

Technical Note

Project:	P18-669 Glan Llyn Newport		
Subject:	Technical Note – Surface Water Temporary Pumping		
Prepared by:	David McCarroll – Geo-Environmental Engineer	Date:	10/03/2025
Authorised by:	Chris Wilson – Principal Geo-Environmental Engineer	Status:	S2 - Information
Document Ref:	18669-RLL-25-XX-RP-O-0704	Revision:	P01

1 Introduction

1.1 Scope and Purpose

This note has been prepared by Rodgers Leask Limited (RLL) on behalf of Revantage Real Estate Limited (RRE) to present an informational timeline of events during the period of emergency discharge of surface water from the Glan Llyn residential development into the channelised controlled water immediately adjacent to the east known as Monks Ditch.

Following closure of the penstock gate at Drain 2 north on the 12th February 2025; the Glan Llyn residential development has been without its primary active discharge point for surface water. Prior to closure of Drain 2, water was discharged into the Severn Estuary via the Tata Middle East West Ditch (MEWD) in line with a Discharge Consent controlled by Tata. Normal water level on site is below 4.5mAOD.

By the 24th February water levels around site reached a level of approximately 5.10mAOD. RRE correspondence with National Resources Wales (NRW) led to an agreed temporary solution following concerns about rising water levels in the occupied residential development. This allowed for temporary discharge of surface waters from the on site water network (Kings Wall Reen) to the controlled water immediately adjacent to the east of the site known as Monks Ditch.

This note has been prepared in response to a request made by (NRW) to monitor water quality whilst pumping into Monks Ditch. The scope of this note is to summarise the emergency discharge period alongside laboratory sampling from both the site surface water at the extraction point and both upstream and downstream of the discharge point of Monks Ditch. The note shall present observations made during the period of temporary discharge.

1.2 Timeline of emergency response

- Prior to the 12th of February 2025: surface water was discharged to the Tata MEWD via a sluiced culvert at Drain 2.
- 12th February 2025 (17:11): Drain 2 sluice closed due to the expiration of the Tata-RRE discharge agreement.
- 24th February 2025: the water levels around site and at the Drain 2 discharge point rise to approximately at 5.10mAOD.
- 25th February 2025: Following approval by RRE, pumping initiated from Kings Wall Reen using two pumps providing a combined maximum output of 580m³/hr. Daily sampling and observations commenced at the discharge point.
- 28th February 2025: one pump stopped pumping, reducing output to 290m³/hr.
- 1st March 2025: second pump in operation restoring 580m³/hr discharge rate.
- 4th March 2025 (13:00): a third pump was added. This pump increased output by 660m³/hr to a total of 1240m³/hr.
- 5th March 2025 (17:00): pumping from the site ceased. Water level at Drain 2 : 4.78mAOD.

2 Water Quality Summary

2.1 Chemical Sampling

Daily surface water sampling was undertaken during the emergency pumping period from three locations;

- Upstream (MD-U) – baseline conditions
- Extraction point (Temp Discharge) – water leaving the site
- Downstream (MD-D) – monitoring potential impacts

The sampling positions are shown on RLL drawing 18669-RLL-24-XX-DR-O-0573 (**Appendix A**).

A total of 27 samples were collected between 25th February and 5th March 2025, they were analysed for a suite of surface water quality parameters including:

- Metals, cyanide, phenols, BOD/COD
- PAHs
- Sulphate, ammoniacal nitrogen, pH

2.2 Chemical Screening Results

Chemical analysis of surface water samples collected from the three monitoring points; MD-U, Temp Discharge and MD-D were initially assessed for compliance with the Gwent Levels SSSI screening criteria.

Where no Gwent Levels SSSI screening value exists for a given determinand, the assessment has defaulted to the Water Framework Directive (WFD) Environmental Quality Standards (EQS) screening criteria where applicable.

2.3 MD-U Upstream

Chemical analysis at the upstream location (MD-U) was undertaken between 25th February and 5th March 2025, providing a baseline against which potential downstream impacts could be assessed.

The majority of determinands were within compliance with the Gwent Levels SSSI screening values; however, there were exceedances of the Gwent Levels SSSI or WFD EQS screening values. These exceedances are understood to be broadly consistent with the general water quality in Monks Ditch.

Exceedances were identified for suspended solids, ammoniacal nitrogen and biochemical oxygen demand (BOD). Exceedances were also recorded for some metals, including total cyanide and dissolved chromium. The exceedances at MD-U have been summarised in Table 1.

Table 1: MD-U (Upstream) – Exceedances of Gwent Levels SSSI/ WFD EQS Screening Values

Parameter	Screening Value	Exceedance Value(s)	Frequency of exceedances	Date(s)
Suspended Solids	60 mg/l	130, 370 mg/l	2 of 9	26/02/25 + 02/03/25
Ammoniacal Nitrogen	1.10 mg/l	1.40, 1.60 mg/l	2 of 9	28/02/25 + 05/03/25
Biochemical Oxygen Demand	6.50 mg O2/l	8.00 mg O2/l	1 of 9	05/03/2025
Cyanide (Total)*	0.001 mg/l*	0.09 mg/l	1 of 9	02/03/25
Chromium (Dissolved)*	3.40 mg/l*	3.50 mg/l	1 of 9	28/02/25

*WFD EQS value used

2.4 Temporary Discharge

Chemical analysis at the temporary discharge location (Temp Discharge) was undertaken between 25th February and 5th March 2025 to assess the quality of water being released to the Monks Ditch and its potential contribution to downstream water quality impacts.

Similar to MD-U, the majority of determinands were within compliance with the Gwent Levels SSSI screening values. The exceedances recorded at Temp Discharge have been

summarised in Table 2. The water quality and recorded exceedances are consistent with those recorded at the MD-U upstream location. The parameters of note are suspended solids, ammoniacal nitrogen, and cyanide (total) which exceeded screening thresholds at both locations, with concentrations of a similar magnitude.

The data suggests that the chemical quality of water at the Temp Discharge point is similar to, and frequently an improvement to the Monks Ditch conditions. The contribution to the downstream water quality is considered consistent with background variability observed within Monks Ditch.

Table 2: Temp Discharge (Extraction Point) – Exceedances of Gwent Levels SSSI/ WFD EQS Screening Values

Parameter	Screening Value	Exceedance Value(s)	Frequency of exceedances	Date(s)
Suspended Solids	60 mg/l	69 mg/l	1 of 9	03/03/25
Ammoniacal Nitrogen	1.10 mg/l	1.20, 1.50 + 1.40mg/l	3 of 9	01/03/25, 04/03/25 + 05/03/25
Cyanide (Total)*	0.001 mg/l*	0.07 mg/l	1 of 9	02/03/25

*WFD EQS value used

2.5 MD-D Downstream

Chemical analysis at the downstream location (MD-D) was undertaken between 25th February and 5th March 2025 to assess the water quality following the influence of both the upstream catchment and contributions from the temporary discharge.

Similar to MD-U and Temp Discharge, the majority of determinands were within compliance with the Gwent Levels SSSI screening values.

Several determinands exceeded Gwent Levels SSSI or WFD EQS screening values including suspended solids, and metals (Table 3).

Table 3: MD-D (Downstream) – Exceedances of Gwent Levels SSSI/ WFD EQS Screening Values

Parameter	Screening Value	Exceedance Value(s)	Frequency of exceedances	Date(s)
Suspended Solids	60 mg/l	120, 80 mg/l	2 of 9	25/03/25 – 26/03/25
Ammoniacal Nitrogen	1.10 mg/l	1.30 + 1.60mg/l	2 of 9	04/03/25 + 05/03/25
Biochemical Oxygen Demand	6.50 mg O2/l	8.00 mg O2/l	1 of 9	05/03/25

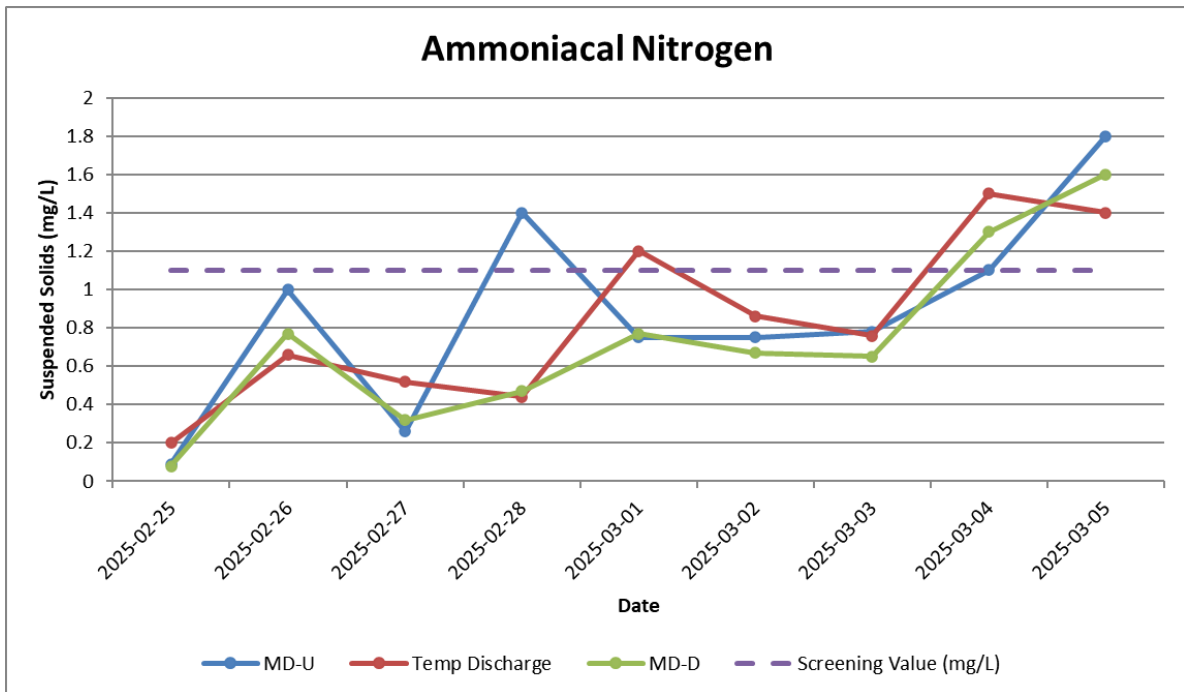
Cyanide (Total)*	0.001 mg/l*	0.07 mg/l	1 of 9	02/03/25
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*WFD EQS value used

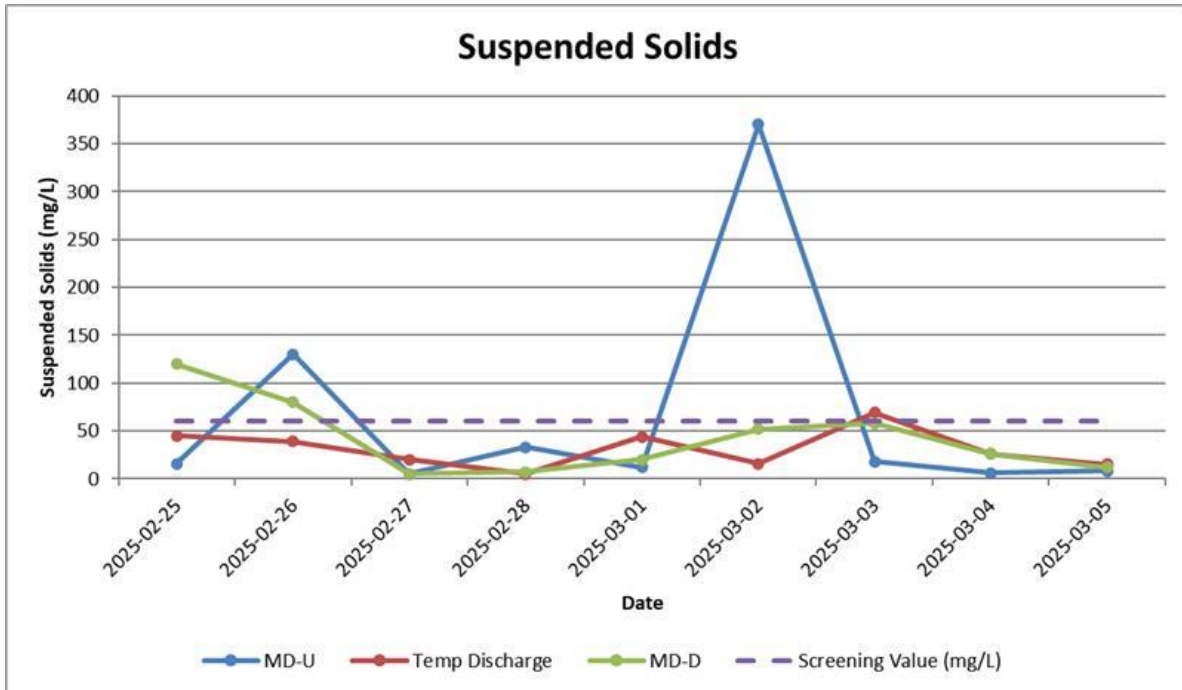
The results show exceedances that align with both background conditions and contributions from upstream and results remain consistent with background variability observed within Monks Ditch.

2.6 Notable Contaminant Plots

Time series plots for determinands (Ammoniacal Nitrogen and Suspended Solids) that recorded exceedances at each of the three sampling positions have been plotted to visualise exceedances during the emergency pumping period across all three monitoring points.



For Ammoniacal Nitrogen, concentrations at MD-U, Temp Discharge, and MD-D rise above the screening threshold of 1.10 mg/L, particularly towards the latter half of the monitoring period, with MD-U peaking at 1.8 mg/L on 5th March 2025.



For Suspended Solids, the most significant exceedance occurred at MD-U on 2nd March 2025, reaching approximately 370 mg/L substantially above the 60 mg/L threshold. Additionally, more marginal exceedances are also evident at Temp Discharge and MD-D and MD-U.

2.7 On Site Visual observations and pH monitoring

RLL conducted daily pH monitoring using a calibrated hand pH probe and visual inspections to assess water quality at all three sampling locations. Observations focused on:

- Immediate changes at the discharge point
- Baseline conditions upstream
- Potential impacts downstream

Visual observations assessed turbidity, discoloration, and other indicators of water quality changes. A summary of monitoring data is provided in **Appendix D**.

3 Conclusion

The emergency discharge of surface water from the Glan Llyn residential development site into Monks Ditch was implemented as a temporary measure following the closure of the primary discharge point at Drain 2. Water quality monitoring, including chemical sampling, visual observations, and pH measurements, were conducted throughout the discharge period to assess potential environmental impacts.

Chemical data from samples obtained during the emergency discharge period recorded exceedances across all three locations, with common determinands including suspended solids, ammoniacal nitrogen and cyanide.






The upstream location (MD-U) sample results indicated that baseline exceedances were reflective of background concentrations associated with the broader Monks Ditch catchment. The Temp Discharge location exhibited a similar set of exceedances, with concentrations comparable and mostly an improvement to the MD-U results. This suggests that the discharge was not detrimentally impacting overall surface water quality in Monks Ditch. At the downstream location (MD-D), the observed exceedances were consistent with the upstream and discharge locations. The results were within the range of values recorded at the other monitoring locations.

Daily visual monitoring recorded no evidence of persistent or significant changes in water turbidity, discoloration, or other indicators of contamination at the discharge point or downstream locations. The pH values remained within expected compliant ranges, further indicating that the contribution of the emergency discharge has not adversely impacted the water quality in Monk's Ditch.

Appendices

Appendix A – Drawings



- Key:
-  Sample Locations
 -  Monks Ditch
 -  Reen Network
 -  Pumping Location (Extraction Point)
 -  Central Lakes

Sketch Title:
Surface Water Temporary Pumping to Monks Ditch

Date: 05/03/2025

Drawn by:
DM

Checked:
CW

Sketch Reference:
18669-RLL-25-XX-DR-O-0705

Appendix B – Chemical Results



Final Report

Report No.: 25-06778-1

Initial Date of Issue: 06-Mar-2025

Re-Issue Details:

Client Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Aimee Meredith-Smith
Chris Wilson
David McCarroll
Ruth Hardy

Project P18-669

Quotation No.: Q25-37295 **Date Received:** 27-Feb-2025

Order No.: 136787 **Date Instructed:** 27-Feb-2025

No. of Samples: 3

Turnaround (Wkdays): 5 **Results Due:** 05-Mar-2025

Date Approved: 06-Mar-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-06778	25-06778	25-06778		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1939414	1939415	1939416		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D		
		Sample Type:		WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water		
		Date Sampled:		25-Feb-2025	25-Feb-2025	25-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
pH at 20C		U	1010		4.0	8.2	8.3	8.2
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	320	450	310
Suspended Solids At 105C		U	1030	mg/l	5.0	16	45	120
Total Dissolved Solids		N	1020	mg/l	1.0	210	300	200
Turbidity		N	1060	NTU	1.0	14	31	16
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	< 4.0	5.0	< 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	< 10	23	14
Dissolved Oxygen		N	1150	mg O2/l	0.50	9.7	8.9	8.6
Redox Potential		N	1170	mV	N/A	210	220	220
Chloride		U	1220	mg/l	1.0	26	40	26
Fluoride		U	1220	mg/l	0.050	0.13	0.29	0.13
Ammonia (Free)		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050
Ammonia (Free) as N		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050
Ammonium		U	1220	mg/l	0.050	0.11	0.24	0.093
Ammoniacal Nitrogen		U	1220	mg/l	0.050	0.093	0.20	0.078
Phosphate		U	1220	mg/l	0.200	< 0.20	0.24	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	0.042	0.078	0.042
Sulphur		N	1220	mg/l	1.0	5.7	19	5.7
Sulphate		U	1220	mg/l	1.0	17	56	17
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	42	69	41
Magnesium (Dissolved)		U	1455	mg/l	0.20	8.2	5.7	8.1
Calcium (Total)		N	1455	mg/l	5.0	45	72	43
Magnesium (Total)		N	1455	mg/l	0.50	8.9	6.3	8.4
Total Hardness as CaCO3		U	1270	mg/l	15	140	200	140
Arsenic (Dissolved)		U	1455	µg/l	0.20	0.50	1.4	0.51
Boron (Dissolved)		U	1455	µg/l	10.0	59	88	54
Barium (Dissolved)		U	1455	µg/l	5.00	66	41	66
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Copper (Dissolved)		U	1455	µg/l	0.50	0.98	4.0	1.1
Iron (Dissolved)		N	1455	µg/l	5.0	14	64	15
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	3.5	34	3.6
Nickel (Dissolved)		U	1455	µg/l	0.50	< 0.50	0.84	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-06778	25-06778	25-06778		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1939414	1939415	1939416		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D		
		Sample Type:		WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water		
		Date Sampled:		25-Feb-2025	25-Feb-2025	25-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Antimony (Dissolved)		U	1455	µg/l	0.50	< 0.50	0.67	< 0.50
Selenium (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Vanadium (Dissolved)		U	1455	µg/l	0.50	< 0.50	4.6	< 0.50
Zinc (Dissolved)		U	1455	µg/l	2.5	5.7	7.4	4.3
Arsenic (Total)		N	1455	µg/l	0.20	0.82	2.0	0.83
Boron (Total)		N	1455	µg/l	10.0	56	95	52
Barium (Total)		N	1455	µg/l	5.00	80	54	78
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	2.0	3.2	2.0
Copper (Total)		N	1455	µg/l	0.50	3.7	6.4	3.0
Iron (Total)		N	1455	µg/l	5.0	570	1400	490
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	37	71	34
Nickel (Total)		N	1455	µg/l	0.50	3.3	3.0	1.4
Lead (Total)		N	1455	µg/l	0.50	2.6	6.6	2.6
Antimony (Total)		N	1455	µg/l	0.50	< 0.50	0.84	< 0.50
Selenium (Total)		N	1455	µg/l	0.50	< 0.50	0.50	< 0.50
Vanadium (Total)		N	1455	µg/l	0.50	1.3	7.0	1.1
Zinc (Total)		N	1455	µg/l	2.5	18	36	39
Chromium (Hexavalent)		U	1490	µg/l	20	< 20	< 20	< 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	3.3	6.4	3.3
Total Inorganic Carbon		N	1220	mg/l	2.5	34	43	36
Total Organic Carbon		U	1610	mg/l	2.0	3.2	6.5	3.4
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-06778	25-06778	25-06778
Quotation No.: Q25-37295		Chemtest Sample ID.:				1939414	1939415	1939416
		Client Sample ID.:				MD-U	Temp Discharge	MD-D
		Sample Type:				WATER	WATER	WATER
		Sample Sub Type:				Surface Water	Surface Water	Surface Water
		Date Sampled:				25-Feb-2025	25-Feb-2025	25-Feb-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-p-phenylenediamine.	PL LE GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 25-07084-1

Initial Date of Issue: 14-Mar-2025

Re-Issue Details:

Client Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Aimee Meredith-Smith
Chris Wilson
David McCarroll
Ruth Hardy

Project P18-669

Quotation No.: Q25-37295 **Date Received:** 28-Feb-2025

Order No.: 136787 **Date Instructed:** 02-Mar-2025

No. of Samples: 4

Turnaround (Wkdays): 5 **Results Due:** 06-Mar-2025

Date Approved: 14-Mar-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07084	25-07084	25-07084	25-07084		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1940603	1940604	1940605	1940606		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D	GAC-Outlet		
		Sample Type:		WATER	WATER	WATER	WATER		
		Sample Sub Type:							
		Date Sampled:		26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
pH at 20C		U	1010		4.0	7.3	7.5	7.4	7.3
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	310	400	360	570
Suspended Solids At 105C		U	1030	mg/l	5.0	130	39	80	< 5.0
Total Dissolved Solids		N	1020	mg/l	1.0	200	260	230	370
Turbidity		N	1060	NTU	1.0	87	80	120	12
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	[B] < 4.0	[B] 8.0	[B] < 4.0	[B] < 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	13	19	15	15
Dissolved Oxygen		N	1150	mg O2/l	0.50	8.7	8.8	8.3	8.7
Redox Potential		N	1170	mV	N/A	210	210	210	220
Chloride		U	1220	mg/l	1.0	36	37	35	31
Fluoride		U	1220	mg/l	0.050	0.12	0.28	0.12	0.58
Ammonia (Free)		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Ammonia (Free) as N		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Ammonium		U	1220	mg/l	0.050	1.3	0.83	0.98	1.1
Ammoniacal Nitrogen		U	1220	mg/l	0.050	1.0	0.66	0.77	0.86
Phosphate		U	1220	mg/l	0.200	0.34	0.23	0.24	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	0.11	0.075	0.078	0.023
Sulphur		N	1220	mg/l	1.0	5.3	20	6.7	60
Sulphate		U	1220	mg/l	1.0	16	59	20	180
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	38	61	41	81
Magnesium (Dissolved)		U	1455	mg/l	0.20	7.9	5.1	7.9	4.0
Calcium (Total)		N	1455	mg/l	5.0	40	65	45	85
Magnesium (Total)		N	1455	mg/l	0.50	8.4	5.6	8.7	4.3
Total Hardness as CaCO3		U	1270	mg/l	15	130	170	130	220
Arsenic (Dissolved)		U	1455	µg/l	0.20	0.52	1.6	0.67	2.2
Boron (Dissolved)		U	1455	µg/l	10.0	21	55	25	100
Barium (Dissolved)		U	1455	µg/l	5.00	66	41	64	53
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	2.8	2.4	2.6	2.1
Copper (Dissolved)		U	1455	µg/l	0.50	2.9	4.4	2.1	2.1
Iron (Dissolved)		N	1455	µg/l	5.0	57	91	39	24
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	4.7	35	4.9	26
Nickel (Dissolved)		U	1455	µg/l	0.50	1.7	2.2	1.8	3.3
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	0.67	< 0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07084	25-07084	25-07084	25-07084		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1940603	1940604	1940605	1940606		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D	GAC-Outlet		
		Sample Type:		WATER	WATER	WATER	WATER		
		Sample Sub Type:							
		Date Sampled:		26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Antimony (Dissolved)		U	1455	µg/l	0.50	< 0.50	0.96	< 0.50	1.1
Selenium (Dissolved)		U	1455	µg/l	0.50	< 0.50	0.66	< 0.50	1.7
Vanadium (Dissolved)		U	1455	µg/l	0.50	0.85	5.9	0.81	3.7
Zinc (Dissolved)		U	1455	µg/l	2.5	16	14	10	12
Arsenic (Total)		N	1455	µg/l	0.20	0.88	2.0	0.84	2.4
Boron (Total)		N	1455	µg/l	10.0	27	63	30	100
Barium (Total)		N	1455	µg/l	5.00	99	120	100	56
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	3.9	4.0	2.6	2.3
Copper (Total)		N	1455	µg/l	0.50	4.7	7.8	3.7	2.7
Iron (Total)		N	1455	µg/l	5.0	570	1200	470	130
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	20	68	17	30
Nickel (Total)		N	1455	µg/l	0.50	2.9	4.1	1.9	3.4
Lead (Total)		N	1455	µg/l	0.50	2.5	7.6	1.6	0.88
Antimony (Total)		N	1455	µg/l	0.50	0.58	0.96	< 0.50	0.97
Selenium (Total)		N	1455	µg/l	0.50	< 0.50	0.94	< 0.50	1.6
Vanadium (Total)		N	1455	µg/l	0.50	1.7	8.4	1.7	4.1
Zinc (Total)		N	1455	µg/l	2.5	32	130	24	13
Chromium (Hexavalent)		U	1490	µg/l	20	[B] < 20	[B] < 20	[B] < 20	[B] < 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	4.1	5.9	3.7	5.4
Total Inorganic Carbon		N	1220	mg/l	2.5	36	38	36	24
Total Organic Carbon		U	1610	mg/l	2.0	4.2	5.9	3.8	5.3
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07084	25-07084	25-07084	25-07084
Quotation No.: Q25-37295		Chemtest Sample ID.:				1940603	1940604	1940605	1940606
		Client Sample ID.:				MD-U	Temp Discharge	MD-D	GAC-Outlet
		Sample Type:				WATER	WATER	WATER	WATER
		Sample Sub Type:							
		Date Sampled:				26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1940603		MD-U		26-Feb-2025	B	Coloured Winchester 1000ml
1940603		MD-U		26-Feb-2025	B	EPA Vial 40ml
1940603		MD-U		26-Feb-2025	B	Plastic Bottle 1000ml
1940604		Temp Discharge		26-Feb-2025	B	Coloured Winchester 1000ml
1940604		Temp Discharge		26-Feb-2025	B	EPA Vial 40ml
1940604		Temp Discharge		26-Feb-2025	B	Plastic Bottle 1000ml
1940605		MD-D		26-Feb-2025	B	Coloured Winchester 1000ml
1940605		MD-D		26-Feb-2025	B	EPA Vial 40ml
1940605		MD-D		26-Feb-2025	B	Plastic Bottle 1000ml
1940606		GAC-Outlet		26-Feb-2025	B	Coloured Winchester 1000ml
1940606		GAC-Outlet		26-Feb-2025	B	EPA Vial 40ml
1940606		GAC-Outlet		26-Feb-2025	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-p-phenylenediamine.	PL LE GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Amended Report

Report No.: 25-07244-3

Initial Date of Issue: 10-Mar-2025 **Date of Re-Issue:** 02-Apr-2025

Re-Issue Details: This report has been revised and directly supersedes 25-07244-2 in its entirety

Client: Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Chris Wilson
Aimee Meredith-Smith
David McCarroll
Ruth Hardy

Project: P18-669

Quotation No.: Q25-37295 **Date Received:** 03-Mar-2025

Order No.: 136787 **Date Instructed:** 03-Mar-2025

No. of Samples: 4

Turnaround (Wkdays): 5 **Results Due:** 07-Mar-2025

Date Approved: 02-Apr-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07244	25-07244	25-07244	25-07244		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1941313	1941314	1941315	1941316		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D	GAC-Outlet		
		Sample Type:		WATER	WATER	WATER	WATER		
		Sample Sub Type:							
		Date Sampled:		27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
pH at 20C		U	1010		4.0	7.3	7.1	7.3	7.1
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	340	500	370	620
Suspended Solids At 105C		U	1030	mg/l	5.0	< 5.0	20	< 5.0	< 5.0
Total Dissolved Solids		N	1020	mg/l	1.0	220	330	240	400
Turbidity		N	1060	NTU	1.0	15	51	15	4.6
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	[B] 4.0	[B] 6.0	[B] < 4.0	[B] 5.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	16	27	16	24
Dissolved Oxygen		N	1150	mg O2/l	0.50	8.6	8.8	8.7	8.7
Redox Potential		N	1170	mV	N/A	190	200	190	200
Chloride		U	1220	mg/l	1.0	27	40	44	29
Fluoride		U	1220	mg/l	0.050	0.12	0.28	0.13	0.57
Ammonia (Free)		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Ammonia (Free) as N		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Ammonium		U	1220	mg/l	0.050	0.34	0.67	0.41	0.26
Ammoniacal Nitrogen		U	1220	mg/l	0.050	0.26	0.52	0.32	0.20
Phosphate		U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	0.042	0.059	0.042	< 0.020
Sulphur		N	1220	mg/l	1.0	6.7	21	8.7	77
Sulphate		U	1220	mg/l	1.0	20	64	26	230
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	0.070
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	0.070
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	46	76	50	84
Magnesium (Dissolved)		U	1455	mg/l	0.20	10	6.3	9.6	3.6
Calcium (Total)		N	1455	mg/l	5.0	49	79	52	89
Magnesium (Total)		N	1455	mg/l	0.50	10	6.7	9.8	3.9
Total Hardness as CaCO3		U	1270	mg/l	15	160	220	160	230
Arsenic (Dissolved)		U	1455	µg/l	0.20	0.47	1.4	0.61	2.3
Boron (Dissolved)		U	1455	µg/l	10.0	26	59	29	84
Barium (Dissolved)		U	1455	µg/l	5.00	79	44	76	49
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	1.1	1.2	0.67	1.0
Copper (Dissolved)		U	1455	µg/l	0.50	0.96	5.1	2.8	3.1
Iron (Dissolved)		N	1455	µg/l	5.0	14	56	24	39
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	2.2	24	3.8	11
Nickel (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	1.2	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07244	25-07244	25-07244	25-07244		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1941313	1941314	1941315	1941316		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D	GAC-Outlet		
		Sample Type:		WATER	WATER	WATER	WATER		
		Sample Sub Type:							
		Date Sampled:		27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Antimony (Dissolved)		U	1455	µg/l	0.50	< 0.50	0.75	< 0.50	1.0
Selenium (Dissolved)		U	1455	µg/l	0.50	< 0.50	1.1	< 0.50	1.9
Vanadium (Dissolved)		U	1455	µg/l	0.50	0.61	5.5	1.2	4.1
Zinc (Dissolved)		U	1455	µg/l	2.5	11	8.2	20	5.3
Arsenic (Total)		N	1455	µg/l	0.20	0.73	1.9	0.73	2.6
Boron (Total)		N	1455	µg/l	10.0	28	66	33	89
Barium (Total)		N	1455	µg/l	5.00	97	67	83	83
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	1.4	2.3	1.1	1.3
Copper (Total)		N	1455	µg/l	0.50	3.8	7.1	3.6	4.7
Iron (Total)		N	1455	µg/l	5.0	300	750	260	260
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	15	49	12	20
Nickel (Total)		N	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Lead (Total)		N	1455	µg/l	0.50	1.9	5.3	1.4	1.8
Antimony (Total)		N	1455	µg/l	0.50	< 0.50	1.0	< 0.50	1.2
Selenium (Total)		N	1455	µg/l	0.50	< 0.50	1.4	0.54	1.7
Vanadium (Total)		N	1455	µg/l	0.50	1.1	7.3	1.5	5.1
Zinc (Total)		N	1455	µg/l	2.5	18	32	18	18
Chromium (Hexavalent)		U	1490	µg/l	20	[B] < 20	[B] < 20	[B] < 20	[B] < 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	4.2	6.8	3.6	6.5
Total Inorganic Carbon		N	1220	mg/l	2.5	36	46	19	20
Total Organic Carbon		U	1610	mg/l	2.0	4.2	6.6	3.5	6.4
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07244	25-07244	25-07244	25-07244
Quotation No.: Q25-37295		Chemtest Sample ID.:				1941313	1941314	1941315	1941316
		Client Sample ID.:				MD-U	Temp Discharge	MD-D	GAC-Outlet
		Sample Type:				WATER	WATER	WATER	WATER
		Sample Sub Type:							
		Date Sampled:				27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1941313		MD-U		27-Feb-2025	B	Coloured Winchester 1000ml
1941313		MD-U		27-Feb-2025	B	EPA Vial 40ml
1941313		MD-U		27-Feb-2025	B	Plastic Bottle 1000ml
1941314		Temp Discharge		27-Feb-2025	B	Coloured Winchester 1000ml
1941314		Temp Discharge		27-Feb-2025	B	EPA Vial 40ml
1941314		Temp Discharge		27-Feb-2025	B	Plastic Bottle 1000ml
1941315		MD-D		27-Feb-2025	B	Coloured Winchester 1000ml
1941315		MD-D		27-Feb-2025	B	EPA Vial 40ml
1941315		MD-D		27-Feb-2025	B	Plastic Bottle 1000ml
1941316		GAC-Outlet		27-Feb-2025	B	Coloured Winchester 1000ml
1941316		GAC-Outlet		27-Feb-2025	B	EPA Vial 40ml
1941316		GAC-Outlet		27-Feb-2025	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-p-phenylenediamine.	PL LE GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 25-07457-1

Initial Date of Issue: 21-Mar-2025

Re-Issue Details:

Client Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Aimee Meredith-Smith
Chris Wilson
David McCarroll
Ruth Hardy

Project P18-669

Quotation No.: Q25-37295 **Date Received:** 05-Mar-2025

Order No.: 136787 **Date Instructed:** 05-Mar-2025

No. of Samples: 14

Turnaround (Wkdays): 7 **Results Due:** 13-Mar-2025

Date Approved: 21-Mar-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	
Quotation No.: Q25-37295		Chemtest Sample ID.:		1942203	1942204	1942205	1942206	1942207	1942208	1942209	1942210		
		Client Sample ID.:		Drain 2	Temp Discharge	MD-U	MD-D	D2-S	Temp Discharge	MD-U	MD-D		
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:		01-Mar-2025	01-Mar-2025	01-Mar-2025	01-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
pH at 20C		U	1010		4.0	9.1	7.8	7.8	7.8	9.1	8.1	7.8	7.7
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	360	570	400	370	360	440	390	400
Suspended Solids At 105C		U	1030	mg/l	5.0	< 5.0	44	12	20	< 5.0	16	370	52
Total Dissolved Solids		N	1020	mg/l	1.0	230	370	260	240	230	280	250	260
Turbidity		N	1060	NTU	1.0	2.3	9.9	4.9	2.5	2.2	4.6	6.6	28
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	[B] 4.0	[B] 5.0	[B] < 4.0	[B] < 4.0	[B] < 4.0	[B] < 4.0	[B] < 4.0	[B] < 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	14	20	< 10	< 10	13	< 10	< 10	< 10
Dissolved Oxygen		N	1150	mg O2/l	0.50	8.5	8.6	8.5	8.6	8.5	8.4	8.8	9.0
Redox Potential		N	1170	mV	N/A	190	200	190	190	190	190	190	190
Chloride		U	1220	mg/l	1.0	37	48	31	29	38	37	29	29
Fluoride		U	1220	mg/l	0.050	0.44	0.35	0.15	0.14	0.44	0.20	0.18	0.14
Ammonia (Free)		N	1220	mg/l	0.050	0.42	< 0.050	< 0.050	< 0.050	0.50	0.054	< 0.050	< 0.050
Ammonia (Free) as N		N	1220	mg/l	0.050	0.42	< 0.050	< 0.050	< 0.050	0.50	0.054	< 0.050	< 0.050
Ammonium		U	1220	mg/l	0.050	0.75	1.5	0.94	0.96	0.86	1.0	0.94	0.84
Ammoniacal Nitrogen		U	1220	mg/l	0.050	1.0	1.2	0.75	0.77	1.2	0.86	0.75	0.67
Phosphate		U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	0.036	0.042	0.036	0.039	0.033	0.039	0.042	0.039
Sulphur		N	1220	mg/l	1.0	19	26	12	11	20	16	12	11
Sulphate		U	1220	mg/l	1.0	57	79	37	32	59	48	35	34
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.070	0.090	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.070	0.090	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	44	82	55	52	44	61	55	54
Magnesium (Dissolved)		U	1455	mg/l	0.20	3.8	6.8	11	11	3.8	11	12	12
Calcium (Total)		N	1455	mg/l	5.0	46	90	58	55	45	66	57	58
Magnesium (Total)		N	1455	mg/l	0.50	4.1	7.8	11	12	3.9	12	13	13
Total Hardness as CaCO3		U	1270	mg/l	15	130	230	180	180	130	200	190	190
Arsenic (Dissolved)		U	1455	µg/l	0.20	2.1	1.9	0.83	0.78	1.9	1.1	0.76	0.88
Boron (Dissolved)		U	1455	µg/l	10.0	77	74	34	34	76	42	32	35
Barium (Dissolved)		U	1455	µg/l	5.00	61	48	83	84	63	83	92	90
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	1.3	2.3	< 0.50	1.5	3.1	2.8	1.8	2.3
Copper (Dissolved)		U	1455	µg/l	0.50	3.2	5.0	1.7	1.8	3.1	2.0	1.2	1.4
Iron (Dissolved)		N	1455	µg/l	5.0	15	40	29	13	7.3	24	18	14
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	1.0	9.7	3.2	2.3	0.80	32	22	27
Nickel (Dissolved)		U	1455	µg/l	0.50	23	2.3	< 0.50	0.67	2.0	1.6	0.74	0.80

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457
Quotation No.: Q25-37295		Chemtest Sample ID.:		1942203	1942204	1942205	1942206	1942207	1942208	1942209	1942210	
		Client Sample ID.:		Drain 2	Temp Discharge	MD-U	MD-D	D2-S	Temp Discharge	MD-U	MD-D	
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
		Date Sampled:		01-Mar-2025	01-Mar-2025	01-Mar-2025	01-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025	
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Antimony (Dissolved)		U	1455	µg/l	0.50	1.0	0.93	< 0.50	< 0.50	0.77	< 0.50	< 0.50
Selenium (Dissolved)		U	1455	µg/l	0.50	1.2	1.3	0.52	< 0.50	0.99	0.59	< 0.50
Vanadium (Dissolved)		U	1455	µg/l	0.50	22	7.8	2.3	1.9	22	3.4	2.0
Zinc (Dissolved)		U	1455	µg/l	2.5	5.9	16	12	16	7.2	15	13
Arsenic (Total)		N	1455	µg/l	0.20	2.5	2.8	1.0	1.1	1.9	1.6	0.93
Boron (Total)		N	1455	µg/l	10.0	89	78	40	33	78	49	34
Barium (Total)		N	1455	µg/l	5.00	89	72	87	100	68	110	110
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	0.17	< 0.11	< 0.11	< 0.11	0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	2.5	3.8	1.9	2.5	4.0	2.9	1.9
Copper (Total)		N	1455	µg/l	0.50	4.2	8.3	2.5	3.2	4.0	7.0	2.2
Iron (Total)		N	1455	µg/l	5.0	150	2100	330	720	140	900	370
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	6.8	130	21	46	6.9	160	39
Nickel (Total)		N	1455	µg/l	0.50	30	2.9	1.4	1.3	2.6	2.0	0.79
Lead (Total)		N	1455	µg/l	0.50	1.3	20	3.1	5.6	1.2	6.2	3.1
Antimony (Total)		N	1455	µg/l	0.50	1.1	1.1	< 0.50	< 0.50	0.87	0.52	< 0.50
Selenium (Total)		N	1455	µg/l	0.50	1.5	1.3	0.72	0.86	1.3	0.89	0.55
Vanadium (Total)		N	1455	µg/l	0.50	23	12	3.0	3.0	24	6.0	2.7
Zinc (Total)		N	1455	µg/l	2.5	33	92	26	45	26	60	29
Chromium (Hexavalent)		U	1490	µg/l	20	[B] < 20	[B] < 20	[B] < 20	[B] < 20	< 20	< 20	< 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	5.0	6.7	3.0	2.9	4.4	3.7	2.8
Total Inorganic Carbon		N	1220	mg/l	2.5	34	53	48	48	34	53	48
Total Organic Carbon		U	1610	mg/l	2.0	4.5	6.6	3.1	3.0	4.3	3.5	2.7
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457
Quotation No.: Q25-37295		Chemtest Sample ID.:				1942203	1942204	1942205	1942206	1942207	1942208	1942209	1942210
		Client Sample ID.:				Drain 2	Temp Discharge	MD-U	MD-D	D2-S	Temp Discharge	MD-U	MD-D
		Sample Type:				WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
		Sample Sub Type:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
		Date Sampled:				01-Mar-2025	01-Mar-2025	01-Mar-2025	01-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07457	25-07457	25-07457	25-07457	25-07457	25-07457		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1942211	1942212	1942213	1942214	1942215	1942216		
		Client Sample ID.:		GAC-OUTLET	Temp Discharge	MD-U	MD-D	GAC-OUTLET	GAC-OUTLET		
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water				
		Date Sampled:		03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	01-Mar-2025	02-Mar-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
pH at 20C		U	1010		4.0	7.4	7.7	7.7	7.9	7.7	7.9
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	530	450	400	410	570	560
Suspended Solids At 105C		U	1030	mg/l	5.0	6.0	69	18	58	< 5.0	< 5.0
Total Dissolved Solids		N	1020	mg/l	1.0	350	290	260	270	370	360
Turbidity		N	1060	NTU	1.0	7.1	3.1	5.3	34	8.3	14
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	4.0	< 4.0	< 4.0	< 4.0	[B] 4.0	[B] < 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	14	< 10	< 10	< 10	20	19
Dissolved Oxygen		N	1150	mg O2/l	0.50	8.9	8.7	8.8	8.8	9.9	11
Redox Potential		N	1170	mV	N/A	200	200	190	190	230	230
Chloride		U	1220	mg/l	1.0	36	36	30	28	37	33
Fluoride		U	1220	mg/l	0.050	0.54	0.19	0.14	0.14	0.51	0.50
Ammonia (Free)		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.11
Ammonia (Free) as N		N	1220	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.11
Ammonium		U	1220	mg/l	0.050	0.92	0.95	0.97	0.80	2.1	3.2
Ammoniacal Nitrogen		U	1220	mg/l	0.050	0.72	0.76	0.78	0.65	1.7	2.6
Phosphate		U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	0.027	0.039	0.039	0.039	0.032	< 0.020
Sulphur		N	1220	mg/l	1.0	50	16	12	11	50	43
Sulphate		U	1220	mg/l	1.0	150	48	35	34	150	130
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	74	62	54	54	77	75
Magnesium (Dissolved)		U	1455	mg/l	0.20	4.4	11	12	12	4.2	4.1
Calcium (Total)		N	1455	mg/l	5.0	73	61	54	59	82	81
Magnesium (Total)		N	1455	mg/l	0.50	4.4	11	12	13	4.7	4.4
Total Hardness as CaCO3		U	1270	mg/l	15	200	200	190	190	210	200
Arsenic (Dissolved)		U	1455	µg/l	0.20	3.0	1.0	0.77	0.85	2.5	2.7
Boron (Dissolved)		U	1455	µg/l	10.0	81	40	30	30	93	89
Barium (Dissolved)		U	1455	µg/l	5.00	47	82	92	92	46	46
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	2.0	2.1	2.0	2.2	< 0.50	< 0.50
Copper (Dissolved)		U	1455	µg/l	0.50	2.6	2.0	1.3	1.4	4.2	3.4
Iron (Dissolved)		N	1455	µg/l	5.0	20	21	14	17	24	23
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	14	29	23	27	12	12
Nickel (Dissolved)		U	1455	µg/l	0.50	2.3	1.0	0.65	0.83	3.0	3.1

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07457	25-07457	25-07457	25-07457	25-07457	25-07457		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1942211	1942212	1942213	1942214	1942215	1942216		
		Client Sample ID.:		GAC-OUTLET	Temp Discharge	MD-U	MD-D	GAC-OUTLET	GAC-OUTLET		
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water				
		Date Sampled:		03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	01-Mar-2025	02-Mar-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Antimony (Dissolved)		U	1455	µg/l	0.50	1.1	< 0.50	< 0.50	< 0.50	0.85	0.78
Selenium (Dissolved)		U	1455	µg/l	0.50	1.7	0.61	< 0.50	< 0.50	1.4	1.4
Vanadium (Dissolved)		U	1455	µg/l	0.50	7.5	3.5	2.0	2.2	6.4	6.1
Zinc (Dissolved)		U	1455	µg/l	2.5	7.1	8.9	10	11	6.5	11
Arsenic (Total)		N	1455	µg/l	0.20	3.4	1.4	1.2	1.7	3.0	3.0
Boron (Total)		N	1455	µg/l	10.0	81	43	32	35	140	99
Barium (Total)		N	1455	µg/l	5.00	51	100	99	130	69	70
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	0.21	< 0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	5.7	5.2	4.9	4.4	1.3	1.7
Copper (Total)		N	1455	µg/l	0.50	5.1	2.9	2.5	4.6	4.3	4.3
Iron (Total)		N	1455	µg/l	5.0	550	400	370	3400	280	280
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	29	46	37	220	25	24
Nickel (Total)		N	1455	µg/l	0.50	4.6	2.7	2.6	2.2	3.0	2.8
Lead (Total)		N	1455	µg/l	0.50	3.6	2.1	3.0	31	2.5	2.4
Antimony (Total)		N	1455	µg/l	0.50	1.8	0.85	0.50	< 0.50	1.0	0.95
Selenium (Total)		N	1455	µg/l	0.50	2.1	0.77	< 0.50	0.75	1.7	1.3
Vanadium (Total)		N	1455	µg/l	0.50	8.9	4.4	2.6	7.0	7.5	7.3
Zinc (Total)		N	1455	µg/l	2.5	26	38	44	170	20	24
Chromium (Hexavalent)		U	1490	µg/l	20	< 20	< 20	< 20	< 20	[B] < 20	< 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	5.5	3.7	3.1	2.7	5.5	5.7
Total Inorganic Carbon		N	1220	mg/l	2.5	36	50	48	50	34	23
Total Organic Carbon		U	1610	mg/l	2.0	5.7	3.7	2.7	2.8	5.6	5.7
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.63	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07457	25-07457	25-07457	25-07457	25-07457	25-07457
Quotation No.: Q25-37295		Chemtest Sample ID.:				1942211	1942212	1942213	1942214	1942215	1942216
		Client Sample ID.:				GAC-OUTLET	Temp Discharge	MD-U	MD-D	GAC-OUTLET	GAC-OUTLET
		Sample Type:				WATER	WATER	WATER	WATER	WATER	WATER
		Sample Sub Type:				Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:				03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	01-Mar-2025	02-Mar-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1942203		Drain 2		01-Mar-2025	B	Coloured Winchester 1000ml
1942203		Drain 2		01-Mar-2025	B	EPA Vial 40ml
1942203		Drain 2		01-Mar-2025	B	Plastic Bottle 1000ml
1942204		Temp Discharge		01-Mar-2025	B	Coloured Winchester 1000ml
1942204		Temp Discharge		01-Mar-2025	B	EPA Vial 40ml
1942204		Temp Discharge		01-Mar-2025	B	Plastic Bottle 1000ml
1942205		MD-U		01-Mar-2025	B	Coloured Winchester 1000ml
1942205		MD-U		01-Mar-2025	B	EPA Vial 40ml
1942205		MD-U		01-Mar-2025	B	Plastic Bottle 1000ml
1942206		MD-D		01-Mar-2025	B	Coloured Winchester 1000ml
1942206		MD-D		01-Mar-2025	B	EPA Vial 40ml
1942206		MD-D		01-Mar-2025	B	Plastic Bottle 1000ml
1942207		D2-S		02-Mar-2025	B	Coloured Winchester 1000ml
1942207		D2-S		02-Mar-2025	B	EPA Vial 40ml
1942207		D2-S		02-Mar-2025	B	Plastic Bottle 1000ml
1942208		Temp Discharge		02-Mar-2025	B	Coloured Winchester 1000ml
1942208		Temp Discharge		02-Mar-2025	B	EPA Vial 40ml
1942208		Temp Discharge		02-Mar-2025	B	Plastic Bottle 1000ml
1942209		MD-U		02-Mar-2025	B	Coloured Winchester 1000ml
1942209		MD-U		02-Mar-2025	B	EPA Vial 40ml
1942209		MD-U		02-Mar-2025	B	Plastic Bottle 1000ml
1942210		MD-D		02-Mar-2025	B	Coloured Winchester 1000ml
1942210		MD-D		02-Mar-2025	B	EPA Vial 40ml
1942210		MD-D		02-Mar-2025	B	Plastic Bottle 1000ml

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1942215		GAC-OUTLET		01-Mar-2025	B	Coloured Winchester 1000ml
1942215		GAC-OUTLET		01-Mar-2025	B	EPA Vial 40ml
1942215		GAC-OUTLET		01-Mar-2025	B	Plastic Bottle 1000ml
1942216		GAC-OUTLET		02-Mar-2025	B	Coloured Winchester 1000ml
1942216		GAC-OUTLET		02-Mar-2025	B	EPA Vial 40ml
1942216		GAC-OUTLET		02-Mar-2025	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-p-phenylenediamine.	PL LE GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
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I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

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DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

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Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
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SA - Saline Water
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TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

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NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

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EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 25-07538-1

Initial Date of Issue: 13-Mar-2025

Re-Issue Details:

Client Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Aimee Meredith-Smith
Chris Wilson
David McCarroll
Ruth Hardy

Project P18-669

Quotation No.: Q25-37295 **Date Received:** 05-Mar-2025

Order No.: 136787 **Date Instructed:** 05-Mar-2025

No. of Samples: 4

Turnaround (Wkdays): 5 **Results Due:** 11-Mar-2025

Date Approved: 13-Mar-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07538	25-07538	25-07538	25-07538		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1942506	1942507	1942508	1942509		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D	KWR-S		
		Sample Type:		WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:		28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
pH at 20C		U	1010		4.0	8.2	7.9	7.8	8.5
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	470	370	370	470
Suspended Solids At 105C		U	1030	mg/l	5.0	33	< 5.0	7.0	40
Total Dissolved Solids		N	1020	mg/l	1.0	310	240	240	300
Turbidity		N	1060	NTU	1.0	85	15	18	43
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	[B] 4.0	[B] < 4.0	[B] < 4.0	[B] < 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	19	< 10	< 10	13
Dissolved Oxygen		N	1150	mg O2/l	0.50	6.9	7.3	7.3	8.0
Redox Potential		N	1170	mV	N/A	210	200	200	210
Chloride		U	1220	mg/l	1.0	39	26	27	34
Fluoride		U	1220	mg/l	0.050	0.37	0.13	0.14	0.48
Ammonia (Free)		N	1220	mg/l	0.050	0.11	< 0.050	< 0.050	0.15
Ammonia (Free) as N		N	1220	mg/l	0.050	0.11	< 0.050	< 0.050	0.15
Ammonium		U	1220	mg/l	0.050	1.7	0.54	0.58	1.0
Ammoniacal Nitrogen		U	1220	mg/l	0.050	1.4	0.44	0.47	0.93
Phosphate		U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	0.052	0.036	0.036	0.036
Sulphur		N	1220	mg/l	1.0	32	8.3	8.3	33
Sulphate		U	1220	mg/l	1.0	95	25	25	100
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	64	50	50	68
Magnesium (Dissolved)		U	1455	mg/l	0.20	4.8	11	11	3.7
Calcium (Total)		N	1455	mg/l	5.0	67	52	53	72
Magnesium (Total)		N	1455	mg/l	0.50	5.2	11	11	4.1
Total Hardness as CaCO3		U	1270	mg/l	15	180	170	170	180
Arsenic (Dissolved)		U	1455	µg/l	0.20	2.5	0.61	0.62	4.2
Boron (Dissolved)		U	1455	µg/l	10.0	62	25	21	75
Barium (Dissolved)		U	1455	µg/l	5.00	42	82	82	43
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	3.5	3.0	2.6	3.3
Copper (Dissolved)		U	1455	µg/l	0.50	5.0	1.6	1.6	5.5
Iron (Dissolved)		N	1455	µg/l	5.0	33	16	16	28
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	28	7.5	7.0	1.8
Nickel (Dissolved)		U	1455	µg/l	0.50	2.5	0.89	0.53	2.2

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07538	25-07538	25-07538	25-07538		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1942506	1942507	1942508	1942509		
		Client Sample ID.:		MD-U	Temp Discharge	MD-D	KWR-S		
		Sample Type:		WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:		28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Antimony (Dissolved)		U	1455	µg/l	0.50	0.83	< 0.50	< 0.50	1.3
Selenium (Dissolved)		U	1455	µg/l	0.50	1.1	0.56	< 0.50	2.1
Vanadium (Dissolved)		U	1455	µg/l	0.50	11	1.1	1.1	19
Zinc (Dissolved)		U	1455	µg/l	2.5	11	11	18	13
Arsenic (Total)		N	1455	µg/l	0.20	3.0	0.79	0.68	4.8
Boron (Total)		N	1455	µg/l	10.0	71	28	28	83
Barium (Total)		N	1455	µg/l	5.00	51	99	110	74
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	0.11
Chromium (Total)		N	1455	µg/l	0.50	3.5	3.2	3.1	3.5
Copper (Total)		N	1455	µg/l	0.50	6.6	2.8	2.2	7.6
Iron (Total)		N	1455	µg/l	5.0	770	540	170	1200
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	0.07
Manganese (Total)		N	1455	µg/l	0.50	68	40	12	95
Nickel (Total)		N	1455	µg/l	0.50	2.7	1.1	0.61	2.6
Lead (Total)		N	1455	µg/l	0.50	7.4	4.1	1.2	16
Antimony (Total)		N	1455	µg/l	0.50	0.89	< 0.50	< 0.50	1.3
Selenium (Total)		N	1455	µg/l	0.50	1.3	< 0.50	< 0.50	2.1
Vanadium (Total)		N	1455	µg/l	0.50	14	1.8	1.3	23
Zinc (Total)		N	1455	µg/l	2.5	50	32	25	58
Chromium (Hexavalent)		U	1490	µg/l	20	[B] < 20	[B] < 20	[B] < 20	[B] < 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	7.0	2.5	2.4	5.9
Total Inorganic Carbon		N	1220	mg/l	2.5	41	46	48	36
Total Organic Carbon		U	1610	mg/l	2.0	6.7	2.5	2.5	5.9
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07538	25-07538	25-07538	25-07538
Quotation No.: Q25-37295		Chemtest Sample ID.:				1942506	1942507	1942508	1942509
		Client Sample ID.:				MD-U	Temp Discharge	MD-D	KWR-S
		Sample Type:				WATER	WATER	WATER	WATER
		Sample Sub Type:				Surface Water	Surface Water	Surface Water	Surface Water
		Date Sampled:				28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1942506		MD-U		28-Feb-2025	B	Coloured Winchester 1000ml
1942506		MD-U		28-Feb-2025	B	EPA Vial 40ml
1942506		MD-U		28-Feb-2025	B	Plastic Bottle 1000ml
1942507		Temp Discharge		28-Feb-2025	B	Coloured Winchester 1000ml
1942507		Temp Discharge		28-Feb-2025	B	EPA Vial 40ml
1942507		Temp Discharge		28-Feb-2025	B	Plastic Bottle 1000ml
1942508		MD-D		28-Feb-2025	B	Coloured Winchester 1000ml
1942508		MD-D		28-Feb-2025	B	EPA Vial 40ml
1942508		MD-D		28-Feb-2025	B	Plastic Bottle 1000ml
1942509		KWR-S		28-Feb-2025	B	Coloured Winchester 1000ml
1942509		KWR-S		28-Feb-2025	B	EPA Vial 40ml
1942509		KWR-S		28-Feb-2025	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
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1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

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NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

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All soil samples will be retained for a period of 30 days from the date of receipt.

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FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 25-07939-1

Initial Date of Issue: 21-Mar-2025

Re-Issue Details:

Client Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Aimee Meredith-Smith
Chris Wilson
David McCarroll
Ruth Hardy

Project P18-669

Quotation No.: Q25-37295 **Date Received:** 07-Mar-2025

Order No.: 136787 **Date Instructed:** 07-Mar-2025

No. of Samples: 6

Turnaround (Wkdays): 5 **Results Due:** 13-Mar-2025

Date Approved: 21-Mar-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07939	25-07939	25-07939	25-07939	25-07939	25-07939		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1943752	1943753	1943754	1943755	1943756	1943757		
		Client Sample ID.:		GAC-Outlet	Temp Discharge	GAC-Outlet	Temp Discharge	MD-U	MD-D		
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:		05-Mar-2025	05-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
pH at 20C		U	1010		4.0	8.0	8.3	7.9	8.1	8.2	8.3
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	560	600	560	550	380	440
Suspended Solids At 105C		U	1030	mg/l	5.0	< 5.0	15	< 5.0	26	6.0	26
Total Dissolved Solids		N	1020	mg/l	1.0	370	390	360	350	250	290
Turbidity		N	1060	NTU	1.0	14	8.9	1.3	12	2.4	4.5
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	< 4.0	< 4.0	[B] 6.0	[B] < 4.0	[B] < 4.0	[B] < 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	17	20	17	19	< 10	12
Dissolved Oxygen		N	1150	mg O2/l	0.50	11	10	10	9.5	10	11
Redox Potential		N	1170	mV	N/A	230	230	230	230	230	230
Chloride		U	1220	mg/l	1.0	36	50	36	43	24	36
Fluoride		U	1220	mg/l	0.050	0.60	0.45	0.59	0.46	0.13	0.24
Ammonia (Free)		N	1220	mg/l	0.050	0.081	0.13	0.065	0.096	0.087	0.12
Ammonia (Free) as N		N	1220	mg/l	0.050	0.081	0.13	0.065	0.096	0.087	0.12
Ammonium		U	1220	mg/l	0.050	1.9	1.6	1.8	1.8	1.3	1.5
Ammoniacal Nitrogen		U	1220	mg/l	0.050	1.6	1.4	1.5	1.5	1.1	1.3
Phosphate		U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Sulphur		N	1220	mg/l	1.0	50	28	50	33	8.0	18
Sulphate		U	1220	mg/l	1.0	150	85	150	100	24	55
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	73	85	74	77	48	59
Magnesium (Dissolved)		U	1455	mg/l	0.20	4.3	9.6	4.4	6.9	14	11
Calcium (Total)		N	1455	mg/l	5.0	80	94	78	81	51	65
Magnesium (Total)		N	1455	mg/l	0.50	4.9	10	4.7	7.4	14	13
Total Hardness as CaCO3		U	1270	mg/l	15	200	250	200	220	180	200
Arsenic (Dissolved)		U	1455	µg/l	0.20	3.0	1.5	2.9	2.0	0.35	1.3
Boron (Dissolved)		U	1455	µg/l	10.0	86	98	90	84	25	48
Barium (Dissolved)		U	1455	µg/l	5.00	47	47	47	47	110	86
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	2.0	2.4	2.5	2.3	2.1	2.1
Copper (Dissolved)		U	1455	µg/l	0.50	2.7	3.7	2.9	4.2	0.68	1.9
Iron (Dissolved)		N	1455	µg/l	5.0	18	72	21	37	9.9	17
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	15	78	9.3	30	9.5	17
Nickel (Dissolved)		U	1455	µg/l	0.50	3.4	2.9	3.6	2.9	1.4	1.8

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:		25-07939	25-07939	25-07939	25-07939	25-07939	25-07939		
Quotation No.: Q25-37295		Chemtest Sample ID.:		1943752	1943753	1943754	1943755	1943756	1943757		
		Client Sample ID.:		GAC-Outlet	Temp Discharge	GAC-Outlet	Temp Discharge	MD-U	MD-D		
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:		05-Mar-2025	05-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Antimony (Dissolved)		U	1455	µg/l	0.50	0.60	0.59	0.60	0.56	< 0.50	< 0.50
Selenium (Dissolved)		U	1455	µg/l	0.50	1.7	1.0	1.9	1.3	< 0.50	1.1
Vanadium (Dissolved)		U	1455	µg/l	0.50	7.5	6.6	7.6	9.5	< 0.50	3.7
Zinc (Dissolved)		U	1455	µg/l	2.5	9.6	14	8.5	11	4.3	7.1
Arsenic (Total)		N	1455	µg/l	0.20	4.4	2.5	3.4	2.7	0.63	1.4
Boron (Total)		N	1455	µg/l	10.0	93	110	92	89	29	50
Barium (Total)		N	1455	µg/l	5.00	94	62	67	67	140	190
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	3.0	2.7	2.4	3.3	2.5	5.3
Copper (Total)		N	1455	µg/l	0.50	4.8	4.7	3.6	5.9	1.5	3.4
Iron (Total)		N	1455	µg/l	5.0	610	740	420	1400	170	620
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	66	99	48	98	18	53
Nickel (Total)		N	1455	µg/l	0.50	4.5	2.8	3.7	3.5	1.7	3.9
Lead (Total)		N	1455	µg/l	0.50	4.2	1.9	3.5	9.0	1.0	3.7
Antimony (Total)		N	1455	µg/l	0.50	0.84	0.75	0.75	0.66	< 0.50	< 0.50
Selenium (Total)		N	1455	µg/l	0.50	1.9	1.3	1.7	1.5	< 0.50	1.2
Vanadium (Total)		N	1455	µg/l	0.50	9.6	9.8	9.4	13	< 0.50	4.9
Zinc (Total)		N	1455	µg/l	2.5	25	26	21	66	13	28
Chromium (Hexavalent)		U	1490	µg/l	20	< 20	< 20	< 20	< 20	< 20	< 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	5.5	6.9	5.6	6.8	< 2.0	3.6
Total Inorganic Carbon		N	1220	mg/l	2.5	29	60	29	46	46	50
Total Organic Carbon		U	1610	mg/l	2.0	5.7	6.8	5.2	6.6	< 2.0	3.7
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07939	25-07939	25-07939	25-07939	25-07939	25-07939
Quotation No.: Q25-37295		Chemtest Sample ID.:				1943752	1943753	1943754	1943755	1943756	1943757
		Client Sample ID.:		GAC-Outlet	Temp Discharge	GAC-Outlet	Temp Discharge	MD-U	MD-D		
		Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER		
		Sample Sub Type:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
		Date Sampled:		05-Mar-2025	05-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025		
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1943754		GAC-Outlet		04-Mar-2025	B	Coloured Winchester 1000ml
1943754		GAC-Outlet		04-Mar-2025	B	EPA Vial 40ml
1943754		GAC-Outlet		04-Mar-2025	B	Plastic Bottle 1000ml
1943755		Temp Discharge		04-Mar-2025	B	Coloured Winchester 1000ml
1943755		Temp Discharge		04-Mar-2025	B	EPA Vial 40ml
1943755		Temp Discharge		04-Mar-2025	B	Plastic Bottle 1000ml
1943756		MD-U		04-Mar-2025	B	Coloured Winchester 1000ml
1943756		MD-U		04-Mar-2025	B	EPA Vial 40ml
1943756		MD-U		04-Mar-2025	B	Plastic Bottle 1000ml
1943757		MD-D		04-Mar-2025	B	Coloured Winchester 1000ml
1943757		MD-D		04-Mar-2025	B	EPA Vial 40ml
1943757		MD-D		04-Mar-2025	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-p-phenylenediamine.	PL LE GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 25-07954-1

Initial Date of Issue: 21-Mar-2025

Re-Issue Details:

Client Rodgers Leask Environmental

Client Address: Office 225
2430/2440 Aztec West
Almondsbury
Bristol
BS32 4AQ

Contact(s): Aimee Meredith-Smith
Chris Wilson
David McCarroll
Ruth Hardy

Project P18-669

Quotation No.: Q25-37295 **Date Received:** 07-Mar-2025

Order No.: 136787 **Date Instructed:** 07-Mar-2025

No. of Samples: 8

Turnaround (Wkdays): 5 **Results Due:** 13-Mar-2025

Date Approved: 21-Mar-2025

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:											
Quotation No.: Q25-37295		Chemtest Sample ID.:											
		Client Sample ID.:											
		Sample Type:											
		Sample Sub Type:											
		Date Sampled:											
Determinand	HWOL Code	Accred.	SOP	Units	LOD	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954
pH at 20C		U	1010		4.0	8.3	8.2	8.1	8.0	8.1	8.1	8.2	8.1
Electrical Conductivity at 25C		U	1020	µS/cm	1.0	470	460	590	560	570	440	440	450
Suspended Solids At 105C		U	1030	mg/l	5.0	12	8.0	140	23	36	6.0	31	16
Total Dissolved Solids		N	1020	mg/l	1.0	300	300	390	360	370	280	290	290
Turbidity		N	1060	NTU	1.0	7.7	3.9	14	18	18	2.0	3.2	6.6
Biochemical Oxygen Demand		N	1090	mg O2/l	4.0	8.0	< 4.0	13	7.0	< 4.0	< 4.0	< 4.0	< 4.0
Chemical Oxygen Demand		U	1100	mg O2/l	10	14	13	18	21	21	59	13	18
Dissolved Oxygen		N	1150	mg O2/l	0.50	11	11	10	11	9.5	9.3	9.6	9.6
Redox Potential		N	1170	mV	N/A	230	230	230	230	230	230	230	230
Chloride		U	1220	mg/l	1.0	31	31	47	32	34	37	42	23
Fluoride		U	1220	mg/l	0.050	0.28	0.28	0.44	0.64	0.61	0.59	0.39	0.58
Ammonia (Free)		N	1220	mg/l	0.050	0.15	0.14	0.10	0.10	0.13	0.096	0.093	0.082
Ammonia (Free) as N		N	1220	mg/l	0.050	0.15	0.14	0.10	0.10	0.13	0.096	0.093	0.082
Ammonium		U	1220	mg/l	0.050	1.8	2.1	1.9	2.6	2.5	1.8	1.5	1.4
Ammoniacal Nitrogen		U	1220	mg/l	0.050	1.6	1.8	1.6	2.1	2.1	1.5	1.2	1.2
Phosphate		U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)		N	1220	mg/l	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Sulphur		N	1220	mg/l	1.0	23	23	26	63	53	32	11	22
Sulphate		U	1220	mg/l	1.0	70	68	79	190	160	96	34	66
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate		U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide		N	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)		U	1455	mg/l	2.00	58	59	84	77	75	55	49	60
Magnesium (Dissolved)		U	1455	mg/l	0.20	11	11	9.7	4.6	4.5	4.3	11	12
Calcium (Total)		N	1455	mg/l	5.0	61	68	110	96	100	72	58	80
Magnesium (Total)		N	1455	mg/l	0.50	12	13	12	5.9	6.4	5.7	13	16
Total Hardness as CaCO3		U	1270	mg/l	15	190	190	250	210	210	160	170	200
Arsenic (Dissolved)		U	1455	µg/l	0.20	1.4	1.4	1.5	3.3	3.6	2.4	0.53	1.4
Boron (Dissolved)		U	1455	µg/l	10.0	53	50	100	96	96	100	87	130
Barium (Dissolved)		U	1455	µg/l	5.00	86	85	48	49	49	37	46	40
Beryllium (Dissolved)		U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	2.4	2.0	2.6	1.9	2.1	3.0	1.9	2.4
Copper (Dissolved)		U	1455	µg/l	0.50	2.0	1.8	3.5	4.3	4.4	3.4	1.9	2.7
Iron (Dissolved)		N	1455	µg/l	5.0	21	22	48	11	15	19	18	16
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (Dissolved)		U	1455	µg/l	0.50	22	18	76	5.4	4.6	10	4.1	4.4
Nickel (Dissolved)		U	1455	µg/l	0.50	2.2	1.7	2.6	2.9	3.3	2.5	1.4	1.9
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:											
Quotation No.: Q25-37295		Chemtest Sample ID.:											
		Client Sample ID.:											
		Sample Type:											
		Sample Sub Type:											
		Date Sampled:											
Determinand	HWOL Code	Accred.	SOP	Units	LOD	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954
Antimony (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	0.54	< 0.50	< 0.50	0.57	< 0.50	< 0.50
Selenium (Dissolved)		U	1455	µg/l	0.50	1.0	0.98	1.1	1.5	1.9	1.3	0.79	1.0
Vanadium (Dissolved)		U	1455	µg/l	0.50	5.5	5.7	7.2	16	16	43	2.2	4.6
Zinc (Dissolved)		U	1455	µg/l	2.5	8.2	3.5	23	11	9.2	5.4	12	9.9
Arsenic (Total)		N	1455	µg/l	0.20	1.6	1.9	3.0	4.4	5.2	3.3	0.86	1.9
Boron (Total)		N	1455	µg/l	10.0	53	59	130	120	140	130	100	180
Barium (Total)		N	1455	µg/l	5.00	180	110	74	69	210	48	70	54
Beryllium (Total)		N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)		N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)		N	1455	µg/l	0.50	2.4	2.2	3.8	2.8	4.1	3.5	3.2	3.0
Copper (Total)		N	1455	µg/l	0.50	4.0	2.8	6.6	6.0	7.4	4.9	3.0	3.9
Iron (Total)		N	1455	µg/l	5.0	200	220	1600	390	1300	86	120	180
Mercury (Total)		N	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
Manganese (Total)		N	1455	µg/l	0.50	33	33	140	61	98	31	12	12
Nickel (Total)		N	1455	µg/l	0.50	2.3	1.9	4.3	4.0	6.2	2.7	2.0	1.8
Lead (Total)		N	1455	µg/l	0.50	1.7	1.2	5.0	3.1	9.1	0.84	0.93	1.7
Antimony (Total)		N	1455	µg/l	0.50	< 0.50	< 0.50	1.1	0.82	0.99	0.95	< 0.50	< 0.50
Selenium (Total)		N	1455	µg/l	0.50	1.1	1.4	1.6	2.1	2.4	1.6	0.90	1.5
Vanadium (Total)		N	1455	µg/l	0.50	6.4	7.6	14	21	25	58	2.9	6.5
Zinc (Total)		N	1455	µg/l	2.5	16	15	31	24	50	11	20	22
Chromium (Hexavalent)		U	1490	µg/l	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Dissolved Organic Carbon		U	1610	mg/l	2.0	3.8	3.9	6.4	7.3	7.3	5.8	4.4	6.1
Total Inorganic Carbon		N	1220	mg/l	2.5	48	43	58	31	31	31	53	53
Total Organic Carbon		U	1610	mg/l	2.0	3.8	3.9	6.7	7.1	7.2	5.4	4.5	6.3
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:				25-07954	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954	25-07954
Quotation No.: Q25-37295		Chemtest Sample ID.:				1943808	1943809	1943810	1943811	1943812	1943813	1943814	1943815
		Client Sample ID.:				MD-D	MD-U	NR-C	CE-L	KWR-S	D1-C	D2-C	D0-N
		Sample Type:				WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
		Sample Sub Type:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
		Date Sampled:				05-Mar-2025	05-Mar-2025	05-Mar-2025	05-Mar-2025	05-Mar-2025	05-Mar-2025	05-Mar-2025	05-Mar-2025
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.	SW
1060	Turbidity	Turbidity	Spectrophotometry	
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.	
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].	TE TS LE GW
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.	
1170	Redox Potential	Redox Potential	Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	PL LE GW
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.	GW LE
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-p-phenylenediamine.	PL LE GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	PL GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW SW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL

DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - The required amount of sample for analysis was not received

H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix C – Chemical Screening Sheets

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental	Chemtest Job No.:		WFD EQS (AA unless only MAC)	Gwent Levels SSSI WQS	Screening Value Applied	25-06778	25-06778	25-06778	25-07084	25-07084	25-07084	25-07244	25-07244	25-07244	25-07538	25-07538	25-07538
	Chemtest Sample ID.:	Client Sample Ref.:				Sample Type:	Sub-Sample Type:	Date Sampled:	1939414	1939415	1939416	1940603	1940604	1940605	1941313	1941314	1941315
Determinand	Accred.	Units															
pH	U			6-9	6-9	8.2	8.3	8.2	7.3	7.5	7.4	7.3	7.1	7.3	8.2	7.9	7.8
Suspended Solids At 105C	U	mg/l		20-60	20-60	16	45	120	130	39	80	< 5.0	20	< 5.0	33	< 5.0	7
Biochemical Oxygen Demand	N	mg O2/l		6.50	6.50	< 4.0	5.0	< 4.0	[B] < 4.0	8.0	[B] < 4.0	4.0	6.0	[B] < 4.0	4.0	[B] < 4.0	[B] < 4.0
Chloride	U	mg/l	250.00	300.00	300.00	26	40	26	36	37	35	27	40	44	39	26	27
Fluoride	U	mg/l	5.00		5.00	0.13	0.29	0.13	0.12	0.28	0.12	0.12	0.28	0.13	0.37	0.13	0.14
Ammonia (Free) as N	N	mg/l	0.20		0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.11	< 0.050	< 0.050
Ammoniacal Nitrogen	U	mg/l		1.10	1.10	0.09	0.20	0.08	1.00	0.66	0.77	0.26	0.52	0.32	1.40	0.44	0.47
Sulphate	U	mg/l	400.00	300.00	300.00	17	56	17	16	59	20	20	64	26	95	25	25
Cyanide (Total)	U	mg/l	0.001		0.001	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	mg/l	0.00		0.00	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	µg/l	50.00		50.00	0.5	1.4	0.5	0.5	1.6	0.7	0.5	1.4	0.6	2.5	0.6	0.6
Boron (Dissolved)	U	µg/l	2000.00		2000.00	59	88	54	21	55	25	26	59	29	62	25	21
Cadmium (Dissolved)	U	µg/l	0.15		0.15	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	µg/l	3.40		3.40	< 0.50	< 0.50	< 0.50	2.8	2.4	2.6	1.1	1.2	0.67	3.5	3	2.6
Copper (Dissolved)* mbat	U	µg/l	1.00		1.00	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2
Iron (Dissolved)	N	µg/l	1000.00		1000.00	14	64	15	57	91	39	14	56	24	33	16	16
Mercury (Dissolved)	U	µg/l	0.07		0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Vanadium (Dissolved)	U	µg/l	20-60		20-60	< 0.50	4.6	< 0.50	0.9	5.9	0.8	0.6	5.5	1.2	11.0	1.1	1.1
Naphthalene	U	µg/l	2.00		2.00	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	µg/l	0.10		0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	µg/l	0.0063		0.0063	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[fluoranthene	U	µg/l	0.02		0.017	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	µg/l	0.02		0.017	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	µg/l	0.00		0.00	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	µg/l				< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	µg/l	0.01		0.0082	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	µg/l				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	mg/l				< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

*M-Bat applied








Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07457	25-07939	25-07939	25-07939	25-07954	25-07939	25-07954
Chemtest Sample ID.:		1942205	1942204	1942206	1942209	1942208	1942210	1942213	1942212	1942214	1943756	1943755	1943757	1943809	1943753	1943808
Client Sample Ref.:		MD-U	Temp Discharge	MD-D	MD-U	Temp Discharge	MD-D	MD-U	Temp Discharge	MD-D	MD-U	Temp Discharge	MD-D	MD-U	Temp Discharge	MD-D
Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Sub-Sample Type:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Date Sampled:		01-Mar-2025	01-Mar-2025	01-Mar-2025	02-Mar-2025	02-Mar-2025	02-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	04-Mar-2025	04-Mar-2025	04-Mar-2025	05-Mar-2025	05-Mar-2025	05-Mar-2025
Determinand	Accred.	Units														
pH	U		7.8	7.8	7.8	7.8	8.1	7.7	7.7	7.7	7.9	8.2	8.1	8.3	8.2	8.3
Suspended Solids At 105C	U	mg/l	12	44	20	370	16	52	18	69	58	6	26	26	8	15
Biochemical Oxygen Demand	N	mg O2/l	[B] < 4.0	5.0	[B] < 4.0	[B] < 4.0	[B] < 4.0	[B] < 4.0	< 4.0	< 4.0	< 4.0	[B] < 4.0	[B] < 4.0	[B] < 4.0	< 4.0	< 4.0
Chloride	U	mg/l	31	48	29	29	37	29	30	36	28	24	43	36	31	50
Fluoride	U	mg/l	0.15	0.35	0.14	0.18	0.20	0.14	0.14	0.19	0.14	0.13	0.46	0.24	0.28	0.45
Ammonia (Free) as N	N	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	0.054	< 0.050	< 0.050	< 0.050	< 0.050	0.087	0.096	0.12	0.14	0.13
Ammoniacal Nitrogen	U	mg/l	0.75	1.20	0.77	0.75	0.86	0.67	0.78	0.76	0.65	1.10	1.5	1.30	1.80	1.40
Sulphate	U	mg/l	37	79	32	35	48	34	35	48	34	24	100	55	68	85
Cyanide (Total)	U	mg/l	< 0.050	< 0.050	< 0.050	0.09	0.07	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	µg/l	0.8	1.9	0.8	0.8	1.1	0.9	0.8	1.0	0.9	0.4	2.0	1.3	1.4	1.5
Boron (Dissolved)	U	µg/l	34	74	34	32	42	35	30	40	30	25	84	48	50	98
Cadmium (Dissolved)	U	µg/l	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	µg/l	< 0.50	2.3	1.5	1.8	2.8	2.3	2	2.1	2.2	2.1	2.3	2.1	2	2.4
Copper (Dissolved)* mbat	U	µg/l	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2
Iron (Dissolved)	N	µg/l	29	40	13	18	24	14	14	21	17	10	37	17	22	72
Mercury (Dissolved)	U	µg/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Vanadium (Dissolved)	U	µg/l	2.3	7.8	1.9	2.0	3.4	2.1	2.0	3.5	2.2	< 0.50	9.5	3.7	5.7	6.6
Naphthalene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[fluoranthene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(g,h,i)perylene	U	µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	mg/l	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

*M-Bat applied

Appendix D – Daily Monitoring Sheet Records

Date	25/02/2025	26/02/2025	27/02/2025	28/02/2025	03/03/2025	04/03/2025	05/03/2025
Weather	Sunny, 8c	Heavy Rain AM, 8c	Sunny, 10c	Sunny, 8c	Sunny, 10c	Sunny, 11c	Sunny, 13c
3 day Forecast	Rain forecast tomorrow	No rain forecast	No rain forecast	No rain forecast	No rain forecast	No rain forecast	No rain forecast
pH (discharge point)	8.2	7.5	7.3	7.4	7.6	7.6	7.9
pH (upstream)	8.3	7.3	7.3	7.4	7.6	7.5	8
pH (downstream)	8.2	7.4	7.3	7.4	7.6	7.5	8.1
Water Clarity observation	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.	Fine silt present before discharge point. Monks Ditch contains fine silt upstream/downstream.
Sample Compliant (Y/N)	Results Due 05/03/2025	Results Due 06/03/2025	Results Pending	Results Pending	Results Pending	Results Pending	Results Pending
Observations	Fine suspended solids.	Fine suspended solids.	Fine suspended solids.	Fine suspended solids.	Fine suspended solids.	Fine suspended solids.	Fine suspended solids.
Photos							
Engineer	DM	DM	DM	DM	DM	DM	DM