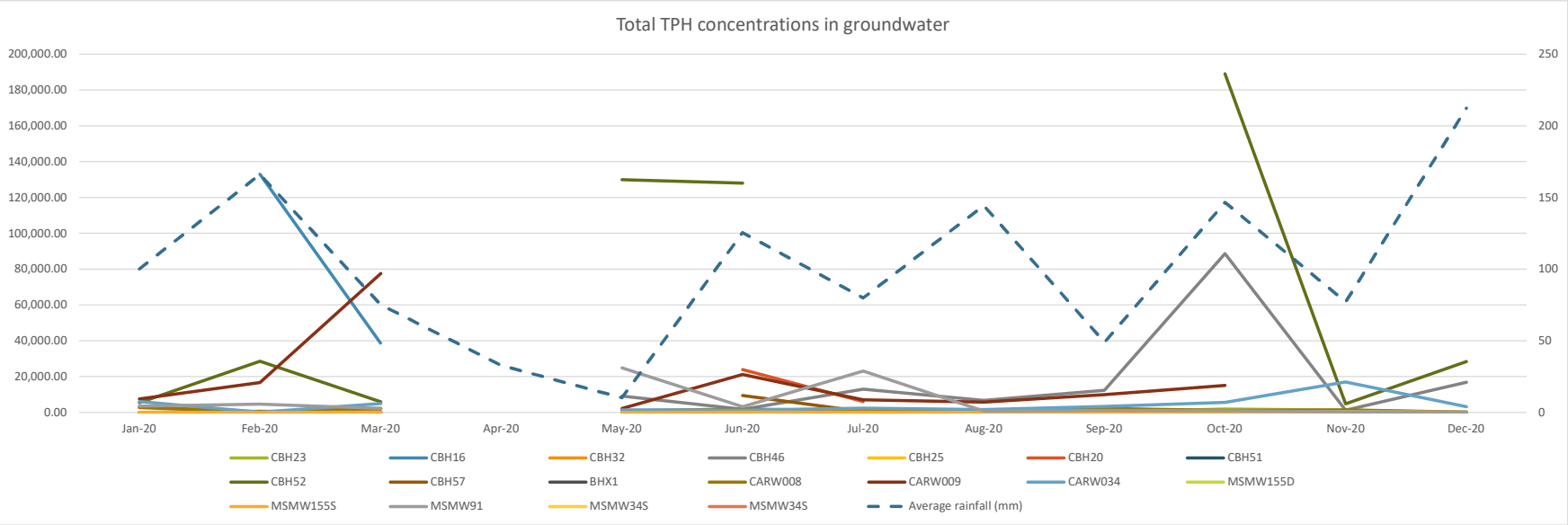
Coed Darcy Crymlyn Tip 2020 Surface Water Quality Assessment

[illegible]

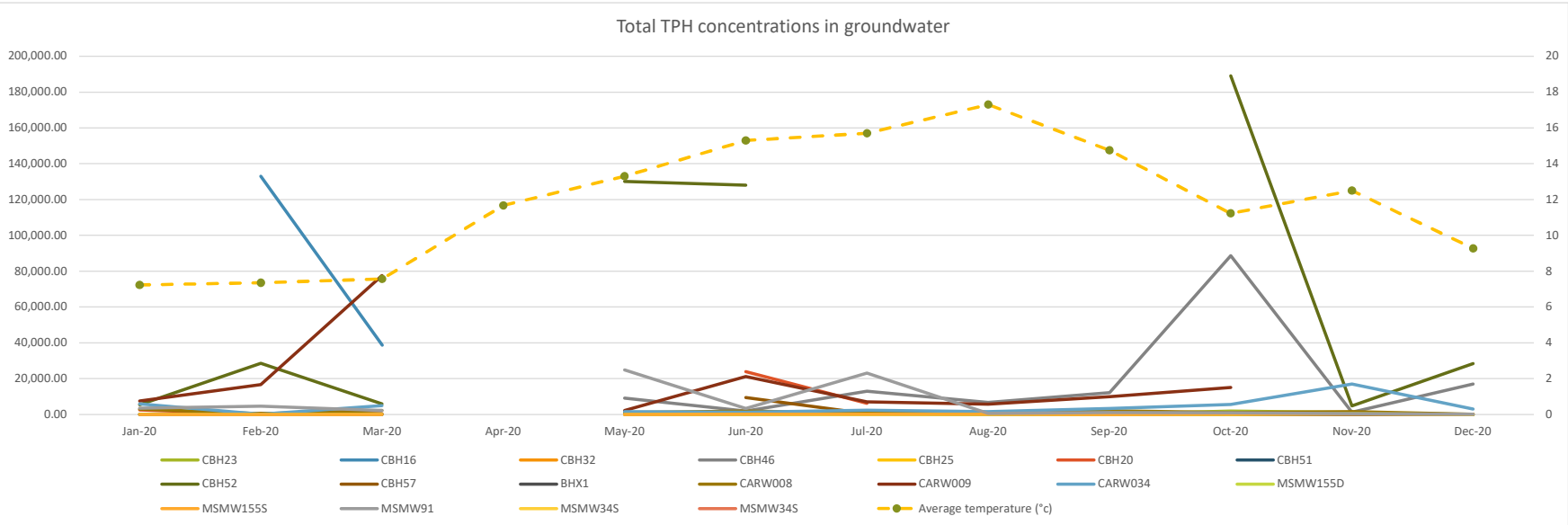
		23344248	23344239	23344385	23516933	23516924	23516915	23516904	23516894	23517073				
SDG ID.		201202-12	201202-12	201202-12	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121				
Status														
Project Site														
Project														
Sample Description		SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6				
Status														
Sample Depth		0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00				
Sample Type		CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER				
Date Sampled		30/11/2020	30/11/2020	30/11/2020	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	EQS Freshwater (AA)	EQS Freshwater (MAC)	EQS 90 percentile	Permit Threshold
Received On		02/12/2020	02/12/2020	02/12/2020	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021				
Date Complete		10/12/2020	10/12/2020	10/12/2020	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021				
Ammoniacal Nitrogen as N	mg/l	<0.2	0.587	<0.2	3.84	<0.2	<0.2	<0.2	<0.2	<0.2			0.3	
Chloride	mg/l	17.8	16.2	14.3	24.7	19.2	19.1	16.6	12.5	14		300		
Arsenic (diss.filt)	µg/l	0.857	0.995	0.534	0.502	<0.5	0.656	0.761	1.01	<0.5	50			
Boron (diss.filt)	µg/l	56.4	40.7	27.2	192	32.8	31.5	53.3	32.3	21.1				
Cadmium (diss.filt)	µg/l	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.08	0.45		
Chromium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	1.11	<1	4.7			
Copper (diss.filt)	µg/l	1.2	1.49	0.923	<0.3	<0.3	2.61	1.89	2.94	1.13	1			
Lead (diss.filt)	µg/l	0.2	0.2	0.2	<0.2	<0.2	<0.2	<0.2	0.808	<0.2	1.2	14		
Mercury (diss.filt)	µg/l	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		0.07		
Nickel (diss.filt)	µg/l	1.38	1.44	0.477	<0.4	<0.4	0.843	1.33	2.03	0.423	4	34		
Selenium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1				
Vanadium (diss.filt)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	20			
Zinc (diss.filt)	µg/l	2.79	4.07	2.63	9.9	2	7.61	4.99	13.5	9.29	10.9			
Aliphatics >C10-C12	µg/l	<10	<10	<10	54	<10	<10	<10	<10	<10				
Aliphatics >C12-C16 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aliphatics >C16-C21 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aliphatics >C21-C35 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	49	<10				
Aliphatics >C5-C6	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aliphatics >C6-C8	µg/l	<10	<10	<10	12	<10	<10	<10	<10	<10				
Aliphatics >C8-C10	µg/l	<10	<10	<10	30	<10	<10	<10	<10	<10				
Aromatics >EC10-EC12	µg/l	<10	<10	<10	36	<10	<10	<10	<10	<10				
Aromatics >EC12-EC16 (aq)	µg/l	<10	<10	<10	65	<10	<10	<10	<10	<10				
Aromatics >EC16-EC21 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aromatics >EC21-EC35 (aq)	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aromatics >EC5-EC7	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aromatics >EC7-EC8	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10				
Aromatics >EC8-EC10	µg/l	<10	<10	<10	20	<10	<10	<10	<10	<10				
Benzene	µg/l	<7	<7	<7	<7	<7	<7	<7	<7	<7	10	50		
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5				
GRO >C5-C12	µg/l													
GRO Surrogate % recovery**	%													
m,p-Xylene	µg/l	<8	<8	<8	<8	<8	<8	<8	<8	<8				
Methyl tertiary butyl ether (MTBE)	µg/l				<3	<3	<3	<3	<3	<3				
o-Xylene	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3				
Sum of detected BTEX	µg/l													
Sum of detected Xylenes	µg/l										30			
Toluene	µg/l	<4	<4	<4	<4	<4	<4	<4	<4	<4	74			
Total Aliphatics & Aromatics >C5-35 (aq)	µg/l				220	<10	<10	<10	53	<10				5000
Total Aliphatics >C12-C35 (aq)	µg/l				<10	<10	<10	<10	49	<10				
Total Aromatics >EC12-EC35 (aq)	µg/l				65	<10	<10	<10	<10	<10				

	23344248	23344239	23344385	23516933	23516924	23516915	23516904	23516894	23517073				
SDG ID	201202-12	201202-12	201202-12	210108-121	210108-121	210108-121	210108-121	210108-121	210108-121				
Status													
Project Site													
Project													
Sample Description	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6				
Status													
Sample Depth	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00	0.00-0.00				
Sample Type	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER	CE_WATER				
										EQS Freshwater (AA)	EQS Freshwater (MAC)	EQS 90 percentile	Permit Threshold
Date Sampled	30/11/2020	30/11/2020	30/11/2020	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021				
Received On	02/12/2020	02/12/2020	02/12/2020	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021	1/8/2021				
Date Complete	10/12/2020	10/12/2020	10/12/2020	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021	1/14/2021				
Acenaphthene (aq)	µg/l	0.005	0.0676	0.005	0.149	<0.005	<0.005	<0.005	0.00753	<0.005			
Acenaphthylene (aq)	µg/l	0.005	0.005	0.005	0.0352	<0.005	<0.005	<0.005	<0.005	<0.005			
Anthracene (aq)	µg/l	0.005	0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1	0.1	
Benzo(a)anthracene (aq)	µg/l	0.005	0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
Benzo(a)pyrene (aq)	µg/l	<0.002	<0.002	<0.002	<0.002	<0.002	0.0103	<0.002	<0.002	<0.002	0.00017	0.27	
Benzo(b)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	0.0145	<0.005	<0.005	<0.005		0.017	
Benzo(g,h,i)perylene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		0.0082	
Benzo(k)fluoranthene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	0.00801	<0.005	<0.005	<0.005		0.017	
Indeno(1,2,3-cd)pyrene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
Chrysene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
Dibenzo(a,h)anthracene (aq)	µg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
Fluoranthene (aq)	µg/l	<0.005	0.0129	<0.005	0.00713	<0.005	0.00878	<0.005	<0.005	<0.005	0.0063	0.12	
Fluorene (aq)	µg/l	0.005	0.0367	0.00595	0.187	<0.005	<0.005	<0.005	0.00918	0.0055			
Naphthalene (aq)	µg/l	<0.01	<0.01	0.0125	0.0567	<0.01	<0.01	<0.01	<0.01	<0.01	2	130	
PAH, Total Detected USEPA 16 (aq)	µg/l	0.082	0.164	0.082	0.468	<0.082	<0.082	<0.082	<0.082	<0.082			
Phenanthrene (aq)	µg/l	<0.005	0.0302	0.0153	0.0197	<0.005	<0.005	<0.005	0.00699	<0.005			
Pyrene (aq)	µg/l	<0.005	0.0163	0.005	0.0142	<0.005	0.0132	0.017	<0.005	<0.005			
Aliphatics >C16-C35 Aqueous	µg/l	10	10	10	<10	<10	<10	<10	49	<10			

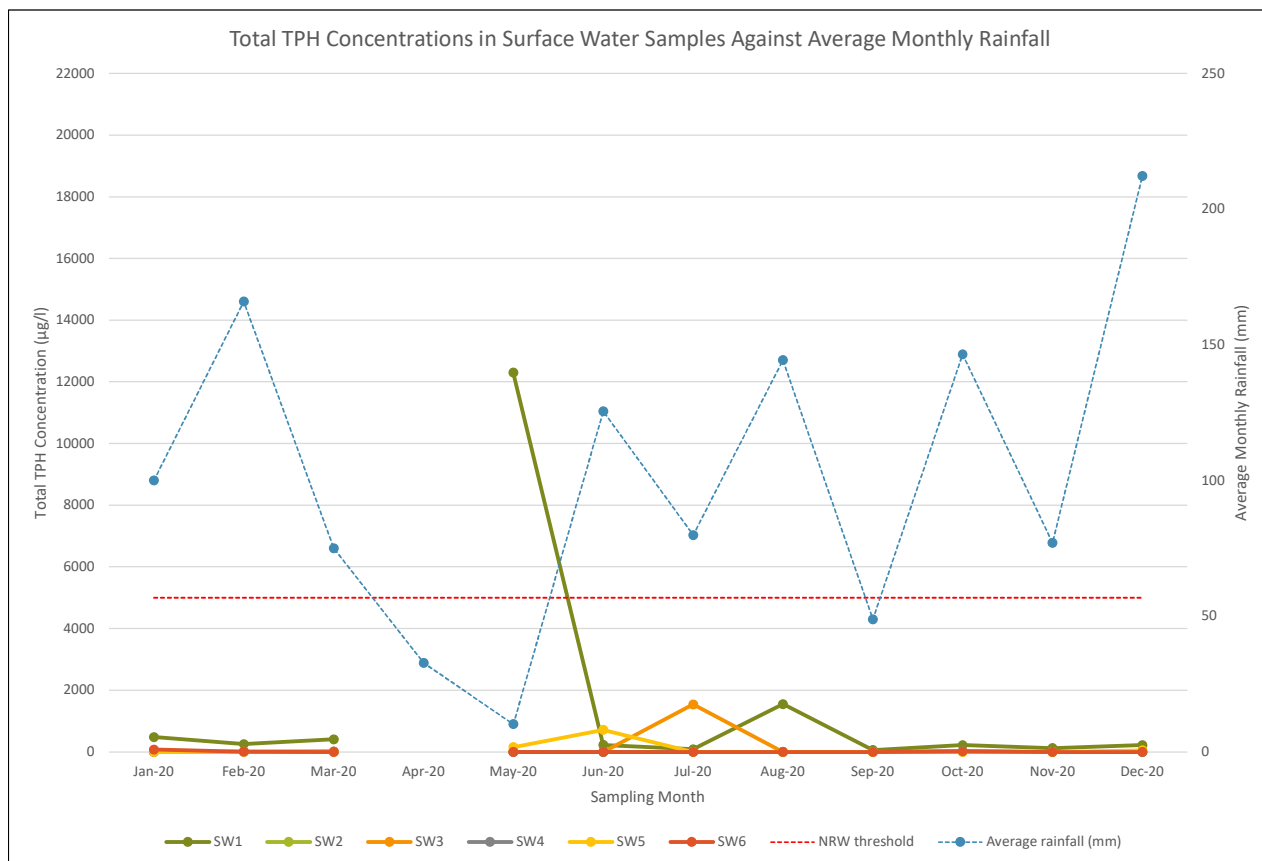
GRAPH 1



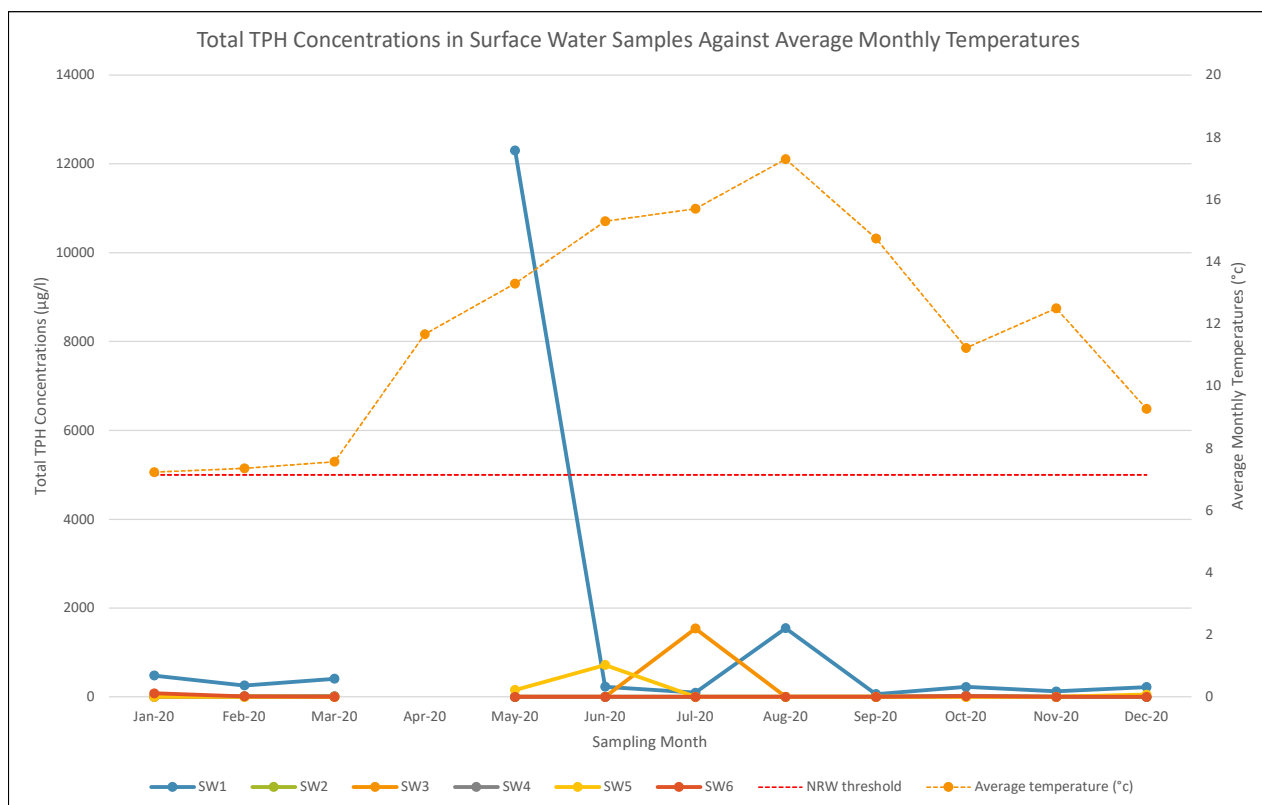
GRAPH 2



GRAPH 3



GRAPH 4





Appendix F Landfill Gas Monitoring Data

January Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		CO (ppm)	H2S (ppm)	Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable				
MSMW27	28/01/2020	0.2	0	3.3	3.3		18.7			997	-0.03
MSMW155D	28/01/2020	2.5	2.5	2.7	2.7		11.4			998	-0.05
MSMW155S	28/01/2020	0	0	3.1	3.1		14.4			997	-0.12
CARW034	28/01/2020										
CARW009	28/01/2020	0.8	0.8	0.9	0.9		21.1			997	0.01
CARW008	28/01/2020	0.6	0.6	3	3		16.4			997	0
BH51	28/01/2020	4.4	2.4	5.2	3.2		18.7			1000	-0.03
BH52	28/01/2020	0.1	0.1	0.2	0.2		21.1			1000	-0.14
BH20	28/01/2020	52.1	52	5.6	5.6		0.2			1000	-0.09
BH49	28/01/2020	16.5	16	5.5	5.3		13.2			1000	-0.05
BH57	28/01/2020	8.9	8.8	4.9	4.9		0.6			1000	-0.12
BH32	28/01/2020	0.1	0.1	5.9	5.9		1.1			1000	-0.05
BH23	28/01/2020	0.5	0.4	5.7	4.6		10.8			1000	-0.26

February Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		CO (ppm)	H2S (ppm)	Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable				
MSMW27	19/02/2020	0	0	3.4	3.4	19.3				1022	-0.1
MSMW155D	19/02/2020	4.3	4.3	2.2	2.2	15.6				1023	-0.39
MSMW155S	19/02/2020	0	0	0.8	0.8	21.1				1022	-0.14
CARW034	19/02/2020										
CARW009	19/02/2020	0.7	0.7	2.5	2.5	19.3				1022	-0.12
CARW008	19/02/2020	0.7	0.7	2.6	2.6	17.3				1022	-0.07
BH51	19/02/2020	0.9	0.4	3.4	1.3	20.9				1020	-0.09
BH52	19/02/2020	0	0	0.6	0.5	21.3				1020	-0.1
BH49	19/02/2020	4.2	4.1	3.1	2.9	18.1				1020	-0.05
BH20	19/02/2020	58.4	58.3	4.9	4.9	0.4				1020	-0.07
BH57	19/02/2020	0	0	0.8	0.8	15.5				1020	0.05
BH32	19/02/2020	0	0	3	2.3	17.9				1020	0.03

March Gas Data

[illegible]

April Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		CO (ppm)	H2S (ppm)	Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable				
MSMW27	30/04/2020	0	0	8.7	8.7	5.4	5.4			1024	-0.26
MSMW155D	30/04/2020	0	0	0.1	0.1	21.5	21.6			1024	0.03
MSMW155S	30/04/2020	0	0	1.8	1.8	20.1	20.2			1024	-4.31
CARW034	30/04/2020										
CARW009	30/04/2020	0.2	0.1	0.9	0.6	19.9	20.1			1024	0.1
CARW008	30/04/2020	0		1.2	1.1	17.8	19.7			1024	5.99
BH51	30/04/2020	0		0.1	0	21.3	21.3			1024	0.09
BH52	30/04/2020	0.5		0.8	0.8	20.1	20.1			1024	-0.05
BH49	30/04/2020	5.9		3.2	3.2	16.7	16.8			1024	0.15
BH20	30/04/2020	48.5		9.8	9.8	0.8	0.8			1024	0.02
BH57	30/04/2020	7.8		5.8	5.8	3.1	3.1			1024	-0.05
BH32	30/04/2020	6		12.9	12.3	2.1	2.1			1024	0.05
BH23	30/04/2020	10.5		6	5.9	4.7	4.7			1024	-0.02

May Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	26/05/2020								
MSMW155D	26/05/2020	0	0	0.2	0.2	20.1	20.1	1038	0.07
MSMW155S	26/05/2020	0.1	0	0.8	0.8	19.4	19.4	1038	0.07
CARW034	26/05/2020								
CARW009	26/05/2020	0.1	0.1	0.3	0.2	19.4	19.4	1037	0.01
CARW008	26/05/2020	0	0	0.1	0.1	19.7	19.7	1037	0.09
BH51	26/05/2020	1	1	0.8	0.8	18.9	18.9	1037	-0.02
BH52	26/05/2020	0.5	0.4	1.8	0.8	16.9	17.6	1037	-0.02
BH49	26/05/2020	5.2	3.2	4	1.8	14.6	16.9	1037	0
BH20	26/05/2020	38.9	38.8	8.4	8.3	0.3	0.3	1036	0.03
BH57	26/05/2020	10.5	10.4	5.3	5.3	5.3	5.3	1037	-0.03
BH32	26/05/2020	0.2	0.2	5.4	5.3	10.3	10.3	1037	-0.02
BH23	26/05/2020	0.5	0	0.5	0.1	14.3	20.1	1037	0.02

June Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	25/06/2020	0	0	11.3	11.2	3.8	4.1	1014	0.03
MSMW155D	25/06/2020	0	0	0.3	0.3	20.1	20.1	1014	0.03
MSMW155S	25/06/2020	0.1	0.1	2.4	2.4	16.3	16.3	1014	0.03
CARW034	25/06/2020								
CARW009	25/06/2020	0.8	0.8	1.5	1.5	20.5	20.5	1011	-0.03
CARW008	25/06/2020	0.1	0.1	0.1	0.1	21.3	21.3	1011	-0.03
BH51	25/06/2020	18.7	18.7	9.7	9.6	0.4	0.4	1013	0.02
BH52	25/06/2020	9.8	9.8	2.9	2.9	13.8	13.8	1013	0.02
BH49	25/06/2020	8.1	5.3	4.2	3.6	15.3	15.3	1013	0.03
BH20	25/06/2020	50.2	50.2	7.1	7.1	0.6	0.6	1013	0.03
BH57	25/06/2020	8.9	8.8	4.9	4.9	7.5	7.5	1000	-0.12
BH32	25/06/2020	0.2	0.2	2.8	2.8	15.8	15.8	1010	-0.05
BH23	25/06/2020	0.1		0.1		20		1013	-0.02
BH46	25/06/2020	0.9	0.9	0.4	0.4	19	19	1013	0.03

July Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	30/07/2020	0.2	0.2	13.4	13.3	2.7	2.7	1004	0.07
MSMW155D	30/07/2020	0.2	0.2	0.2	0.1	20.9	20.9	1004	-1.4
MSMW155S	30/07/2020	0.4	0.3	0.6	0.3	20.6	20.6	1004	-7.3
CARW034	30/07/2020	Install pipe snapped at surface							
CARW009	30/07/2020	0.2	0.2	1.3	1.2	19.1	19.1	1016	0
CARW008	30/07/2020	3	2.4	3	2.4	19.4	19.4	1016	-10.5
BH51	30/07/2020	0.4	0.2	0.1	0.1	21	21	1003	0
BH52	30/07/2020	1	0.8	0.8	0.7	17.5	17.5	1003	0
BH49	30/07/2020	11.7	11.7	3.9	3.9	15.1	15.1	1003	0.34
BH20	30/07/2020	84	83.9	5.5	5.5	0.2	0.2	1002	-0.03
BH57	30/07/2020	7.8	7.8	5.2	5.2	6.1	6.1	1003	0.02
BH23	30/07/2020	1.1	0.2	0.3	0.2	20.2	20.2	1003	0.03
BH46	30/07/2020	5.1	5	0.6	0.6	19.1	19.1	1017	-0.1

August Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	26/08/2020	0.2	0.2	17.2	17.1	1.6	1.6	1014	0.07
MSMW155D	26/08/2020	0.2	0.2	0.4	0.1	20.5	20.5	1014	-0.15
MSMW155S	26/08/2020	0.2	0.2	2	2	18	18	1014	0.03
CARW034	26/08/2020	Install snapped at surface							
CARW009	26/08/2020	2.4	2.4	1.7	1.7	20.3	20.3	995	0.02
CARW008	26/08/2020	0.3	0.3	0.1	0.1	20	20	995	0.12
BH51	26/08/2020	4	4	2.4	2.4	16.4	16.4	1013	0.05
BH52	26/08/2020	0.4	0.4	2.2	1.1	19	19	1013	0
BH49	26/08/2020	8.1	7.8	3.9	3.4	15.4	15.4	1013	0.03
BH20	26/08/2020	94.6	94.6	3.7	3.7	0.2	0.2	1013	0.03
BH57	26/08/2020	8.4	8.2	7.7	7.6	0.6	0.6	1013	0.09
BH32	26/08/2020	0.2	0.2	0.1	0.1	20.3	20.3	1013	0.02

September Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	29/09/2020	2.3	2.2	16	16	1.4	1.4	1014	-2.46
MSMW155D	29/09/2020	0.7	0.3	0.7	0.7	20.5	20.5	1014	0.07
MSMW155S	29/09/2020	4	4	2	2	16.5	16.5	1014	-15.82
CARW034	29/09/2020	Install snapped at surface							
CARW009	29/09/2020	6	6	4.9	4.9	16.6	16.6	1017	-1.88
CARW008	29/09/2020	0.3	0.2	1.2	1.1	19.5	19.5	1017	0.02
BH51	29/09/2020	0.5	0.2	0.3	0.1	20.8	20.8	1013	0
BH52	29/09/2020	6.9	5.7	3.3	2.7	16.7	16.7	1013	-1.73
BH49	29/09/2020	14.9	14	5.3	4.8	12.9	12.9	1013	0.05
BH20	29/09/2020	53.8	53.6	10.8	10.8	0.1	0.1	1013	0.03
BH57	29/09/2020	11.6	11.5	8.7	8.7	0.4	0.4	1013	0.07
BH32	29/09/2020	6.1	6	12.5	12.3	3	3	1013	0.02
BH46	29/09/2020	21.2	21.1	2.1	2.1	16.6	16.6	1013	0.03

October Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	28/10/2020	0.4	0.3	9.7	9.6	10.4	10.4	996	19.39
MSMW155D	28/10/2020	0.6	0.3	2.1	2.1	18.8	18.8	996	8.05
MSMW155S	28/10/2020	3.3	0.5	2.4	2.4	16.1	16.1	996	14.64
CARW034	28/10/2020	Install snapped at surface							
CARW009	28/10/2020	0.8	0.3	2	1.9	18.7	18.7	996	3.37
CARW008	28/10/2020	5.4	5.4	5.3	5.3	16.7	16.7	996	-0.92
BH51	28/10/2020	0.4	0.4	1.7	1.7	20	20	995	0.03
BH52	28/10/2020	1	0.4	0.5	0.2	20.5	20.5	995	-2.05
BH49	28/10/2020	13.5	12.3	6.1	5.3	13.7	13.7	995	0
BH20	28/10/2020	52.8	52.8	4.4	4.4	0.4	0.4	995	-2.22
BH57	28/10/2020	8.2	5.5	1.5	1.3	5.7	5.7	995	-2.57
BH32	28/10/2020	1.1	0.3	2.4	2	13.4	13.4	995	-2.8
BH23	28/10/2020	0.4	0.3	2.1	1.5	8.1	8.1	996	4.43
BH48	28/10/2020	0.4	0.4	7.7	7.7	1.4	1.4	996	-1.3

November Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	19/11/2020	0.2	0.2	1.7	1.7	20.3	20.3	1033	-0.1
MSMW155D	19/11/2020	0.2	0.2	0.6	0.2	21.2	21.2	1033	-0.09
MSMW155S	19/11/2020	0.3	0.2	1.8	1.8	18	18	1033	-0.05
CARW034	19/11/2020	Install snapped at surface							
CARW009	19/11/2020	0.9	0.8	1.9	1.8	20	20	1035	-0.09
CARW008	19/11/2020	0.4	0.3	1.8	1.8	18.8	18.8	1035	-0.09
BH51	19/11/2020	0.3	0.3	0.1	0.1	20.9	20.9	1031	-0.1
BH52	19/11/2020	0.8	0.4	0.3	0.1	20.8	20.8	1031	-0.05
BH49	19/11/2020	6.7	6.2	4.1	3.7	17.1	17.1	1030	0.1
BH20	19/11/2020	40.9	40.9	4.9	4.9	0.3	0.3	1029	-0.03
BH57	19/11/2020	5.7	3	0.6	0.1	20.6	20.6	1029	-0.17
BH32	19/11/2020	0.3	0.3	5.6	2.4	14.8	14.8	1030	-0.07
BH23	19/11/2020	0.6	0.3	1.5	1.3	17.9	17.9	1030	0.02
BH46	19/11/2020	0.4	0.4	0.2	0.1	20.8	20.8	1031	-0.09

December Gas Data

Location	Date	CH4 (%)		CO2 (%)		O2 (%)		Barometric Pressure	Relative Pressure
		Peak	Stable	Peak	Stable	Minimum	Stable		
MSMW27	12/12/2020	0.3	0.3	2.9	2.9		20	1007	0.39
MSMW155D	12/12/2020	0.4	0.3	1.4	1.2		20.4	1007	-0.09
MSMW155S	12/12/2020	3.3	3.2	1.3	1.2		19.1	1007	-0.02
CARW034	12/12/2020	Install snapped at surface							
CARW009	12/12/2020	2.8	2.8	4.1	4.1		17.8	1006	0.62
CARW008	12/12/2020	0.7	0.7	2.7	2.7		17.4	1005	-0.1
BH51	12/12/2020	16.2	16	6.4	6.3		8.6	1007	-0.12
BH52	12/12/2020	0.8	0.4	0.4	0.2		21.4	1007	-2.45
BH20	12/12/2020	34.1	34.1	6	6		0.7	1006	-1.59
BH49	12/12/2020	14.5	14.5	5.1	5		14.6	1006	-0.03
BH57	12/12/2020	3.3	3.3	1.3	1.1		13.3	1006	14.5
BH32	12/12/2020	1.7	1.7	4.8	4.8		0.3	1006	-2.63
CBH23	12/12/2020	0.5	0.4	1.5	1.4		18.7	1006	-0.14
CBH46	12/12/2020	1.7	1.2	0.5	0.3		21.3	1007	-0.79