

4th November 2014

Martyn Grant
Environmental Manager
The Royal Mint
Llantrisant
Pontyclun
CF72 8YT

Our Ref: AG/LC/RH/LUK17-20212_1 October Monitoring Report 2014

Dear Martyn,

Re: Factual Report on Groundwater and Surface Water Sampling in October 2014

ENVIRON UK Limited ("ENVIRON") was instructed by The Royal Mint to carry out surface water sampling from selected locations in the Nant Mychydd River and groundwater sampling from selected boreholes in the area of Building 9A and the Coin Press Room ("CPR"). This letter presents a factual report on the second of three scheduled rounds of monitoring to be undertaken from June 2014 to February 2015.

Background

Surface water monitoring during 2013/14 identified elevated concentrations of copper and zinc in the culverted stream that enters the Nant Mychydd (sampling points R7 and R7A). While the source of contamination is being investigated by The Royal Mint, ENVIRON recommended that the surface water monitoring programme should be continued from selected sampling points at a reduced frequency of once every four months, or until the contamination reduces to below the respective environmental quality standards (EQS).

ENVIRON also carried out groundwater sampling at the site which has previously identified elevated concentrations of metals in some areas of the site. With the exception of boreholes BH11 and BH12, elevated concentrations of nickel, copper and zinc have been identified in all boreholes monitored throughout 2013. The pH was also below [more acidic than] the acceptable EQS range in several locations across the site. It was recommended that monitoring should continue from selected boreholes at a reduced frequency of once every four months, or until the contamination reduces to below the respective EQS.

Surface Water

Surface water samples were collected on the 8th October 2014 from five sampling locations on the Nant Mychydd River and the culverted watercourse that passes through the site (sampling points R1, R6, R7, R7A and C1), as shown on Figure 2. Samples were analysed for a range of metals, pH, cyanide, total petroleum hydrocarbons (TPH) and alkalinity at a UKAS accredited laboratory. The laboratory certificates of analysis are attached which provide the method of analysis for each determinand. The surface water analysis results from April 2011 to October 2014 are summarised in the attached table and are presented graphically on Figures 6, 7 and 8.

During the October 2014 monitoring, the concentration of copper exceeded the EQS of 0.001mg/l (for hardness between 0mg/l and 50mg/l CaCO₃) at sampling points R6 (0.004mg/l), south of the site where a tributary joins the Nant Mychydd from the east; and R7 (0.043mg/l) and R7A (0.057mg/l) where the culverted stream emerges from site prior to entering the Nant Mychydd. The concentration of copper also exceeded the EQS at sampling point C1 (0.014mg/l) where the

watercourse to the north of the site is culverted under the site. It should be noted that sampling location C1 is upstream of the site.

The concentration of zinc exceeded the EQS value of 0.008mg/l (for hardness between 0mg/l and 50mg/l CaCo₃) at sampling points R6 (0.087mg/l), R7 (0.043mg/l) and R7A (0.141mg/l) during the most recent round of monitoring. The concentration of zinc also exceeded the EQS at sampling point C1 (0.012mg/l), upstream of the site.

Concentrations of copper and zinc recorded during the October 2014 monitoring round represent the maximum concentrations recorded to date at the majority of sampling locations.

Concentrations of nickel were below the EQS value of 0.02mg/l (for hardness between 0mg/l and 50mg/l CaCo₃) at all surface water sampling locations; however, overall the concentrations had increased slightly since the previous round of monitoring.

The TPH concentrations in this monitoring round ranged from 0.02mg/l at sample point R1 (in exceedance of the UK DWS of 0.01mg/l) to 1.04mg/l at R7. TPH concentrations have increased at four out of the five sampling locations when compared to the previous round of monitoring in June 2014; including sample location C1, which is upstream of the site. The TPH Concentration for sample location R1 has decreased slightly since the previous round of monitoring and is within the range previously recorded at this location. Of the other sample locations, C1, R7 and R7A each recorded maximum concentrations to date during the October 2014 monitoring round.

Natural Resources Wales (formerly The Environment Agency Wales) has requested that rainfall data is collected at the time of sampling since this may influence the levels of contaminants in the receiving watercourse. In order to provide data for the October 2014 round of monitoring, weather station information for a location approximately 13km east of the site (weather station reference IMIDGLAM3) has been obtained (www.wunderground.com).

The data are presented in Table 1 below. Rainfall data has been provided for the five days preceding the monitoring visit and compared with the daily average rainfall to date for September and October (to date) 2014 and the daily average based on data from 2006 to 2013 for September and October.

Table 1: Rainfall Data			
Date	Rainfall data (mm)*	Sep/Oct 2014 daily average (mm)*	2006 – 2014 Sep/Oct daily average (mm)*
03/10/14	0.0	7.5	3.1
04/10/14	4.3		
05/10/14	0.0		
06/10/14	28.7		
07/10/14	7.6		
08/10/14	4.3		
* Data gathered from 'IMIDGLAM3' weather station in Caerphilly located 13km East of site (www.wunderground.com) (accessed 16/10/14)			

The rainfall data indicates that rainfall in the months of September and October 2014 was above the average; additionally, significant rainfall (greater than that indicated in the above data) was

occurring on the day of sampling and the river level was noted as being slightly higher than average.

Groundwater Sampling

Groundwater samples were collected from the following boreholes: BH8, BH9, BH901, BH10, BH11, BH12, BH13 and BH32, (shown on Figure 1). Samples were analysed for a range of metals, pH and alkalinity at a UKAS accredited laboratory. The laboratory certificates of analysis are attached which provide the method of analysis for each determinand. The analysis results are summarised in the attached table and are represented graphically on Figures 3, 4 and 5.

The results have been benchmarked against previous analytical results from these monitoring wells and screened against EQS for freshwater. The results are summarised as follows:

- The following determinands did not exceed the screening criteria in any of the boreholes: lead, arsenic, boron, mercury, selenium and vanadium.
- Borehole BH8 was not accessible between 2011 and 2012; however, since January 2013 BH8 has become accessible and is now included in the monitoring rounds. During the most recent round of monitoring, the concentrations of nickel (0.235mg/l), copper (0.285mg/l) and zinc (0.564mg/l) all exceeded their respective EQS values of 0.02mg/l for nickel, 0.001mg/l for copper and 0.008mg/l for zinc. Concentrations of these determinands have increase since the previous round of monitoring in June 2014.
- Concentrations of nickel, copper and zinc in boreholes BH9 and BH901 remain above their respective EQS values. The concentration of nickel has increased in BH9 (from 0.066mg/l to 0.107mg/l) and in BH901 (from 0.521mg/l to 1.048mg/l) since the previous round of June 2014. The concentration of zinc also increased in borehole BH9 (from 0.192mg/l to 0.264mg/l).
- Concentrations of nickel, copper and zinc remain stable and below their respective EQS values in boreholes BH11 and BH12 for the latest monitoring round.
- Concentrations of nickel, copper and zinc in borehole BH10 have all significantly decreased during the most recent round of monitoring. Nickel concentration decreased from 0.138mg/l to 0.003mg/l; copper concentration decreased from 0.352mg/l to 0.006mg/l; and zinc concentration decreased from 0.38mg/l to 0.007mg/l. Concentrations of nickel and zinc were recorded below respective EQS values during the most recent round of monitoring. *At the time of sampling, groundwater was noted to be clear and colourless with no visible suspended sediment and was warmer than ambient temperature.*
- In BH32, concentrations of nickel (1.349mg/l), copper (0.119mg/l) and zinc (2.669mg/l) have increased since the previous round of monitoring in June 2014. Concentrations remain above the relevant EQS for nickel, copper and zinc.
- There has been an increase in the concentration of nickel (0.644mg/l), copper (0.115mg/l) and zinc (0.594mg/l) in borehole BH13 since the previous round of monitoring in June 2014. Concentrations remain above the relevant EQS for these determinands.
- Total chromium was not detected above the EQS value of 0.0047mg/l within any of the monitoring wells in the most recent monitoring round.
- The concentration of cadmium was recorded above the laboratory LOD (0.0001mg/l) in all boreholes except BH10 and BH11, with a maximum of 0.0025mg/l in BH32. All reported values are above the EQS value of 0.00008mg/l.
- pH values outside of the EQS range (pH 6 to pH9) were not detected in any samples during the most recent round of monitoring.

The next round of surface water and groundwater monitoring is due to be carried out in the first week of February 2015. Please do not hesitate to contact me if there is anything you wish to discuss.

Yours sincerely,



Lucy Cleverley
Senior Consultant



Andy Goddard
Senior Manager

- Enc. Laboratory Testing Certificates
 Summary of Surface Water Monitoring Results
 Summary of Groundwater Monitoring Results
 Figure 1: Groundwater Sampling Borehole Location Plan
 Figure 2: River Sampling Locations
 Figure 3: Copper Graphical Representations – Groundwater
 Figure 4: Nickel Graphical Representations – Groundwater
 Figure 5: Zinc Graphical Representations – Groundwater
 Figure 6: Copper Graphical Representations – Surface Water
 Figure 7: Nickel Graphical Representations – Surface Water
 Figure 8: Zinc Graphical Representations – Surface Water

Our Ref: EXR/186108 (Ver. 2)

Your Ref: UK17-20212

October 20, 2014



Environmental Chemistry

ESG

Bretby Business Park

Ashby Road

Burton-on-Trent

Staffordshire

DE15 0YZ

Telephone: 01283 554400

Facsimile: 01283 554422

Ms L Cleverley
Environ UK Ltd
8 Village Way
Greenmeadow Springs
Coryton
Cardiff
CF15 7NE

For the attention of Ms L Cleverley

Dear Ms Cleverley

Sample Analysis - Royal Mint GW and SW Monitoring

Samples from the above site have been analysed in accordance with the schedule supplied.

The sample details and the results of analyses for these samples are given in the appended report.

An invoice for this work will follow under a separate cover.

Please be aware that our policy for the retention of paper based laboratory records and analysis reports is 6 years.

The work was carried out in accordance with Environmental Scientifics Group Ltd (Laboratory and Analytical) Standard Terms and Conditions of Contract.

If I can be of any further assistance please do not hesitate to contact me.

Yours sincerely

for ESG

A handwritten signature in black ink, appearing to read 'J Colbourne'.

J Colbourne
Project Co-ordinator
01283 554547

TEST REPORT



Report No. EXR/186108 (Ver. 2)

Environ UK Ltd
8 Village Way
Greenmeadow Springs
Coryton
Cardiff
CF15 7NE

Site: Royal Mint GW and SW Monitoring

The 13 samples described in this report were registered for analysis by ESG on 09-Oct-2014. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 20-Oct-2014

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited
Any opinions or interpretations expressed herein are outside the scope of any UKAS accreditation held by ESG.

The following tables are contained in this report:

Table 1 Main Analysis Results (Pages 2 to 3)
GC-FID Chromatograms (Pages 4 to 8)
Analytical and Deviating Sample Overview (Pages 9 to 10)
Table of Method Descriptions (Page 11)
Table of Report Notes (Page 12)
Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of
ESG :
Declan Burns

A handwritten signature in black ink, appearing to read 'D. Burns'.

Operations Director
Laboratory and Analytical Business

Date of Issue: 20-Oct-2014

Tests marked '^' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected.

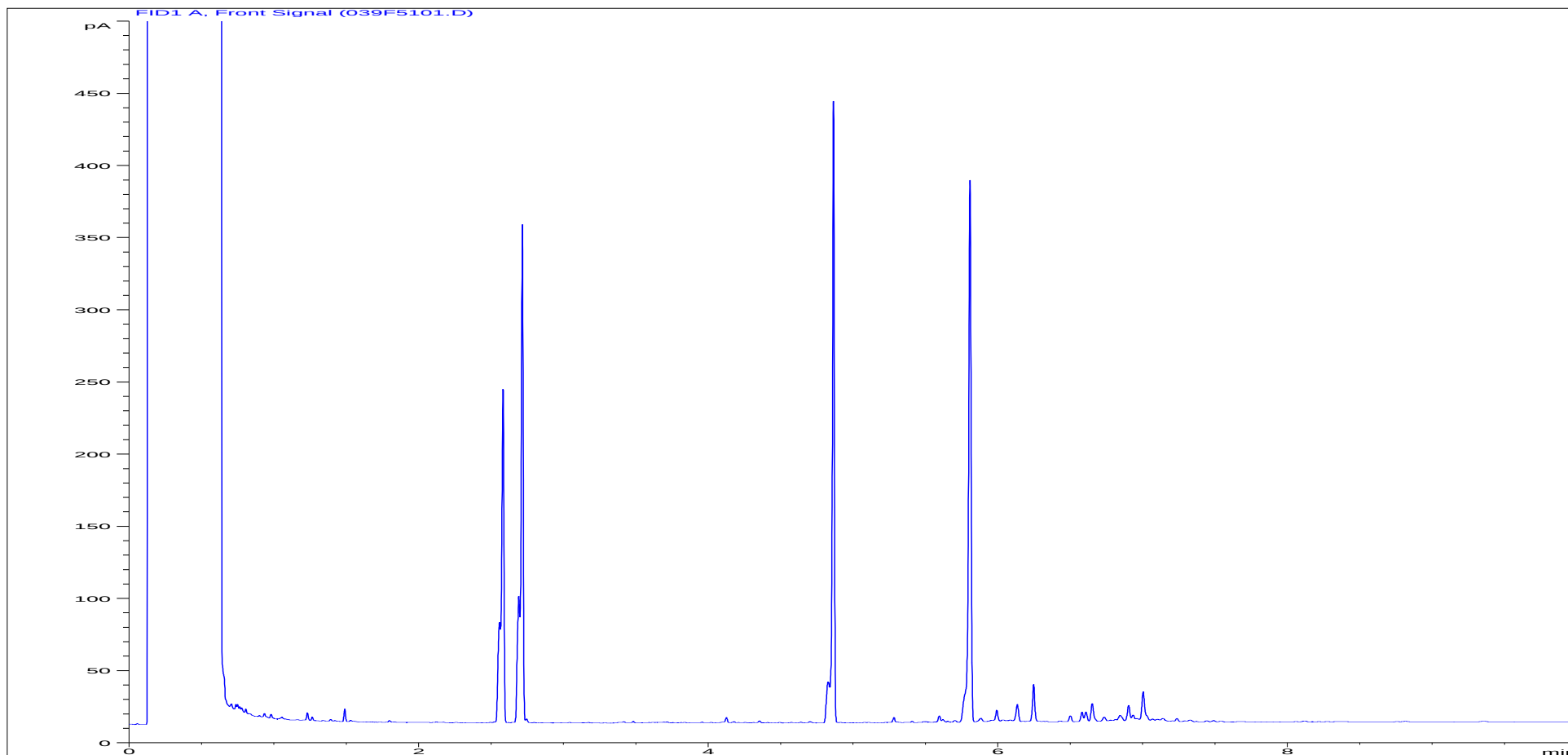
ESG accepts no responsibility for any sampling not carried out by our personnel.

Where individual results are flagged see report notes for status.

Units : Method Codes : Method Reporting Limits : UKAS Accredited :			pH units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
			WSLM3	WSLM12	Calc. HD	ICPWATVAR	ICPWATVAR	ICPWATVAR	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW
					7	1	1	0.01	0.001	0.001	0.0001	0.001	0.001	0.002	0.001	0.01	0.0001	0.001	
			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LAB ID Number EX/	Client Sample Description	Sample Date	pH units w	Total Alkalinity as CaCO3 w	Total Hardness as CaCO3	Calcium as Ca (Dissolved) a	Magnesium as Mg (Dissolved) a	Barium as Ba (Dissolved) a	Nickel as Ni (Dissolved)	Chromium as Cr (Dissolved)	Cadmium as Cd (Dissolved)	Copper as Cu (Dissolved)	Lead as Pb (Dissolved)	Zinc as Zn (Dissolved)	Arsenic as As (Dissolved)	Boron as B (Dissolved) a	Mercury as Hg (Dissolved)	Selenium as Se (Dissolved)	
1532546	BH901	08-Oct-14 09:30	6.3	<2	293	71	28	0.04	1.048	0.001	0.008	0.772	0.003	2.042	<0.001	0.04	<0.0001	<0.001	
1532547	BH9	08-Oct-14 10:00	8.0	83	193	61	10	0.03	0.107	0.001	0.0004	0.048	<0.001	0.264	<0.001	0.02	<0.0001	<0.001	
1532548	BH801	08-Oct-14 10:30	6.5	<2	72	19	6	0.03	0.235	<0.001	0.0014	0.285	0.003	0.564	<0.001	0.03	<0.0001	<0.001	
1532549	BH32	08-Oct-14 11:10	7.2	7	124	33	10	0.04	1.349	<0.001	0.0025	0.119	<0.001	2.669	<0.001	0.08	<0.0001	<0.001	
1532550	BH11	08-Oct-14 11:50	8.0	85	91	25	7	0.09	0.003	<0.001	<0.0001	<0.001	<0.001	0.004	<0.001	0.01	<0.0001	<0.001	
1532551	BH13	08-Oct-14 12:20	7.4	<2	124	35	9	0.03	0.644	<0.001	0.0015	0.115	0.001	0.594	<0.001	0.06	<0.0001	<0.001	
1532552	BH12	08-Oct-14 12:50	8.2	162	172	54	9	0.07	0.007	0.001	0.0004	0.005	<0.001	0.003	<0.001	0.03	<0.0001	<0.001	
1532553	BH10	08-Oct-14 13:20	8.1	38	75	20	6	0.04	0.003	<0.001	<0.0001	0.006	<0.001	0.007	<0.001	0.01	<0.0001	<0.001	
1532554	R1	08-Oct-14 14:20	8.1	50	81	24	5	0.02	0.001	<0.001	<0.0001	0.002	<0.001	0.008	<0.001	<0.01	<0.0001	<0.001	
1532555	R6	08-Oct-14 15:05	8.1	34	48	16	2	0.02	0.001	<0.001	<0.0001	0.004	<0.001	0.087	<0.001	0.01	<0.0001	<0.001	
1532556	R7	08-Oct-14 15:10	8.1	33	50	15	3	0.02	0.012	0.001	<0.0001	0.043	0.002	0.093	<0.001	0.01	<0.0001	<0.001	
1532557	R7A	08-Oct-14 15:15	8.2	20	33	10	2	0.02	0.015	0.001	<0.0001	0.057	0.003	0.141	<0.001	<0.01	<0.0001	<0.001	
1532558	C1	08-Oct-14 15:50	8.1	14	37	10	3	<0.01	0.008	<0.001	<0.0001	0.014	<0.001	0.012	<0.001	<0.01	<0.0001	<0.001	
 Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422			Client Name Contact		Environ UK Ltd Ms L Cleverley							Sample Analysis							
			Royal Mint GW and SW Monitoring										Date Printed		20-Oct-2014				
													Report Number		EXR/186108				
													Table Number		1				

Units : Method Codes : Method Reporting Limits : UKAS Accredited :			mg/l	mg/l	mg/l	mg/l														
			ICPMSW	SFAPI	TPHFID	ICPWATVAR														
			0.001	0.02	0.01	0.01														
			Yes	Yes	Yes	No														
LAB ID Number EX/	Client Sample Description	Sample Date	Vanadium as V (Dissolved)	Cyanide (Total) as CN	TPH GC	Beryllium as Be (Dissolved) a														
			1532546	BH901	08-Oct-14 09:30	<0.001			<0.01											
			1532547	BH9	08-Oct-14 10:00	0.001			<0.01											
			1532548	BH801	08-Oct-14 10:30	<0.001			<0.01											
			1532549	BH32	08-Oct-14 11:10	<0.001			<0.01											
			1532550	BH11	08-Oct-14 11:50	<0.001			<0.01											
			1532551	BH13	08-Oct-14 12:20	<0.001			<0.01											
			1532552	BH12	08-Oct-14 12:50	<0.001			<0.01											
			1532553	BH10	08-Oct-14 13:20	<0.001			<0.01											
			1532554	R1	08-Oct-14 14:20	<0.001	<0.02	0.02	<0.01											
			1532555	R6	08-Oct-14 15:05	0.001	<0.02	0.15	<0.01											
			1532556	R7	08-Oct-14 15:10	0.001	<0.02	1.04	<0.01											
			1532557	R7A	08-Oct-14 15:15	<0.001	<0.02	0.6	<0.01											
			1532558	C1	08-Oct-14 15:50	<0.001	<0.02	0.30	<0.01											
 Environmental Scientifics Group Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422			Client Name		Environ UK Ltd						Sample Analysis									
			Contact		Ms L Cleverley															
			Royal Mint GW and SW Monitoring						Date Printed		20-Oct-2014									
									Report Number		EXR/186108									
									Table Number		1									

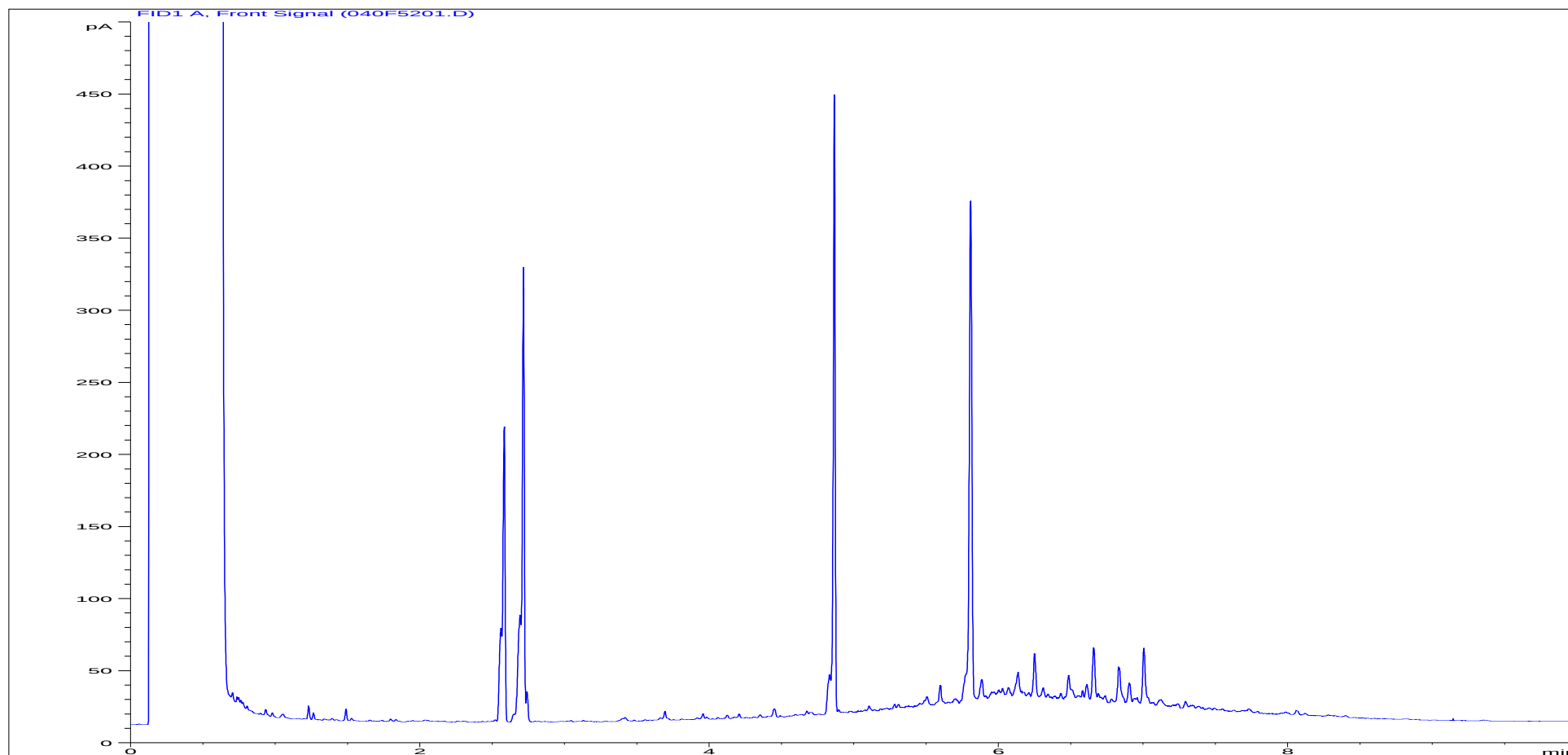
Petroleum Hydrocarbons (C8 to C40) by GC/FID



Sample ID:	EX1532554	Job Number:	W18_6108
Multiplier:	0.005	Client:	Environ UK Ltd
Dilution:	1	Site:	Royal Mint GW and SW Monitoring
Acquisition Method:	TPH_RUNF.M	Client Sample Ref:	R1
Acquisition Date/Time:	14-Oct-14, 06:47:30		
Datafile:	D:\TES\DATA\Y2014\101314TPH_GC17\101314 2014-10-13 15-01-04\039F5101.D		

Where individual results are flagged see report notes for status.

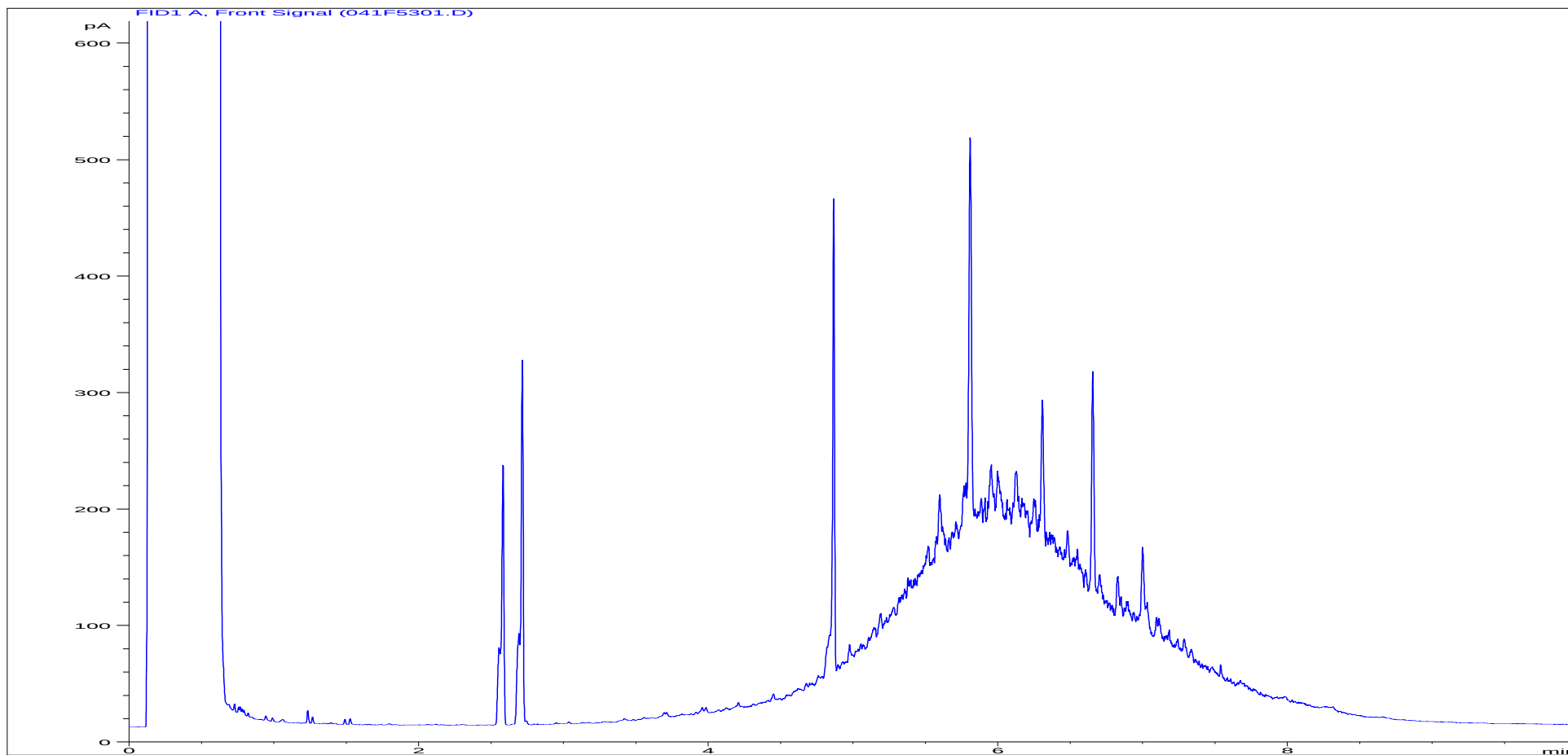
Petroleum Hydrocarbons (C8 to C40) by GC/FID



Sample ID:	EX1532555	Job Number:	W18_6108
Multiplier:	0.005	Client:	Environ UK Ltd
Dilution:	1	Site:	Royal Mint GW and SW Monitoring
Acquisition Method:	TPH_RUNF.M	Client Sample Ref:	R6
Acquisition Date/Time:	14-Oct-14, 07:06:28		
Datafile:	D:\TES\DATA\Y2014\101314TPH_GC17\101314 2014-10-13 15-01-04\040F5201.D		

Where individual results are flagged see report notes for status.

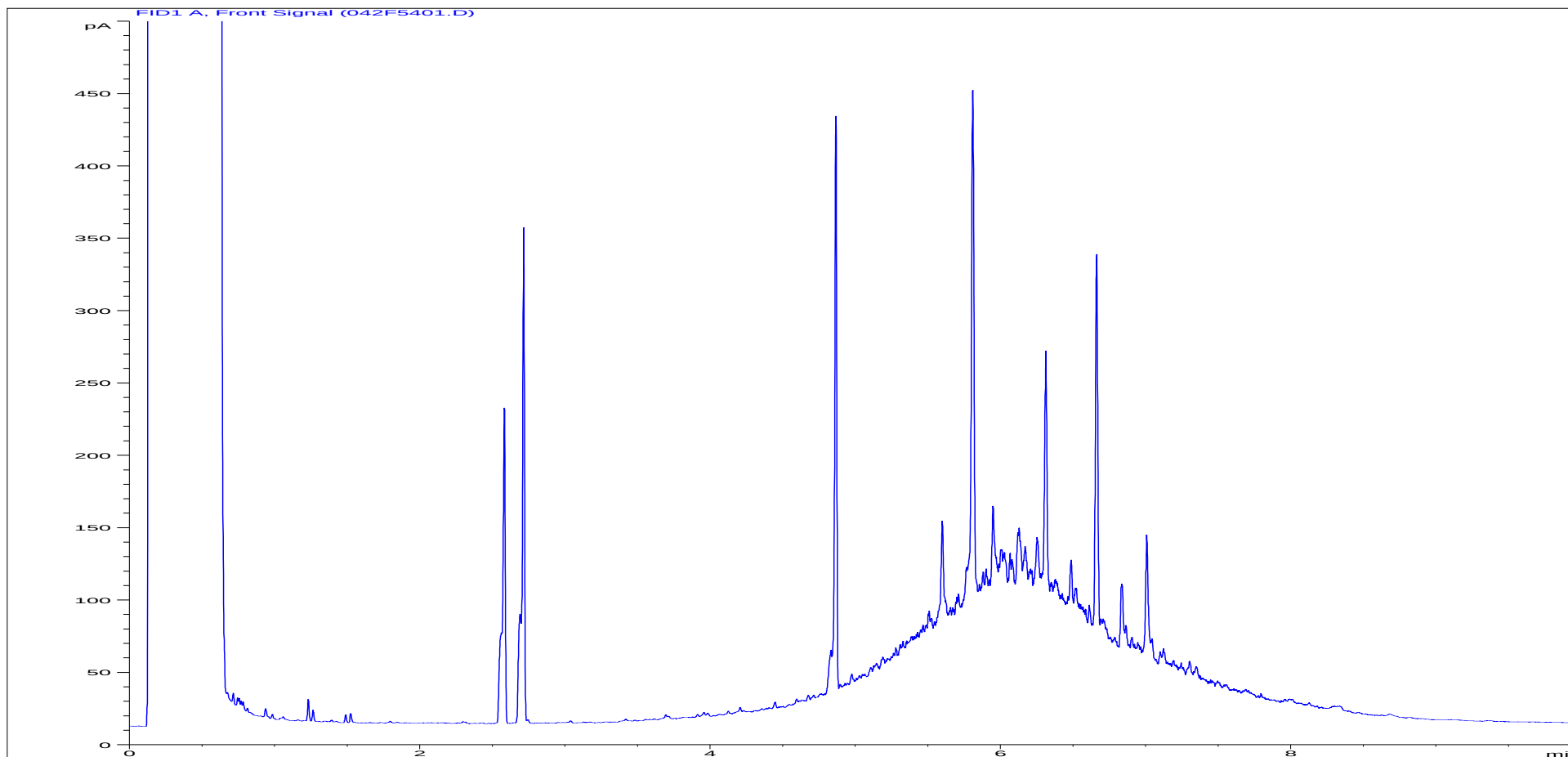
Petroleum Hydrocarbons (C8 to C40) by GC/FID



Sample ID:	EX1532556	Job Number:	W18_6108
Multiplier:	0.005	Client:	Environ UK Ltd
Dilution:	1	Site:	Royal Mint GW and SW Monitoring
Acquisition Method:	TPH_RUNF.M	Client Sample Ref:	R7
Acquisition Date/Time:	14-Oct-14, 07:25:05		
Datafile:	D:\TES\DATA\Y2014\101314TPH_GC17\101314 2014-10-13 15-01-04\041F5301.D		

Where individual results are flagged see report notes for status.

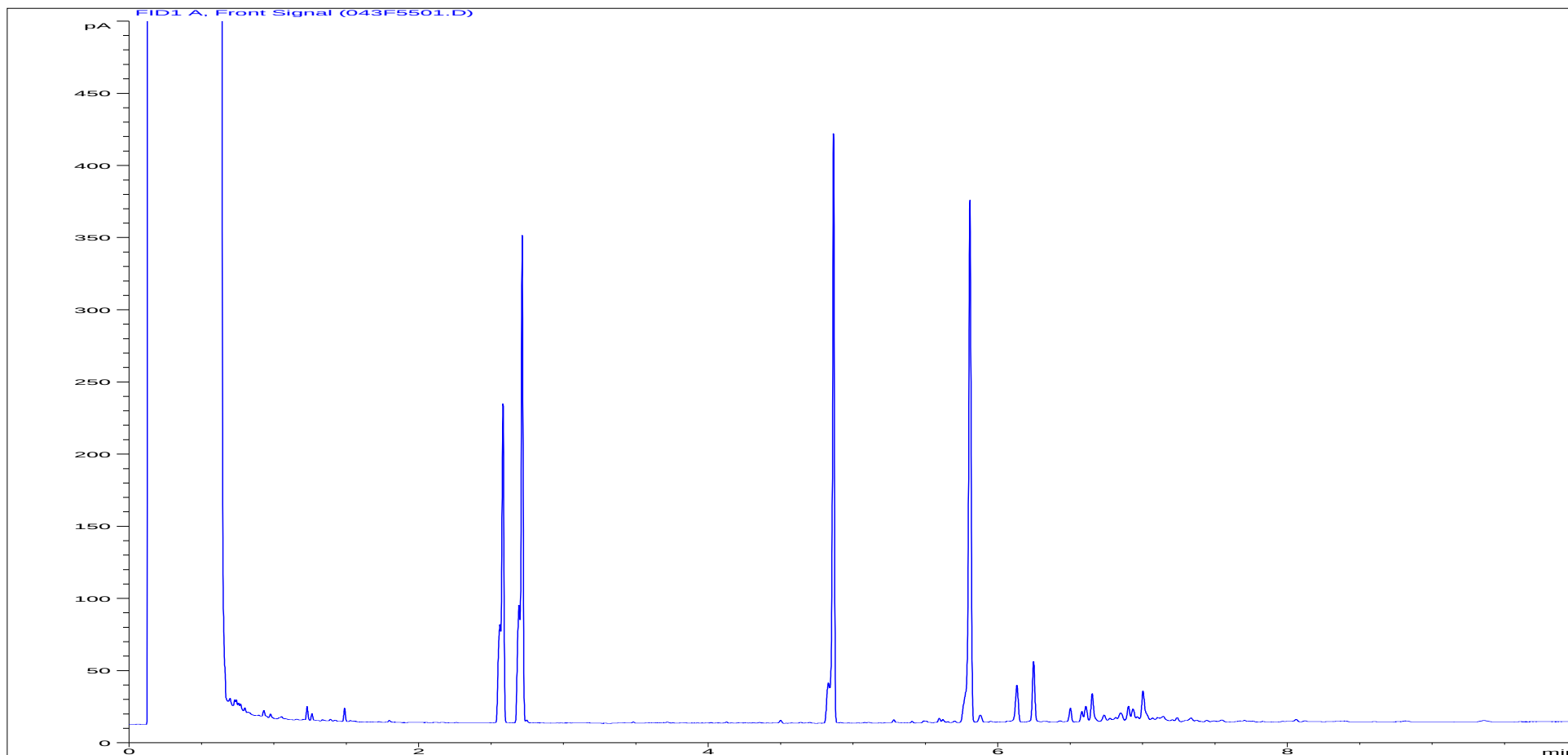
Petroleum Hydrocarbons (C8 to C40) by GC/FID



Sample ID:	EX1532557	Job Number:	W18_6108
Multiplier:	0.005	Client:	Environ UK Ltd
Dilution:	1	Site:	Royal Mint GW and SW Monitoring
Acquisition Method:	TPH_RUNF.M	Client Sample Ref:	R7A
Acquisition Date/Time:	14-Oct-14, 07:43:54		
Datafile:	D:\TES\DATA\Y2014\101314TPH_GC17\101314 2014-10-13 15-01-04\042F5401.D		

Where individual results are flagged see report notes for status.

Petroleum Hydrocarbons (C8 to C40) by GC/FID



Sample ID:	EX1532558	Job Number:	W18_6108
Multiplier:	0.005	Client:	Environ UK Ltd
Dilution:	1	Site:	Royal Mint GW and SW Monitoring
Acquisition Method:	TPH_RUNF.M	Client Sample Ref:	C1
Acquisition Date/Time:	14-Oct-14, 08:02:50		
Datafile:	D:\TES\DATA\Y2014\101314TPH_GC17\101314 2014-10-13 15-01-04\043F5501.D		

Where individual results are flagged see report notes for status.

Sample Analysis

ESG Environmental Chemistry
Analytical and Deviating Sample Overview

W186108

Customer Environ UK Ltd
Site Royal Mint GW and SW Monitoring
Report No W186108

Consignment No W77620
Date Logged 09-Oct-2014

Report Due 17-Oct-2014

ID Number	Description	Matrix Type	Sampled	MethodID	Calc_HD	CUST SERV	ICPMSW	Nickel as Ni MS (Dissolved)	Chromium as Cr MS (Dissolved)	Cadmium as Cd MS (Dissolved)	Copper as Cu MS (Dissolved)	Lead as Pb MS (Dissolved)	Zinc as Zn MS (Dissolved)	Arsenic as As MS (Dissolved)	Mercury as Hg MS (Dissolved)	Selenium as Se MS (Dissolved)	Vanadium as V MS (Dissolved)	Calcium as Ca (Dissolved) VAR	Magnesium as Mg (Dissolved) VAR	Barium as Ba (Dissolved) VAR	Boron as B (Dissolved) VAR	Beryllium as Be (Dissolved) VAR	Cyanide (Total) as CN SFA	SFAP
				Total Hardness as CaCO3 (CALC)				Report A																
EX/1532546	BH901	Groundwater	08/10/14																					
EX/1532547	BH9	Groundwater	08/10/14																					
EX/1532548	BH801	Groundwater	08/10/14																					
EX/1532549	BH32	Groundwater	08/10/14																					
EX/1532550	BH11	Groundwater	08/10/14																					
EX/1532551	BH13	Groundwater	08/10/14																					
EX/1532552	BH12	Groundwater	08/10/14																					
EX/1532553	BH10	Groundwater	08/10/14																					
EX/1532554	R1	Surface Water	08/10/14																					
EX/1532555	R6	Surface Water	08/10/14																					
EX/1532556	R7	Surface Water	08/10/14																					
EX/1532557	R7A	Surface Water	08/10/14																					
EX/1532558	C1	Surface Water	08/10/14																					

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

Deviating Sample Key	
A	The sample was received in an inappropriate container for this analysis
B	The sample was received without the correct preservation for this analysis
C	Headspace present in the sample container
D	The sampling date was not supplied so holding time may be compromised - applicable to all analysis
E	Sample processing did not commence within the appropriate holding time
F	Sample processing did not commence within the appropriate handling time
Requested Analysis Key	
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
	Analysis Subcontracted - Note: due date may vary

The integrity of data for samples/analysis that have been categorised as Deviating may be compromised. Data may not be representative of the sample at the time of sampling.

Where individual results are flagged see report notes for status.

Customer
Site
Report No

Environ UK Ltd
Royal Mint GW and SW Monitoring
W186108

Consignment No W77620
Date Logged 09-Oct-2014

Report Due 17-Oct-2014

ID Number	Description	MethodID		TPH/FID	WSL/M12	WSL/M3
		Matrix Type	Sampled	TPH GC	Total Alkalinity as CaCO3	pH units
				✓	✓	✓
EX/1532546	BH901	Groundwater	08/10/14			
EX/1532547	BH9	Groundwater	08/10/14			
EX/1532548	BH801	Groundwater	08/10/14			
EX/1532549	BH32	Groundwater	08/10/14			
EX/1532550	BH11	Groundwater	08/10/14			
EX/1532551	BH13	Groundwater	08/10/14			
EX/1532552	BH12	Groundwater	08/10/14			
EX/1532553	BH10	Groundwater	08/10/14			
EX/1532554	R1	Surface Water	08/10/14			
EX/1532555	R6	Surface Water	08/10/14			
EX/1532556	R7	Surface Water	08/10/14			
EX/1532557	R7A	Surface Water	08/10/14			
EX/1532558	C1	Surface Water	08/10/14			

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

Deviating Sample Key

A The sample was received in an inappropriate container for this analysis
B The sample was received without the correct preservation for this analysis
C Headspace present in the sample container
D The sampling date was not supplied so holding time may be compromised - applicable to all analysis
E Sample processing did not commence within the appropriate holding time
F Sample processing did not commence within the appropriate handling time

Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - **Note: due date may be affected if triggered**

No analysis scheduled

Analysis Subcontracted - **Note: due date may vary**

Method Descriptions

Matrix	MethodID	Analysis Basis	Method Description
Water	Calc_HD	As Received	Calculation based on Dissolved metals analysis by ICPOES
Water	ICPMSW	As Received	Direct quantitative determination of Metals in water samples using ICPMS
Water	ICPWATVAR	As Received	Direct determination of Metals and Sulphate in water samples using ICPOES
Water	SFAPI	As Received	Segmented flow analysis with colorimetric detection
Water	TPHFID	As Received	Determination of pentane extractable hydrocarbons in water by GCFID
Water	WSLM12	As Received	Titration with Sulphuric Acid to required pH
Water	WSLM3	As Received	Determination of the pH of water samples by pH probe

Where individual results are flagged see report notes for status.

Report Notes

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l

Nil: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

Asbestos Analysis

CH Denotes Chrysotile

TR Denotes Tremolite

CR Denotes Crocidolite

AC Denotes Actinolite

AM Denotes Amosite

AN Denotes Anthophyllite

NAIIS No Asbestos Identified in Sample

NADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined

N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

▯ Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Sample Descriptions

Client : Environ UK Ltd
Site : Royal Mint GW and SW Monitoring
Report Number : W18_6108

[illegible]

Table 2: Surface Water Monitoring 2014-2015 (UK17-20212) - Summary of Results

Analysis																	
Sample Point	Date	pH	CaCO3 mg/l	Sulphate (dissolved) mg/l	Nickel (dissolved) mg/l	Chromium (dissolved) mg/l	Cadmium (dissolved) mg/l	Copper (dissolved) mg/l	Lead (dissolved) mg/l	Zinc (dissolved) mg/l	Arsenic (dissolved) mg/l	Boron (dissolved) mg/l	Mercury (dissolved) mg/l	Selenium (dissolved) mg/l	Vanadium (dissolved) mg/l	Cyanide (total) (mg/l)	TPH (mg/l)
R1	Jan-10	7.5	NT	9	<0.001	0.001	<0.0001	<0.001	<0.001	0.005	<0.001	<0.01	<0.0001	<0.001	<0.002	<0.02	0.06
	May-10	7.9	NT	9	0.001	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	0.02	<0.0001	<0.001	<0.002	0.03	<0.01
	Jun-10	7.5	NT	13	0.001	0.002	<0.0001	<0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	<0.002	<0.02	<0.01
	Aug-10	7.5	NT	21	0.001	0.002	<0.0001	<0.001	<0.001	<0.002	<0.001	0.02	<0.0001	<0.001	0.001	<0.02	0.01
	Oct-10	7.7	NT	10	<0.001	0.001	<0.0001	0.001	<0.001	<0.002	<0.001	0.02	<0.0001	0.002	<0.001	<0.02	0.01
	Dec-10	7.6	NT	12	<0.001	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Apr-11	7.4	56	NT	0.001	0.001	<0.0001	0.002	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.03
	May-11	7.6	21	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	0.41	<0.0001	<0.001	<0.001	<0.02	0.02
	Jul-11	8	61	NT	<0.001	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	0.0001	<0.02	0.02
	Sep-11	7.5	64	NT	0.001	0.003	<0.0001	<0.001	<0.001	0.009	<0.001	0.06	<0.0001	0.001	<0.001	<0.02	0.02
	Nov-11	8.6	61	NT	0.001	0.002	<0.0001	0.001	<0.001	0.003	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	0.01
	Jan-12	8.1	52	NT	0.001	0.005	<0.0001	0.001	<0.001	0.005	<0.001	0.02	<0.0001	<0.001	0.002	<0.02	0.01
	Mar-12	8.2	51	NT	0.001	0.002	<0.0001	0.002	<0.001	0.006	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	<0.01
	May-12	8	39	NT	0.001	0.001	<0.0001	0.002	<0.001	0.009	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.016
	Jul-12	7.7	45	NT	0.002	<0.001	<0.0001	0.002	<0.001	0.009	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Sep-12	7.8	47	NT	0.001	0.001	<0.0001	0.002	<0.001	0.006	<0.001	0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-12	7.8	53	NT	0.001	<0.001	<0.0001	<0.001	<0.001	0.006	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	Jan-13	7.5	58	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	0.005	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	0.02
	Apr-13	7.7	46	NT	<0.001	0.001	<0.0001	<0.001	<0.001	0.003	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	May-13	8	62	NT	<0.001	0.001	<0.0001	<0.001	<0.001	0.003	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Jul-13	7.6	68	NT	0.001	0.001	<0.0001	0.003	<0.001	0.005	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.105
	Oct-13	7.2	55	NT	0.001	0.001	<0.0001	0.001	<0.001	0.006	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	<0.01
	Nov-13	7.7	62	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Jan-14	7.2	36	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jun-14	6.9	60	NT	0.001	<0.001	<0.0001	0.001	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.03
R6	Jan-10	7.5	NT	9	0.001	0.001	<0.0001	<0.001	<0.001	0.002	<0.001	<0.01	0.0001	<0.001	<0.002	<0.02	0.64
	May-10	7.6	NT	10	0.002	<0.001	<0.0001	<0.001	<0.001	0.003	<0.001	0.02	<0.0001	<0.001	<0.002	0.24	<0.01
	Jun-10	7.5	NT	14	0.002	0.002	<0.0001	<0.001	<0.001	0.002	<0.001	0.01	<0.0001	<0.001	<0.002	<0.02	<0.01
	Aug-10	7.7	NT	22	0.001	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	0.02	<0.0001	<0.001	<0.001	<0.02	0.01
	Oct-10	7.7	NT	11	0.001	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Dec-10	7.4	NT	11	0.001	0.001	<0.0001	<0.001	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Apr-11	7.4	52	NT	0.002	0.001	<0.0001	0.002	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.04
	May-11	7.4	23	NT	0.001	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	0.39	<0.0001	<0.001	<0.001	<0.02	0.04
	Jul-11	7.2	71	NT	<0.001	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.02
	Sep-11	7.7	64	NT	0.001	0.001	<0.0001	<0.001	<0.001	0.003	<0.001	0.04	<0.0001	<0.001	<0.001	<0.02	0.01
	Nov-11	7.7	61	NT	0.002	0.002	<0.0001	0.002	<0.001	0.003	<0.001	0.03	<0.0001	<0.001	0.002	<0.02	0.02
	Jan-12	8	57	NT	0.002	0.003	<0.0001	0.002	<0.001	0.008	<0.001	0.02	<0.0001	<0.001	0.002	<0.02	0.02
	Mar-12	8.2	57	NT	0.001	0.002	<0.0001	<0.001	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.02
	May-12	7.9	50	NT	0.001	0.002	<0.0001	0.002	<0.001	0.014	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.016
	Jul-12	7.7	56	NT	0.002	<0.001	<0.0001	0.001	<0.001	0.005	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Sep-12	7.9	53	NT	0.001	0.001	<0.0001	0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Nov-12	7.9	64	NT	0.001	<0.001	<0.0001	<0.001	<0.001	0.003	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	Jan-13	7.6	65	NT	0.001	<0.001	<0.0001	0.001	<0.001	0.025	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	0.02
	Apr-13	7.8	51	NT	<0.001	0.007	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	May-13	8	74	NT	<0.001	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Jul-13	7.6	74	NT	0.002	0.001	<0.0001	0.001	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.019
	Oct-13	7.3	52	NT	0.001	<0.001	<0.0001	0.001	<0.001	0.008	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-13	7.7	77	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Jan-14	7.5	42	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jun-14	6.9	50	NT	0.002	<0.001	0.0001	0.003	<0.001	0.018	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.04

Analysis																	
Sample Point	Date	pH	CaCO3 mg/l	Sulphate (dissolved) mg/l	Nickel (dissolved) mg/l	Chromium (dissolved) mg/l	Cadmium (dissolved) mg/l	Copper (dissolved) mg/l	Lead (dissolved) mg/l	Zinc (dissolved) mg/l	Arsenic (dissolved) mg/l	Boron (dissolved) mg/l	Mercury (dissolved) mg/l	Selenium (dissolved) mg/l	Vanadium (dissolved) mg/l	Cyanide (total) (mg/l)	TPH (mg/l)
R7	Jan-10	7.7	NT	7	0.005	0.003	<0.0001	0.01	<0.001	0.009	<0.001	0.01	0.0001	<0.001	<0.002	<0.02	<0.01
	May-10	8	NT	14	0.019	<0.001	<0.0001	0.039	<0.001	0.097	<0.001	0.01	<0.0001	<0.001	<0.002	0.05	<0.01
	Jun-10	7.5	NT	18	0.013	0.002	<0.0001	0.028	<0.001	0.071	<0.001	0.01	<0.0001	<0.001	<0.002	<0.02	<0.01
	Aug-10	7.8	NT	29	0.008	0.001	<0.0001	0.011	<0.001	0.017	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	<0.01
	Oct-10	7.7	NT	20	0.004	0.001	<0.0001	0.007	<0.001	0.009	<0.001	0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Dec-10	7.4	NT	12	0.004	0.001	<0.0001	0.008	<0.001	0.012	<0.001	0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Apr-11	7.5	47	NT	0.017	0.001	<0.0001	0.039	<0.001	0.037	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.03
	May-11	7.7	29	NT	0.011	<0.001	<0.0001	0.023	<0.001	0.038	<0.001	0.39	<0.0001	<0.001	<0.001	<0.02	0.03
	Jul-11	7.4	61	NT	0.003	0.001	<0.0001	0.007	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.02
	Sep-11	7.7	50	NT	0.019	0.001	<0.0001	0.017	<0.001	0.012	<0.001	0.03	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-11	7.7	59	NT	0.009	0.002	<0.0001	0.009	<0.001	0.008	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	0.02
	Jan-12	8	52	NT	0.001	0.003	<0.0001	<0.001	<0.001	0.005	<0.001	0.01	<0.0001	<0.001	0.002	<0.02	0.01
	Mar-12	8.1	37	NT	0.006	0.001	<0.0001	0.009	<0.001	0.009	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	<0.01
	May-12	7.9	46	NT	0.002	0.001	<0.0001	0.003	<0.001	0.006	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.022
	Jul-12	7.7	38	NT	0.008	<0.001	<0.0001	0.013	<0.001	0.016	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	Sep-12	7.9	54	NT	0.002	0.001	<0.0001	0.001	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-12	7.8	51	NT	0.002	<0.001	<0.0001	0.003	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	Jan-13	7.6	49	NT	0.005	<0.001	<0.0001	0.01	<0.001	0.023	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	0.02
	Apr-13	7.8	48	NT	0.002	0.001	<0.0001	0.004	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	May-13	8.1	54	NT	0.003	<0.001	<0.0001	0.007	<0.001	0.007	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jul-13	7.6	72	NT	0.002	0.002	<0.0001	0.003	<0.001	0.005	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.031
	Oct-13	7.3	57	NT	0.001	<0.001	<0.0001	0.002	<0.001	0.005	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-13	7.7	69	NT	0.002	<0.001	<0.0001	0.004	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jan-14	7.4	36	NT	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jun-14	7	55	NT	0.002	<0.001	<0.0001	0.003	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.03
R7A	Jan-10	7.8	NT	7	0.004	0.001	<0.0001	0.009	<0.001	0.009	<0.001	<0.01	0.0001	<0.001	<0.002	<0.02	0.25
	May-10	8.1	NT	14	0.021	<0.001	<0.0001	0.041	<0.001	0.113	<0.001	<0.01	<0.0001	<0.001	<0.002	0.03	0.02
	Jun-10	7.5	NT	16	0.013	0.002	<0.0001	0.027	<0.001	0.085	<0.001	0.01	<0.0001	<0.001	<0.002	<0.02	<0.01
	Aug-10	7.8	NT	32	0.013	0.001	<0.0001	0.017	<0.001	0.04	<0.001	0.03	<0.0001	<0.001	<0.001	<0.02	<0.01
	Oct-10	7.7	NT	19	0.004	0.001	<0.0001	0.007	<0.001	0.009	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Dec-10	7.5	NT	15	0.008	0.001	<0.0001	0.015	<0.001	0.033	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Apr-11	7.5	47	NT	0.017	0.001	<0.0001	0.038	<0.001	0.037	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.03
	May-11	7.7	29	NT	0.011	<0.001	<0.0001	0.022	<0.001	0.036	<0.001	0.38	<0.0001	<0.001	<0.001	<0.02	0.02
	Jul-11	7.5	56	NT	0.008	0.001	<0.0001	0.018	<0.001	0.014	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.01
	Sep-11	7.4	50	NT	0.021	0.001	<0.0001	0.018	<0.001	0.012	<0.001	0.02	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-11	7.7	47	NT	0.041	0.002	<0.0001	0.029	<0.001	0.03	<0.001	0.02	<0.0001	<0.001	0.001	<0.02	0.01
	Jan-12	7.9	45	NT	0.011	0.002	<0.0001	0.011	<0.001	0.016	<0.001	0.01	<0.0001	<0.001	0.002	<0.02	<0.01
	Mar-12	8.1	38	NT	0.006	0.001	<0.0001	0.009	<0.001	0.008	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	<0.01
	May-12	7.9	20	NT	0.017	0.001	<0.0001	0.052	0.001	0.07	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.057
	Jul-12	7.8	41	NT	0.008	<0.001	<0.0001	0.013	<0.001	0.016	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Sep-12	7.9	44	NT	0.017	0.001	<0.0001	0.031	<0.001	0.042	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Nov-12	7.8	47	NT	0.004	<0.001	<0.0001	0.007	<0.001	0.008	<0.001	0.02	<0.0001	<0.001	<0.001	<0.02	0.02
	Jan-13	7.6	32	NT	0.02	<0.001	0.0002	0.044	0.002	0.089	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	0.04
	Apr-13	7.8	37	NT	0.003	0.001	<0.0001	0.008	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.02
	May-13	8.3	53	NT	0.006	<0.001	<0.0001	0.017	<0.001	0.018	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jul-13	7.5	53	NT	0.018	0.001	<0.0001	0.026	<0.001	0.064	<0.001	<0.01	<0.0001	<0.001	0.001	<0.02	0.012
	Oct-13	7.3	62	NT	0.005	<0.001	<0.0001	0.010	<0.001	0.011	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-13	7.8	61	NT	0.005	<0.001	<0.0001	0.009	<0.001	0.014	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jan-14	7.4	26	NT	0.004	<0.001	<0.0001	0.005	<0.001	0.062	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Jun-14	7.1	44	NT	0.013	<0.001	0.0001	0.039	0.001	0.067	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.06

		Analysis															
Sample Point	Date	pH	CaCO3 mg/l	Sulphate (dissolved) mg/l	Nickel (dissolved) mg/l	Chromium (dissolved) mg/l	Cadmium (dissolved) mg/l	Copper (dissolved) mg/l	Lead (dissolved) mg/l	Zinc (dissolved) mg/l	Arsenic (dissolved) mg/l	Boron (dissolved) mg/l	Mercury (dissolved) mg/l	Selenium (dissolved) mg/l	Vanadium (dissolved) mg/l	Cyanide (total) (mg/l)	TPH (mg/l)
C1	Mar-12	8.1	40	NT	0.004	0.001	<0.0001	0.009	0.002	0.01	0.001	<0.01	<0.0001	<0.001	0.002	<0.02	<0.01
	May-12	7.9	43	NT	0.011	0.001	<0.0001	0.026	<0.001	0.01	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.014
	Jul-12	7.8	45	NT	0.002	<0.001	<0.0001	0.004	<0.001	0.007	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Sep-12	7.7	43	NT	0.003	0.001	<0.0001	0.004	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Nov-12	7.7	45	NT	0.002	<0.001	<0.0001	0.002	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jan-13	7.7	30	NT	0.006	<0.001	<0.0001	0.009	<0.001	0.016	<0.001	0.03	<0.0001	<0.001	0.001	<0.02	<0.01
	Apr-13	7.8	41	NT	0.001	0.002	<0.0001	0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.04
	May-13	7.9	69	NT	0.002	<0.001	<0.0001	0.002	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Jul-13	7.4	50	NT	0.002	<0.001	<0.0001	0.003	<0.001	0.004	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.058
	Oct-13	7.7	88	NT	0.002	<0.001	<0.0001	0.004	<0.001	0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
	Nov-13	7.6	37	NT	0.002	<0.001	<0.0001	0.002	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01
	Jan-14	7.6	39	NT	0.002	<0.001	<0.0001	0.002	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	<0.01
Jun-14	7	34	NT	0.005	<0.001	<0.0001	0.01	<0.001	0.003	<0.001	<0.01	<0.0001	<0.001	<0.001	<0.02	0.01	
EQS (mg/l)		6 to 9 (2)		400	0.02 (1)	0.0047 (3)	0.00009 (1)	0 - 50 = 0.001 (3) 50-100 = 0.006	0.0072 (1)	0-50 = 0.008 (3) 50-100 = 0.05	0.05 (2)	2 (2)	0.001 (1)	0.01 (4)	0.02 (3)	0.001 (1)	0.01(4)

Notes:

2011 Sampling Points

EQS Adjusted for Harndess

The yellow cells indicate elevated concentrations compared with Environmental Quality Standards (EQS).

NG = No Guideline

NT = Not Tested

1 = Annex I of Directive 2008/105/EC of the European Parliament & of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and

2 = Table 2a: Environmental Quality Standards for List 2 dangerous substances, EC Dangerous Substances Directive (76/464/EEC)

3 = Table 2b: Environmental Quality Standards for hardness related List 2 dangerous substances, EC dangerous substances Directive (76/464/EEC)

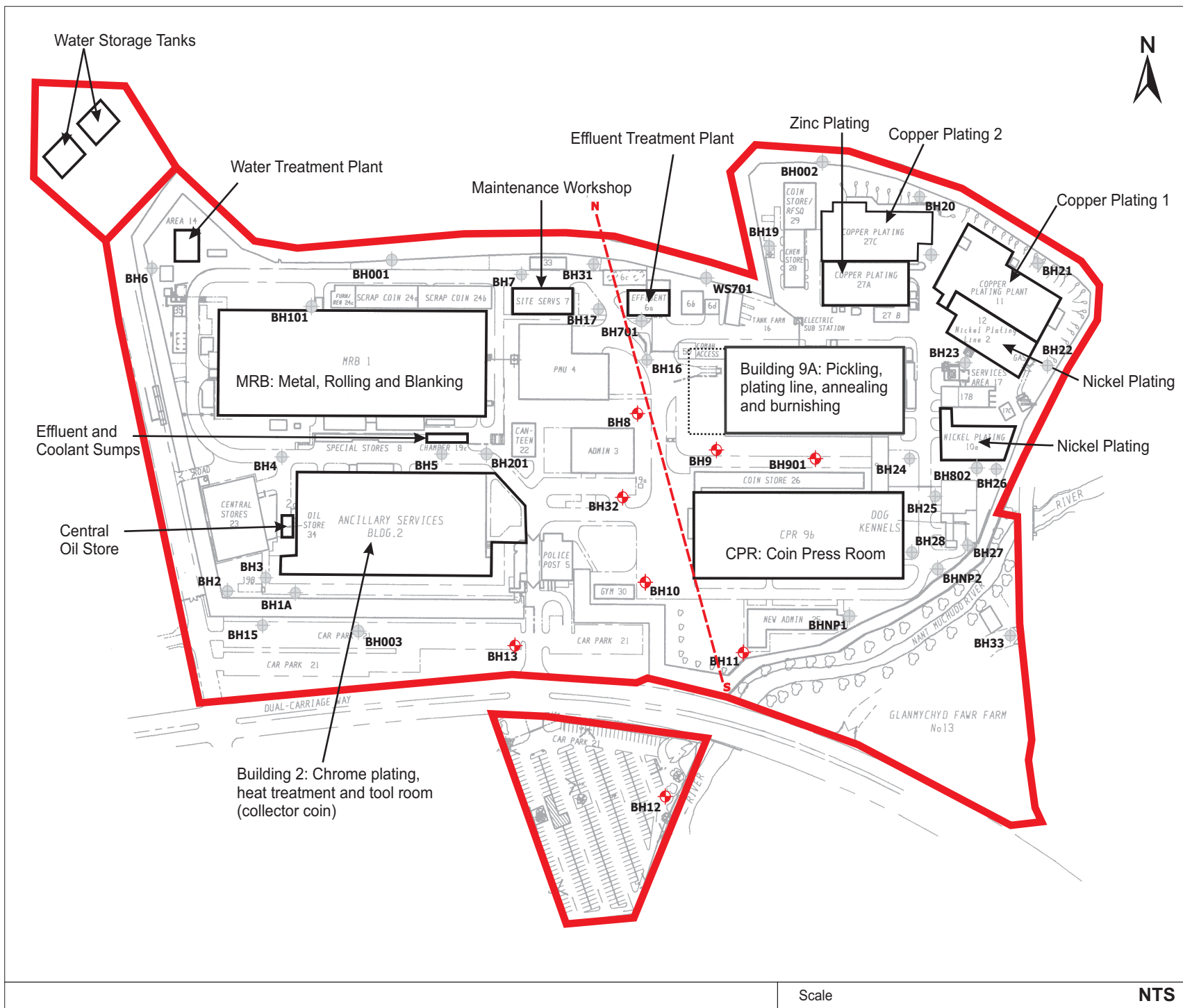
NB - in the absence of hardness data, a conservative approach has been adopted and the lowest EQS values used

4 = Water Supply (Water Quality) (England and Wales) Regulations 2000 (SI 2000/3184) (as amended); Water Supply (Water Quality) (Wales) Regulations 2001 (SI 3911 W.323) (as amended)

Table 1: Groundwater Monitoring 2014 -2015 (UK17-20212) - Summary of Results

Borehole	Date	Analysis												
		pH	CaCO3 (mg/l)	Nickel (dissolved) mg/l	Chromium (dissolved) mg/l	Cadmium (dissolved) mg/l	Copper (dissolved) mg/l	Lead (dissolved) mg/l	Zinc (dissolved) mg/l	Arsenic (dissolved) mg/l	Boron (dissolved) mg/l	Mercury (dissolved) mg/l	Selenium (dissolved) mg/l	Vanadium (dissolved) mg/l
Guideline Value		6-9 (1)	NG	0.02 (1)	0.0047(1)	0.00008(1)	0.001-0.028* (1)	0.0072 (1)	0.008 - 0.125* (1)	0.05(1)	2 (1)	0.00005(1)	0.01(2)	0.02 - 0.06* (1)
BH8	01-Oct-09	4.5	NT	0.571	0.001	0.0021	0.22	0.002	0.45	<0.001	0.05	<0.0001	0.002	<0.002
	01-Feb-10	4.3	NT	0.315	0.002	0.0027	0.239	0.002	0.68	<0.001	0.06	<0.0001	0.003	<0.002
	01-Apr-10	4.4	NT	0.141	<0.001	<0.0001	0.17	<0.001	0.952	<0.001	0.03	<0.0001	0.001	<0.002
	01-Jun-10	4.6	NT	0.57	0.001	0.0019	0.195	0.002	1.368	<0.001	0.04	<0.0001	0.001	<0.002
	25-Jan-13	5.2	14	0.162	<0.001	0.0013	0.283	0.002	0.379	<0.001	0.05	<0.0001	<0.001	0.001
	03-Apr-13	5.4	5	0.19	<0.001	0.0014	0.293	0.002	0.482	<0.001	<0.01	<0.0001	0.001	<0.001
	31-May-13	5.9	<30	0.307	0.001	0.0009	0.452	<0.001	1.325	<0.001	<0.01	<0.0001	<0.001	<0.001
	26-Jul-13	4.9	<2	0.176	<0.001	0.0017	0.262	0.004	0.703	<0.001	0.02	<0.0001	<0.001	<0.001
	07-Oct-13	5.4	0	0.111	<0.001	0.001	0.225	0.003	0.323	<0.001	0.02	<0.0001	<0.001	<0.001
	25-Nov-13	6.6	7	0.103	0.001	0.0007	0.152	<0.001	0.232	<0.001	0.03	<0.0001	<0.001	<0.001
	30-Jan-14	5.9	8	0.08	<0.001	0.0007	0.099	<0.001	0.205	<0.001	0.03	<0.0001	<0.001	<0.001
	04-Jun-14	4.8	6	0.085	<0.001	0.0007	0.132	0.001	0.23	<0.001	<0.01	<0.0001	<0.001	<0.001
BH9	15-Oct-09	7.5	NA	0.002	0.001	<0.0001	0.001	<0.001	0.005	<0.001	0.05	<0.0001	<0.001	<0.002
	06-Sep-11	4.5	NA	1.011	0.006	0.0012	1.11	<0.001	5.872	0.001	0.07	<0.0001	<0.001	<0.001
	27-Sep-11	4.5	NA	3.96	0.004	0.0049	2.081	<0.001	19.61	<0.001	0.07	<0.0001	0.002	0.001
	31-Oct-11	4.4	0	7.402	0.02	0.0022	9.91	0.002	31.02	0.001	NA	<0.0001	<0.001	NA
	14-Dec-11	4.7	0	10.4	0.013	0.0059	9.567	<0.001	40.3	<0.001	0.3	<0.0001	0.003	<0.001
	13-Mar-12	6.1	3	2.57	0.027	0.0017	3.452	0.005	22.99	0.001	<0.01	<0.0001	<0.001	0.014
	14-May-12	4.7	0	2.254	0.012	0.0015	4.592	0.002	7.107	<0.001	0.08	<0.0001	<0.001	<0.001
	10-Jul-12	4.5	0	1.122	0.014	0.0011	2.581	0.002	5.178	0.001	0.08	<0.0001	<0.001	0.002
	18-Sep-12	6.7	0	0.458	0.003	0.0006	1.41	<0.001	1.921	<0.001	0.06	<0.0001	<0.001	<0.001
	27-Nov-12	6.8	9	0.679	0.002	0.0009	1.29	<0.001	2.205	<0.001	0.09	<0.0001	<0.001	<0.001
	25-Jan-13	7.5	24	0.546	<0.001	0.0008	0.771	<0.001	1.765	<0.001	0.11	<0.0001	<0.001	0.001
	03-Apr-13	6.2	17	0.522	0.001	0.0008	2.185	<0.001	1.806	<0.001	0.04	<0.0001	<0.001	<0.001
BH10	31-May-13	5.1	117	0.754	0.006	0.0014	2.888	0.001	2.901	<0.001	0.08	<0.0001	<0.001	<0.001
	26-Jul-13	5.4	<2	0.329	0.002	0.0009	1.397	<0.001	1.313	<0.001	0.04	<0.0001	<0.001	<0.001
	07-Oct-13	5.1	10	1.176	0.005	0.0014	1.906	<0.001	2.568	<0.001	0.1	<0.0001	<0.001	<0.001
	25-Nov-13	6.7	104	0.227	<0.001	0.0005	0.123	0.006	0.575	<0.001	0.07	<0.0001	<0.001	<0.001
	30-Jan-14	6.7	111	0.121	<0.001	0.0002	0.051	<0.001	0.154	<0.001	0.05	<0.0001	<0.001	<0.001
	04-Jun-14	6.2	115	0.066	0.001	0.0003	0.054	<0.001	0.192	<0.001	0.01	<0.0001	<0.001	<0.001
	01-Jun-10	4.6	NA	0.176	<0.001	0.0003	0.184	<0.001	0.314	<0.001	0.02	<0.0001	<0.001	<0.002
	06-Sep-11	5.6	NA	0.097	<0.001	0.0001	0.044	<0.001	0.428	<0.001		<0.0001	<0.001	<0.001
	27-Sep-11	5.8	NA	0.052	<0.001	<0.0001	0.012	<0.001	0.154	<0.001	0.02	<0.0001	<0.001	<0.001
	31-Oct-11	6.8	13	0.073	0.001	<0.0001	0.032	<0.001	0.291	<0.001	NA	<0.0001	<0.001	NA
	14-Dec-11	7.2	50	0.009	0.001	<0.0001	0.009	<0.001	0.027	<0.001	0.07	<0.0001	0.001	<0.001
	13-Mar-12	5	0	4.727	0.001	0.0034	0.686	0.003	20.9	<0.001	0.01	<0.0001	0.002	0.001
BH32	14-May-12	5.2	0	1.558	<0.001	0.0017	0.709	0.002	5.341	<0.001	0.04	<0.0001	<0.001	<0.001
	10-Jul-12	4.7	0	0.998	0.001	0.002	1.117	0.003	6.488	<0.001	0.05	<0.0001	0.001	<0.001
	18-Sep-12	5.1	0	0.755	0.001	0.0013	1.806	0.002	3.781	<0.001	0.04	<0.0001	<0.001	<0.001
	27-Nov-12	4.8	<2	0.752	<0.001	0.0013	0.728	0.002	3.319	<0.001	0.07	<0.0001	<0.001	<0.001
	25-Jan-13	5.4	16	0.617	<0.001	0.0011	0.984	0.002	2.05	<0.001	0.1	<0.0001	<0.001	<0.001
	03-Apr-13	5.6	4	0.596	<0.001	0.0011	1.537	0.002	1.898	<0.001	0.02	<0.0001	<0.001	<0.001
	31-May-13	5.7	49	0.464	<0.001	0.0009	1.244	0.002	1.704	<0.001	0.02	<0.0001	<0.001	<0.001
	26-Jul-13	5.4	<2	0.203	<0.001	0.0005	0.491	0.001	0.726	<0.001	<0.01	0.0002	<0.001	<0.001
	07-Oct-13	5.9	0	0.221	<0.001	0.0006	0.435	0.001	0.801	<0.001	0.03	<0.0001	<0.001	<0.001
	25-Nov-13	6.3	0	0.34	<0.001	0.0006	0.531	0.001	1.003	<0.001	0.05	<0.0001	<0.001	<0.001
	30-Jan-14	5.3	3	0.277	<0.001	0.0006	0.434	<0.001	0.945	<0.001	0.06	<0.0001	<0.001	<0.001
	04-Jun-14	4.8	4	0.138	<0.001	0.0004	0.352	0.001	0.38	<0.001	0.01	<0.0001	<0.001	<0.001
BH33	01-Jun-10	6.6	NA	0.004	0.001	<0.0001	0.002	<0.001	<0.002	<0.001	0.02	<0.0001	<0.001	<0.002
	06-Sep-11	5.6	NA	2.18	0.003	0.0023	0.029	<0.001	4.856	<0.001	0.06	<0.0001	<0.001	<0.001
	27-Sep-11	6.3	NA	1.992	0.004	0.0014	0.006	<0.001	2.702	<0.001	0.06	<0.0001	0.001	0.001
	31-Oct-11	5.8	18	6.396	0.003	0.0042	0.04	<0.001	16.36	<0.001	NA	<0.0001	0.002	NA
	14-Dec-11	6.9	177	0.247	0.004	0.0002	0.003	<0.001	0.265	<0.001	0.07	<0.0001	0.002	0.002
	13-Mar-12	7.2	80	0.688	0.003	0.0006	0.003	<0.001	0.963	<0.001	<0.01	<0.0001	0.001	0.002
	14-May-12	7.2	166	0.465	0.004	0.0003	0.004	<0.001	0.871	<0.001	0.03	<0.0001	0.002	0.002
	10-Jul-12	6.8	13	1.96	0.001	0.0031	0.03	<0.001	4.906	<0.001	0.07	0.0001	<0.001	<0.001
	18-Sep-12	6.6	9	2.488	0.002	0.004	0.038	<0.001	6.379	<0.001	0.11	<0.0001	<0.001	<0.001
	27-Nov-12	7.2	67	0.834	0.001	0.001	0.009	<0.001	1.657	<0.001	0.06	<0.0001	<0.001	<0.001
	25-Jan-13	7	20	0.862	<0.001	0.0013	0.012	<0.001	1.903	<0.001	0.08	<0.0001	<0.001	0.001
	03-Apr-13	7.2	26	0.952	<0.001	0.001	0.006	<0.001	1.767	<0.001	0.04	<0.0001	<0.001	<0.001
BH11	31-May-13	6.9	52	1.87	0.001	0.0028	0.044	<0.001	3.44	<0.001	0.06	<0.0001	<0.001	<0.001
	26-Jul-13	5.4	8	2.461	0.001	0.0043	0.069	<0.001	7.082	<0.001	0.08	<0.0001	<0.001	<0.001
	07-Oct-13	5.7	13	2.991	0.001	0.0051	0.136	<0.001	6.877	<0.001	0.1	<0.0001	<0.001	<0.001
	25-Nov-13	6.7	82	0.511	<0.001	0.0007	0.005	<0.001	1.32	<0.001	0.07	<0.0001	0.003	<0.001
	30-Jan-14	6.4	66	0.298	<0.001	0.0004	0.008	<0.001	0.785	<0.001	0.05	<0.0001	0.002	<0.001
	04-Jun-14	5.8	40	0.512	<0.001	0.0008	0.005	<0.001	1.157	<0.001	0.04	<0.0001	0.001	<0.001
	01-Feb-10	6.6	NA	0.003	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	<0.002
	01-Apr-10	6.7	NA	0.003	<0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.002
	01-Jun-10	6.4	NA	0.003	0.001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	<0.001	<0.002
	01-Nov-11	7.2	108	0.004	0.002	<0.0001	<0.001	<0.001	<0.002	<0.001	NA	<0.0001	<0.001	NA
	14-Dec-11	7	129	0.004	0.002	<0								

Borehole	Date	Analysis													
		pH	CaCO3 (mg/l)	Nickel (dissolved) mg/l	Chromium (dissolved) mg/l	Cadmium (dissolved) mg/l	Copper (dissolved) mg/l	Lead (dissolved) mg/l	Zinc (dissolved) mg/l	Arsenic (dissolved) mg/l	Boron (dissolved) mg/l	Mercury (dissolved) mg/l	Selenium (dissolved) mg/l	Vanadium (dissolved) mg/l	
Guideline Value		6-9 (1)	NG	0.02 (1)	0.0047(1)	0.00008(1)	0.001-0.028* (1)	0.0072 (1)	0.008 - 0.125* (1)	0.05(1)	2 (1)	0.00005(1)	0.01(2)	0.02 - 0.06* (1)	
BH12	01-Oct-09	6.4	NA	0.022	0.003	0.002	0.002	<0.001	0.008	<0.001	0.04	0.0001	<0.001	<0.002	
	01-Feb-10	6.2	NA	0.01	0.002	0.0006	<0.001	<0.001	0.004	<0.001	0.04	<0.0001	<0.001	<0.002	
	01-Apr-10	6.2	NA	0.012	<0.001	0.0016	<0.001	<0.001	0.003	<0.001	0.03	<0.0001	<0.001	<0.002	
	01-Jun-10	6.3	NA	0.012	0.002	0.0015	0.004	<0.001	0.003	<0.001	0.02	<0.0001	<0.001	<0.002	
	31-Oct-11	6.5	168	0.01	0.004	0.0006	0.002	<0.001	0.005	<0.001	NA	0.0002	0.001	NA	
	16-Dec-11	7.4	91	0.002	0.002	0.0005	<0.001	<0.001	<0.002	<0.001	<0.01	<0.0001	0.001	<0.001	
	13-Mar-12	5.9	0	0.36	<0.001	0.0011	0.156	0.001	1.576	<0.001	<0.01	<0.0001	0.001	0.001	
	14-May-12	7.1	102	0.005	0.003	0.0002	0.001	<0.001	0.005	<0.001	0.02	<0.0001	<0.001	0.001	
	10-Jul-12	7.3	155	0.007	0.002	0.0002	0.002	<0.001	0.007	<0.001	0.01	<0.0001	<0.001	0.001	
	18-Sep-12	7.3	171	0.008	0.004	0.0004	0.002	<0.001	0.002	<0.001	0.05	0.0002	<0.001	<0.001	
	27-Nov-12	7.6	139	0.004	0.002	0.0002	<0.001	<0.001	0.003	<0.001	0.02	<0.0001	<0.001	0.001	
	25-Jan-13	7.6	123	0.003	<0.001	0.0001	<0.001	<0.001	<0.002	<0.001	0.04	<0.0001	<0.001	0.001	
	03-Apr-13	7.6	178	0.008	0.003	0.0004	<0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	0.001	
	31-May-13	7.4	201	0.007	0.004	0.0003	0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	0.002	
	26-Jul-13	6.6	158	0.008	0.004	0.0005	0.004	<0.001	0.004	<0.001	0.01	<0.0001	<0.001	0.002	
	07-Oct-13	7.1	165	0.009	0.002	0.0008	0.005	<0.001	0.004	<0.001	0.03	<0.0001	<0.001	0.001	
	25-Nov-13	6.8	162	0.004	<0.001	0.0003	0.001	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	<0.001	
	30-Jan-14	6.9	127	0.002	<0.001	<0.0001	0.001	<0.001	<0.002	<0.001	0.02	<0.0001	0.002	<0.001	
	04-Jun-14	6.3	242	0.008	0.004	0.0005	0.002	<0.001	<0.002	<0.001	0.01	<0.0001	<0.001	0.002	
BH13	01-Oct-09	5.2	NA	0.721	0.001	0.002	0.243	<0.001	0.611	<0.001	0.04	0.0001	<0.001	<0.002	
	01-Feb-10	5.5	NA	0.263	0.001	0.0008	0.24	<0.001	0.055	<0.001	0.03	<0.0001	<0.001	<0.002	
	01-Apr-10	5.5	NA	0.214	<0.001	0.0006	0.092	<0.001	0.154	<0.001	0.01	<0.0001	<0.001	<0.002	
	01-Jun-10	4.6	NA	0.244	<0.001	0.0008	0.243	0.001	0.285	<0.001	0.02	0.0001	<0.001	<0.002	
	01-Nov-11	6.4	0	0.193	<0.001	0.0004	0.111	<0.001	0.528	<0.001	NA	<0.0001	<0.001	NA	
	16-Dec-11	7.4	47	0.128	0.001	0.0004	0.021	<0.001	0.287	<0.001	<0.01	<0.0001	<0.001	<0.001	
	13-Mar-12	6.9	198	0.009	0.006	0.0004	0.001	<0.001	0.002	<0.001	<0.01	<0.0001	0.001	0.002	
	14-May-12	6.7	0	0.214	<0.001	0.0005	0.104	<0.001	0.761	<0.001	0.01	<0.0001	<0.001	<0.001	
	10-Jul-12	5.9	0	0.387	<0.001	0.0008	0.14	0.001	1.228	<0.001	0.02	<0.0001	<0.001	<0.001	
	18-Sep-12	5.5	0	1.907	0.001	0.0037	0.138	0.002	1.851	<0.001	0.09	<0.0001	<0.001	<0.001	
	27-Nov-12	7.3	12	0.249	<0.001	0.0006	0.034	<0.001	0.615	<0.001	0.02	<0.0001	<0.001	0.001	
	25-Jan-13	6.5	20	0.306	<0.001	0.0007	0.114	<0.001	0.839	<0.001	0.06	<0.0001	<0.001	0.001	
	03-Apr-13	6.8	12	0.276	<0.001	0.0006	0.098	<0.001	0.774	<0.001	<0.01	<0.0001	<0.001	<0.001	
	31-May-13	6.9	50	0.553	<0.001	0.0011	0.091	0.001	0.681	<0.001	0.02	<0.0001	<0.001	<0.001	
	26-Jul-13	5	<2	1.746	<0.001	0.0027	0.098	0.001	0.924	<0.001	0.09	<0.0001	<0.001	<0.001	
	07-Oct-13	6.1	14	0.4	<0.001	0.0009	0.109	0.001	0.625	<0.001	0.04	<0.0001	<0.001	<0.001	
	25-Nov-13	6.6	8	0.169	<0.001	0.0006	0.075	<0.001	0.43	<0.001	0.03	<0.0001	<0.001	<0.001	
	30-Jan-14	6.3	30	0.124	<0.001	0.0005	0.004	<0.001	0.133	<0.001	0.05	<0.0001	<0.001	<0.001	
	04-Jun-14	4.8	234	0.168	<0.001	0.0005	0.054	<0.001	0.373	<0.001	<0.01	<0.0001	<0.001	<0.001	
BH901	01-Mar-06	5.8	<20	0.076	0.008	<0.001	0.074	<0.005	0.031	<0.005	<0.005	<0.00005	<0.005	NA	
	01-May-06	4.3	<20	2.7	<0.005	0.002	2.2	<0.005	0.89	<0.005	0.032	<0.00005	<0.005	NA	
	01-Dec-06	3.5	<20	3.8	0.006	0.005	2.3	<0.005	1.6	<0.005	0.140	<0.00005	<0.005	NA	
	01-Aug-07	6.70	62	0.09	<0.005	<0.001	0.013	<0.005	0.018	<0.005	0.031	<0.00005	<0.005	NA	
	01-Aug-08	3.3	<20	2.1	<0.005	0.003	0.96	<0.005	2.5	<0.005	0.060	<0.00005	<0.005	NA	
	01-Sep-09	5.36	6.5	0.342	<0.005	<0.001	0.401	<0.005	0.522	<0.005	<0.018	<0.00005	<0.005	NA	
	01-Aug-10	6.40	41	0.035	0.001	<0.001	0.019	<0.001	0.142	<0.001	0.030	<0.00005	<0.005	NA	
	01-Aug-11	6.70	11	0.185	<0.001	0.0003	0.067	<0.001	0.749	<0.001	0.030	<0.0001	<0.001	NA	
	14-Dec-11	6	<2	0.608	<0.001	0.0008	0.3	<0.001	2.682	<0.001	0.11	<0.0001	0.001	<0.001	
	13-Mar-12	5.2	0	0.44	0.002	0.0011	2.143	0.002	2.89	<0.001	<0.01	<0.0001	<0.001	0.001	
	14-May-12	6.7	0	3.982	0.007	0.0031	6.873	0.003	17.55	<0.001	0.03	<0.0001	0.003	<0.001	
	10-Jul-12	4.9	0	0.279	0.002	0.0005	0.834	<0.001	1.561	<0.001	0.02	<0.0001	<0.001	<0.001	
	18-Sep-12	6.1	0	0.212	0.001	0.0006	0.394	<0.001	0.815	<0.001	0.04	<0.0001	<0.001	<0.001	
	27-Nov-12	4.7	<0	0.283	0.001	0.0006	0.523	0.002	1.196	<0.001	0.04	<0.0001	<0.001	<0.001	
	25-Jan-13	6.4	13	0.319	<0.001	0.0008	0.536	0.002	1.19	<0.001	0.05	<0.0001	<0.001	0.001	
	03-Apr-13	7.1	24	0.136	<0.001	0.0003	0.234	<0.001	0.462	<0.001	<0.01	<0.0001	<0.001	<0.001	
	31-May-13	5.9	<30	0.307	0.001	0.0009	0.452	<0.001	1.325	<0.001	<0.01	<0.0001	<0.001	<0.001	
	26-Jul-13	4.7	<2	0.316	<0.001	0.0013	0.272	0.002	1.394	<0.001	0.03	<0.0001	<0.001	<0.001	
	07-Oct-13	5.4	0	0.36	<0.001	0.0014	0.437	<0.001	1.474	<0.001	0.04	<0.0001	<0.001	<0.001	
25-Nov-13	6	2	0.738	<0.001	0.0015	0.777	0.001	2.073	<0.001	0.1	<0.0001	<0.001	<0.001		
30-Jan-14	4.2	<2	0.553	<0.001	0.0009	1.356	0.003	1.592	<0.001	0.11	<0.0001	<0.001	<0.001		
04-Jun-14	4.3	0	0.521	<0.001	0.0036	1.612	0.003	2.457	<0.001	0.04	<0.0001	<0.001	<0.001		



Legend

— Site Boundary

● Sampled Boreholes

Title **Figure 1: Borehole Location Plan**

Site **The Royal Mint, Llantrisant Pontyclun, Mid Glamorgan, CF72 8YT**

Client **The Royal Mint**

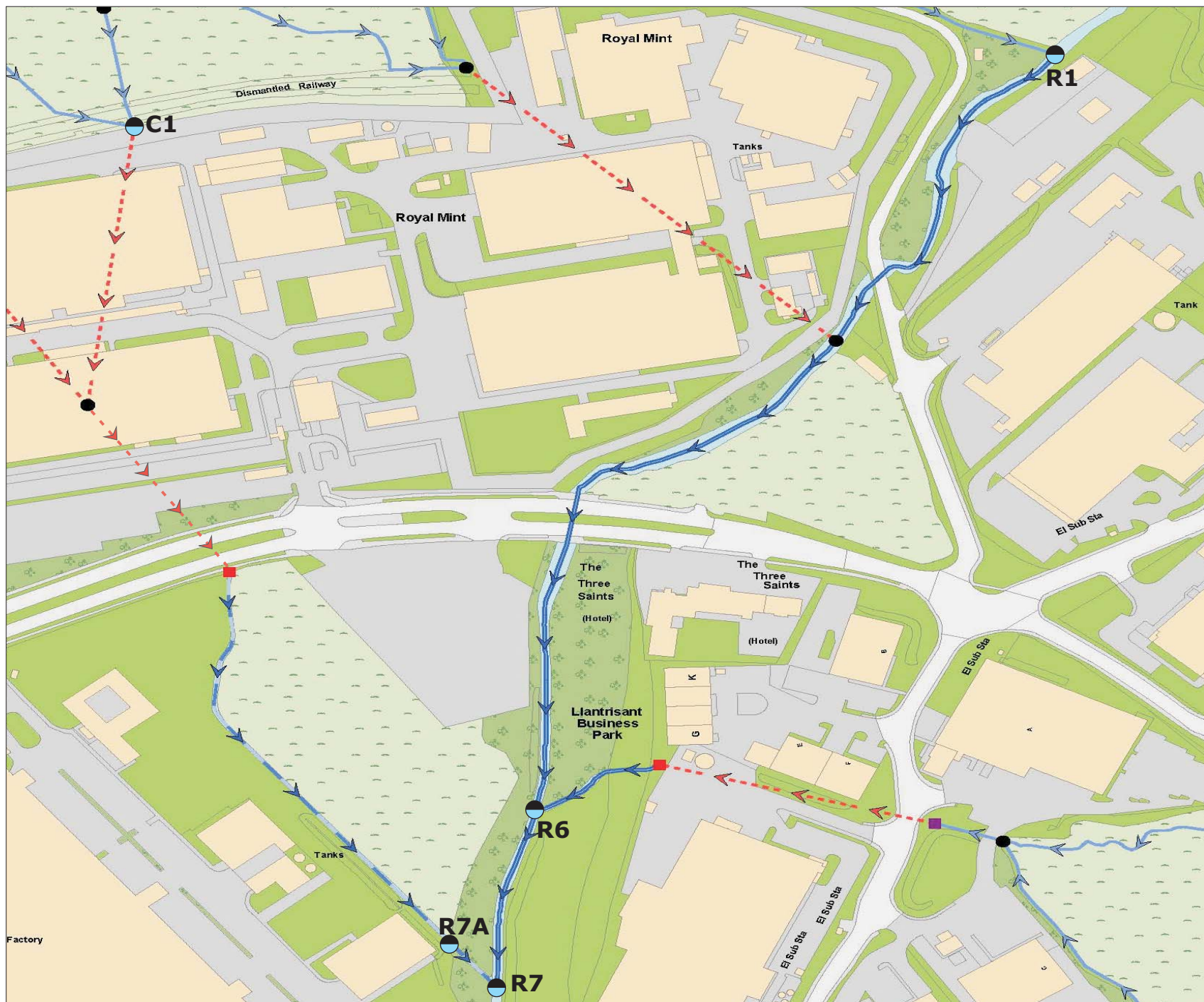
Project No. **UK17-20212**

Issue **1**

Date **June 2014**

Drawn by **RH**

 ENVIRON



Legend

 River Sampling Locations

Title **Figure 2: River Sampling Locations**

Site **The Royal Mint,
Llantrisant
Pontyclun,
Mid Glamorgan,
CF72 8YT**

Client **The Royal Mint**

Project No. **UK17-20212**

Issue **1**

Date **June 2014**

Drawn by **RH**

 **ENVIRON**

Scale

NTS

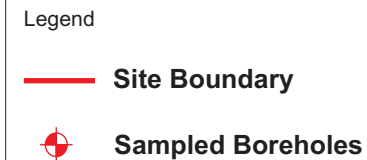
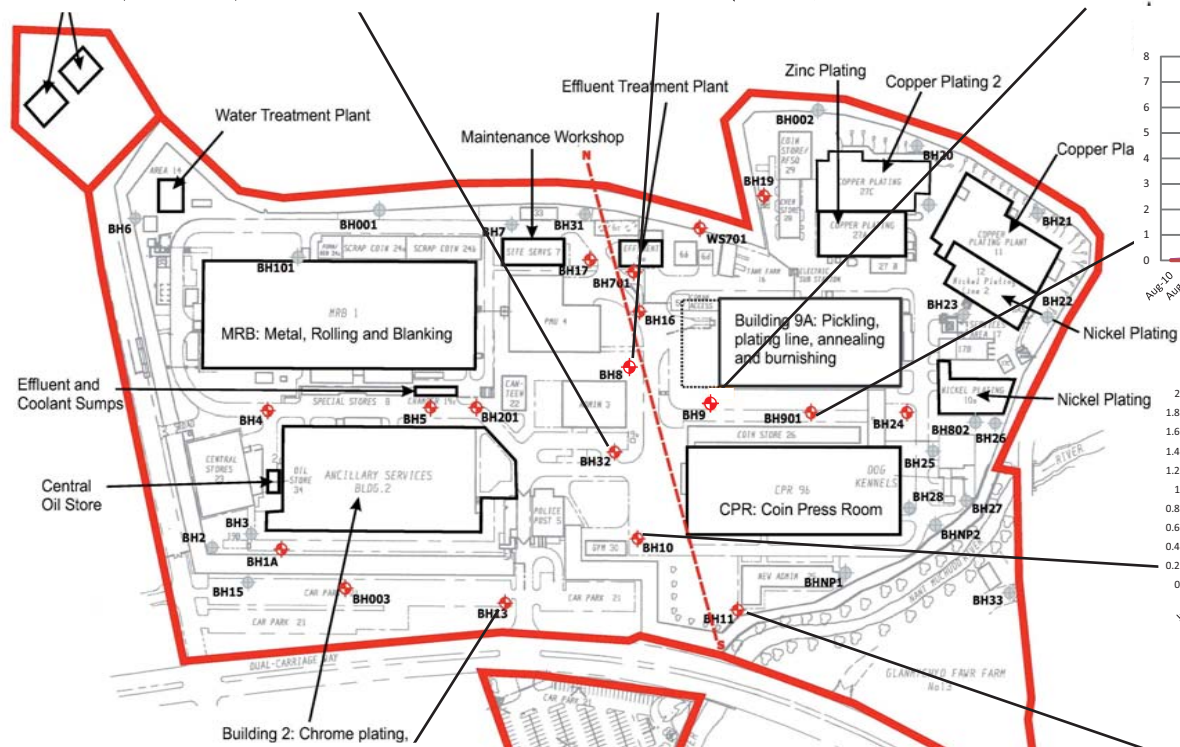
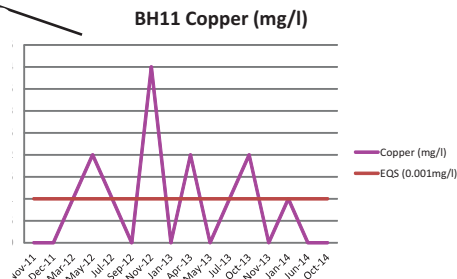
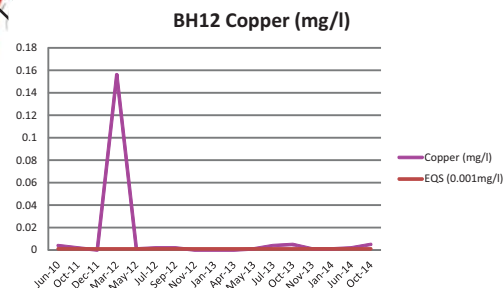
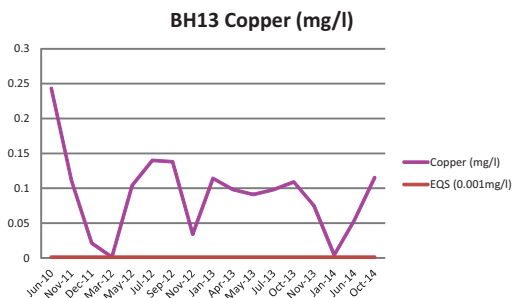
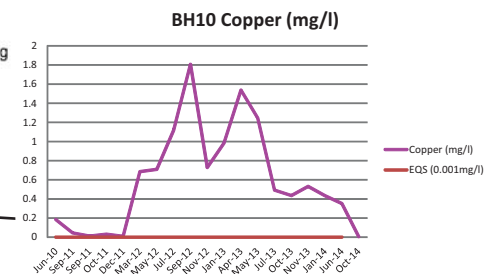
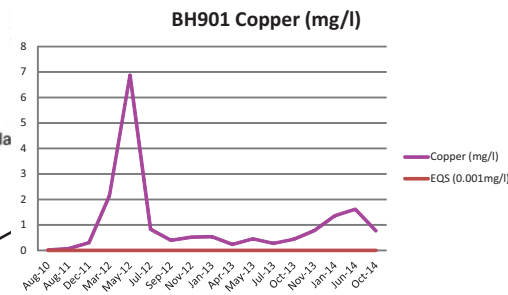
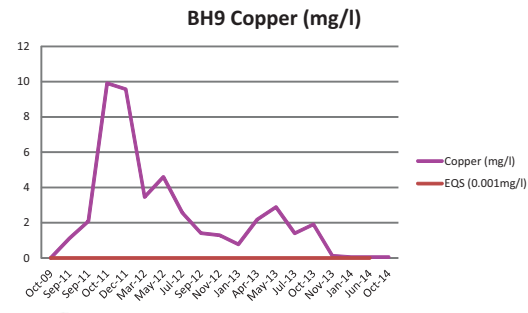
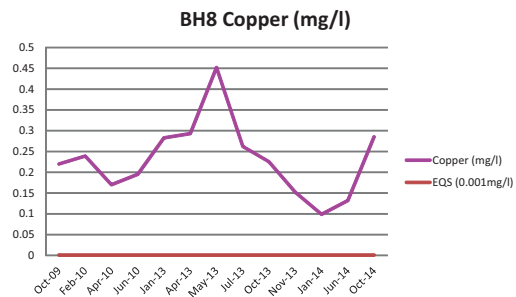
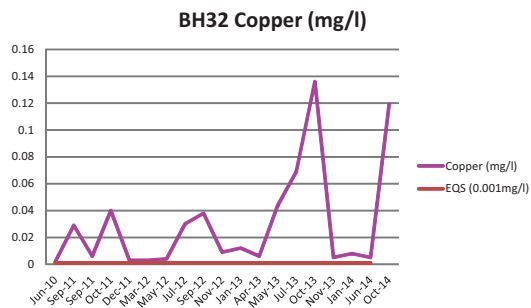


Figure 3: Graphical Representation of Copper Concentrations, 08/10/2014

**The Royal Mint,
Llantrisant
Pontyclun,
Mid Glamorgan,
CF22 8YT**

Client The Royal Mint

Project No. UK17-20212

Issue 1

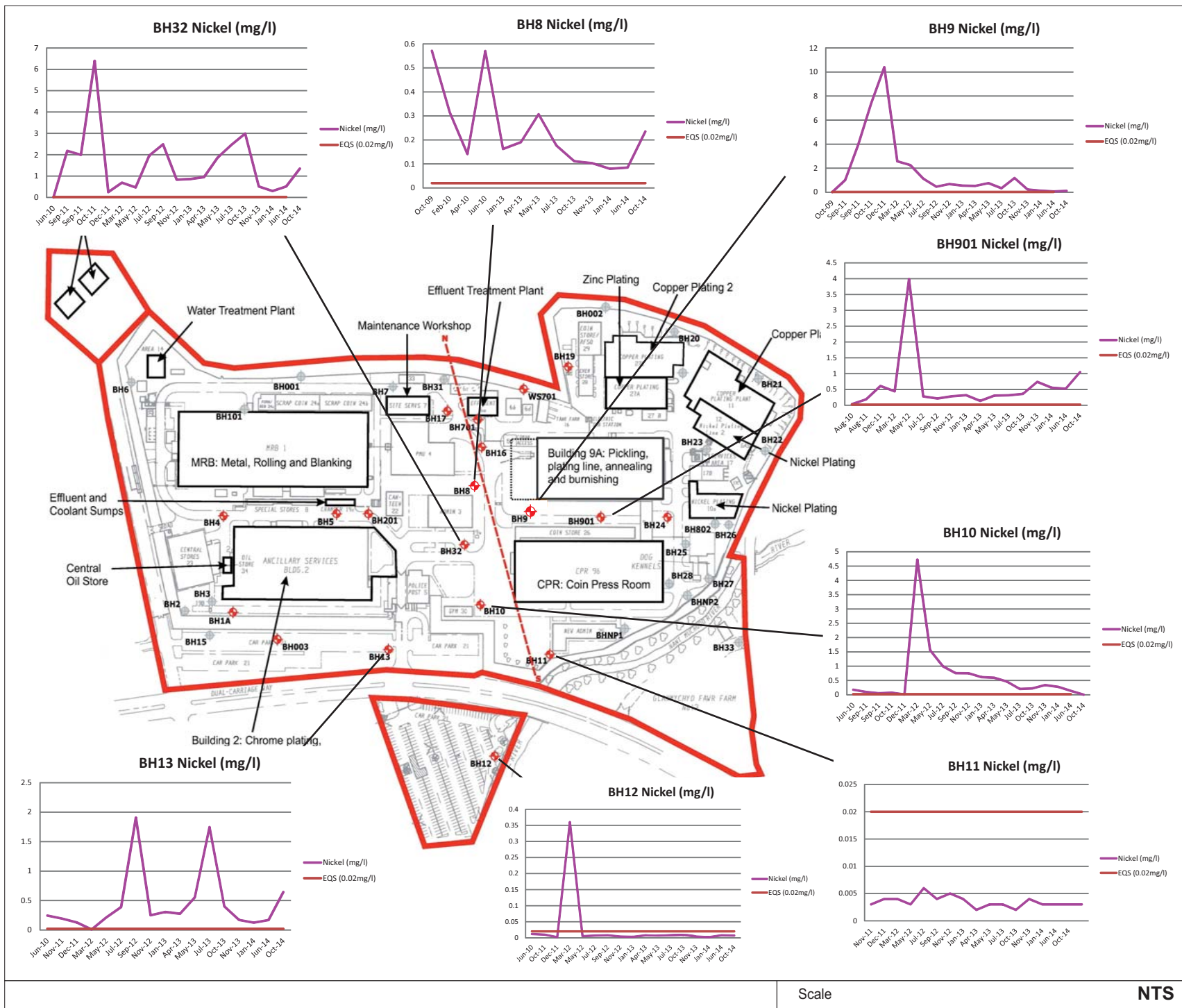
Date October 2014

Drawn by RH

Scale

NTS





Legend

Site Boundary

Sampled Boreholes

Title **Figure 4: Graphical Representation of Nickel Concentrations, 08/10/2014**

Site **The Royal Mint, Llantrisant Pontyclun, Mid Glamorgan, CF72 8YT**

Client **The Royal Mint**

Project No. **UK17-20212**

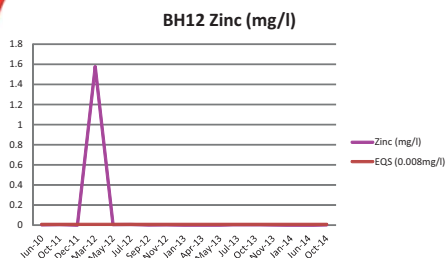
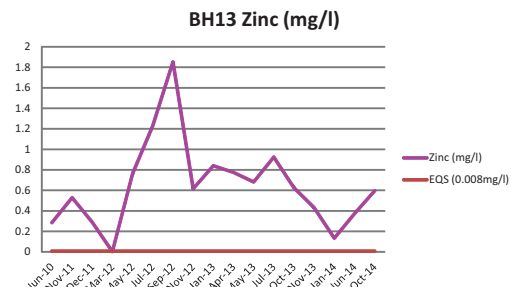
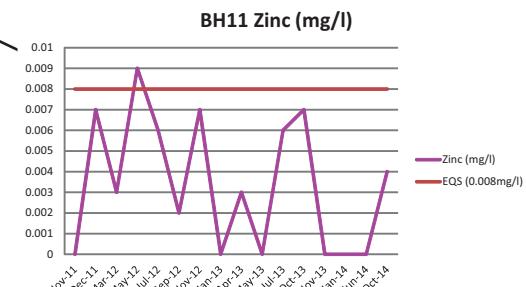
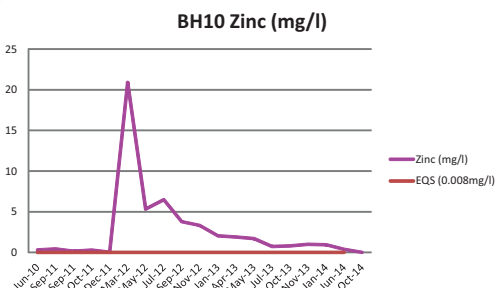
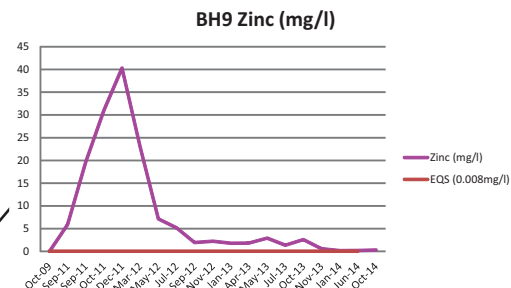
Issue **1**

Date **October 2014**

Drawn by **RH**

Scale **NTS**

ENVIRON

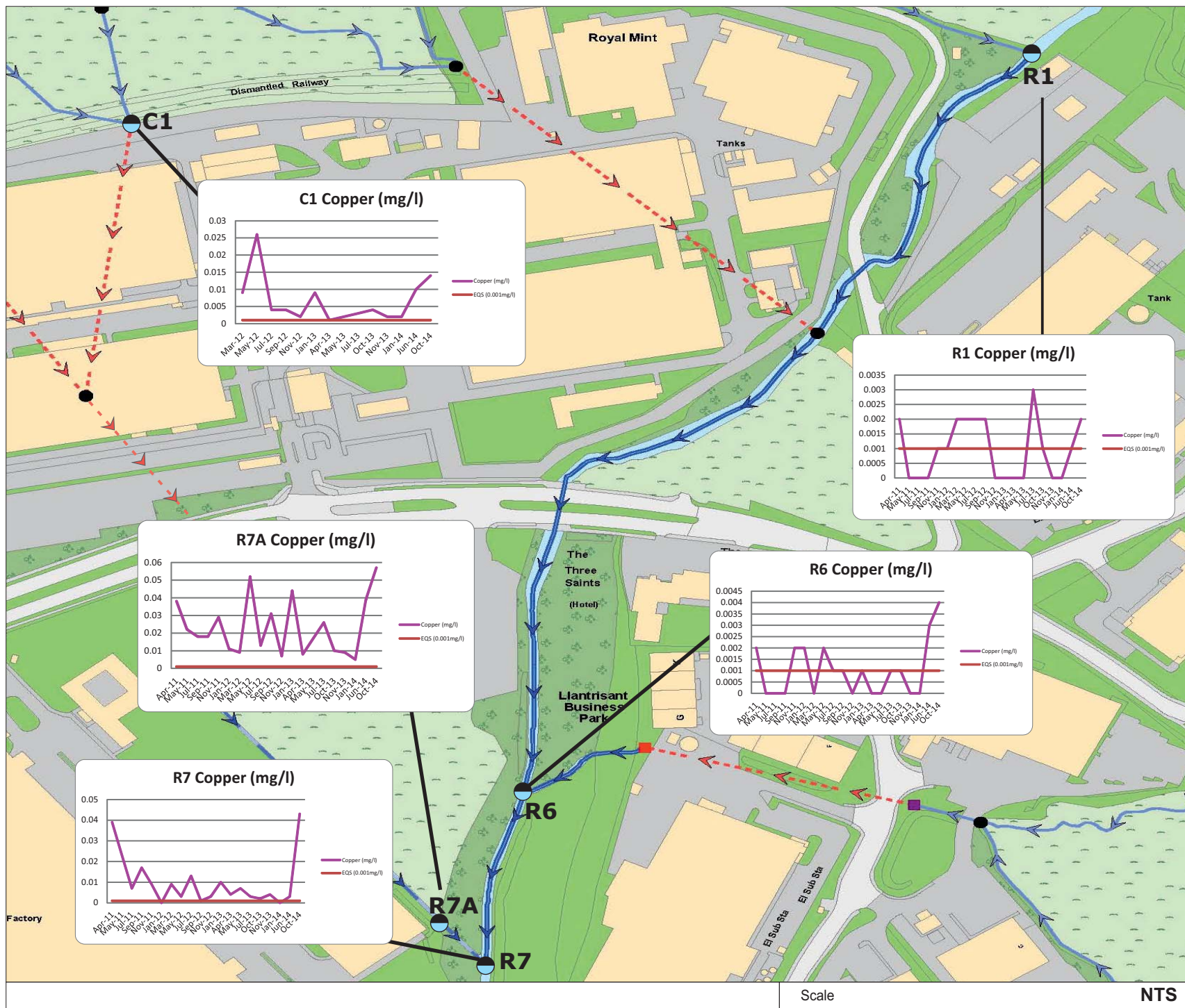


Sampled Boreholes

Drawn by	RH
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NTS





Legend

● River Sampling Locations

Title **Figure 6: Copper Concentration Graphs - Surface Water, 08/10/2014**

Site **The Royal Mint, Llantrisant Pontyclun, Mid Glamorgan, CF22 8YT**

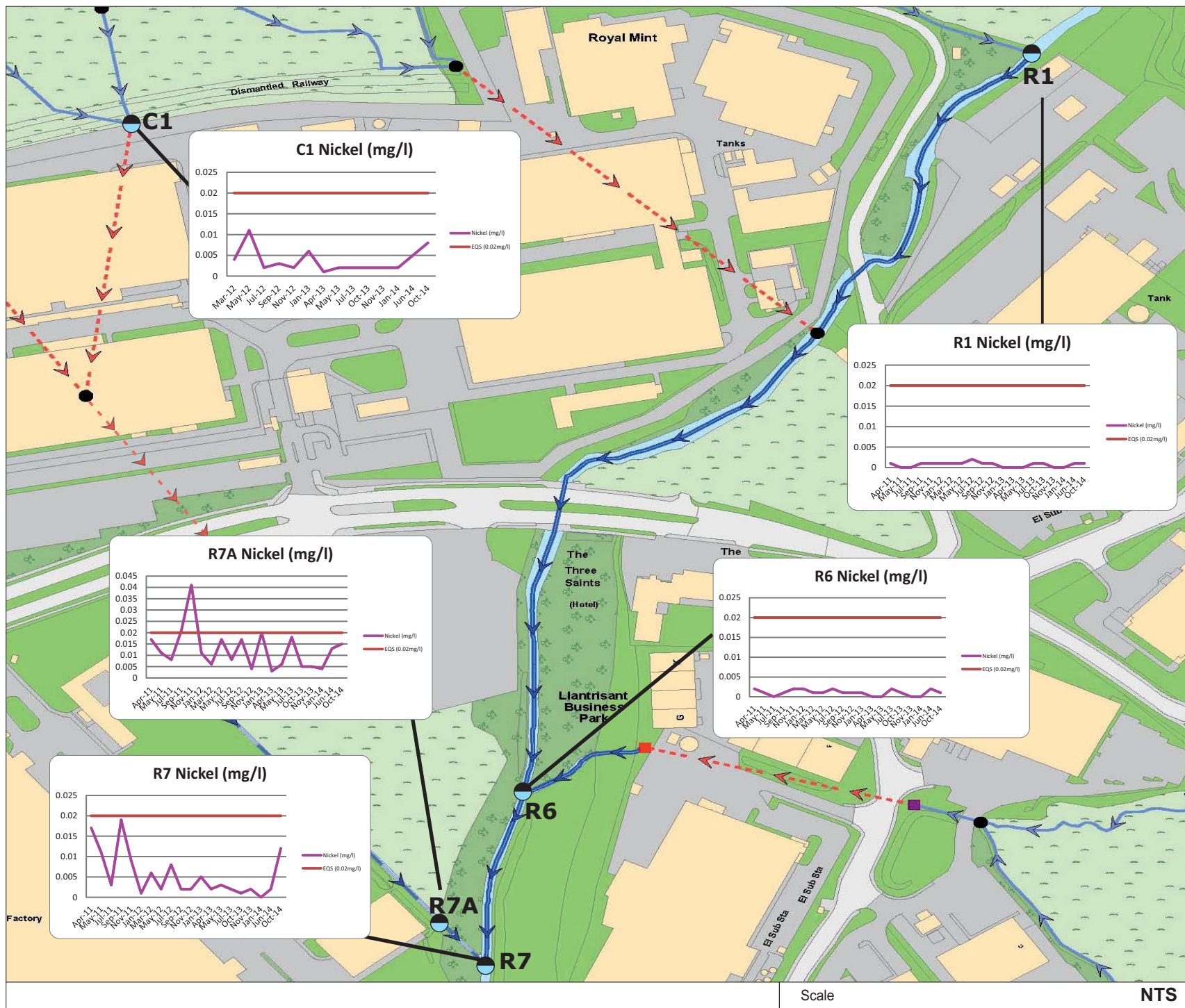
Client **The Royal Mint**

Project No. **UK17-20212**

Issue **1**

Date **October 2014**

Drawn by **RH**



Legend

● River Sampling Locations

Title **Figure 7: Nickel Concentration Graphs - Surface Water, 08/10/2014**

Site **The Royal Mint, Llantrisant Pontyclun, Mid Glamorgan, CF22 8YT**

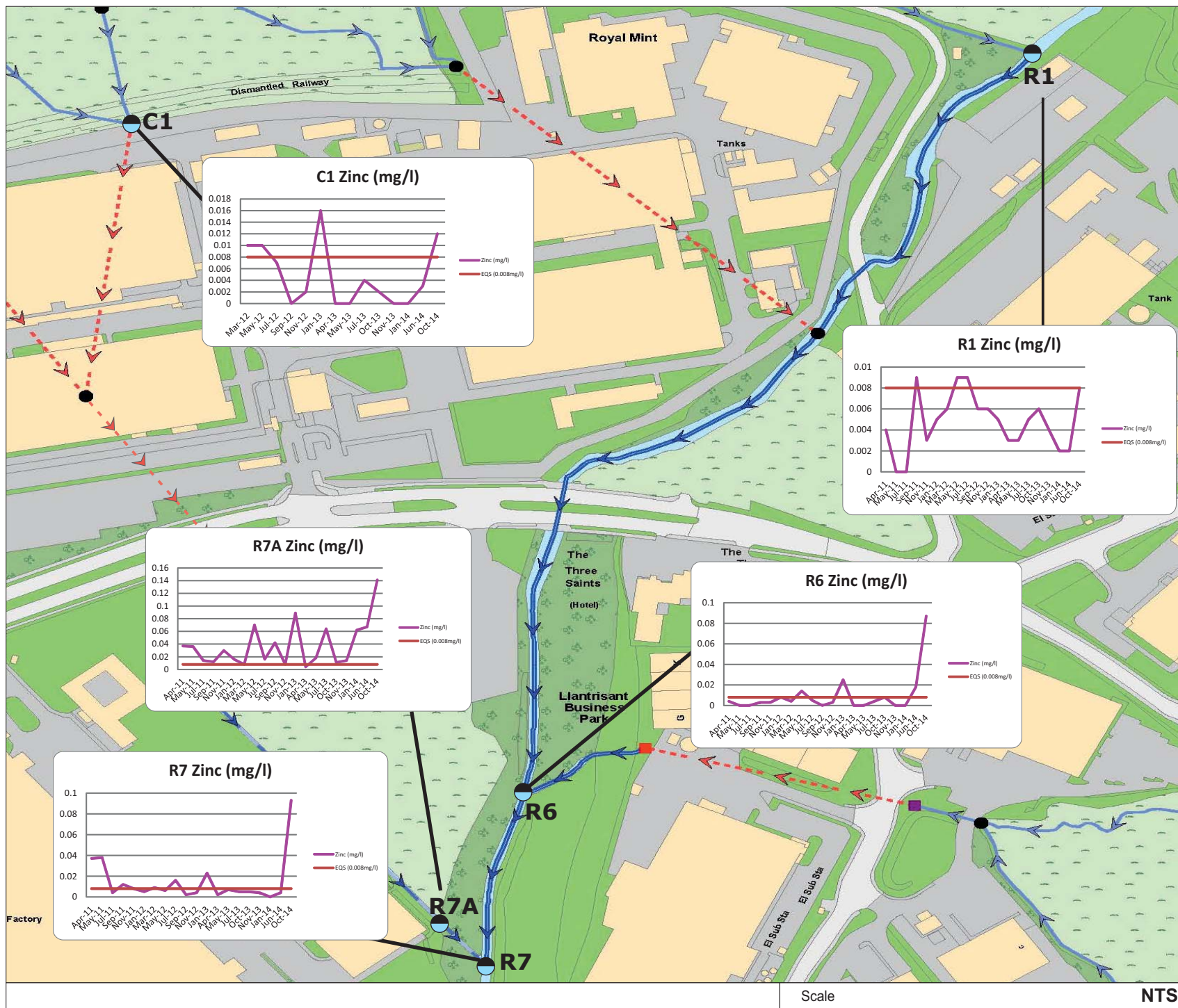
Client **The Royal Mint**

Project No. **UK17-20212**

Issue **1**

Date **October 2014**

Drawn by **RH**



Legend  River Sampling Locations	
Title Figure 8: Zinc Concentration Graphs - Surface Water, 08/10/2014	
Site The Royal Mint, Llantrisant Pontyclun, Mid Glamorgan, CF72 8YT	
Client The Royal Mint	
Project No.	UK17-20212
Issue	1
Date	October 2014
Drawn by	RH
 ENVIRON	