

Appendix 13.2

GI Factual Report

GI Factual Report



Our Ref: JMS/Rp/P21076 + attachments (*.pdf)

05th November, 2021

ARUP
One Albert Quay,
Ballintemple,
Cork,
T1 X8N6.

Re: The Creamfields (Former CMP Dairy Site) Ground Investigation, Factual report.

Introduction

In April 2021, Priority Geotechnical (PGL) were requested by Arup, acting as Client Representative on behalf of Watfore Developments Ltd. to undertake a ground investigation as part of the The Creamfields (Former CMP Dairy Site), project.

The site is bounded by the Tramore Road to the north and Kinsale Road to the east. Industrial buildings are present to the south and west of the site. The site is relatively flat but falls to the south from approximately 12m Ordnance Datum (mOD) in the north to 6mOD in the south. The site is currently not in use. The remnants of demolished building are visible at the surface. There appears to be dense vegetation in the south of the site. The site was formerly the Cork Milk Producers (CMP) dairy site. Access to the site is via the gate off Tramore Road, to the north of the site.

The proposed development at the site includes:

- Apartment blocks varying from 4 to 15 floors;
- Public open spaces; and
- An underground car park.

The ground investigation that is the subject of this specification is the geotechnical and geo-environmental investigation of the site.

Scope

The scope of the ground investigation, which was specified by Arup, comprised of the following:

- Geophysical survey to determine the position of former railway and siding
- 07Nr. Trial Pits to depths of 4.5m below ground level;
- 03Nr. Silt Trenches;
- 02Nr. cable-percussive boreholes with standard penetration testing (SPT) testing to depths of 5m below ground level and completion with ground gas monitoring standpipes;
- 03Nr. cable-percussive boreholes with standard penetration testing (SPT) testing to depths of 15m below ground level or refusal and completion with either dual groundwater and ground gas monitoring standpipes or just groundwater monitoring standpipes;
- 04Nr. cable-percussive boreholes with standard penetration testing (SPT) testing to depths of 15m below ground level and rotary coring follow-on boreholes to a depths of approximately 20m below ground level (5m into the bedrock) and completion with either dual groundwater and ground gas monitoring standpipes or just groundwater monitoring standpipes;
- Sampling and geotechnical laboratory testing;
- Geo-environmental sampling and testing;
- Three rounds of follow up ground water and ground gas monitoring; and
- Factual reporting, including AGS format files (to include for laboratory test data) with investigation data.

The scope of the works was altered during the period of investigation. The works as completed is outlined, hereafter.

Objectives

The purpose of this Contract is to carry out ground investigation to determine the ground and groundwater conditions in order to inform the engineering design solutions of the proposed development.

Site Works

The intrusive investigation works carried out between the 20th April and 23rd June 2021. Works were carried out under the supervision of PGL Engineering Geologist(s); in accordance with the contract specification: The site investigation was carried out in accordance with the Specification and Related Documents for Ground investigation in Ireland, 2nd Edition, published by Engineers Ireland (2016) (EI SGI, 2016 including Errata Sheet Revision No.1, January 2019) and the relevant British Standards (BS 5930 (2015) Code of Practice for Site Investigation and BS 1377, Method of Tests for Soil for Civil Engineering Purposes, *in situ* Tests Parts 1 to 9). Details of the plant and equipment used are detailed on the relevant exploratory records.

A non-intrusive geophysical survey was carried out between the 13th and 20th April 2021. The survey consisted of 4 ERT profiles totalling a total linear distance of 436m, 8 SRP profiles with a total linear distance of 368m and 2 MASW profiles with a total linear distance of 212m. The findings are accompanying this factual report.

Cable Percussion Boreholes

A total of sixteen (16) cable percussion boreholes were advanced to depths 1.0m below existing ground level (bgl) to 10.0m bgl using PGL's Dando 2000 Percussion Rig and 200mm diameter casing. BH07, BH08 and BH09 were relocated in an attempt to avoid obstructions within the Made Ground strata. BH02A was drilled to install a monitoring standpipe. The logs are accompanying this factual report.

Location	Final Depth (m bgl)	Date Start (dd/mm/yyyy)
BH01	6.5	20/04/2021
BH02	6.2	26/04/2021
BH02A	5.0	25/05/2021
BH03	7.2	27/04/2021
BH04	7.1	29/04/2021
BH05	3.2	22/04/2021
BH06	7.9	23/04/2021

Location	Final Depth (m bgl)	Date Start (dd/mm/yyyy)
BH07	1.0	04/05/2021
BH07A	1.0	04/05/2021
BH07B	1.0	05/05/2021
BH07C	6.0	31/05/2021
BH08	1.0	04/05/2021
BH08A	1.5	05/05/2021
BH08B	9.0	31/05/2021
BH09	1.6	30/04/2021
BH09A	10.0	01/06/2021

Location	Chiseling Depth Top (m bgl)	Chiseling Depth Base (m bgl)	Duration (hh:mm)	Tool
BH01	6.4	6.5	01:00	Chisel.
BH02	4.5	5.0	00:30	Chisel.
	6.1	6.2	01:00	Chisel.
BH03	2.6	2.75	00:45	Chisel.
	6.5	6.6	00:30	Chisel.
	7.2	7.2	01:00	Chisel.
BH04	3.8	3.9	00:30	Chisel.
	7.0	7.1	01:00	Chisel.
BH05	1.4	1.6	00:30	Chisel
	2.85	2.9	01:00	Chisel
	3.15	3.2	01:00	Chisel
BH06	1.8	1.9	00:30	Chisel.
	7.0	7.1	00:30	Chisel.
	7.8	7.9	01:00	Chisel.
BH07	0.9	1.0	01:00	Chisel.
BH07A	0.9	1.0	01:00	Chisel.
BH07B	0.0	1.0	01:00	Chisel.
BH08	0.9	1.0	01:00	Chisel.
BH08A	1.4	1.5	01:00	Chisel.
BH08B	3.9	4.0	00:30	Chisel.
	8.8	8.9	00:30	Chisel.
	9.0	9.0	01:00	Chisel.
BH09	1.5	1.6	01:00	Chisel.
BH09A	7.8	7.85	00:30	Chisel.
	9.95	10.0	01:00	Chisel.

Rotary Boreholes

Subsequently, three (03) rotary follow on boreholes were drilled to depths 19.0m bgl to 28.5m bgl using PGL's Soilmec PSM Rotary Rig and 131mm diameter Symmetrex casing.

The logs are accompanying this factual report.

Location	Final Depth (m bgl)	Date Start (dd/mm/yyyy)
RC01	28.5	18/05/2021
RC06	22.9	19/05/2021
RC09	19.0	23/06/2021

Trial Pit Excavations

A total of fifteen (15) trial pits were excavated to depths 2.7m bgl to 4.5m bgl using an 8t tracked excavator. TPBH04, TPBH07, TPBH08 and TPBH09 were excavated to remove potential obstructions within the Made Ground strata and allow cable percussion boreholes to progress to greater depth. Three pits were excavated for the purpose of carrying out soakaway tests. The excavations terminated for a variety of reasons as outlined on the exploration logs accompanying this report.

Location	Final Depth (m bgl)	Stability	Date Start (dd/mm/yyyy)
TP01	3.5	Moderate.	20/04/2021
TP02	4.2	Good.	20/04/2021
TP03	4.2	Poor from 0.20m - 1.00m. Good from 1.00m - 4.20m.	20/04/2021
TP04	4.2	Good.	20/04/2021
TP05	4.0	Moderate.	21/04/2021
TP06	4.3	Moderate.	21/04/2021
TP06A	4.0	Moderate.	25/05/2021
TP07	3.2	Poor.	21/04/2021
TP08	3.1	Poor.	20/04/2021
TP09	4.5	Moderate.	21/04/2021
TP10	2.7	Very poor.	21/04/2021
TPBH04	3.6	Poor.	25/05/2021
TPBH07	3.0	Moderate.	24/05/2021
TPBH08	3.0	Moderate to poor.	24/05/2021
TPBH09	3.0	Poor to very poor.	24/05/2021
SA01	3.0	Moderate to poor.	25/05/2021
SA02	3.0	Poor.	25/05/2021
SA03	2.3	Good.	25/05/2021

In-Situ Testing

Soakaways

A single (01) infiltration/ soakaway test was carried out at exploratory location SA01 in general accordance with BRE Digest 365, Soakaway Design (2003/ 2007). The data from the testing is presented accompanying the relevant exploratory record attached, herein Infiltration was determined over a single (1) drainage cycle at SA01 for a duration of 420mins. Infiltration testing was not carried out at location SA02 and SA03 where Made Ground deposits were described to depths 3.00m bgl and 2.30m bgl respectively.

Standard Penetration Tests

Standard Penetration Tests, N values, were typically carried out in the boreholes using the 60° solid cone in place of the standard split barrel sampler. The Standard Penetration Test was carried out in accordance with Geotechnical Investigation and Testing, Part 3 Standard penetration test, BS EN ISO 22476-3:2005, Specification and Related Documents for Ground Investigation Ireland, 2nd Edition, Engineers Ireland (2016). Eighty nine (89) standard penetration tests were carried out in cable percussion (62) and rotary (27) boreholes. The data is presented on the exploratory logs accompanying this report.

Sampling

A total of one hundred and eleven (111) bulk disturbed samples (B), thirty (30) small disturbed samples (D), a single (01) undisturbed sample (U) and 8.7lin.m of core were recovered from the exploratory holes in accordance with Geotechnical Investigation and Sampling– Sampling Methods and Groundwater Measurements (EN ISO 22475-1:2006).

Seventy eight (78) environmental samples (ES) were recovered between depths 0.2m bgl and 5.5m bgl at exploratory locations. These were placed immediately in air-tight containers, which were filled to the top of the sample container. The sample suite consisted of: 2No. small disturbed samples (D) not less than 1.0kg, 2No. 250g amber glass sample containers and 2No. 60g amber glass sample containers.

The preparation for and methods of taking environmental samples, together with their size, preservation and handling was in accordance with British Standard BS 5930: 1981- Code of Practice for Site investigation, the contract documents and the Association of

Geotechnical and Geo-environmental Specialists (AGS) guide to environmental sampling, September 2010.

Survey and Drawings

Upon completion of the fieldworks, the 'as built' exploration locations were surveyed using Trimble 5700/5800 GPS equipment to the Ordinance Survey Irish Transverse Mercator system of co-ordinates (ITM) and elevations to Malin Head datum. The exploratory locations were shown on the exploratory location plans P21076-SI-A & P21076-SI-01.

Location	Easting	Northing	Ground Level (mOD)	Final Depth (m bgl)	Date Start (dd/mm/yyyy)
BH01	567589.61	569807.71	11.33	6.50	20/04/2021
BH02	567691.16	569799.16	11.12	6.20	26/04/2021
BH02A	567691.16	569797.40	11.13	5.00	25/05/2021
BH03	567684.41	569752.58	10.96	7.20	27/04/2021
BH04	567580.90	569722.64	10.75	7.10	29/04/2021
BH05	567634.56	569718.87	11.18	3.20	22/04/2021
BH06	567675.76	569704.49	10.08	7.90	23/04/2021
BH07	567624.06	569629.60	8.53	1.00	04/05/2021
BH07A	567624.06	569627.80	8.53	1.00	04/05/2021
BH07B	567624.06	569626.00	8.52	1.00	05/05/2021
BH07C	567624.06	569624.00	8.51	6.00	31/05/2021
BH08	567655.63	569644.34	8.48	1.00	04/05/2021
BH08A	567655.63	569642.50	8.48	1.50	05/05/2021
BH08B	567655.63	569640.70	8.49	9.00	31/05/2021
BH09	567619.68	569575.40	7.52	1.60	30/04/2021
BH09A	567619.70	569578.10	7.52	10.00	01/06/2021
RC01	567589.61	569807.71	11.33	28.50	18/05/2021
RC06	567675.76	569704.49	10.08	22.90	19/05/2021
RC09	567619.68	569575.40	7.52	19.00	23/06/2021
SA01	567588.65	569797.49	11.12	3.00	25/05/2021
SA02	567633.26	569745.81	10.90	3.00	25/05/2021
SA03	567575.02	569674.56	10.07	2.30	25/05/2021
TP01	567640.11	569815.74	11.51	3.50	20/04/2021
TP02	567586.82	569785.95	11.31	4.20	20/04/2021
TP03	567634.89	569771.92	11.18	4.20	20/04/2021
TP04	567673.33	569768.00	11.33	4.20	20/04/2021
TP05	567578.76	569672.98	10.03	4.00	21/04/2021
TP06	567635.05	569641.16	8.53	4.30	21/04/2021
TP06A	567629.19	569672.51	8.91	4.00	25/05/2021
TP07	567599.97	569585.63	7.54	3.20	21/04/2021

Location	Easting	Northing	Ground Level (mOD)	Final Depth (m bgl)	Date Start (dd/mm/yyyy)
TP08	567663.67	569677.64	9.13	3.10	20/04/2021
TP09	567603.23	569635.15	8.61	4.50	21/04/2021
TP10	567623.49	569595.08	7.63	2.70	21/04/2021
TPBH04	567580.90	569722.64	10.75	3.60	25/05/2021
TPBH07	567624.06	569629.60	8.53	3.00	24/05/2021
TPBH08	567655.63	569644.34	8.48	3.00	24/05/2021
TPBH09	567619.68	569575.40	7.52	3.00	24/05/2021

Laboratory Testing

Laboratory testing was scheduled by Arup. Testing was carried out by PGL in accordance with BS1377 (1990), Methods of test for soils for civil engineering purposes and the ISRM suggested methods for rock characterisation, testing and monitoring. Chemical testing was undertaken by Chemtest UK Ltd. on behalf of PGL.

Please note that all samples shall be retained for a period no longer than 28 days from the date of this report. Thereafter all remaining samples shall be appropriately disposed of unless a written instruction to the contrary is received by PGL prior to the date of this reporting and within the 28 day period outlined above. Laboratory testing will result in a reduction of sample quantity and in some cases the use of the full sample mass. Samples already tested may not be suitable or available for further testing.

The laboratory data is attached and is summarised as follows;

SUMMARY OF LABORATORY TESTING

Soil Testing		
Type	Nr.	Remarks
Natural Moisture Content	30	5% to 27%
Atterberg Limits	28	Liquid Limit, LL 22% to 37% Plastic Limit, PL 14% to 27% Plasticity Index, PI 7 to 13
Particle Size Distribution	30	No hydrometer analysis on fine soils
Suite D	08	See attached results
Environmental E1	46	See attached results
Environmental E2	42	See attached results
Environmental E4	42	See attached results
Environmental E5	46	See attached results

Soil Testing		
Type	Nr.	Remarks
Environmental E6	08	See attached results
Environmental E7	04	See attached results
Environmental E8	46	See attached results

Rock Testing		
Type	Nr.	Remarks
Point load Is50	05	2.4MPa to 6.5MPa
Unconfined compressive strength	01	20.35MPa

Published Geology

A search of the Geological Survey data base and 1:100,000 mapping (Sheet 25) showed the area to be underlain by three geological formations. Waulsortian Limestones (WA) underlie the immediate study area and are described as massive un-bedded Limestones. The Little Island Formation (LI) is mapped to the north and defined by massive and crinoidal fine Limestone. The Cuskinny Member is mapped to the south and is described as flaser bedded Sandstone and Mudstone. Outcropping bedrock is shown sporadically throughout the three units. A series of east west and North West/ South East trending faults are mapped within the area. Historical report ID: 7210 titled: 'Proposed Park and Ride Site', details a ground investigation undertaken approx. 250m east of the site. Made Ground deposits were described extending to depths 2.25m to 9.7m. This was generally underlain by Clay deposits.

Quaternary sediment mapping indicated the area is underlain by Made Ground deposits. The national Groundwater Vulnerability mapping showed the area to be of moderate to high vulnerability.

Ground Conditions

The full details of the ground conditions encountered are provided for on the exploratory records accompanying this report. The records provide descriptions, in accordance with BS 5930 (2015) and Eurocode 7, Geotechnical Investigation and Testing, Identification and classification of soils, Part 1, Identification and description (EN ISO 14688-1: 2002),– Identification and Classification of Soil, Part 2: Classification Principles (EN ISO 14688-2:2004) and Identification and Classification of Rock, Part 1: Identification & Description (EN ISO 14689-1:2004) of the materials encountered, in situ testing and details of the samples taken, together with any observations made during the ground investigation.

Groundwater was recorded during the period of works at depths 2.1m bgl to 18.2m bgl. Groundwater conditions observed in the exploratory locations are those appertaining to the period of the investigation. Groundwater levels may be subject to diurnal, seasonal and climatic variations and can also be affected by drainage conditions, tidal variations etc. Nine (09) 50mm diameter HDPE standpipes and two (02) 19mm diameter piezometer standpipes were installed during the period of investigation. The groundwater regime should be assessed from standpipe well installations, where available. A summary of groundwater is presented below and detailed on the exploratory records attached, herein.

SUMMARY OF GROUNDWATER

Location	Depth Strike (m bgl)	Remarks	Standpipe (Y/N)
BH01	-	None encountered.	N
BH02	-	None encountered.	N
BH02A	-	None encountered.	Y
BH03	-	None encountered.	Y
BH04	-	None encountered.	Y
BH05	-	None encountered.	Y
BH06	-	None encountered.	N
BH07	-	None encountered.	N
BH07A	-	None encountered.	N
BH07B	-	None encountered.	N
BH07C	-	None encountered.	Y
BH08	-	None encountered.	N
BH08A	-	None encountered.	N
BH08B	-	None encountered.	Y
BH09	-	None encountered.	N

Location	Depth Strike (m bgl)	Remarks	Standpipe (Y/N)
BH09A	-	None encountered.	N
RC01	13.5	See shift data.	Y
RC06	18.2	See shift data for detail.	Y
RC09	3.0	See shift data for detail.	Y
SA01	2.35	Trickling flow rate.	N
SA02	-	None encountered.	N
SA03	-	None encountered.	N
TP01	-	None encountered.	N
TP02	-	None encountered.	N
TP03	-	None encountered.	N
TP04	-	None encountered.	N
TP05	3.3	Steady rate of flow.	N
TP06	2.3	Steady rate of flow.	N
TP06A	2.1	Steady to fast flow rate.	N
TP07	3.1	Fast rate of flow.	N
TP08	3.1	Steady rate of flow.	N
TP09	3.9	Steady rate of flow.	N
TP10	2.7	Slow rate of flow.	N
TPBH04	-	None encountered.	N
TPBH07	2.37	Slow flow rate.	N
TPBH08	2.8	Slow flow rate.	N
TPBH09	2.45	Fast flow rate.	N

SUMMARY OF STANDPIPE INSTALLATIONS

Location	Depth Top (m bgl)	Depth Base (m bgl)	Diameter (mm)	Pipe Type
BH02A	0.00	1.00	50	PLAIN
	1.00	5.00	50	SLOTTED
BH03	0.00	1.20	50	PLAIN
	1.20	2.80	50	SLOTTED
BH04	0.00	1.20	50	PLAIN
	1.20	5.00	50	SLOTTED
BH05	0.00	1.00	50	PLAIN
	1.00	3.20	50	SLOTTED
BH07C	0.00	1.20	50	PLAIN
	1.20	6.00	50	SLOTTED
BH08B	0.00	1.20	50	PLAIN
	1.20	5.40	50	SLOTTED

Location	Depth Top (m bgl)	Depth Base (m bgl)	Diameter (mm)	Pipe Type
RC01	0.00	15.50	50	PLAIN
	15.50	18.50	50	SLOTTED
RC06	0.00	0.70	19	PLAIN
	0.70	4.50	19	SLOTTED
	0.00	19.90	50	PLAIN
	19.90	22.90	50	SLOTTED
RC09	0.00	0.70	19	PLAIN
	0.70	2.40	19	SLOTTED
	0.00	16.00	50	PLAIN
	16.00	19.00	50	SLOTTED

A series of groundwater and gas readings were obtained on subsequent site visits. The data is presented below.

SUMMARY OF GROUNDWATER MONITORING

Location	Date (dd/mm/yyyy)		
	Depth (m bgl)		
	01/06/2021	21/07/2021	16/08/2021
RC01	4.18	5.04	5.0
BH02A	2.17	Dry	Dry
BH03	2.64	Dry	Dry
BH04	3.25	Dry	3.7
BH05	Dry	Dry	Dry
RC06	3.74	4.22	4.15
BH07C	2.06	2.72	2.72
BH08B	-	2.5	2.46
RC09	-	2.74	2.72

SUMMARY OF GAS MONITORING

Location	21/07/2021										
	Flow (l/h)	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	CO (ppm)	H2S (ppm)	CH4 lel (%)	CH4 peak (%)	Baro pressure (mb)	Relative pressure (mb)
BH02A	0	0	0.00	0.20	0.80	0	0	0.00	0.00	1022	0.03 (Pos)
BH03	0	0	3.30	0.16	0.81	0	0	0.00	0.00	1021	0.02 (Pos)
BH04	0	0	0.00	0.20	0.80	0	0	0.00	0.00	1021	0.07 (Pos)
BH05	0	0	0.01	0.16	0.83	0	0	0.00	0.00	1021	0.11 (Pos)

21/07/2021											
Location	Flow (l/h)	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	CO (ppm)	H2S (ppm)	CH4 lel (%)	CH4 peak (%)	Baro pressure (mb)	Relative pressure (mb)
RC06	0	0.1	0.10	0.09	0.81	0	0	0.00	0.00	1021	0.11 (Pos)
BH07C	0	0.1	0.03	0.12	0.85	1	0	0.01	0.00	1021	0.11 (Pos)
BH08B	0.1	0.1	0.01	0.18	0.81	2	0	0.01	0.00	1020	0.15 (Pos)
RC09	0	0	0.02	0.17	0.80	1	0	0.00	0.00	1019	0.24 (Pos)

16/08/2021											
Location	Flow (l/h)	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	CO (ppm)	H2S (ppm)	CH4 lel (%)	CH4 peak (%)	Baro pressure (mb)	Relative pressure (mb)
BH02A	-0.1	0	0	0.15	0.85	0	0	0	0	1024	0.02 (Pos)
BH03	0.1	0	0	0.2	0.8	0	0	0	0	1023	0.05 (Neg)
BH04	0.1	0	0.06	0.11	0.83	0	0	0	0	1023	0.28 (Neg)
BH05	-0.1	0	0.02	0.18	0.81	0	0	0	0	1024	0.02 (Pos)
RC06	-0.1	0	0	0.2	0.8	0	0	0	0	1024	0.01 (Neg)
BH07C	-0.1	0	0.04	0.14	0.82	0	0	0	0	1025	0
BH08B	0.1	0	0	0.2	0.8	0	0	0	0	1025	0.06 (Neg)
RC09	0.1	0	0.01	0.19	0.8	0	0	0	0	1025	0.07 (Neg)

01/11/2021											
Location	Flow (l/h)	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	CO (ppm)	H2S (ppm)	CH4 lel (%)	CH4 peak (%)	Baro pressure (mb)	Relative pressure (mb)
BH02A	0	0.1	0.001	0.20	0.80	0	0	1.00	0.001	997	0.01
BH03	0	0.1	0.001	0.20	0.80	0	0	0.01	0.001	997	0.62
BH04	0	0.1	0.035	0.12	0.84	0	0	0.01	0.001	997	0.00
BH05	0	0.1	0.007	0.19	0.81	0	0	0.01	0.001	997	0.06
RC06	0	0.1	0.043	0.12	0.84	0	0	0.01	0.001	997	0.46
BH07C	0	0.0	0.001	0.19	0.80	0	0	0.01	0.001	997	0.31
BH08B	0	0.0	0.001	0.20	0.80	0	0	0.01	0.001	997	0.04
RC09	0	0.0	0.003	0.20	0.80	0	0	0.01	0.000	997	0.12

Exploratory boreholes and excavations were backfilled with arisings, bentonite and gravel.



GRAVEL Backfill to installation/ borehole



ARISINGS Backfill



BENTONITE Backfill to installation/ borehole

Should there be any queries in relation to the data collected, please do not hesitate to contact our office.

Yours sincerely,
For **Priority Geotechnical**,

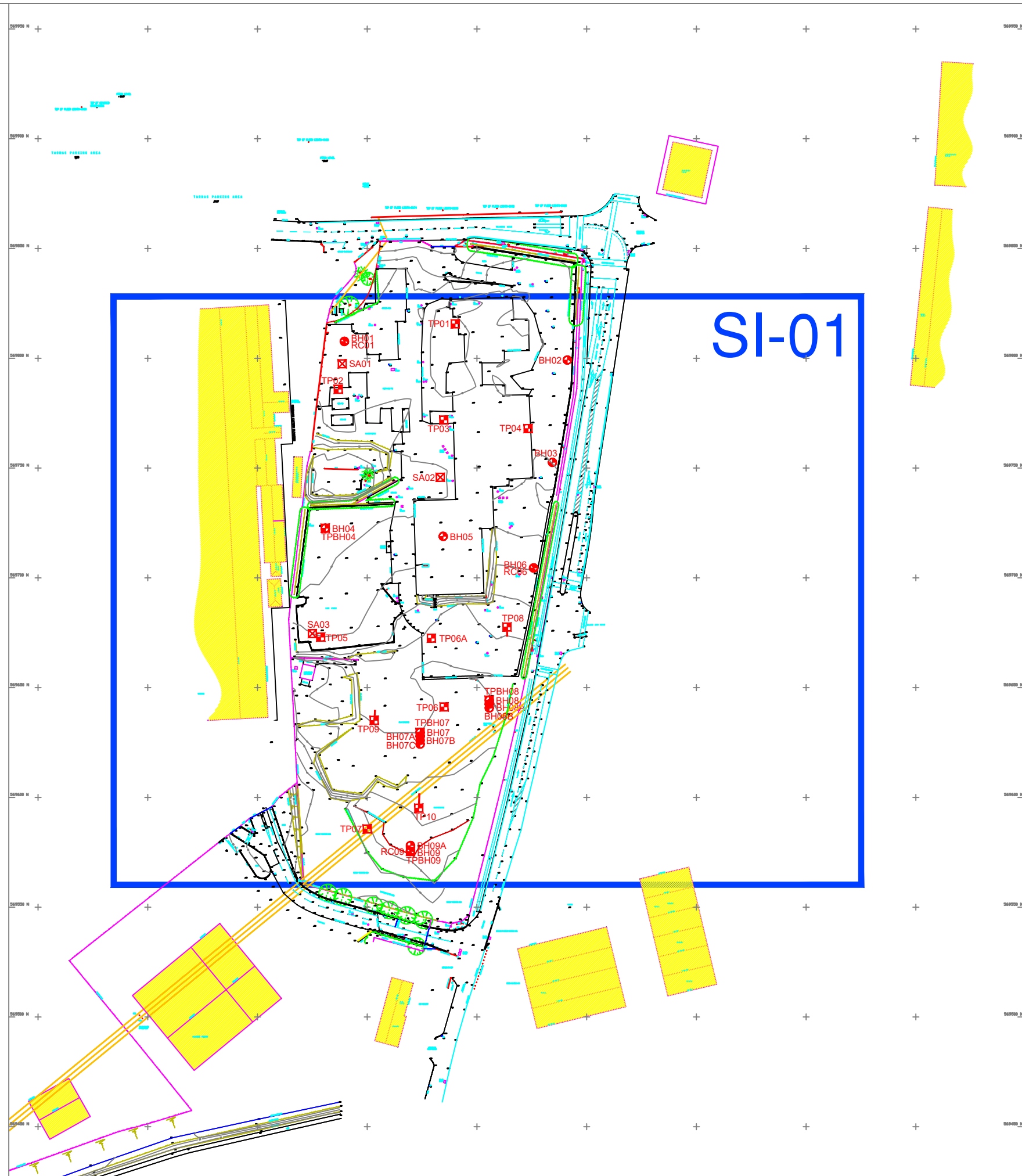


James McSweeney BSc
Engineering Geologist

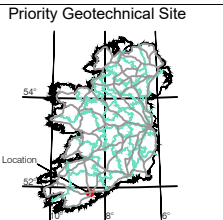
No responsibility can be held by PGL for ground conditions between exploratory locations. The exploratory logs provide for ground profiles and configuration of strata relevant to the investigation depths achieved during the fieldworks. Caution shall be taken when extrapolating between such exploratory locations. No liability is accepted for ground conditions extraneous to the exploratory locations.

No account has been taken of potential subsidence or ground movement due to mineral extraction, mining works or karstification below or in proximity to the site, unless specifically addressed.

This report has been prepared for Employer and their Representative as outline, herein. The information should not be used without their prior written permission. PGL accepts no responsibility or liability for this document being used other than for the purposes for which it was intended.



SI-01



JOB NAME:
Creamfields Site (CMP Cork)

Sheet Title:
EXPLORATORY LOCATION
LAYOUT

JOB NUMBER:
P21076

DRAWING NUMBER:
P21076-SI-A

DRAWN BY:
Gary Curtin

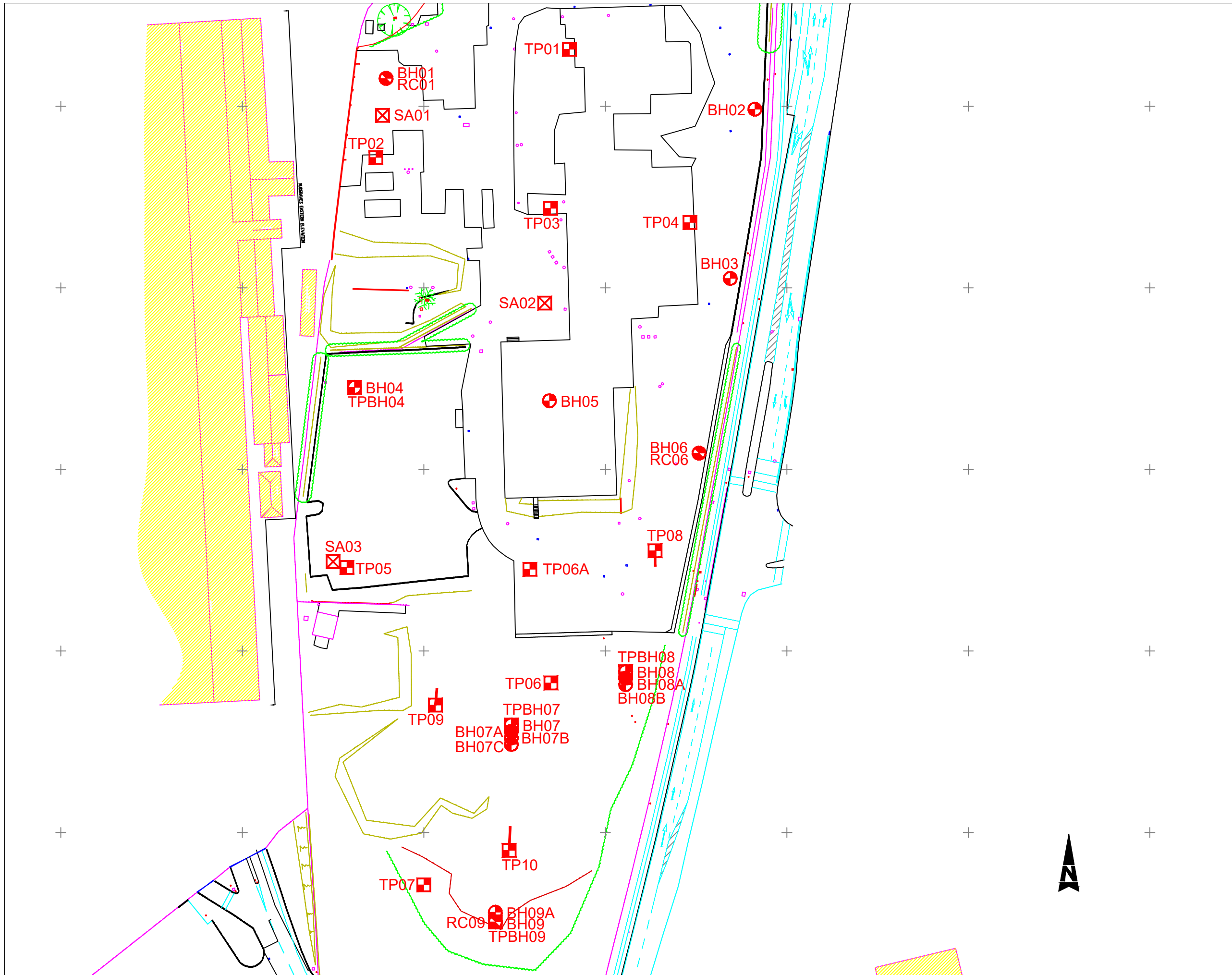
DATE:
12/04/2021

SCALE:
1:2000 ON A3

APPROVED:
GH

REVISION:
D01





KEY:

- TP00 Denotes Trial Pit location
- BH00 Denotes Borehole location
- RC00 Denotes Rotary Core location
- SA00 Denotes Soakaway location

Coordinates shown on ITM.

TP01	567640.1	569815.7	11.509
TP02	567586.8	569785.9	11.307
TP03	567634.9	569771.9	11.177
TP04	567673.3	569768	11.331
TP05	567578.8	569673	10.034
TP06	567635	569641.2	8.526
TP06A	567629.2	569672.5	8.909
TP07	567600	569585.6	7.54
TP08	567663.7	569677.6	9.133
TP09	567603.2	569635.1	8.609
TP10	567623.5	569595.1	7.627
BH01	567589.6	569807.7	11.326
BH02	567691.2	569799.2	11.124
BH02A	567691.2	569797.4	11.125
BH03	567684.4	569752.6	10.961
BH04	567580.9	569722.6	10.749
BH05	567634.6	569718.9	11.18
BH06	567675.8	569704.5	10.078
BH07	567624.1	569629.6	8.527
BH07A	567624.1	569627.8	8.53
BH07B	567624.1	569626	8.52
BH07C	567624.1	569624	8.51
BH08	567655.6	569644.3	8.479
BH08A	567655.6	569642.5	8.48
BH08B	567655.6	569640.7	8.49
BH09	567619.7	569575.4	7.515
BH09A	567619.7	569578.1	7.515
SA01	567588.6	569797.5	11.121
SA02	567633.3	569745.8	10.9
SA03	567575	569674.6	10.069

JOB NAME:
Creamfields Site (CMP Cork)

Sheet Title:
EXPLORATION LOCATION PLAN

JOB NUMBER:
P21076

DRAWING NUMBER:
P21076-SI-01

DRAWN BY:
Gary Curtin

DATE:
25/08/2021

SCALE: 1:1000 ON A3	APPROVED: GH
------------------------	-----------------

REVISION:
D01



KEY TO SYMBOLS ON EXPLORATORY HOLE RECORDS

All linear dimensions are in metres or millimetres

DESCRIPTIONS

** Drillers Description
Friable Easily crumbled

SAMPLES

U() Undisturbed 102mm diameter sample, () denotes number of blows to drive sampler
U()F, U()P F- not recovered, P-partially recovered
U38 Undisturbed 38mm diameter sample
P(F), (P) Piston sample - disturbed
B Bulk sample - disturbed
D Jar Sample - disturbed
W Water Sample
CBR California Bearing Ratio mould sample
ES Chemical Sample for Contamination Analysis
SPTLS Standard Penetration Test S lump sample from split sampler

CORE RECOVERY AND ROCK QUALITY

TCR Total Core Recovery (% of Core Run)
SCR Solid Core Recovery (length of core having at least one full diameter as % of core run)
RQD Rock Quality Designation (length of solid core greater than 100mm as % of core run)
Where there is insufficient space for the TCR, SCR and RQD, the results may be found in the remarks column
lf Fracture Spacing in mm (Minimum/Average/Maximum) NI - non intact, NR - no recovery
AZCL Assumed Zone of Core Loss
NI Non intact

GROUNDWATER

▽ Groundwater strike
▼ Groundwater level after standing period
Date/Water Date of shift (day/month)/Depth to water at end of previous shift shown above the date and depth to water at beginning of shift given below the date

INSITU TESTING

S Standard Penetration Test - split barrel sampler
C Standard Penetration Test - solid 60° cone
SW Self Weight Penetration
Ivp, HVp (R) In Situ Vane Test, Hand Vane Test (R) demonstrates remoulded strength
K(F), (C), (R), (P) Permeability Test
HP Hand Penetrometer Test

MEASURED PROPERTIES

N Standard Penetration Test - blows required to drive 300mm after seating drive
x/y Denotes x blows for y mm within the Standard Penetration Test
x*/y Denotes x blows for y mm within the seating drive
 c_u Undrained Shear Strength (kN/m²)
CBR California Bearing Ratio

ROTARY DRILLING SIZES

Index Letter	Nominal Diameter (mm)	
	Borehole	Core
N	75	54
H	99	76
P	120	92
S	146	113



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Drilled By
KC
Logged By
BS

Borehole No.
BH01
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567590E - 569808N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 11.33 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 20/04/2021 - 21/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.20	B		0.20	11.13	Concrete.	1	
		0.00 - 1.20	D						
		0.50	ES		1.20	10.13	(MADE GROUND) Brown, slightly sandy gravelly CLAY with low cobble content. Gravel is fine to coarse, sub-angular to sub-rounded. Cobbles are 63mm to 200mm dia, sub-rounded.	2	
		1.20 - 2.20	B						
		1.20 - 2.20	D		3.20	8.13	Firm to stiff, brown, slightly sandy gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded. Cobbles are, 63mm to 200mm dia, sub-rounded.	3	
		1.20	SPT (C)	N=15 (3,3/4,4,4,3)					
		2.20 - 3.20	B		5.20	6.13	Firm to stiff, brown, slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded.	4	
		2.20 - 3.20	D						
		2.20	SPT (C)	N=19 (3,4/6,5,4,4)	6.50	4.83	Medium dense, brown, clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded. Low cobble content, 63mm to 100mm dia, sub-angular to sub-rounded. <i>5.20m: Driller noted Boulder content.</i>	5	
		3.20 - 4.20	B						
		3.20 - 4.20	D		6.50	4.83	End of Borehole at 6.500m	6	
		3.20	SPT (C)	N=13 (3,2/3,3,3,4)					
		4.20 - 5.20	B		6.50	4.83		7	
		4.20 - 5.20	D						
		4.20	SPT (C)	N=20 (5,6/6,4,4,6)	6.50	4.83		8	
		5.20 - 6.20	B						
		5.20	SPT (C)	N=19 (5,5/4,4,5,6)	6.50	4.83		9	
		6.20	SPT (C)	25 (16,17/25 for 5mm)					
		6.50	SPT (C)	50 (25 for 0mm/50 for 0mm)	6.50	4.83			

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	6.50	200	200	6.40	6.50	01:00	Chisel.
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 6.50m bgl, refusal. Inspection pit carried out prior to drilling.	Shift Data:			GW (m bgl)	Shift	Depth (m bgl)	Remarks
		20/04/2021 08:00	0.00			Start of shift.	
		Dry 20/04/2021 18:00	1.20			End of shift.	
		Dry 21/04/2021 08:00	1.20			Start of shift.	
		Dry 21/04/2021 18:00	6.50			End of borehole.	



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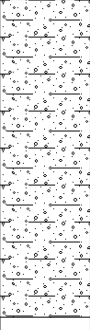
Drilled By:
 GW
 Logged By:
 BS

Borehole No.
RC01
 Sheet 1 of 4

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567590E - 569808N **Hole Type:** RC

Location: Tramore Road, Cork **Level:** 11.33 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Dates:** 18/05/2021 19/05/2021

Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%)			Depth (m) / Fl (/m)	Level (mOD)	Legend	Stratum Description	
				TCR	SCR	RQD					
										Refer to BH01 for detailed overburden description.	1
											2
											3
											4
											5
											6
							6.90	4.43		Driller described: Dense, clayey sandy GRAVEL with cobble content.	7
											8
											9

Groundwater:				Hole Information:			Equipment: Soilmec PSM.
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
13.50				See shift data.	28.50	76	131
							Method: Compressed air.

Remarks: Borehole terminated at 28.50m bgl, required depth. 50mm standpipe installed. Depth response zone 15.50m to 18.50m.	Shift Data:		Groundwater (m bgl)	Shift	Hole Depth (m bgl)	Remarks
			15.5	18/05/2021 08:00	0.00	Start of shift.
				18/05/2021 18:00	16.50	End of shift.
			10.8	19/05/2021 08:00	0.00	Start of shift.
				19/05/2021 18:00	28.50	End of borehole.



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Drilled By:	Borehole No.
GW	RC01
Logged By:	
BS	
Sheet 2 of 4	

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567590E - 569808N	Hole Type: RC
Location: Tramore Road, Cork	Level: 11.33 m OD	Scale: 1:50	
Client: Watfore Developments Ltd.	Dates: 18/05/2021	19/05/2021	

Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%)			Depth (m) / Fl (/m)	Level (mOD)	Legend	Stratum Description			
				TCR	SCR	RQD							
		N=30 (7,7/6,7,7,10) (C)								Driller described: Dense, clayey sandy GRAVEL with cobble content.	10		
		N=31 (5,6/6,7,8,10) (C)				11.00	0.33					Driller described: Medium dense, yellow, silty sandy GRAVEL.	11
		N=17 (4,4/4,5,4,4) (C)								Driller described: Dense, yellow, silty gravelly SAND.			12
		N=24 (4,5/5,5,6,8) (C)				14.20	-2.87						
		N=35 (6,6/8,9,9,9) (C)										14	
		N=30 (5,6/7,7,6,10) (C)										15	
											16		
											17		
											18		

Groundwater:				Hole Information:			Equipment: Soilmec PSM.
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
13.50				See shift data.	28.50	76	131
Remarks:				Shift Data:			
Borehole terminated at 28.50m bgl, required depth. 50mm standpipe installed. Depth response zone 15.50m to 18.50m.				Groundwater (m bgl)	Shift	Hole Depth (m bgl)	Remarks
				15.5	18/05/2021 08:00	0.00	Start of shift.
					18/05/2021 18:00	16.50	End of shift.
				10.8	19/05/2021 08:00	0.00	Start of shift.
	19/05/2021 18:00	28.50	End of borehole.				



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Drilled By:
 GW
Logged By:
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Borehole No.
RC01
 Sheet 3 of 4

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567590E - 569808N **Hole Type:** RC

Location: Tramore Road, Cork **Level:** 11.33 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Dates:** 18/05/2021 19/05/2021

Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%)			Depth (m) / Fl (/m)	Level (mOD)	Legend	Stratum Description	
				TCR	SCR	RQD					
		N=16 (4,4/5,4,3,4) (C)								Driller described: Dense, yellow, silty gravelly SAND.	19
		N=15 (3,3/3,4,4,4) (C)									20
		N=20 (3,4/3,4,4,9) (C)					21.00	-9.67		Driller described: Medium dense, yellow brown, sandy GRAVEL. Sand is fine.	21
		N=13 (3,3/3,3,3,4) (C)									22
		50 (25 for 0mm/50 for 0mm) (C)					23.90 24.00	-12.57 -12.67			
	24.00 - 25.50	50mm 270mm 200mm	100	73	39	11/m		24			
	25.80	C						25			
	25.50 - 27.00	70mm 250mm 200mm	73	55	37	6/m		26			
											27

Groundwater:					Hole Information:			Equipment:
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Soilmec PSM.
13.50				See shift data.	28.50	76	131	Compressed air.

Remarks:	Shift Data:	Groundwater (m bgl)		Shift		Hole Depth (m bgl)		Remarks	
Borehole terminated at 28.50m bgl, required depth. 50mm standpipe installed. Depth response zone 15.50m to 18.50m.									
		15.5		18/05/2021 08:00		0.00		Start of shift.	
				18/05/2021 18:00		16.50		End of shift.	
		10.8		19/05/2021 08:00		0.00		Start of shift.	
				19/05/2021 18:00		28.50		End of borehole.	



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Drilled By:	Borehole No.
GW	RC01
Logged By:	
BS	
Sheet 4 of 4	

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567590E - 569808N	Hole Type: RC
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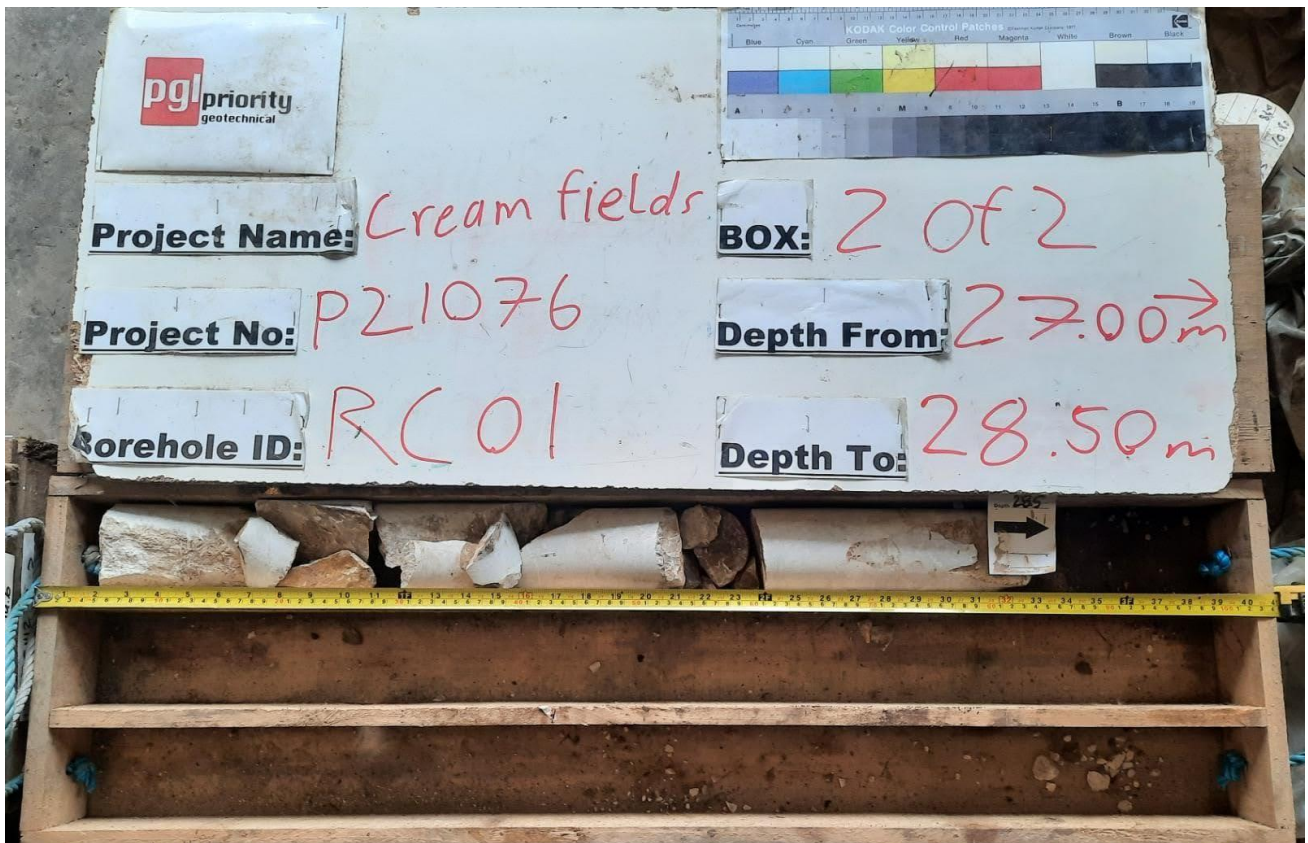
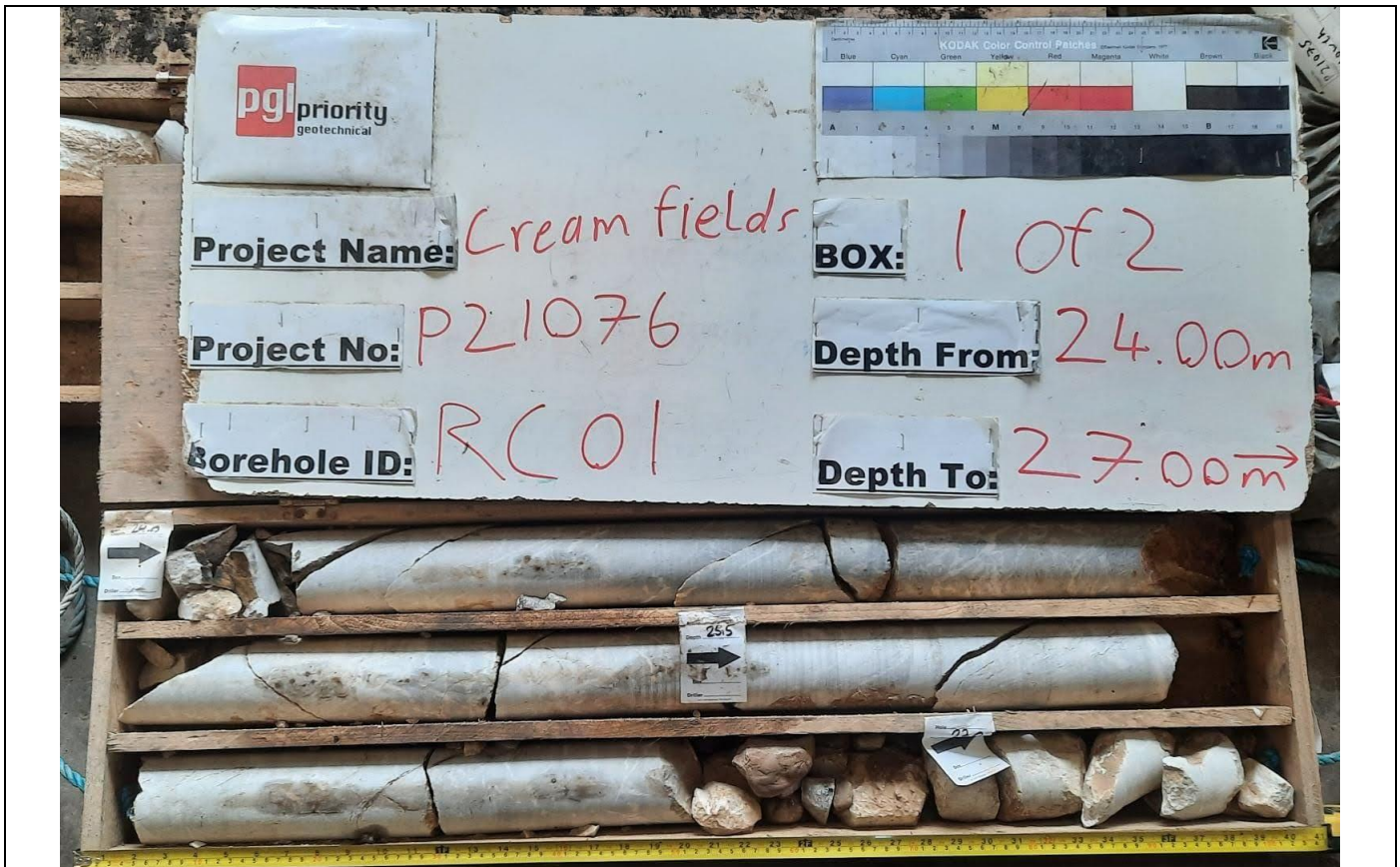
Location: Tramore Road, Cork	Level: 11.33 m OD	Scale: 1:50
-------------------------------------	--------------------------	--------------------

Client: Watfore Developments Ltd.	Dates: 18/05/2021 - 19/05/2021
--	---------------------------------------

Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%)			Depth (m) / Fl (/m)	Level (mOD)	Legend	Stratum Description	
				TCR	SCR	RQD					
		27.00 - 28.50	50mm 240mm 80mm	74	15	9	10/m	-17.17		Lithology: Strong, blue grey, LIMESTONE with calcite veining. Weathering: Moderately weathered, moderately fragmented from 27.00m to 28.26m. Oxidation discolouration and clay infill on fracture surfaces. Fractures: 2 sets observed. Set 1 is dipping circa 50 degrees with undulating rough fracture surfaces and close to medium fracture spacing. Set 2 is dipping circa 80 degrees with undulating rough fracture surfaces and wide fracture spacing. End of Borehole at 28.500m	28
		28.15	C								29
		28.35	C								30
											31
											32
											33
											34
											35
											36

Groundwater:				Hole Information:			Equipment: Soilmec PSM.
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
13.50				See shift data.	28.50	76	131
							Method: Compressed air.

Remarks: Borehole terminated at 28.50m bgl, required depth. 50mm standpipe installed. Depth response zone 15.50m to 18.50m.	Shift Data:		Groundwater (m bgl)	Shift	Hole Depth (m bgl)	Remarks
			15.5	18/05/2021 08:00	0.00	Start of shift.
				18/05/2021 18:00	16.50	End of shift.
				19/05/2021 08:00	0.00	Start of shift.
			10.8	19/05/2021 18:00	28.50	End of borehole.



Number:

RC01

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup



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Logged By
RD

Borehole No.
BH02
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567691E - 569799N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 11.12 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 26/04/2021 - 27/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.20	B		0.20	10.92		Concrete.	
		0.50	ES					(MADE GROUND) Slightly clayey GRAVEL with medium cobble content. Gravel is fine to coarse and angular. Cobbles are angular, various lithologies and concrete.	1
		1.20 - 2.20	B		1.20	9.92		(MADE GROUND) Firm to stiff, brown mottled, black slight sandy slightly gravelly CLAY with low cobble content and occasional slate and ceramics inclusions. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles are rounded and are Sandstone lithology.	2
		1.20	SPT (C)	N=11 (2,2/3,3,2,3)					
		1.50	ES						
		2.20 - 3.20	B						3
		2.20	SPT (C)	N=13 (2,2/3,3,4,3)					
		2.50	ES						
		3.20 - 4.20	B						4
		3.20	SPT (C)	N=21 (3,3/4,6,5,6)					
		3.50	ES						
		4.20 - 5.20	B		4.20	6.92		Stiff, brown, slightly sandy slightly gravelly CLAY with high cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles are sub-angular to rounded and consist of various lithologies.	5
		4.20	SPT (C)	N=21 (5,5/4,5,6,6)					
		4.50	ES						
		5.20 - 6.20	B					5.20m - 6.20m: Driller noted Boulder content.	6
		5.20	SPT (C)	N=26 (6,7/7,6,6,7)					
		6.20	SPT (C)	0 (25 for 0mm/0 for 0mm)	6.20	4.92		End of Borehole at 6.200m	7
									8
									9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	6.20	200	200	4.50	5.00	00:30	Chisel.
					Equipment:			6.10 6.20 01:00 Chisel.			
					Dando 2000.						

Remarks: Borehole terminated at 6.20m bgl due to obstruction. Inspection pit dug to 1.20m bgl.	Shift Data:			GW (m bgl)	Shift	Depth (m bgl)	Remarks
					26/04/2021 08:00	0.00	Start of shift.
				Dry	26/04/2021 18:00	5.20	End of shift.
				Dry	27/04/2021 08:00	5.20	Start of shift.
				Dry	27/04/2021 18:00	6.20	End of borehole.



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Drilled By
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Logged By

Borehole No.
BH02A
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567691E - 569797N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 11.13 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 25/05/2021 - 25/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
								Refer to BH02 for detailed strata information.	1
									2
									3
									4
				5.00	6.12			End of Borehole at 5.000m	5
									6
									7
									8
									9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	5.00	200	200				
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 5.00m bgl. Borehole drilled to install 50mm standpipe. Response zone from 1.00m to 4.00m bgl.	Shift Data:		GW (m bgl)	Shift	Depth (m bgl)	Remarks
				25/05/2021 08:00	0.00	Start of shift.
			Dry	25/05/2021 18:00	5.00	End of shift.



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Drilled By
KC
Logged By
RD

Borehole No.
BH03
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567684E - 569753N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 10.96 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 27/04/2021 - 28/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.00 - 1.20	B		0.20	10.76	Concrete.	
		1.00	ES				(MADE GROUND) Medium dense, brown, silty gravelly SAND with medium cobble content with timber and brick inclusions. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to rounded. Cobbles are sub-angular to sub-rounded.	1
		1.20 - 2.20 1.20	B SPT (C)	N=11 (2,2/2,3,3,3)				
		2.00	ES				Stiff, purple brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium and sub-angular to rounded.	2
		2.20 - 3.20 2.20	B SPT (C)	N=14 (3,3/2,4,4,4)				
		3.00	ES		3.00	7.96	Stiff, black purple brown, slightly sandy gravelly CLAY with occasional organic material. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. <i>5.20m - 7.20m: Driller noted Cobbles.</i>	3
		3.20 - 4.20 3.20	B SPT (C)	N=22 (5,5/6,6,5,5)				
		4.00	ES				End of Borehole at 7.200m	4
		4.20 - 5.20 4.20	B SPT (C)	N=21 (4,4/6,6,5,4)				
		5.20 - 6.20 5.20	B SPT (C)	N=25 (5,5/6,6,7,6)	5.20	5.76		5
		6.20 - 7.20 6.20	B SPT (C)	N=35 (7,7/9,9,9,8)				6
		7.20	SPT (C)	50 (25 for 75mm/50 for 0mm)	7.20	3.76		7
								8
								9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	7.20	200	200	2.60	2.75	00:45	Chisel.
								6.50	6.60	00:30	Chisel.
								7.20	7.20	01:00	Chisel.
					Equipment: Dando 2000.						

Remarks:	Shift Data:	GW (m bgl)	Shift	Depth (m bgl)	Remarks
		Borehole terminated at 7.20m bgl due to refusal. Inspection pit dug to 1.20m bgl.			27/04/2021 08:00
		Dry	27/04/2021 18:00	5.00	End of shift.
		Dry	28/04/2021 08:00	5.00	Start of shift.
		Dry	28/04/2021 18:00	7.20	End of borehole.



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Borehole No.
BH04
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567581E - 569723N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 10.75 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 29/04/2021 - 29/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.00 - 1.20	B		0.20	10.55		Bituminous surfacing.
		1.20 - 2.20 1.20	B SPT (C)	N=21 (5,5/4,6,6,5)				(MADE GROUND) Medium dense to dense, grey brown, sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles are sub-angular to sub-rounded and consist of various lithologies.
		2.20 - 3.20 2.20	B SPT (C)	N=18 (5,4/4,4,5,5)				
		3.20 - 4.20 3.20	B SPT (C)	N=30 (6,7/7,9,7,7)				3.20m - 4.00m: Increasing clay content.
		4.00 - 5.20 4.20	ES B SPT (C)	N=34 (7,7/9,9,8,8)	4.00	6.75		Dense to medium dense, brown, clayey very sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded, Sandstone lithology. Cobbles are sub-angular to sub-rounded, Sandstone lithology.
		5.20 - 6.20 5.20	B SPT (C)	N=26 (6,6/7,6,6,7)				
		6.20 - 7.10 6.20	B SPT (C)	N=31 (7,11/9,9,8,5)				6.00m - 7.10m: Driller described large angular boulders.
		7.10	SPT (C)	50 (25 for 0mm/50 for 0mm)	7.10	3.65		End of Borehole at 7.100m

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	7.10	200	200	3.80	3.90	00:30	Chisel.
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 7.10m bgl due to refusal. Inspection pit dug to 1.20m bgl.	Shift Data:		GW (m bgl)	Shift	Depth (m bgl)	Remarks
	Dry	29/04/2021 08:00	0.00	08:00	0.00	Start of shift.
		29/04/2021 18:00	7.10	18:00	7.10	End of borehole.



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Borehole No.
BH05
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567635E - 569719N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 11.18 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 22/04/2021 - 22/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.20	B		0.20	10.98	Concrete		
		1.20 - 2.20 1.20	B SPT (C)	N=34 (6,8/8,6,9,11)	1.20	9.98	(MADE GROUND) Purple brown, very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, angular to rounded. Low cobble content, 63mm to 120mm dia, sub-angular to sub-rounded.	1	
		2.20 - 3.20 2.20	B SPT (C)	N=45 (9,11/11,9,11,14)	2.20	8.98	Dense, brown, clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded.	2	
		3.20	SPT (C)	50 (25 for 0mm/50 for 0mm)	3.20	7.98	Dense, brown, slightly clayey sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded. Low cobble content, 63mm to 150mm dia, sub-angular.	3	
							End of Borehole at 3.200m	4	
								5	
								6	
								7	
								8	
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	3.20	200	200	1.40	1.60	00:30	Chisel
								2.85	2.90	01:00	Chisel
								3.15	3.20	01:00	Chisel
					Equipment:						
					Dando 2000.						

Remarks:	Shift Data:		Depth (m bgl)	Remarks
	GW (m bgl)	Shift		
Borehole terminated at 3.20m bgl, obstruction. Inspection pit carried out. 50mm dia. standpipe installed. Response zone from 1.00m to 3.20m bgl.		22/04/2021 08:00	0.00	Start of shift.
	Dry	22/04/2021 18:00	3.20	End of shift.



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Borehole No.
BH06
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567676E - 569704N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 10.08 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 23/04/2021 - 26/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.20	B		0.20	9.88		Concrete.	
		0.50	ES					(MADE GROUND) Brown, slightly clayey sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles are sub-angular to rounded consisting of various lithologies and concrete.	1
		1.20 - 2.20	B	N=24 (4,6/6,7,6,5)	1.20	8.88		Medium dense, brown, organic, slightly clayey sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded, Sandstone lithology. Cobbles are sub-angular to sub-rounded, Sandstone lithology.	2
		1.20	SPT (C)						
		1.50	ES						
		2.20 - 3.20	B	N=19 (5,5/4,4,5,6)	2.20	6.88		Stiff, dark brown, organic slightly sandy gravelly SILT. Sand is fine to coarse. Gravel is fine to coarse, sub-rounded to sub-angular, Sandstone lithology. Cobbles are rounded to sub-angular, Sandstone lithology.	3
		2.20	SPT (C)						
		3.20 - 4.20	B	N=25 (6,6/7,4,7,7)	3.20	5.88		Firm to stiff, brown grey, slightly sandy slightly gravelly SILT. Sand is fine to coarse. Gravel is fine to medium and sub-rounded to rounded. 4.20m - 7.20m: Driller noted Cobble content.	4
		3.20	SPT (C)						
		4.20 - 5.20	B	N=10 (2,2/2,3,3,2)	4.20	2.88		Medium dense, brown, silty very sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles are sub-angular to rounded and consist of various lithologies. Driller noted boulder content	5
		4.20 - 5.20	D						
		4.20	SPT (C)						
		5.20	U						
		5.20 - 6.20	B						
		5.20 - 6.20	D						
		6.20 - 7.20	B	N=18 (3,3/4,4,4,6)	6.20	2.18		End of Borehole at 7.900m	6
		6.20 - 7.20	D						
		6.20	SPT (C)						
		7.20 - 7.90	B	N=29 (5,5/8,8,7,6)	7.20	2.18		End of Borehole at 7.900m	7
		7.20	SPT (C)						
		7.90	SPT (C)	50 (25 for 0mm/50 for 0mm)	7.90	2.18			8
									9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	7.90	200	200	1.80	1.90	00:30	Chisel.
								7.00	7.10	00:30	Chisel.
								7.80	7.90	01:00	Chisel.
					Equipment: Dando 2000.						

Remarks:	Shift Data:	GW (m bgl)	Shift	Depth (m bgl)	Remarks
			23/04/2021 08:00	0.00	Start of shift.
		Dry	23/04/2021 18:00	7.20	End of shift.
		Dry	26/04/2021 08:00	7.20	Start of shift.
		Dry	26/04/2021 18:00	7.90	End of borehole.



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Borehole No.
RC06
 Sheet 1 of 3

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567676E - 569704N **Hole Type:** RC

Location: Tramore Road, Cork **Level:** 10.08 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Dates:** 19/05/2021 20/05/2021

Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%)			Depth (m) / Fl (/m)	Level (mOD)	Legend	Stratum Description	
				TCR	SCR	RQD					
							7.60	2.48		Refer to BH06 for detailed overburden description.	1
											2
											3
											4
											5
											6
											7
										Driller described: Medium dense, clayey gravelly SAND with low cobble content.	8
											9

Groundwater:				Hole Information:			Equipment: Soilmec PSM.
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
18.20				See shift data for detail.	22.90	76	131
							Method: Compressed air.

Remarks: Borehole terminated at 22.90m bgl, required depth. 19mm standpipe installed, depth response zone 0.70m to 4.50m. 50mm standpipe installed. Depth response zone 19.90m to 22.90m.	Shift Data:		Groundwater (m bgl)	Shift	Hole Depth (m bgl)	Remarks
				19/05/2021 08:00	0.00	Start of shift.
				19/05/2021 18:00	13.50	End of shift.
				20/05/2021 08:00	13.50	Start of shift.
				20/05/2021 18:00	22.90	End of borehole.



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Borehole No.
RC06
 Sheet 3 of 3

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567676E - 569704N **Hole Type:** RC

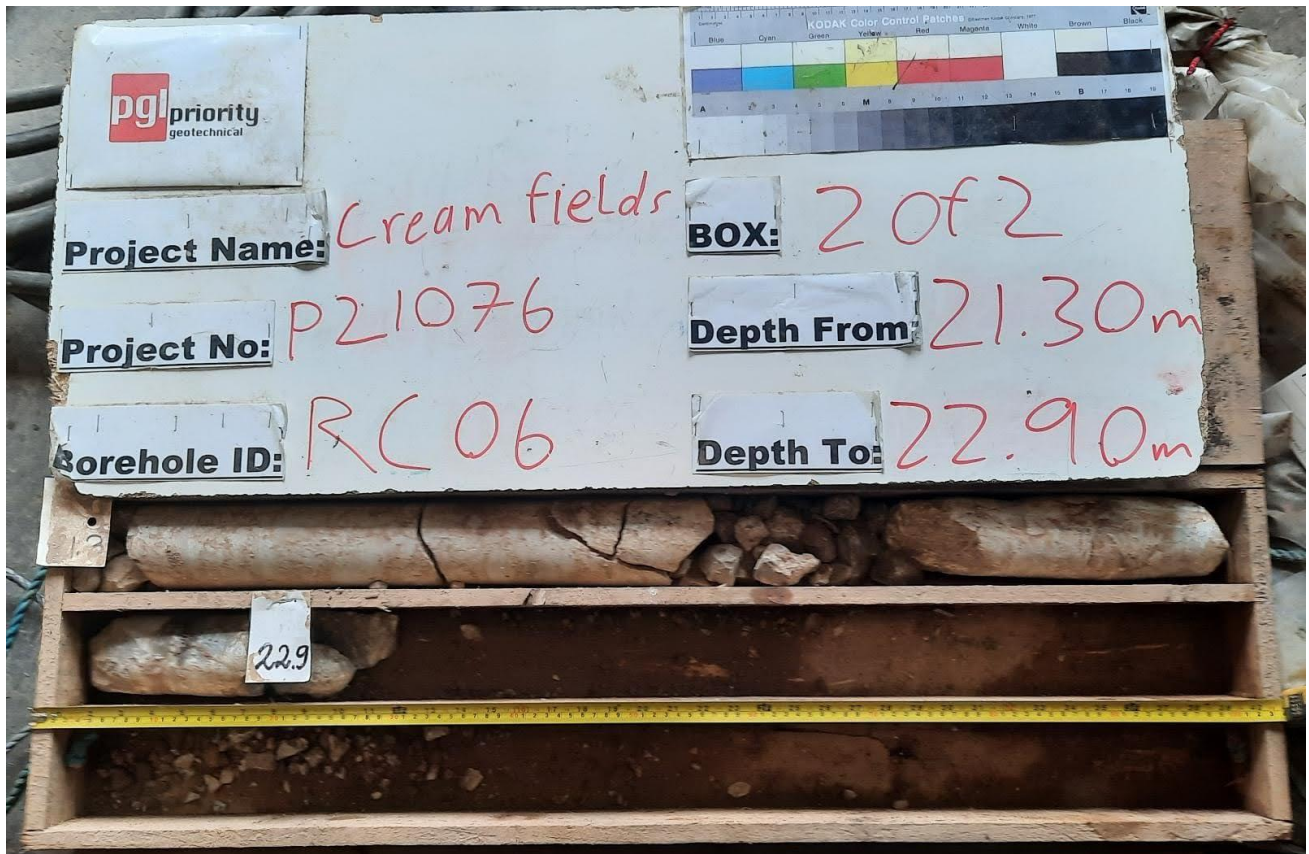
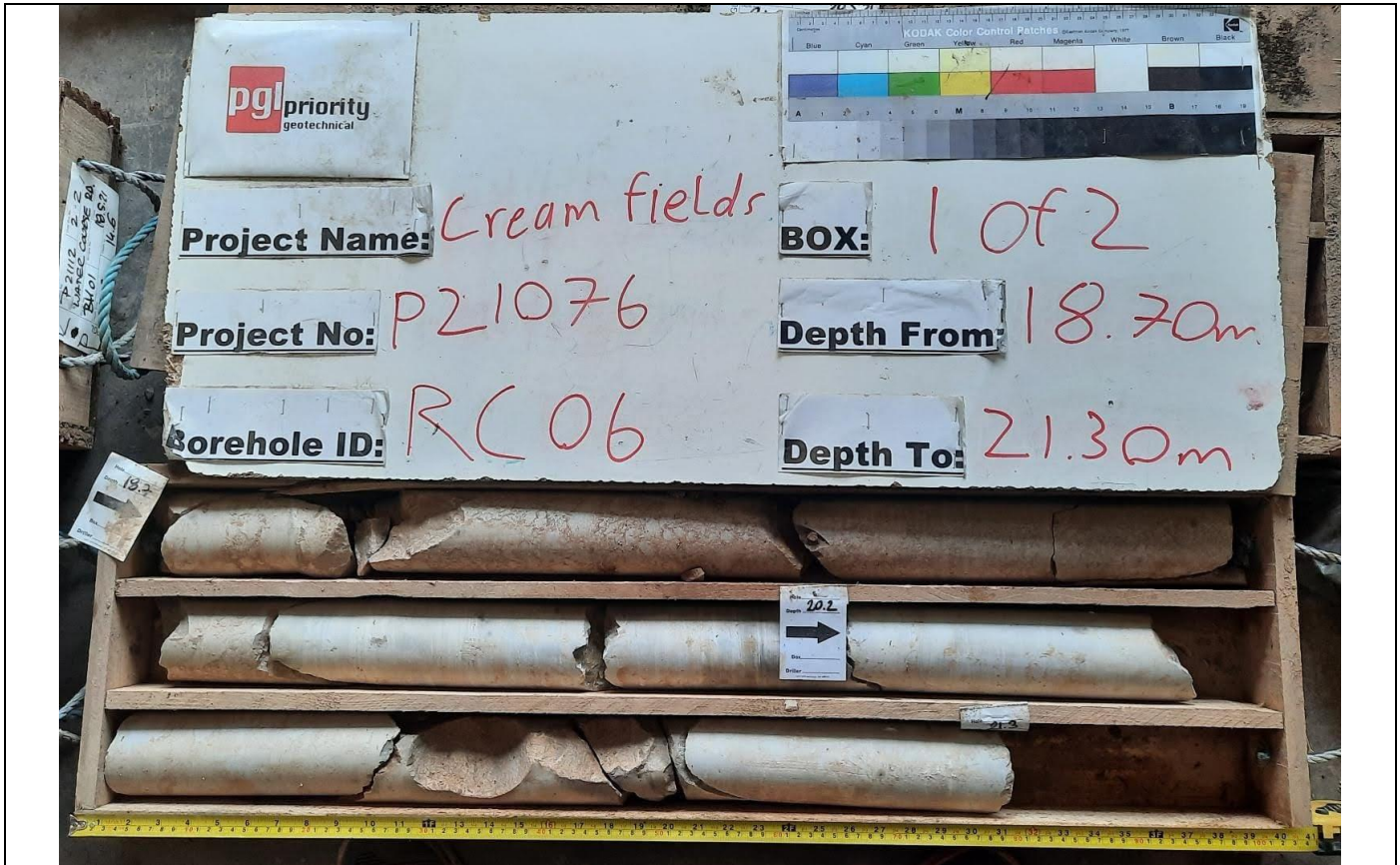
Location: Tramore Road, Cork **Level:** 10.08 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Dates:** 19/05/2021 20/05/2021

Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%)			Depth (m) / Fl (/m)	Level (mOD)	Legend	Stratum Description	
				TCR	SCR	RQD					
	▼	N=35 (5,6/7,7,8,13) (C)					18.50	-8.42		Driller described: Medium dense, clayey gravelly SAND with low cobble content.	
		50 (25 for 0mm/50 for 0mm) (C)								Lithology: Strong, blue grey LIMESTONE.	19
		18.70 - 20.20 19.65	115mm 340mm 200mm C	100	66	48	7/m			Weathering: Core is moderately weathered. Vein dissolution noted at 20.9m. Some oxidation discolouration. Clay infill on fracture surfaces. Extremely fractured section noted at 22.3m - 22.5m.	20
		20.35	C							Fractures: Two sets identified. Set 1 has a dip of 70 degrees, had an undulating rough fracture surface and close to medium fracture spacing. Set 2 has a dip of 50 degrees, an undulating rough fracture surface and medium spacing.	21
		20.20 - 21.30 21.20	60mm 300mm 250mm C	91	85	47	6/m				
		21.30 - 22.90	70mm 250mm 180mm	71	34	14	6/m			21.80m - 22.40m: Driller described Gravel and Sand band.	22
							22.90	-12.82		End of Borehole at 22.900m	23
											24
											25
											26
											27

Groundwater:					Hole Information:			Equipment:
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Soilmec PSM.
18.20				See shift data for detail.	22.90	76	131	Compressed air.

Remarks:	Shift Data:	Groundwater (m bgl)		Shift		Hole Depth (m bgl)		Remarks	
Borehole terminated at 22.90m bgl, required depth. 19mm standpipe installed, depth response zone 0.70m to 4.50m. 50mm standpipe installed. Depth response zone 19.90m to 22.90m.				19/05/2021 08:00	0.00			Start of shift.	
				19/05/2021 18:00	13.50			End of shift.	
				20/05/2021 08:00	13.50			Start of shift.	
				20/05/2021 18:00	22.90			End of borehole.	



Number:

RC06

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
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Borehole No.
BH07
 Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567624E - 569630N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 8.53 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 04/05/2021 - 04/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.00	B				(MADE GROUND) Red brown, slightly clayey gravelly SAND with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse angular to sub-rounded and consists of various lithologies. Cobbles are angular to sub-rounded and consist of various lithologies.		
		1.00	ES		1.00	7.53		1	
		1.00	SPT (C)	50 (25 for 0mm/50 for 0mm)			End of Borehole at 1.000m		
								2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	1.00	200	200	0.90	1.00	01:00	Chisel.
					Equipment:	Dando 2000.					

Remarks: Borehole terminated at 1.00m bgl due to concrete obstruction. See also BH07A for detail.	Shift Data:	GW (m bgl)	Shift	Depth (m bgl)	Remarks
			04/05/2021 08:00	0.00	Start of shift.
		Dry	04/05/2021 18:00	1.00	End of borehole.



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Borehole No.
BH07A
 Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567624E - 569628N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 8.53 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 04/05/2021 - 04/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.00	B				(MADE GROUND) Red brown, slightly sandy gravelly CLAY with medium boulder content and ceramics. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded, Sandstone lithology. Boulders are angular to sub-angular, Sandstone lithology.		
		1.00 1.00	ES SPT (C)	50 (25 for 0mm/50 for 0mm)	1.00	7.53		End of Borehole at 1.000m	1
									2
									3
									4
									5
									6
									7
									8
									9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	1.00	200	200	0.90	1.00	01:00	Chisel.
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 1.00m bgl due to concrete obstruction. See also BH07B for detail.	Shift Data:			
	GW (m bgl)	Shift	Depth (m bgl)	Remarks
	Dry	04/05/2021 08:00 04/05/2021 18:00	0.00 1.00	Star of shift. End of borehole.



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Borehole No.

BH07B

Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567624E - 569626N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 8.52 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 05/05/2021 - 05/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.00	B				(MADE GROUND) Red brown, slightly sandy gravelly CLAY with medium cobble content and tile inclusions. Sand is fine to coarse. Gravel is fine to coarse, are angular to sub-rounded, Sandstone lithology.		
		1.00	SPT (C)	50 (25 for 0mm/50 for 0mm)	1.00	7.52		End of Borehole at 1.000m	1
									2
									3
									4
									5
									6
									7
									8
									9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	1.00	200	200	0.00	1.00	01:00	Chisel.
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 1.00m bgl due to concrete obstruction. See also BH07C for detail.	Shift Data:			
	GW (m bgl)	Shift	Depth (m bgl)	Remarks
	Dry	05/05/2021 08:00 05/05/2021 18:00	0.00 1.00	Start of shift. End of borehole.



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Borehole No.
BH07C
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567624E - 569624N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 8.51 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 31/05/2021 - 31/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
							Trial pit dug to remove potential obstructions. See BH07, BH07A & BH07B for overburden detail.	1	
		3.00 - 4.00	B		3.00	5.51		3	
		3.50 - 4.00	ES					4	
		4.00 - 5.00 4.00	B SPT (C)	N=11 (2,2/3,3,2,3)				5	
		5.00 - 6.00 5.00	B SPT (C)	N=32 (3,3/4,10,9,9)				6	
		5.50 - 6.00	ES					7	
		6.00	SPT (C)	N=25 (6,5/6,7,6,6)	6.00	2.51		End of Borehole at 6.000m	8
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	6.00	200	200				
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 6.00m bgl, required depth..	Shift Data:		GW (m bgl)	Shift	Depth (m bgl)	Remarks
				31/05/2021 08:00	0.00	Start of shift.
			Dry	31/05/2021 18:00	6.00	End of shift.



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Borehole No.
BH08
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation
Project No.: P21076
Co-ords: 567656E - 569644N
Hole Type: CP

Location: Tramore Road, Cork
Level: 8.48 m OD
Scale: 1:50

Client: Watfore Developments Ltd.
Date: 04/05/2021 - 04/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.00	B						
		1.00	ES		1.00	7.48		(MADE GROUND) Brown, slightly clayey gravelly SAND with high cobble content and construction waste. Sand is fine to coarse. Gravel is fine to coarse, rounded to sub-angular and consist of various lithologies. Cobbles are angular to sub-rounded, Sandstone lithology.	1
		1.00	SPT (C)	50 (25 for 0mm/50 for 0mm)				End of Borehole at 1.000m	1
									2
									3
									4
									5
									6
									7
									8
									9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	1.00	200	200	0.90	1.00	01:00	Chisel.
					Equipment:	Dando 2000.					

Remarks: Borehole terminated at 1.00m bgl due to obstruction. Relocated, see BH08A for detail.	Shift Data:	GW (m bgl)	Shift	Depth (m bgl)	Remarks
			04/05/2021 08:00	0.00	Start of shift.
		Dry	04/05/2021 18:00	1.00	End of borehole.



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Borehole No.
BH08A
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567656E - 569642N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 8.48 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 05/05/2021 - 05/05/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.00	B				(MADE GROUND) Brown, slightly sandy gravelly SILT with low cobble content and occasional organic material. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles are sub-rounded and consist of various lithologies. This strata may contain potential asbestos bearing material.	1	
		1.00 - 1.50 1.00	B SPT (C)	N=73 (11,18/12,14,22,25)	1.00	7.48	(MADE GROUND) Dense, brown, slightly clayey gravelly SAND with medium cobble content, concrete and ceramics. Sand is fine to coarse. Gravel is fine to coarse, rounded to sub-angular and consist of various lithologies. Cobbles are angular to sub-rounded and consist of various lithologies. This strata may contain potential asbestos bearing material.	1	
		1.50	SPT (C)	50 (25 for 0mm/50 for 0mm)	1.50	6.98	End of Borehole at 1.500m	2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	1.50	200	200	1.40	1.50	01:00	Chisel.
					Equipment:	Dando 2000.					

Remarks: Borehole terminated at 1.50m bgl due to obstruction. See also BH08B for detail.	Shift Data:	GW (m bgl)	Shift	Depth (m bgl)	Remarks
			05/05/2021 08:00	0.00	Start of shift
		Dry	05/05/2021 18:00	1.50	End of borehole.



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Borehole No.
BH08B
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567656E - 569641N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 8.49 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 31/05/2021 - 01/06/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
								Trial pit dug to remove potential obstruction. See BH08 & BH08B for detail.	1
		3.00 - 3.50 3.00 - 4.00 3.00	ES B SPT (C)	N=22 (4,5/6,6,5,6)	3.00	5.49		Stiff, red brown, slightly sandy gravelly CLAY with high cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded. Low cobble content, sub-rounded. Concrete found.	3
		4.00 - 4.50 4.00 - 5.00 4.00	ES B SPT (C)	N=25 (6,5/6,7,6,6)	4.00	4.49		Stiff, red brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded.	4
		5.00 - 5.50 5.00 - 6.00 5.00	ES B SPT (C)	N=25 (5,5/6,6,7,6)					5
		6.00 - 7.00 6.00	B SPT (C)	N=22 (5,6/6,6,5,5)	6.00	2.49		Stiff, red brown, slightly sandy slightly gravelly SILT with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded. Low cobble content, sub-rounded.	6
		7.00 - 8.00 7.00	B SPT (C)	N=25 (2,2/5,10,5,5)	7.00	1.49		Stiff, red brown, slightly sandy slightly gravelly SILT. Sand is fine to medium. Gravel is fine to coarse, sub-angular to sub-rounded. Low cobble content, sub-rounded.	7
		8.00 - 9.00 8.00	B SPT (C)	N=29 (6,7/7,9,5,8)					8
		9.00	SPT (C)	50 (25 for 0mm/50 for 0mm)	9.00	-0.51		End of Borehole at 9.000m	9

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	9.00	200	200	3.90	4.00	00:30	Chisel.
								8.80	8.90	00:30	Chisel.
								9.00	9.00	01:00	Chisel.
					Equipment: Dando 2000.						

Remarks:	Shift Data:	GW (m bgl)	Shift	Depth (m bgl)	Remarks
Borehole terminated at 9.00m bgl, refusal. 50mm standpipe installed. Response zone from 1.20m - 5.40m bgl.			31/05/2021 08:00	0.00	Start of shift.
		Dry	31/05/2021 18:00	5.00	End of shift.
		Dry	01/06/2021 08:00	5.00	Start of shift.
		Dry	01/06/2021 18:00	9.00	End of borehole.



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Borehole No.
BH09
Sheet 1 of 1

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567620E - 569575N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 7.52 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 30/04/2021 - 30/04/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		0.00 - 1.20	B						
		0.50	ES						
		1.20 - 1.60	B		1.20	6.32			
		1.20	SPT (C)	49 (18,22/49 for 75mm)					
		1.50	ES		1.60	5.92			
		1.60	SPT (C)	50 (25 for 0mm/50 for 0mm)					
							(MADE GROUND) Brown, clayey slightly sandy GRAVEL with medium cobble content and concrete inclusions. Sand is fine to coarse. Gravel is fine to coarse, sub-rounded to angular and consist of various lithologies. Cobbles are sub-angular to sub-rounded.	1	
							(MADE GROUND) Dense, brown black, slightly clayey gravelly COBBLES with concrete and bituminous material. Gravel is fine to coarse and rounded to sub-angular. Cobbles are angular to sub-angular. End of Borehole at 1.600m	2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	1.60	200	200	1.50	1.60	01:00	Chisel.
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 1.60m bgl due to obstruction.	Shift Data:		GW (m bgl)	Shift	Depth (m bgl)	Remarks
				30/04/2021 08:00	0.00	Start of shift.
			Dry	30/04/2021 18:00	1.60	End of borehole.



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Borehole No.
BH09A
Sheet 1 of 2

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567620E - 569578N **Hole Type:** CP

Location: Tramore Road, Cork **Level:** 7.52 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 01/06/2021 - 02/06/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
							Trial pit dug to remove potential obstruction. See BH09 for overburden detail.	1	
		3.00 3.00 - 4.00	ES B		3.00	4.51		2	
		4.00 4.00 - 5.00 4.00	ES B SPT (C)	N=18 (3,3/4,4,5,5)			Medium dense, red brown, very clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded with mixed lithology.	3	
		5.00 5.00 - 6.00 5.00	ES B SPT (C)	N=18 (3,4/3,3,6,6)	5.00	2.52	Stiff, red brown, slightly sandy slightly gravelly SILT. Sand is fine to coarse. Gravel is fine to coarse.	4	
		6.00 - 7.00 6.00	B SPT (C)	N=17 (4,4/3,4,5,5)	6.00	1.52	Stiff, red brown, slightly sandy gravelly SILT. Gravel is fine to medium, sub-angular to sub-rounded with a mixed lithology.	5	
		7.00 - 8.00 7.00	B SPT (C)	N=27 (6,6/8,5,9,5)				6	
		8.00 - 9.00 8.00	B SPT (C)	N=26 (9,5/8,8,5,5)				7	
		9.00 - 10.00 9.00	B SPT (C)	N=28 (6,7/7,7,9,5)				8	
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	10.00	200	200	7.80	7.85	00:30	Chisel.
					Equipment:			9.95 10.00 01:00 Chisel.			
					Dando 2000.						

Remarks: Borehole terminated at 10.00m bgl, refusal.	Shift Data:			GW (m bgl)	Shift	Depth (m bgl)	Remarks
					01/06/2021 08:00	0.00	Start of shift.
		Dry	01/06/2021 18:00			3.00	End of shift.
		Dry	02/06/2021 08:00			3.00	Start of shift.
		Dry	02/06/2021 18:00			10.00	End of borehole.



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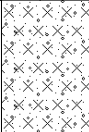
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Borehole No.
BH09A
 Sheet 2 of 2

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation
Project No.: P21076
Co-ords: 567620E - 569578N
Hole Type: CP

Location: Tramore Road, Cork
Level: 7.52 m OD
Scale: 1:50

Client: Watfore Developments Ltd.
Date: 01/06/2021 - 02/06/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		10.00	SPT (C)	50 (25 for 0mm/50 for 0mm)	10.00	-2.48	 Stiff, red brown, slightly sandy gravelly SILT. Gravel is fine to medium, sub-angular to sub-rounded with a mixed lithology.		
							End of Borehole at 10.000m	10	
								11	
								12	
								13	
								14	
								15	
								16	
								17	
								18	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
				None encountered.	10.00	200	200	7.80	7.85	00:30	Chisel.
								9.95	10.00	01:00	Chisel.
					Equipment:						
					Dando 2000.						

Remarks: Borehole terminated at 10.00m bgl, refusal.	Shift Data:			
	GW (m bgl)	Shift	Depth (m bgl)	Remarks
		01/06/2021 08:00	0.00	Start of shift.
	Dry	01/06/2021 18:00	3.00	End of shift.
	Dry	02/06/2021 08:00	3.00	Start of shift.
	Dry	02/06/2021 18:00	10.00	End of borehole.



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Borehole No.
RC09
Sheet 1 of 3

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567620E - 569575N **Hole Type:** RO

Location: Tramore Road, Cork **Level:** 7.52 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 23/06/2021 - 24/06/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
							Refer to BH09A for overburden detail.		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
3.00				See shift data for detail.	19.00	131	131				
					Equipment:						
					Soilmec PSM.						

Remarks: Borehole terminated at 19.00m bgl. 50mm dia. standpipe installed. Response zone from 16.0m bgl to 19.00m bgl. 19mm dia. piezometer pip installed. Response zone from 0.70m bgl to 2.40m bgl.	Shift Data:			GW (m bgl)	Shift	Depth (m bgl)	Remarks
					23/06/2021 08:00	0.00	Start of shift.
					23/06/2021 18:00	13.00	End of shift.
					13 24/06/2021 08:00	13.00	Start of shift.
				14.5	24/06/2021 18:00	19.00	End of borehole.



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Borehole No.
RC09
Sheet 2 of 3

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567620E - 569575N **Hole Type:** RO

Location: Tramore Road, Cork **Level:** 7.52 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 23/06/2021 - 24/06/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		10.00	SPT (C)	N=49 (10,12/14,12,10,13)	10.00	-2.48		Refer to BH09A for overburden detail.
		11.50	SPT (C)	N=50 (8,10/14,13,11,12)				Driller described: Stiff, CLAY with boulder content.
		13.00	SPT (C)	N=51 (9,9/11,14,13,13)				
		14.50	SPT (C)	N=50 (11,12/12,13,11,14)	14.50	-6.98		Driller described: Stiff, gravelly CLAY with boulder content.
		16.00	SPT (C)	N=54 (8,14/13,13,14,14)				
		17.50	SPT (C)	N=57 (10,12/14,15,14,14)				

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
3.00				See shift data for detail.	19.00	131	131				
					Equipment:						
					Soilmec PSM.						

Remarks: Borehole terminated at 19.00m bgl. 50mm dia. standpipe installed. Response zone from 16.0m bgl to 19.00m bgl. 19mm dia. piezometer pip installed. Response zone from 0.70m bgl to 2.40m bgl.	Shift Data:			
	GW (m bgl)	Shift	Depth (m bgl)	Remarks
		23/06/2021 08:00	0.00	Start of shift.
		23/06/2021 18:00	13.00	End of shift.
	13	24/06/2021 08:00	13.00	Start of shift.
	14.5	24/06/2021 18:00	19.00	End of borehole.



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Borehole No.
RC09
Sheet 3 of 3

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation **Project No.:** P21076 **Co-ords:** 567620E - 569575N **Hole Type:** RO

Location: Tramore Road, Cork **Level:** 7.52 m OD **Scale:** 1:50

Client: Watfore Developments Ltd. **Date:** 23/06/2021 - 24/06/2021

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing			Depth (m bgl)	Level (mOD)	Legend	Stratum Description	
		Depth (m bgl)	Type	Results					
		19.00	SPT (C)	N=44 (8,9/11,10,12,11)	19.00	-11.48	 Driller described: Stiff, gravelly CLAY with boulder content.	19	
							End of Borehole at 19.000m	20	
								21	
								22	
								23	
								24	
								25	
								26	
								27	

Groundwater:					Hole Information:			Chiselling Details:			
Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment	Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Top (m)	Base (m)	Duration (hh:mm)	Tool
3.00				See shift data for detail.	19.00	131	131				
					Equipment:						
					Soilmec PSM.						

Remarks: Borehole terminated at 19.00m bgl. 50mm dia. standpipe installed. Response zone from 16.0m bgl to 19.00m bgl. 19mm dia. piezometer pip installed. Response zone from 0.70m bgl to 2.40m bgl.	Shift Data:			GW (m bgl)	Shift	Depth (m bgl)	Remarks	
					23/06/2021 08:00	0.00	Start of shift.	
						23/06/2021 18:00	13.00	End of shift.
					13	24/06/2021 08:00	13.00	Start of shift.
				14.5	24/06/2021 18:00	19.00	End of borehole.	

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567640E - 569816N Level: 11.51m OD	Date: 20/04/2021
Location: Tramore Road, Cork		Dimensions (m): 4.00 	Scale: 1:25
Client: Watfore Developments Ltd.			Depth: 3.50m BGL

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20 - 0.40	ES		0.10	11.41		(MADE GROUND) Grey, GRAVEL. Gravel is medium grained, angular and are Limestone lithology.
	0.50 - 1.00	B		0.40	11.11		(MADE GROUND) Red brown, clayey slightly gravelly SAND with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Cobbles are sub-angular to sub-rounded. <i>0.20m - 0.40m: PID reading Oppm</i>
	0.60 - 0.80	ES					Firm, red brown with red mottling, slightly sandy slightly gravelly CLAY with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-rounded and consist of Sandstone lithology. Cobbles are sub-rounded, Sandstone lithology. <i>0.60m - 0.80m: PID reading Oppm</i>
	1.00	D					
	2.20 - 2.50	ES		2.10	9.41		Very soft, dark purple brown with black mottling, slightly sandy slightly gravelly CLAY with low cobble content. sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded and consist of Sandstone lithology. <i>2.20m - 2.50m: PID reading Oppm</i>
	2.50 - 3.00	D					
	3.10 - 3.50	B		3.10	8.41		Very stiff, purple brown, slightly sandy slightly gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded and consist of Sandstone lithology. Cobbles are sub-angular to sub-rounded, Sandstone lithology. <i>3.20m - 3.50m: PID reading Oppm</i>
	3.20 - 3.50	ES					
	3.50	D		3.50	8.01		End of Pit at 3.50m

Stability: Moderate.	Groundwater: None encountered.
Plant: 8t tracked excavator.	
Backfill: Arisings.	
Remarks: Trial pit terminated at 3.50m bgl.	



Number:

TP01

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP01

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567587E - 569786N Level: 11.31m OD	Date: 20/04/2021
Location: Tramore Road, Cork		Dimensions (m): 1.20 x 4.50 Depth: 4.20m BGL	Scale: 1:25
Client: Watfore Developments Ltd.			Logged: AO

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
				0.20	11.11		Concrete.
	0.50 - 0.70	ES		0.30	11.01		(MADE GROUND) Brown, slightly sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded and consist of various lithologies.
	0.50 - 1.00	B					(MADE GROUND) Brown, slightly sandy slightly gravelly SILT with occasional rootlets. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded and consist of various lithologies. <i>0.50m - 0.70m: PID reading Oppm.</i>
	1.50	D		1.10	10.21		Soft, red brown, slightly sandy slightly gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded and consist of various lithologies. Cobbles are sub-rounded, Sandstone lithology. <i>1.50m - 1.70m: PID reading Oppm.</i>
	1.50 - 1.70 1.50 - 2.00	ES B					
	2.50 - 2.70	ES					<i>2.50m - 2.70m: PID reading Oppm.</i>
	3.00	D					
	3.00 - 3.50	B					
				4.20	7.11		End of Pit at 4.200m

Stability: Good.
Plant: 8t tracked excavator.
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 4.20m bgl. 30mins breaking out concrete.



Number:

TP02

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP02

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567635E - 569772N Level: 11.18m OD	Date: 20/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 4.00	Scale: 1:25
Client: Wafore Developments Ltd.	Depth: 4.20m BGL	Logged: AO

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
Water Strike & Backfill				0.20	10.98		Concrete.
	1.00 - 1.20 1.00 - 1.50	ES B		1.00	10.18		(MADE GROUND) GRAVEL & COBBLES. Gravel is coarse, sub-rounded to rounded, Sandstone lithology. <i>0.90m: 2 cables identified.</i>
	1.50	D					(MADE GROUND) Soft, dark brown, slightly organic slightly sandy slightly gravelly CLAY with occasional plastic and bituminous material. Sand is fine to coarse. Gravel is fine to coarse, sub-rounded to sub-angular and consist of various lithologies. <i>1.00m - 1.20m: PID reading 0ppm.</i>
	2.20 - 2.50	ES		2.10	9.08		Soft, red brown, slightly sandy gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to sub-rounded and consist of various lithologies. Cobbles are sub-rounded and consist of sandstone. <i>2.20m - 2.50m: PID reading 0ppm.</i>
	2.50 2.50 - 3.00	D B					
	3.50 3.50 - 3.70 3.50 - 4.00	D ES B					<i>3.50m - 3.70m: PID reading 0ppm.</i>
			4.20	6.98		End of Pit at 4.200m	

Stability: Poor from 0.20m - 1.00m. Good from 1.00m - 4.20m.	Groundwater: None encountered.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 4.20m bgl. 30mins breaking out concrete.



Number:

TP03

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP03

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567673E - 569768N Level: 11.33m OD	Date: 20/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 4.00	Scale: 1:25
Client: Watfore Developments Ltd.	Depth: 4.20m BGL	Logged: RD

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
							Concrete.
	0.40 - 0.60	ES		0.40	10.93		(MADE GROUND) Brown, slightly gravelly SAND with high cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles range in dia form 63mm-180mm, are sub-rounded to rounded, Sandstone lithology.
	0.60 - 1.10	B		0.60	10.73		0.40m - 0.60m: PID reading 0ppm.
	1.00	D					(MADE GROUND) Soft, brown, slightly sandy slightly gravelly CLAY with low cobble content and low boulder content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of various lithologies. Cobbles range in dia form 63mm-130mm, are sub-rounded to rounded and consist of various lithologies. Boulders range in dia up to 350mm, are sub-rounded to rounded and consist of various lithologies.
	1.50 - 1.70 1.50 - 2.00	ES B		1.50	9.83		(MADE GROUND) Soft, black, slightly sandy slightly gravelly CLAY with low cobble content and occasional ceramic, red brick and organic material. Sand is fine to coarse. Gravel is fine to coarse, are sub-angular to rounded and consist of various lithologies. Cobbles range in dia from 63mm-120mm, are sub-angular to sub-rounded and consist of various lithologies.
	2.00	D					1.50m - 1.70m: PID reading 0ppm.
	2.50 - 2.70 2.50 - 3.00	ES B		2.20	9.13		Soft, brown with occasional red mottling, slightly sandy gravelly CLAY with low cobble content. Sand is fine to coarse. gravel is fine to coarse, sub-rounded and consist of Sandstone lithology.
	3.00	D					2.50m - 2.70m: PID reading 0ppm.
	3.50 - 3.70 3.50 - 4.00	ES B					3.50m - 3.70m: PID reading 0ppm.
	4.00	D					
			4.20	7.13	End of Pit at 4.200m		

Stability: Good.	Groundwater: None encountered.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 4.20m bgl. 30mins breaking out concrete.



Number:

TP04

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP04

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567579E - 569673N Level: 10.03m OD	Date: 21/04/2021
Location: Tramore Road, Cork		Dimensions (m): 	Scale: 1:25
Client: Watfore Developments Ltd.			Depth: 4.00m BGL Logged: RD

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
	0.10			0.10	9.93		Bituminous surfacing.		
	0.30 - 0.50	ES					(MADE GROUND) Purple brown, very clayey slightly sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded, Siltstone lithology. Cobbles range in dia from 63mm-180mm, are angular to sub-angular, Siltstone lithology. <i>0.30m - 0.50m: PID reading 0ppm.</i>		
	0.80 - 1.00	ES					<i>0.80m - 1.00m: PID reading 0ppm.</i>		
	0.90 - 1.40	B							1
	1.50 - 2.00	B		1.40	8.63		(MADE GROUND) Soft, brown, slightly sandy slightly gravelly CLAY with low cobble content and low boulder content with occasional bricks and chalk. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded, Siltstone lithology. Cobbles range in dia from 63mm-200mm, are angular to sub-rounded, Siltstone lithology. Boulders range in dia up to 250mm, are sub-rounded, Siltstone lithology. <i>1.80m - 2.00m: PID reading 0ppm.</i>		2
	1.80 - 2.00	ES							
	2.00	D							
	2.50 - 3.00	B		2.30	7.73		(MADE GROUND) Firm, dark brown mottled red, slightly sandy gravelly CLAY with low cobble content and contains wring, bricks and slate. Sand is fine to coarse. Gravel is fine to coarse, are sub-angular to rounded and consist of various lithologies. Cobbles range in dia from 63mm-170mm, are sub-angular to rounded and consist of various lithologies. <i>2.80m - 3.00m: PID reading 0ppm</i>		3
	2.80 - 3.00	ES							
	3.00	D							
	3.50 - 4.00	B		3.30	6.73		Light brown, slightly sandy gravelly CLAY with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse sub-angular to rounded, Sandstone lithology. Cobbles range in dia from 63mm-140mm, are angular to sub-rounded, Sandstone lithology. <i>3.50m - 3.80m: PID reading 0ppm.</i>		
	3.50 - 4.00	ES							
	4.00	D		4.00	6.03		End of Pit at 4.000m	4	
								5	

Stability: Moderate.
Plant: 8t tracked excavator.
Backfill: Arisings.

Groundwater: 3.30m: Steady rate of flow.

Remarks: Trial pit terminated at 4.00m bgl. 30mins breaking out concrete.



Number:

TP05

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP05

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567635E - 569641N Level: 8.53m OD	Date: 21/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 	Scale: 1:25
Client: Watfore Developments Ltd.		Logged: RD

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
▼	0.50 - 0.70	ES		0.30	8.23	[Cross-hatched pattern]	(MADE GROUND) Grey, sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, are angular to sub-rounded and consist of various lithologies. cobbles range in dia from 63mm-170mm, are angular to sub-angular and consist of various lithologies. <i>No sample taken in made ground as potential asbestos containing material present.</i>
	1.80 - 2.00	ES		1.70	6.83		(MADE GROUND) Soft, slightly sandy gravelly CLAY with medium cobble content and low boulder content as well as high amounts of construction waste. Sand is fine to coarse. Gravel is fine to coarse, are angular to sub-angular, Sandstone lithology. Cobbles range in dia from 63mm-200mm, are angular to sub-angular, Sandstone lithology. Boulders range in dia up to 350mm, are sub-angular and, Sandstone lithology. <i>0.50m - 0.70m: PID reading 0ppm.</i>
	2.80 - 3.00 2.80 - 3.30	ES B		2.80	5.73		Very soft, grey purple, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded, Sandstone lithology <i>2.80m - 3.00m: PID reading 0ppm.</i>
				4.30	4.23		End of Pit at 4.300m

Stability: Moderate.	Groundwater: 2.30m: Steady rate of flow.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 4.30m bgl.



Number:

TP06

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



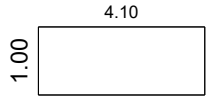
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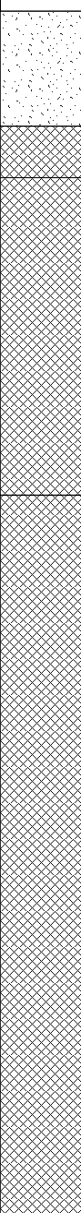
TP06

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567629E - 569673N Level: 8.91m OD	Date: 25/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 	Scale: 1:25
Client: Watfore Developments Ltd.	Depth: 4.00m BGL	Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.50 0.55 - 1.00	ES B		0.38 0.55	8.53 8.36		Concrete with re-bar.
							(MADE GROUND) Loose, light grey, purple, loose, sandy GRAVEL with high cobble content with medium boulder content. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded. Cobbles are up to 200mm dia, sub-angular to angular. Boulders are up to 350mm dia, sub-angular to angular.
	1.50 1.60 - 2.00	ES B		1.60	7.31		(MADE GROUND) Soft, to firm, dark brown, slightly sandy gravelly SILT with medium cobble content with waste material such as plastic, red brick fragments and concrete. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded. Cobbles are up to 200mm dia, angular to rounded.
	2.50 2.50 - 3.00	ES B					(Possible fill) Loose, purple brown, slightly silty, slightly sandy GRAVEL with high cobble content with medium boulder content with some organic material. Sand is fine to coarse. Gravel is fine to coarse, very angular to angular. Cobbles are up to 200mm dia, very angular to angular. Boulders are up to 300mm dia, very angular to angular.
	3.50 3.50 - 4.00	ES B		4.00	4.91		
							End of Pit at 4.000m

Stability: Moderate.	Groundwater: 2.10m: Steady to fast flow rate.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 4.00m bgl due to water ingress.



Number:

TP06A

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567600E - 569586N Level: 7.54m OD	Date: 21/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 5.00	Scale: 1:25
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Client: Watfore Developments Ltd.	Depth: 3.20m BGL	Logged: RD
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Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.50 - 0.70	ES					(MADE GROUND) Loose, brown, clayey very gravelly SAND with high cobble content and high boulder content. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded and consists of various lithologies. Concrete blocks and bricks ranging over 1000mm in dia. <i>0.00m - 1.30m: No sample taken due to high quantity of construction waste with possible asbestos. 0.50m - 0.70m: PID reading 0ppm.</i>
	1.40 - 1.60 1.40 - 1.90	ES B		1.30 1.50	6.24 6.04		(MADE GROUND) Soft, black, organic, slightly gravelly CLAY with electronics. Gravel is fine to coarse, are angular to sub-angular. Sandstone lithology. <i>1.40m - 1.60m: PID reading 0ppm.</i>
	1.90	D					(MADE GROUND) Soft, purple brown, slightly sandy gravelly CLAY with medium cobble content and plastics, timber. Quantity of fill is noticeably less than in overlying strata. Sand is fine to coarse. Gravel is fine to coarse, are angular to sub-rounded, Sandstone. Cobbles range in dia from 63mm-160mm, are angular to sub-angular, Sandstone lithology.
	2.50 - 2.70 2.50 - 3.00	ES B					<i>2.50m - 2.70m: PID reading 0ppm.</i>
	3.00	D					
				3.20	4.34		End of Pit at 3.200m

Stability: Poor.	Groundwater: 3.10m: Fast rate of flow.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 3.20m bgl due to instability caused by groundwater ingress.



Number:

TP07

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP07

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567664E - 569678N Level: 9.13m OD	Date: 20/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 	Scale: 1:25
Client: Watfore Developments Ltd.		Logged: RD

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20 - 0.50	ES		0.20	8.93		(MADE GROUND) Grey, GRAVEL with medium cobble content and low boulder content. Gravel is fine to coarse, are angular to sub-angular and consist of various lithologies. Cobbles range in dia from 63mm-200mm, are angular to sub-rounded and consist of various lithologies. Boulders range in dia up to 220mm, are tabular, Sandstone lithology. <i>0.00m - 2.90m: No sample taken due to high quantity of construction waste with possible asbestos.</i>
				0.50	8.63		(MADE GROUND) Red brown, slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded and consist of various lithologies. <i>0.20m - 0.50m: PID 0ppm.</i>
				0.80	8.33		(MADE GROUND) Stiff, light brown, slightly sandy gravelly CLAY with high cobble content and high amount of construction waste. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-angular and consist of various lithologies. Cobbles are various lithology.
	1.50 - 1.70	ES					(MADE GROUND) Dark brown black, gravelly SAND with high cobble content and high boulder content with construction waste. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded and consist of various lithologies. Cobbles are 63-200mm dia, various lithology. Boulders are 200-1000mm dia., various lithologies. <i>1.50m - 1.70m: PID 0ppm.</i>
	2.50 - 2.70	ES					<i>2.50m - 2.70m: PID 0ppm.</i>
					2.90		6.23
				3.10	6.03	<i>End of Pit at 3.100m</i>	

Stability: Poor.	Groundwater: 3.10m: Steady rate of flow.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 3.10m bgl due to poor stability.



Number:

TP08

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP08

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567603E - 569635N Level: 8.61m OD	Date: 21/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 3.30	Scale: 1:25
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Client: Watfore Developments Ltd.	Depth: 4.50m BGL	Logged RD
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Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
				0.20	8.41		Concrete
	0.30 - 0.50	ES		0.50	8.11		(MADE GROUND) Grey brown, slightly clayey sandy GRAVEL with plastic inclusions. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded and consist of Sandstone lithology. <i>0.30m - 0.50m: PID reading Oppm.</i>
	0.50 - 1.00	B					
	0.70	D					
	1.40 - 1.60	ES					
	1.50 - 2.00	B					
	2.00	D					
	2.50 - 2.70	ES					
	3.00 - 3.50	B		3.00	5.61		(MADE GROUND) Very soft, brown grey, mottled black, organic, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded, Sandstone lithology. The organic content of this strata looks like silage could be waste from old factory. <i>3.50m - 3.70m: PID reading Oppm.</i>
	3.50	D					
3.50 - 3.70	ES						
	4.20 - 4.50	B		4.20	4.41		Soft, grey purple, slightly sandy gravelly CLAY with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded and consist of Sandstone lithology. Cobbles range in dia from 63mm-150mm, sub-angular to rounded, Sandstone.
	4.50	D		4.50	4.11		End of Pit at 4.50m

Stability: Moderate.	Groundwater: 3.90m: Steady rate of flow.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 4.50m bgl.



Number:

TP09

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP09

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567623E - 569595N Level: 7.63m OD	Date: 21/04/2021
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Location: Tramore Road, Cork	Dimensions (m): 	Scale: 1:25
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Client: Watfore Developments Ltd.	Depth: 2.70m BGL	Logged RD
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Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20			0.20	7.43		(MADE GROUND) Grey, slightly sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-angular and consists of various lithologies. Cobbles range in dia from 63mm-80mm, are sub-angular to sub-rounded and consist of various lithologies.
	0.50 - 0.70	ES					(MADE GROUND) Purple brown, compacted very clayey slightly sandy GRAVEL with medium cobble content and some occasional plastic. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-angular, Siltstone lithology. Cobbles range in dia from 63mm-180mm, are angular to sub-angular, Siltstone. <i>0.50m - 0.70m: PID reading Oppm.</i>
	0.90 - 1.40	B					
	1.50 - 1.70	ES		1.40	6.23		(MADE GROUND) Soft, purple brown, slightly sandy gravelly CLAY some very small plastics seen in minor amounts within clay nodules. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded, Sandstone and Siltstone lithology <i>1.50m - 1.70m: PID reading Oppm.</i>
	2.00 - 2.50	B					
	2.50 2.50 - 2.70	D ES		2.70	4.93		<i>2.50m - 2.70m: PID reading Oppm.</i>
							End of Pit at 2.700m

Stability: Very poor.	Groundwater: 2.70m: Slow rate of flow.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 2.70m bgl due to pit collapsing side walls.



Number:

TP10

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TP10

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567581E - 569723N Level: 10.75m OD	Date: 25/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 3.80 0.70	Scale: 1:25
Client: Watfore Developments Ltd.	Depth: 3.60m BGL	Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.05			0.05	10.70		Bituminous surfacing.
	0.18			0.18	10.57		(MADE GROUND) Loose, yellow beige, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, angular.
	0.50 0.50 - 1.00	ES B					Loose, purple brown, very sandy GRAVEL with low cobble content with low boulder content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded. Cobbles are up to 200mm dia, sub-angular to rounded. Boulders are up to 300mm dia, sub-angular to rounded. (Possible fill)
	1.50 1.50 - 2.00	ES B					
	2.50 2.50 - 3.60	ES B					
	3.50	ES		3.60	7.15		
	End of Pit at 3.60m						

Stability: Poor.	Groundwater: None encountered.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 3.60m bgl due to pit wall collapsing.



Number:

TPBH04

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567624E - 569630N Level: 8.53m OD	Date: 24/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 	Scale: 1:25
Client: Watfore Developments Ltd.		Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.30			0.30	8.23		(MADE GROUND) GRAVEL.
	0.50 0.50 - 1.00	ES B		1.10	7.43		(MADE GROUND) Soft to firm, purple, slightly sandy gravelly SILT with low cobble content with plastic and metal inclusions. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded. Cobbles are up to 200mm dia, sub-angular to sub-rounded.
	1.50 1.50 - 2.00	ES B		3.00	5.53		(MADE GROUND) Firm, purple, slightly sandy gravelly SILT with low cobble content with some organic material. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded. Cobbles are up to 200mm dia, sub-angular to sub-rounded.
	2.50 2.50 - 3.00	ES B		End of Pit at 3.000m			

Stability: Moderate.	Groundwater: 2.37m: Slow flow rate.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 3.00m bgl. Required depth reached.



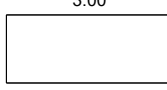
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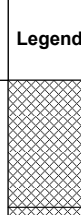

TPBH07

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567656E - 569644N Level: 8.48m OD	Date: 24/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 0.65  3.00 Depth: 3.00m BGL	Scale: 1:25
Client: Watfore Developments Ltd.		Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.50 0.50 - 1.00	ES B		0.42	8.06		(MADE GROUND) GRAVEL with plastic inclusions.
	1.50 1.50 - 2.00	ES B					(MADE GROUND) Soft to firm, brown purple, slightly sandy slightly gravelly SILT. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded.
	2.50 2.50 - 3.00	ES B		2.35	6.13		Soft, pink beige, slightly sandy gravelly CLAY with medium cobble content with low boulder content with some organic material. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded. Cobbles are up to 200mm dia, sub-angular to sub-rounded. Boulder are up to 250mm dia, sub-angular to rounded.
				3.00	5.48		End of Pit at 3.00m

Stability: Moderate to poor.	Groundwater: 2.80m: Slow flow rate.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 3.00m bgl. Required depth reached.



Number:

TPBH08

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Number:

TPBH08

Project
Project No
Engineer

The Creamfields (Former CMP Dairy Site)
P21076
Arup

Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567620E - 569575N Level: 7.52m OD	Date: 24/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 	Scale: 1:25
Client: Watfore Developments Ltd.		Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.50 0.50 - 1.00	ES B					(MADE GROUND) Loose, brown, grey, slightly silty sandy GRAVEL with high cobble content, medium boulder content, waste material metal wire, concrete wall sections and plastic. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded. Cobbles are up to 200mm dia, angular to sub-angular. Boulders are up to 600mm dia, angular to sub-angular.
	1.50 1.50 - 2.00	ES B					
	2.50 2.50 - 3.00	ES B		2.45	5.07		Loose, brown, wet, silty sandy GRAVEL with high cobble content with low boulder content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded. Cobbles are up to 200mm dia, sub-angular to rounded. Boulders are up to 300mm dia, sub-angular to rounded.
				3.00	4.51		End of Pit at 3.000m

Stability: Poor to very poor.	Groundwater: 2.45m: Fast flow rate.
Plant: 8t tracked excavator.	
Backfill: Arisings	

Remarks: Trial put terminated at 3.00m bgl. Required depth reached.



Number: TPBH09	Project The Creamfields (Former CMP Dairy Site) Project No P21076 Engineer Arup	
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Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567589E - 569797N Level: 11.12m OD	Date: 25/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 4.00	Scale: 1:25
Client: Watfore Developments Ltd.	Depth: 3.00m BGL	Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description	
	Depth (m)	Type	Results					
				0.15	10.97		Concrete with re-bar.	
				0.32	10.80			
	1.00 - 1.50	B		0.60	10.52			
	1.70 - 2.40	B		1.70	9.42			
	2.50 - 3.00	B		2.40	8.72			
				3.00	8.12			
							End of Pit at 3.000m	

Stability: Moderate to poor.	Groundwater: 2.35m: Trickling flow rate.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Soakaway pit terminated at 3.00m bgl. Required depth reached. Soakaway test carried out at 1.02m bgl.

P21076
The Creamfields
SA01
25/05/2021

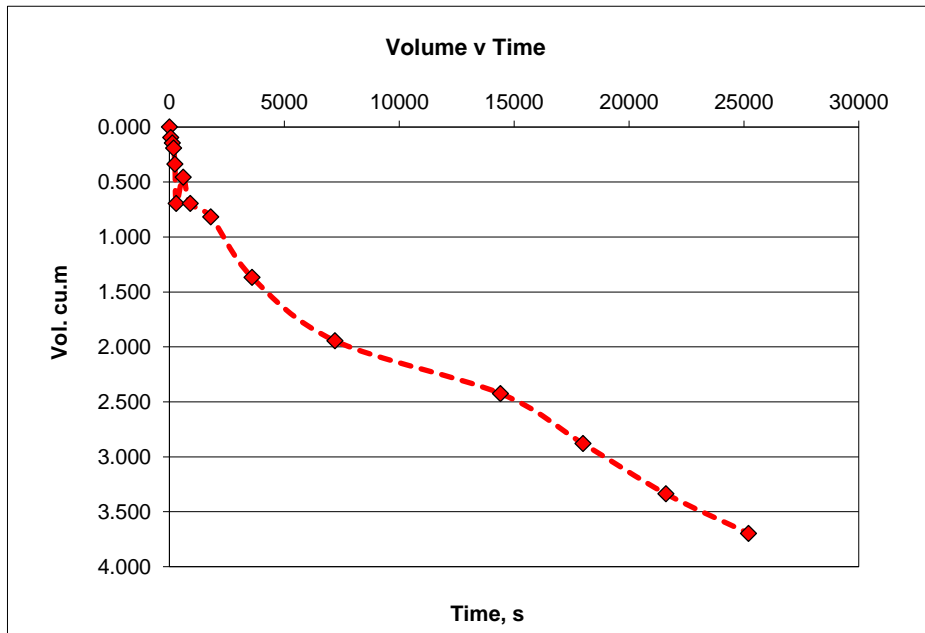
l, m **4.00** b, m **0.60** d, m **3.00**
 l_base, m **4.00** d_eff, m **1.99**
 l_eff, m **4.00**

Start 09:30

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	1.01	0	1.99	0.00	0.000
1	1.05	60	1.95	0.04	0.096
2	1.07	120	1.93	0.06	0.144
3	1.09	180	1.91	0.08	0.192
4	1.15	240	1.85	0.14	0.336
5	1.30	300	1.70	0.29	0.696
10	1.20	600	1.80	0.19	0.456
15	1.30	900	1.70	0.29	0.696
30	1.35	1800	1.65	0.34	0.816
60	1.58	3600	1.42	0.57	1.368
120	1.82	7200	1.18	0.81	1.944
240	2.02	14400	0.98	1.01	2.424
300	2.21	18000	0.79	1.20	2.880
360	2.40	21600	0.60	1.39	3.336
420	2.55	25200	0.45	1.54	3.696

Area **2.4 m²** $V_{p75-25 \text{ theory}}$ volume **2.388 m³**
 50% Area_eff, a_{p50} **11.554 m²** $V_{p75-25 \text{ actual}}$ volume **1.848 m³**
 50% Area_act, a_{p50} **9.484 m²** $t_{p75-25 \text{ actual}}$ time **14943 s**

Infiltration Coefficient *f* 1.30E-05 ms⁻¹



NOTES:

See SA01 for detailed soil description.
 Groundwater encountered at 2.35m. Pit assumed saturated at depth.



Number:

SA01

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567633E - 569746N Level: 10.90m OD	Date: 25/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 4.00 0.90	Scale: 1:25
Client: Watfore Developments Ltd.		Depth: 3.00m BGL

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
Water Strike & Backfill				0.20	10.70		Concrete with re-bar.
	0.50 - 1.00	B					(MADE GROUND) Loose, purple, very gravelly SAND with medium cobble content with low boulder content with waste material such as red brick fragments and plastic.
	1.50 - 2.00	B					
	2.50 - 3.00	B		2.02	8.88		1.90m. Oil seepage noted. (MADE GROUND) Firm to stiff, brown grey, slightly sandy slightly gravelly SILT with low cobble content with waste material, red brick fragments. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded. Cobbles are up to 200m dia, sub-angular to rounded.
				3.00	7.90		End of Pit at 3.000m

Stability: Poor.	Groundwater: None encountered.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 3.00m bgl. Required depth reached. No soakaway test carried out due to the depth of fill.



Number:

SA02

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup



Project Name: The Creamfields (Former CMP Dairy Site) Ground Investigation	Project No.: P21076	Co-ords: 567575E - 569675N Level: 10.07m OD	Date: 25/05/2021
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Location: Tramore Road, Cork	Dimensions (m): 4.10 0.80	Scale: 1:25
Client: Watfore Developments Ltd.	Depth: 2.30m BGL	Logged: KH

Water Strike & Backfill	Samples & In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.05			0.05	10.02		Bituminous surfacing. (MADE GROUND) Loose, purple, slightly silty sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, very angular to angular. Cobbles are up to 200mm dia, angular.
	0.58 - 1.20	B		0.58	9.49		(MADE GROUND) Purple brown, very silty very gravelly SAND with low cobble content with plastic and metal wire. Sand is fine to coarse. Gravel is fine to coarse, very angular to rounded. Cobbles are to 200mm dia, very angular to rounded.
	1.50 - 2.30	B		1.21	8.86		(MADE GROUND) Brown, slightly sandy gravelly SILT with low cobble content and low boulder content with waste material, plastic wire. Sand is fine to coarse. Gravel is fine to coarse, angular to rounded. Cobbles are up to 200mm dia, sub-angular to rounded. Boulders are up to 400mm dia, sub-angular to rounded.
				2.30 2.30	7.77 7.77		Possible concrete slab. Unable to excavate. End of Pit at 2.300m

Stability: Good.	Groundwater: None encountered.
Plant: 8t tracked excavator.	
Backfill: Arisings.	

Remarks: Trial pit terminated at 2.30m bgl. Required depth reached. No soakaway test carried out due to the depth of fill.



Number:

SA03

**Project
Project No
Engineer**

The Creamfields (Former CMP Dairy Site)
P21076
Arup

KEY TO SYMBOLS - LABORATORY TEST RESULT

U	Undisturbed Sample	
P	Piston Sample	
TWS	Thin Wall Sample	
B	Bulk Sample - Disturbed	
D	Jar Sample - Disturbed	
W	Water Sample	
pH	Acidity/Alkalinity Index	
SO ₃	% - Total Sulphate Content (acid soluble)	
SO ₃	g/ltr - Water Soluble Sulphate (Water or 2:1 Aqueous Soil Extract)	
+	Calcareous Reaction	
Cl	Chloride Content	
PI	Plasticity Index	
<425	% of material in sample passing 425 micron sieve	
LL	Liquid Limit	
PL	Plastic Limit	
MC	Water Content	
NP	Non Plastic	
Y _b	Bulk Density	
Y _d	Dry Density	
P _s	Particle Density	
U/D	Undrained/Drained Triaxial	
U/C	Unconsolidated/Consolidated Triaxial	
T/M	Single Stage/Multistage Triaxial	
100/38	Sample Diameter (mm)	
REM	Remoulded Triaxial Test Specimen	
TST	Triaxial Suction Test	
V	Vane Test	
DSB	Drained Shear Box	
RSB	Residual Shear Box	
RS	Ring Shear	
σ ₃	Cell Pressure	
σ ₁ -σ ₃	Deviator Stress	
c	Cohesion	
c _e	Effective Cohesion Intercept	
φ	Angle of Shearing Resistance - Degrees	
φ _e	Effective Angle of Shearing Resistance	
ε _f	Strain at Failure	
*	Failed under 1 st Load	
**	Failed under 2 nd Load	
#	Unstable	
##	Excessive Strain	
p _o	Effective Overburden Pressure	
m _v	Coefficient of Volume Decrease	
c _v	Coefficient of Consolidation	
Opt	Optimum	
Nat	Natural	
Std	Standard Compaction - 2.5kg Rammer	(¶ CBR)
Hvy	Heavy Compaction - 4.5kg Rammer	(§ CBR)
Vib	Vibratory Compaction	
CBR	California Bearing Ratio	
Sat m.c.	Saturation Moisture Content	
MCV	Moisture Condition Value	

Hole ID	Sample Ref	Depth (m)	Sample Type	Sample Description	MC	LL	PL	PI	% Pass 425
BH01	8	3.2	B	Slightly sandy gravelly CLAY	13	24	16	8	51
BH01	12	5.2	B	Clayey very sandy GRAVEL	11	23	14	9	55.3
BH02	11	5.2	B	Slightly sandy slightly gravelly CLAY with high cobble content	15	27	15	12	67.6
BH03	9	4.2	B	Slightly sandy slightly gravelly CLAY	20	34	22	12	66.3
BH03	11	6.2	B	Slightly sandy gravelly CLAY	13	26	15	11	64.3
BH04	6	4.2	B	Clayey very sandy GRAVEL with medium cobble content	14	25	18	7	53.6
BH05	2	1.2	B	Clayey sandy GRAVEL	13	32	21	11	34.3
BH05	3	2.2	B	Slightly clayey sandy GRAVEL with medium cobble content	5				
BH06	3	2.2	B	Slightly clayey sandy GRAVEL with medium cobble content	14	37	24	13	26
BH06	4	3.2	B	Slightly sandy gravelly SILT	22	37	27	10	69.5
BH06	6	4.2	B	Slightly sandy slightly gravelly SILT	21	28	18	10	83.8
BH06	9	5.2	B	Slightly sandy slightly gravelly SILT	13	26	18	8	74.4
BH06	12	7.2	B	Silty very sandy GRAVEL with medium cobble content	12	28	18	10	36.6
BH07C	1	3	B	Slightly sandy gravelly CLAY	27	36	23	13	68
BH07C	3	5	B	Slightly sandy slightly gravelly CLAY	15	22	15	7	68
BH08B	1	3	B	Slightly sandy gravelly CLAY with high cobble content	19	29	19	10	62.1
BH08B	3	5	B	Slightly sandy slightly gravelly CLAY with low cobble content	14	26	16	10	70.5
BH08B	4	6	B	Slightly sandy slightly gravelly SILT with medium cobble content	11	20	14	6	72.3
BH08B	6	8	B	Slightly sandy slightly gravelly SILT	9	24	15	9	66.9
BH09A	2	4	B	Very clayey very sandy GRAVEL	15	28	17	11	56.6



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

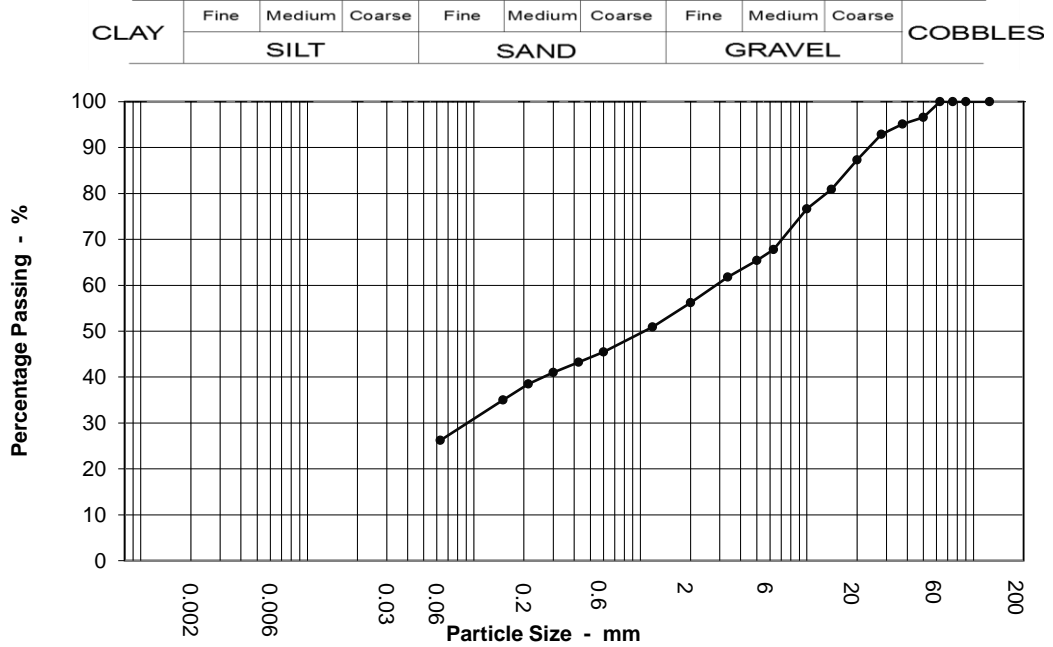
Job Ref	P21076
Borehole / Pit No	BH01
Sample No	8
Depth	3.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	97		
37.5	95		
28	93		
20	87		
14	81		
10	77		
6.3	68		
5	65		
3.35	62		
2	56		
1.18	51		
0.6	45		
0.425	43		
0.3	41		
0.212	38		
0.15	35		
0.063	26		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	44.0
Sand	30.0
Silt & Clay	26.0

Grading Analysis	
D100	63.00
D60	2.84
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

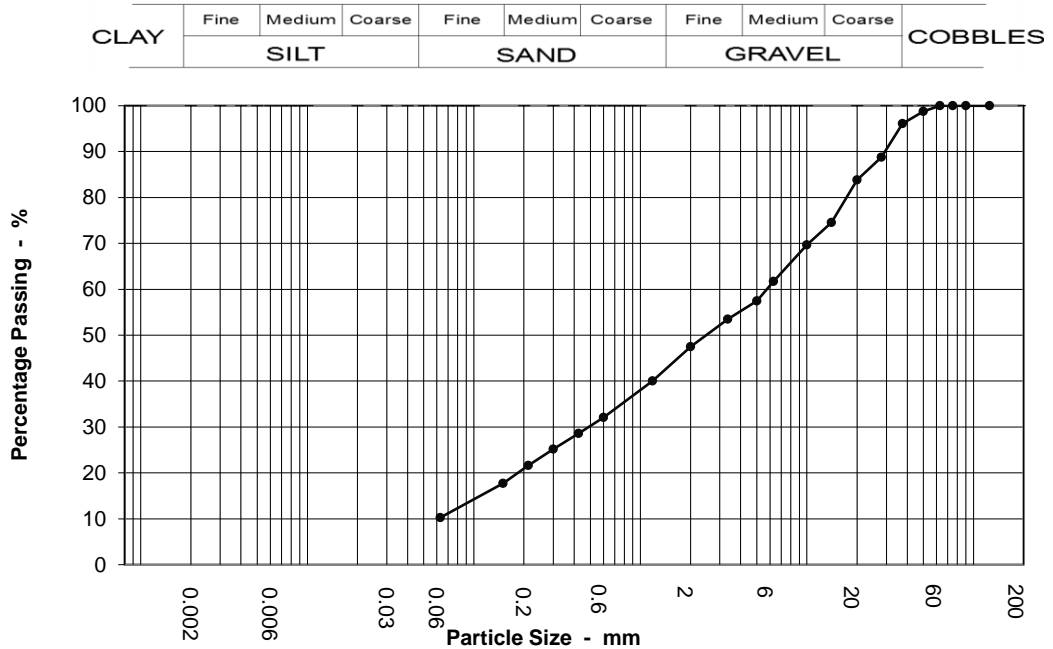
Job Ref	P21076
Borehole / Pit No	BH01
Sample No	12
Depth	5.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Clayey very sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	99		
37.5	96		
28	89		
20	84		
14	75		
10	70		
6.3	62		
5	57		
3.35	53		
2	47		
1.18	40		
0.6	32		
0.425	29		
0.3	25		
0.212	22		
0.15	18		
0.063	10		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	53.0
Sand	37.0
Silt & Clay	10.0

Grading Analysis	
D100	63.00
D60	5.73
D10	
Uniformity Coefficient	

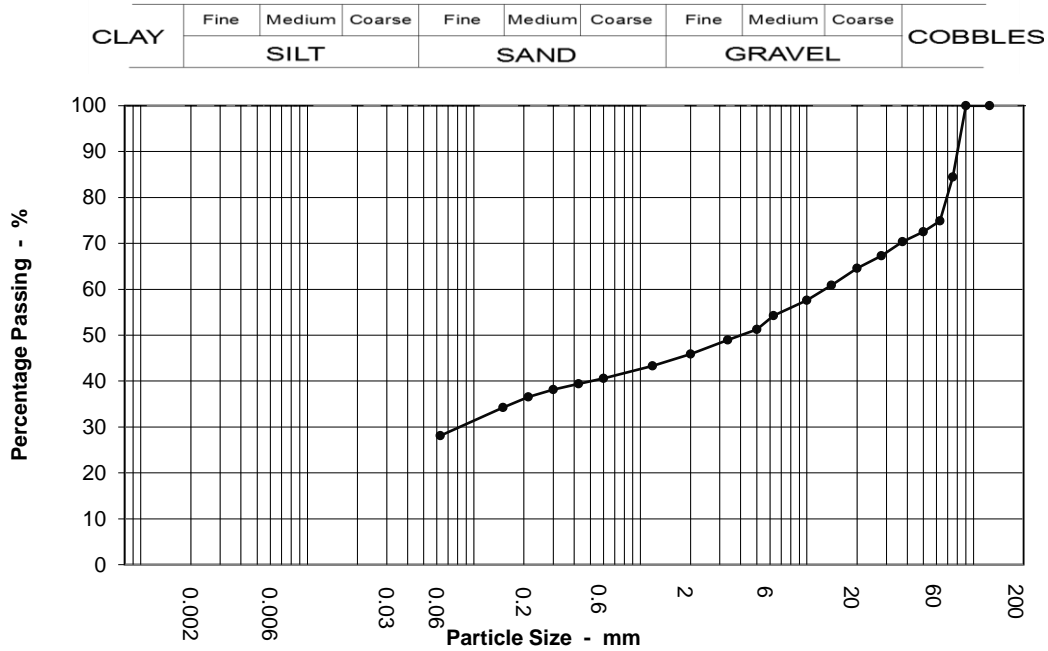


PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref	P21076
Borehole / Pit No	BH02
Sample No	11
Depth	5.20 m
Sample type	B

Location	The Creamfields (Former CMP Dairy Site) Ground Investigation
Soil Description	Slightly sandy slightly gravelly CLAY with high cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	84		
63	75		
50	72		
37.5	70		
28	67		
20	65		
14	61		
10	58		
6.3	54		
5	51		
3.35	49		
2	46		
1.18	43		
0.6	41		
0.425	39		
0.3	38		
0.212	37		
0.15	34		
0.063	28		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	25.0
Gravel	29.0
Sand	18.0
Silt & Clay	28.0

Grading Analysis	
D100	90.00
D60	12.80
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

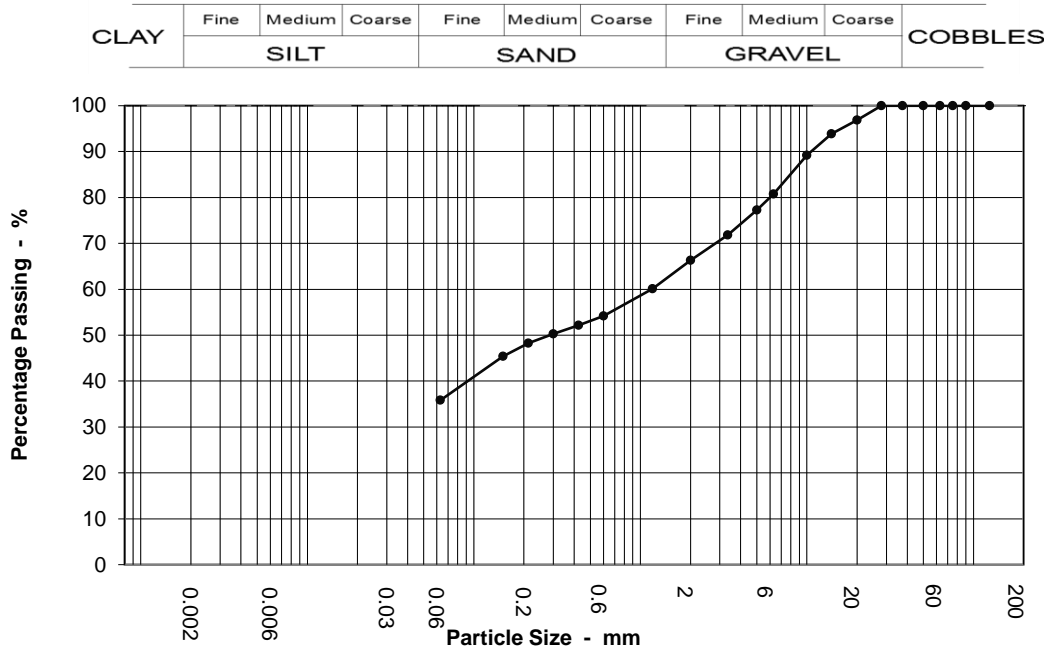
Job Ref	P21076
Borehole / Pit No	BH03
Sample No	9
Depth	4.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	97		
14	94		
10	89		
6.3	81		
5	77		
3.35	72		
2	66		
1.18	60		
0.6	54		
0.425	52		
0.3	50		
0.212	48		
0.15	45		
0.063	36		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	34.0
Sand	31.0
Silt & Clay	36.0

Grading Analysis	
D100	28.00
D60	1.17
D10	
Uniformity Coefficient	

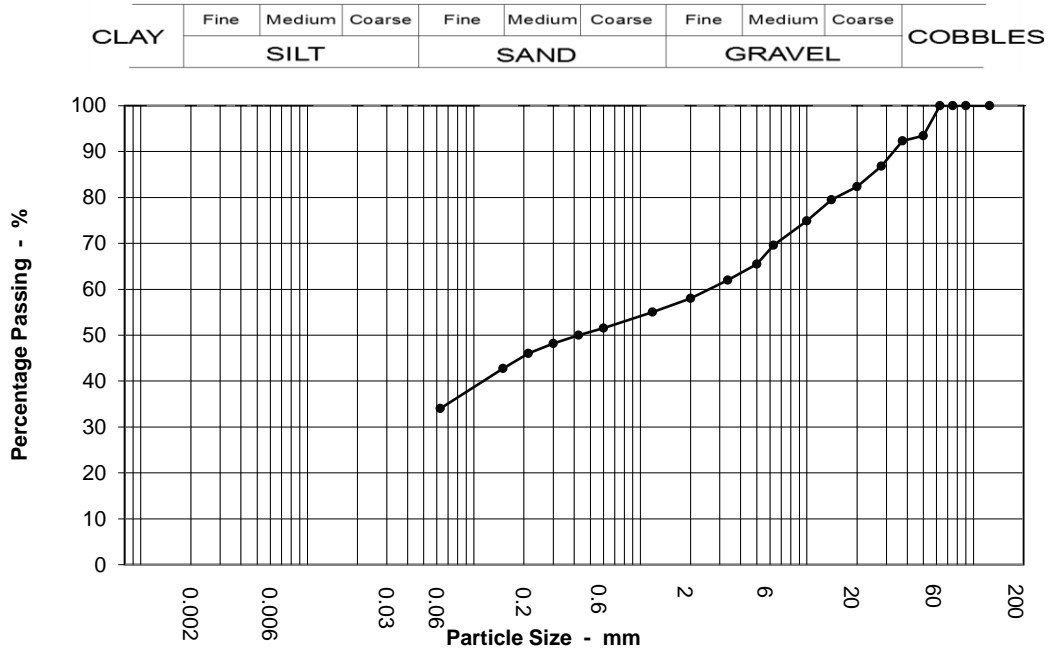


PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref	P21076
Borehole / Pit No	BH03
Sample No	11
Depth	6.20 m
Sample type	B

Location	The Creamfields (Former CMP Dairy Site) Ground Investigation
Soil Description	Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	93		
37.5	92		
28	87		
20	82		
14	80		
10	75		
6.3	70		
5	65		
3.35	62		
2	58		
1.18	55		
0.6	52		
0.425	50		
0.3	48		
0.212	46		
0.15	43		
0.063	34		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	42.0
Sand	24.0
Silt & Clay	34.0

Grading Analysis	
D100	63.00
D60	2.59
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

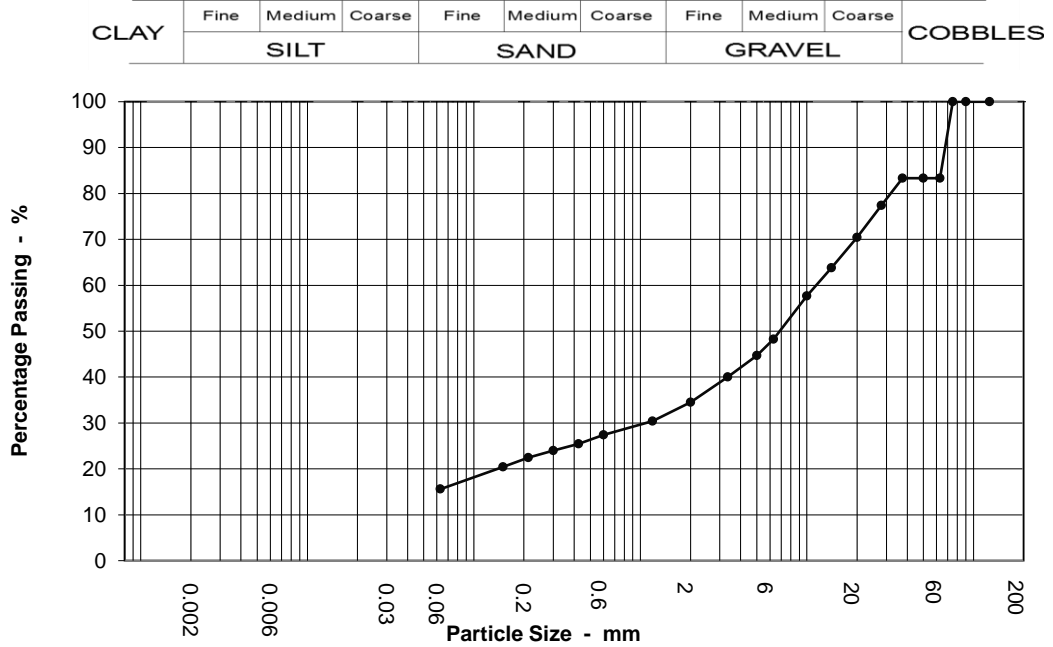
Job Ref	P21076
Borehole / Pit No	BH04
Sample No	6
Depth	4.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Clayey very sandy GRAVEL with medium cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	83		
50	83		
37.5	83		
28	77		
20	70		
14	64		
10	58		
6.3	48		
5	45		
3.35	40		
2	35		
1.18	30		
0.6	27		
0.425	25		
0.3	24		
0.212	22		
0.15	20		
0.063	16		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	17.0
Gravel	49.0
Sand	19.0
Silt & Clay	16.0

Grading Analysis	
D100	75.00
D60	11.40
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

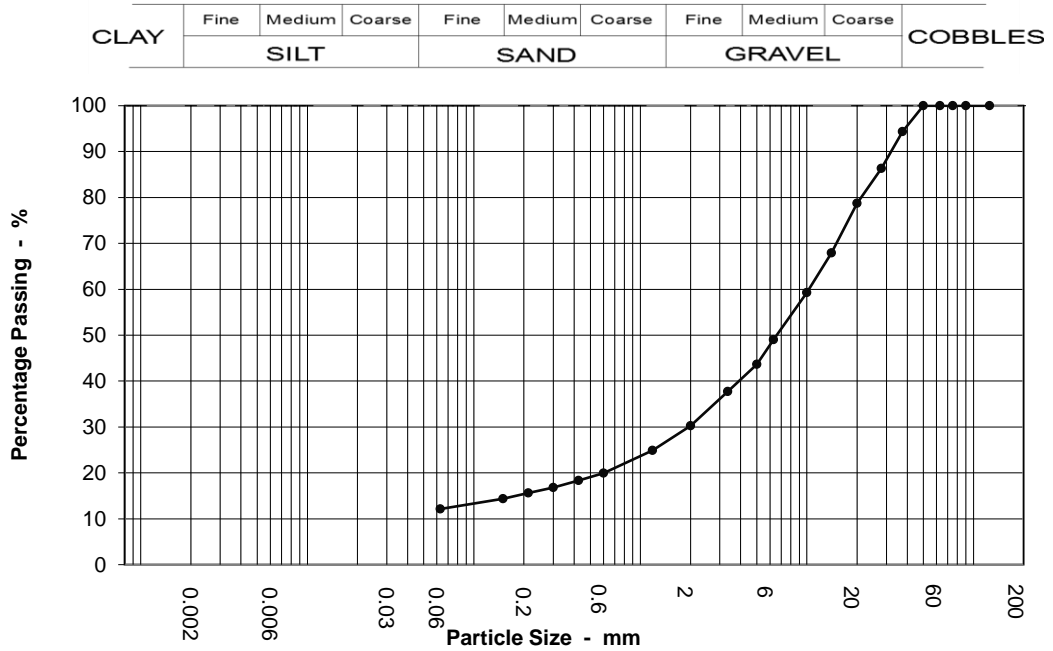
Job Ref	P21076
Borehole / Pit No	BH05
Sample No	2
Depth	1.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Clayey sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	94		
28	86		
20	79		
14	68		
10	59		
6.3	49		
5	44		
3.35	38		
2	30		
1.18	25		
0.6	20		
0.425	18		
0.3	17		
0.212	16		
0.15	14		
0.063	12		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	70.0
Sand	18.0
Silt & Clay	12.0

Grading Analysis	
D100	50.00
D60	10.30
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

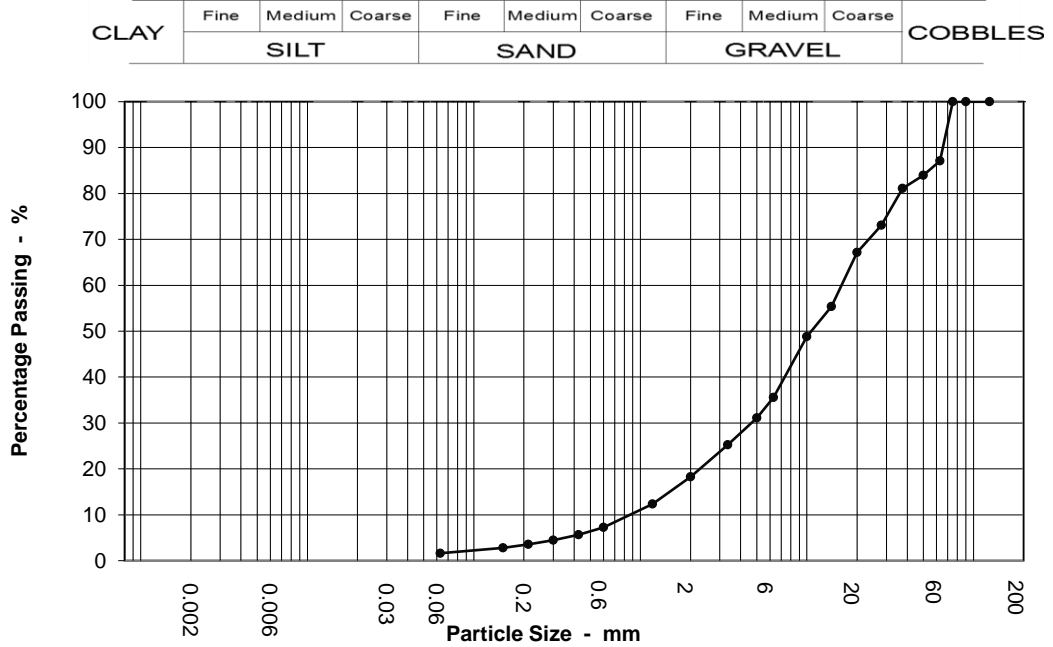
Job Ref	P21076
Borehole / Pit No	BH05
Sample No	3
Depth	2.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly clayey sandy GRAVEL with medium cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	87		
50	84		
37.5	81		
28	73		
20	67		
14	55		
10	49		
6.3	36		
5	31		
3.35	25		
2	18		
1.18	12		
0.6	7		
0.425	6		
0.3	4		
0.212	4		
0.15	3		
0.063	2		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	13.0
Gravel	69.0
Sand	17.0
Silt & Clay	2.0

Grading Analysis	
D100	75.00
D60	16.10
D10	0.87
Uniformity Coefficient	19.00



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

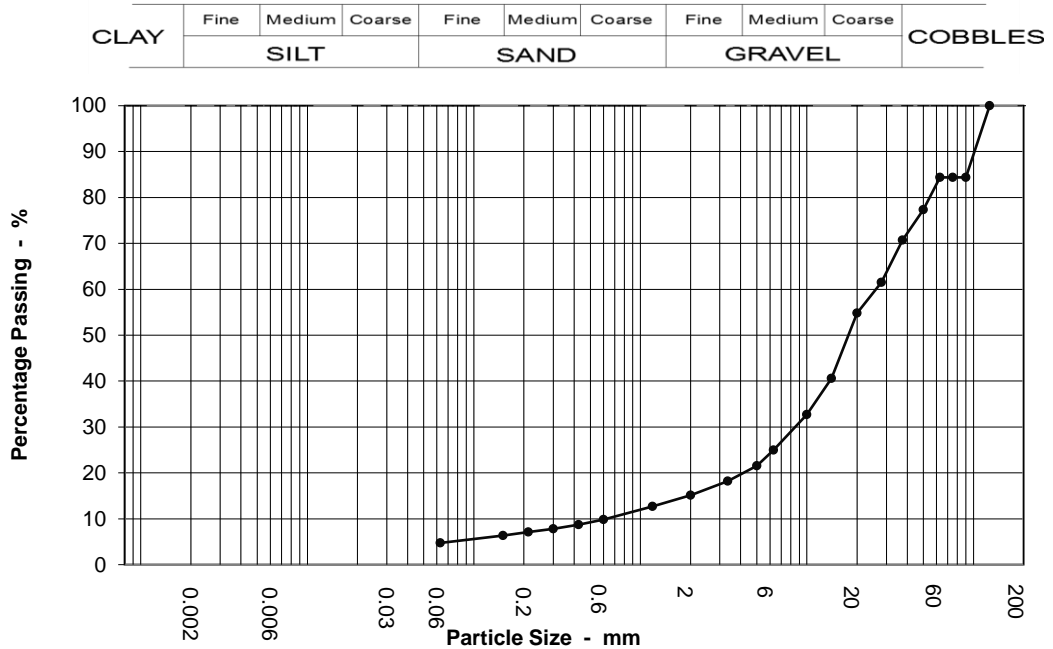
Job Ref	P21076
Borehole / Pit No	BH06
Sample No	3
Depth	2.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly clayey sandy GRAVEL with medium cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	84		
75	84		
63	84		
50	77		
37.5	71		
28	62		
20	55		
14	41		
10	33		
6.3	25		
5	22		
3.35	18		
2	15		
1.18	13		
0.6	10		
0.425	9		
0.3	8		
0.212	7		
0.15	6		
0.063	5		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	16.0
Gravel	69.0
Sand	10.0
Silt & Clay	5.0

Grading Analysis	
D100	125.00
D60	26.00
D10	0.63
Uniformity Coefficient	41.00



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

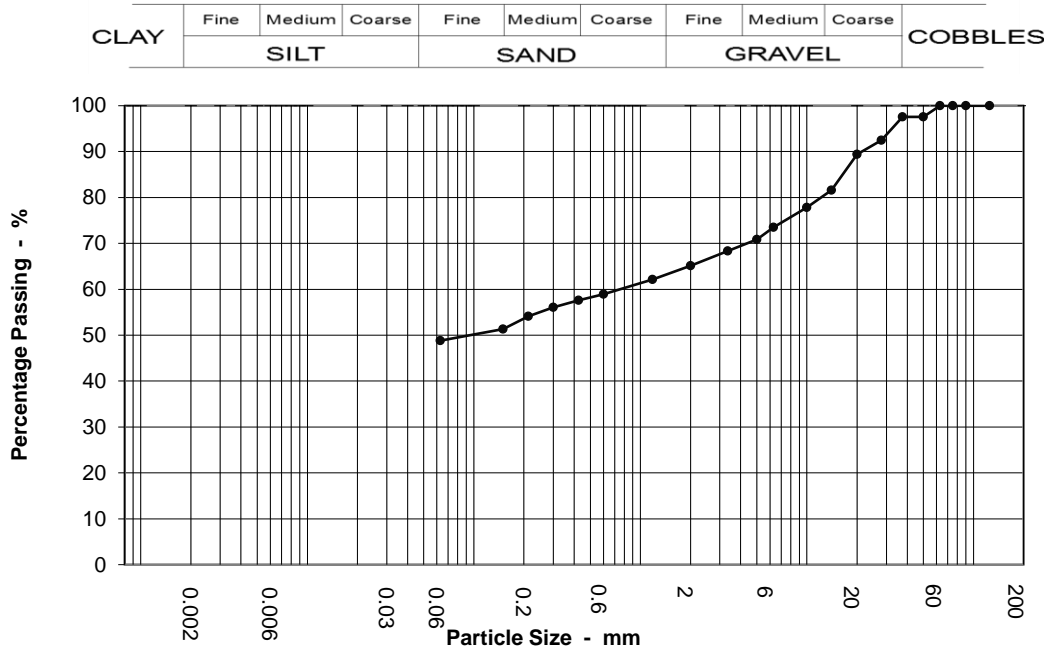
Job Ref	P21076
Borehole / Pit No	BH06
Sample No	4
Depth	3.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	98		
37.5	98		
28	93		
20	89		
14	82		
10	78		
6.3	73		
5	71		
3.35	68		
2	65		
1.18	62		
0.6	59		
0.425	58		
0.3	56		
0.212	54		
0.15	51		
0.063	49		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	35.0
Sand	16.0
Silt & Clay	49.0

Grading Analysis	
D100	63.00
D60	0.75
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

P21076

Borehole / Pit No

BH06

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Sample No

6

Depth

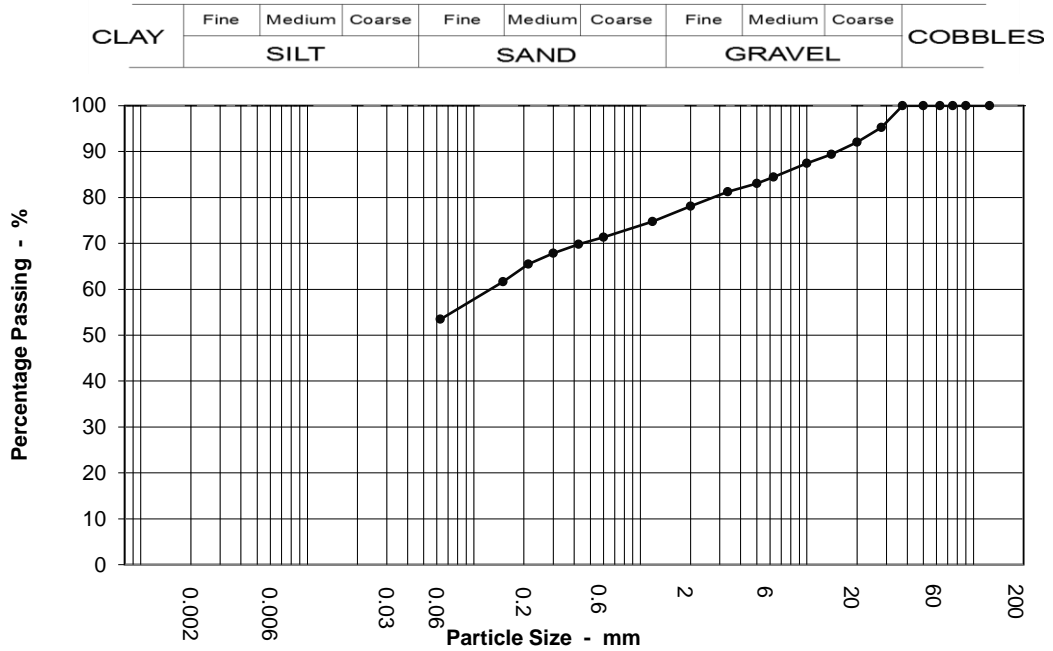
4.20 m

Soil Description

Slightly sandy slightly gravelly SILT

Sample type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	95		
20	92		
14	89		
10	87		
6.3	84		
5	83		
3.35	81		
2	78		
1.18	75		
0.6	71		
0.425	70		
0.3	68		
0.212	65		
0.15	62		
0.063	53		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	22.0
Sand	25.0
Silt & Clay	53.0

Grading Analysis	
D100	37.50
D60	0.13
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

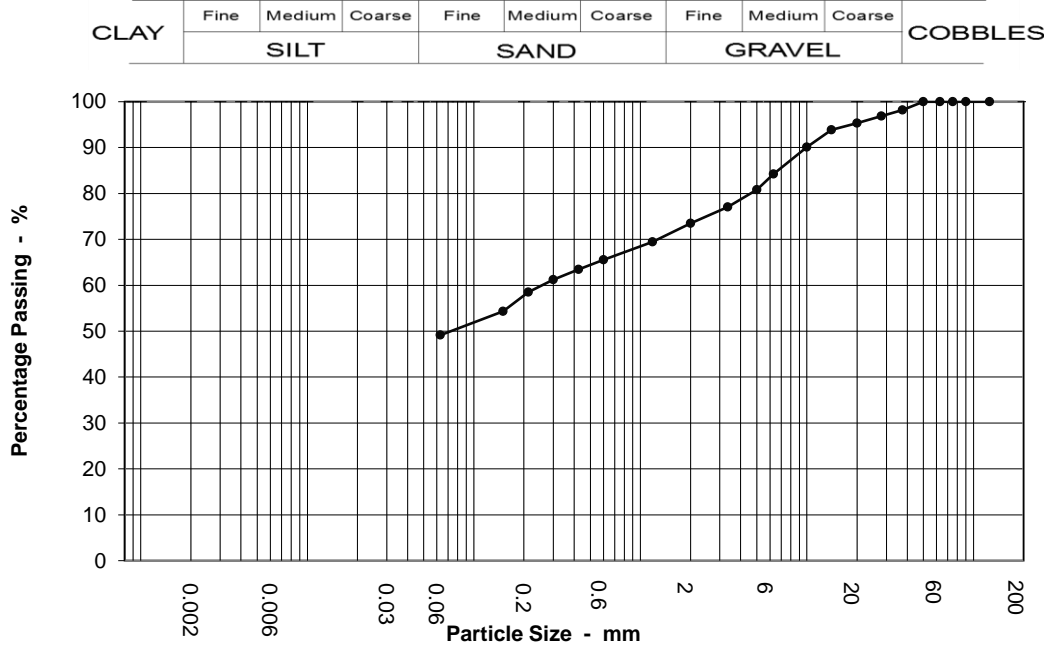
Job Ref	P21076
Borehole / Pit No	BH06
Sample No	9
Depth	5.20 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	98		
28	97		
20	95		
14	94		
10	90		
6.3	84		
5	81		
3.35	77		
2	74		
1.18	69		
0.6	66		
0.425	63		
0.3	61		
0.212	58		
0.15	54		
0.063	49		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	26.0
Sand	24.0
Silt & Clay	49.0

Grading Analysis	
D100	50.00
D60	0.26
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

P21076

Borehole / Pit No

BH06

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Sample No

12

Depth

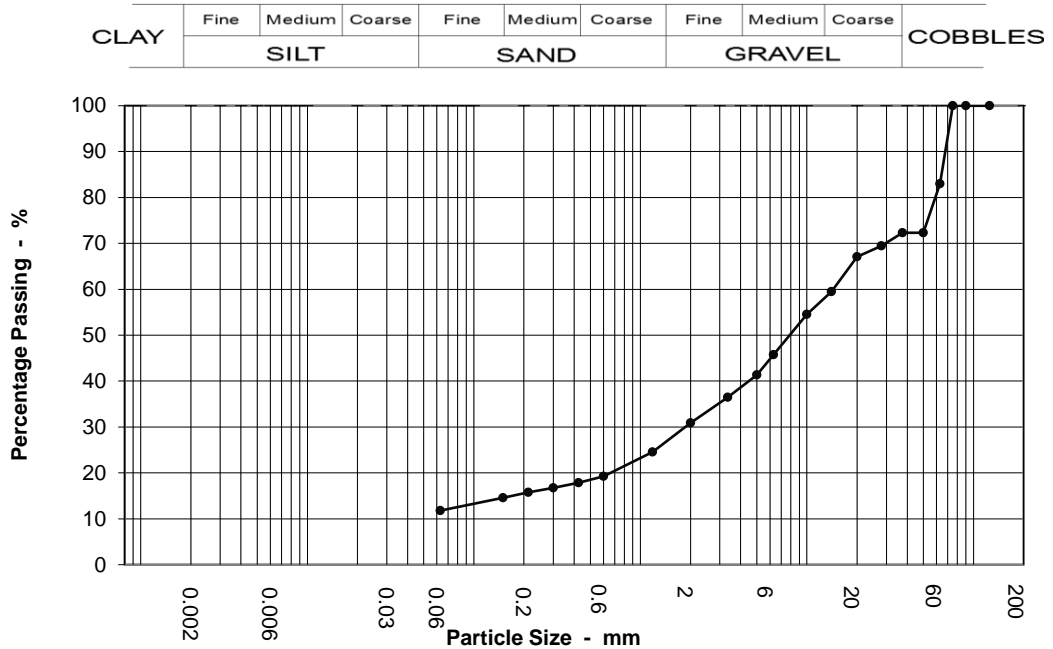
7.20 m

Soil Description

Silty very sandy GRAVEL with medium cobble content

Sample type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	83		
50	72		
37.5	72		
28	69		
20	67		
14	60		
10	55		
6.3	46		
5	41		
3.35	36		
2	31		
1.18	25		
0.6	19		
0.425	18		
0.3	17		
0.212	16		
0.15	15		
0.063	12		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	17.0
Gravel	52.0
Sand	19.0
Silt & Clay	12.0

Grading Analysis	
D100	75.00
D60	14.30
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

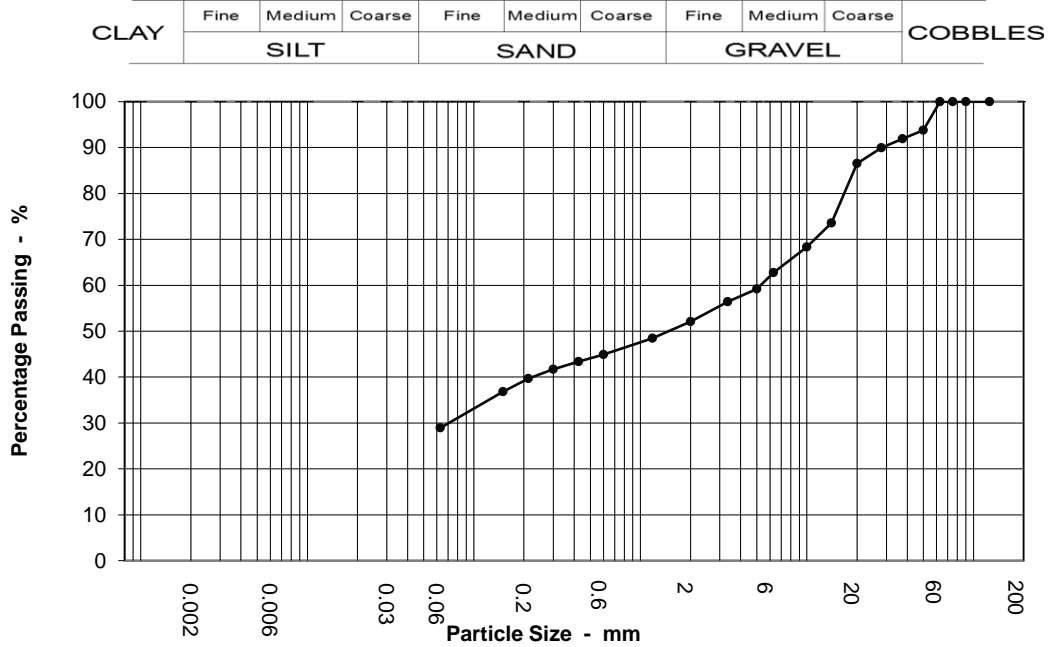
Job Ref	P21076
Borehole / Pit No	BH07C
Sample No	1
Depth	3.00 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	94		
37.5	92		
28	90		
20	87		
14	74		
10	68		
6.3	63		
5	59		
3.35	56		
2	52		
1.18	48		
0.6	45		
0.425	43		
0.3	42		
0.212	40		
0.15	37		
0.063	29		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	48.0
Sand	23.0
Silt & Clay	29.0

Grading Analysis	
D100	63.00
D60	5.27
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

P21076

Borehole / Pit No

BH07C

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Sample No

3

Depth

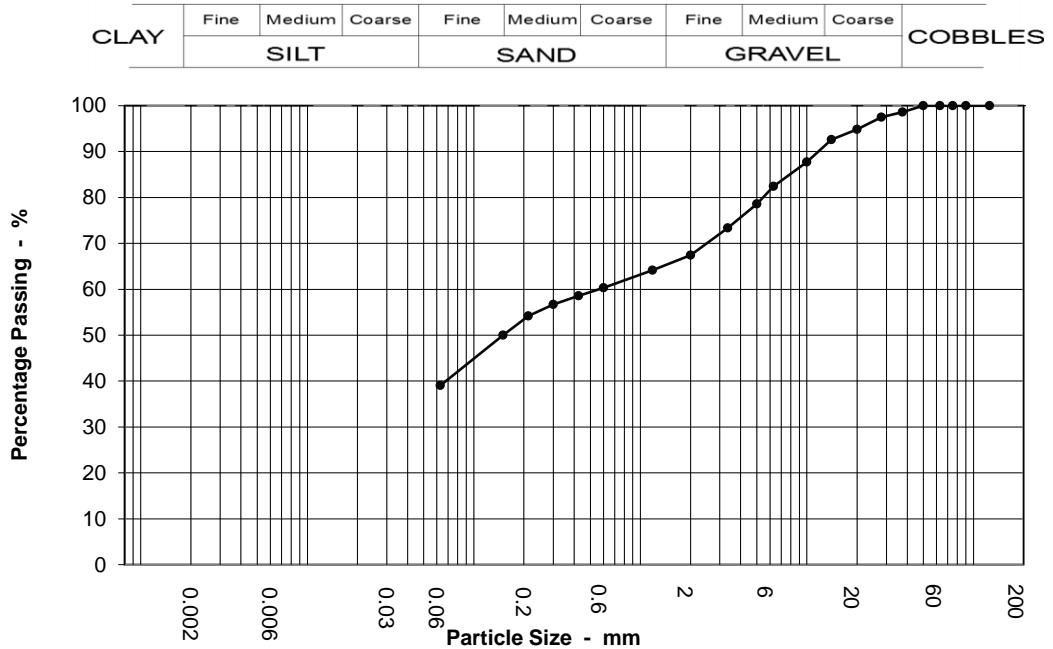
5.00 m

Soil Description

Slightly sandy slightly gravelly CLAY

Sample type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	99		
28	97		
20	95		
14	93		
10	88		
6.3	82		
5	79		
3.35	73		
2	67		
1.18	64		
0.6	60		
0.425	59		
0.3	57		
0.212	54		
0.15	50		
0.063	39		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	33.0
Sand	28.0
Silt & Clay	39.0

Grading Analysis	
D100	50.00
D60	0.56
D10	
Uniformity Coefficient	

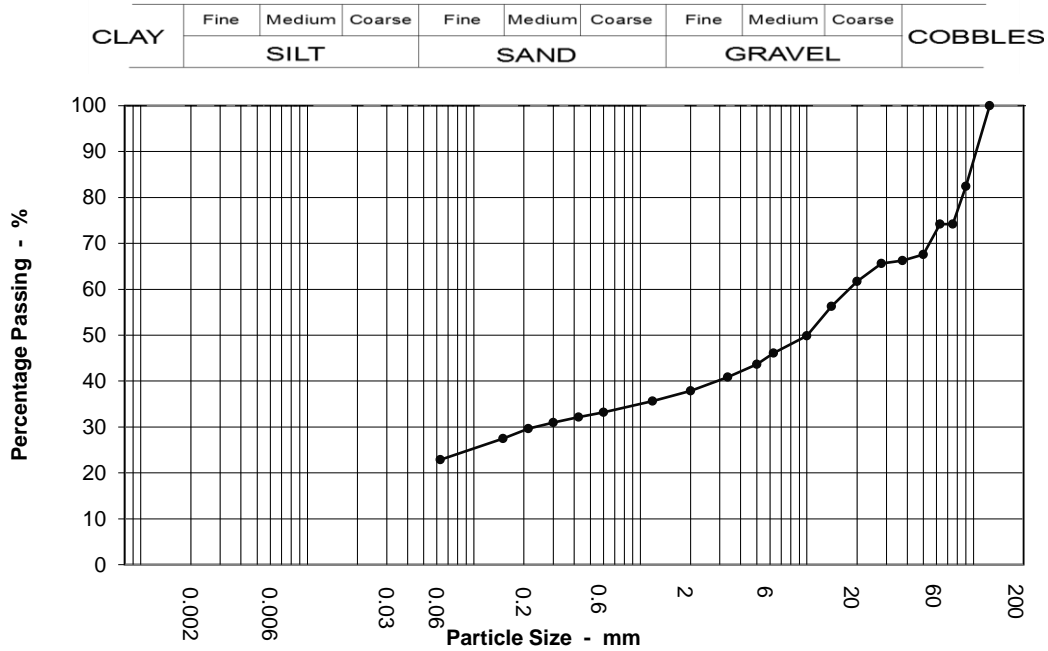


PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref	P21076
Borehole / Pit No	BH08B
Sample No	1
Depth	3.00 m
Sample type	B

Location	The Creamfields (Former CMP Dairy Site) Ground Investigation
Soil Description	Slightly sandy gravelly CLAY with high cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	82		
75	74		
63	74		
50	68		
37.5	66		
28	66		
20	62		
14	56		
10	50		
6.3	46		
5	44		
3.35	41		
2	38		
1.18	36		
0.6	33		
0.425	32		
0.3	31		
0.212	30		
0.15	27		
0.063	23		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	26.0
Gravel	36.0
Sand	15.0
Silt & Clay	23.0

Grading Analysis	
D100	125.00
D60	17.90
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

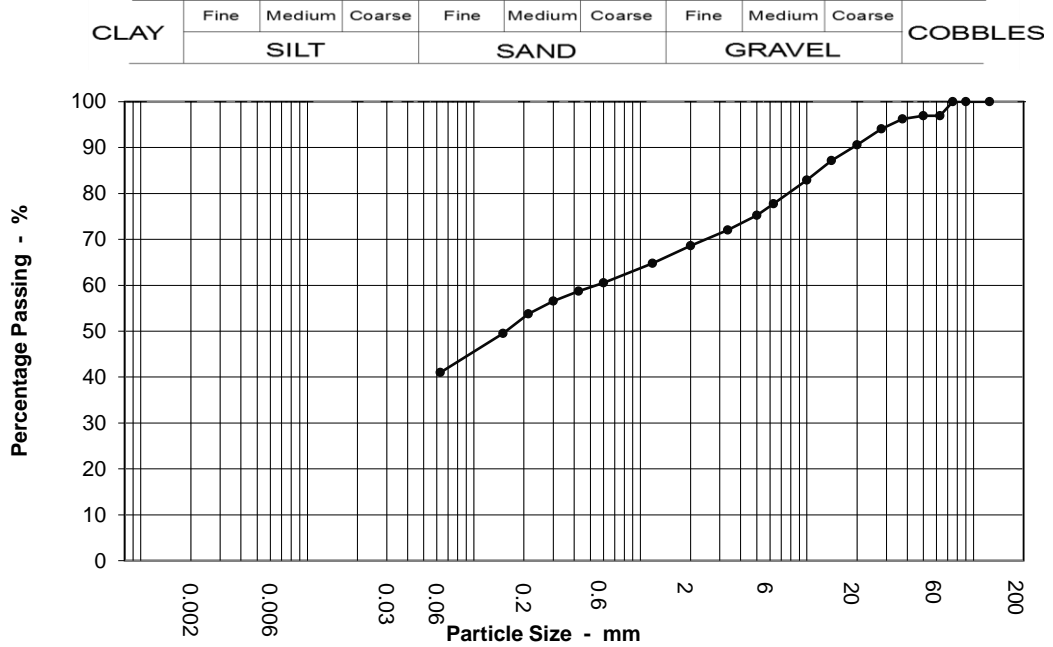
Job Ref	P21076
Borehole / Pit No	BH08B
Sample No	3
Depth	5.00 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly CLAY with low cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	97		
50	97		
37.5	96		
28	94		
20	91		
14	87		
10	83		
6.3	78		
5	75		
3.35	72		
2	69		
1.18	65		
0.6	61		
0.425	59		
0.3	57		
0.212	54		
0.15	50		
0.063	41		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	3.0
Gravel	28.0
Sand	28.0
Silt & Clay	41.0

Grading Analysis	
D100	75.00
D60	0.54
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

P21076

Borehole / Pit No

BH08B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Sample No

4

Depth

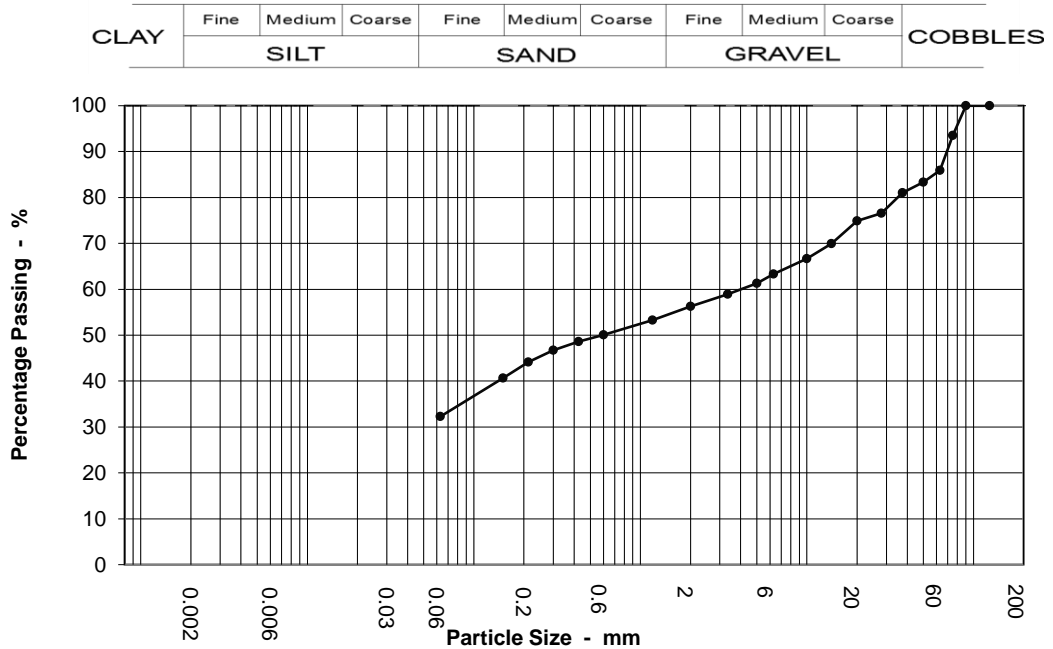
6.00 m

Soil Description

Slightly sandy slightly gravelly SILT with medium cobble content

Sample type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	94		
63	86		
50	83		
37.5	81		
28	77		
20	75		
14	70		
10	67		
6.3	63		
5	61		
3.35	59		
2	56		
1.18	53		
0.6	50		
0.425	49		
0.3	47		
0.212	44		
0.15	41		
0.063	32		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	14.0
Gravel	30.0
Sand	24.0
Silt & Clay	32.0

Grading Analysis	
D100	90.00
D60	4.02
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

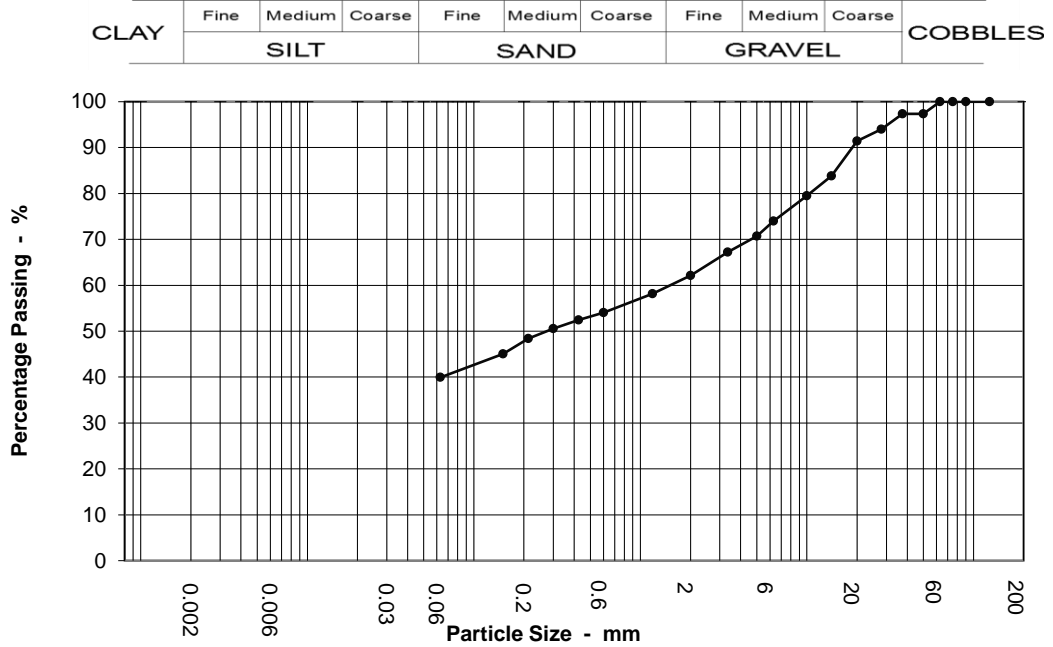
Job Ref	P21076
Borehole / Pit No	BH08B
Sample No	6
Depth	8.00 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	97		
37.5	97		
28	94		
20	91		
14	84		
10	79		
6.3	74		
5	71		
3.35	67		
2	62		
1.18	58		
0.6	54		
0.425	52		
0.3	51		
0.212	48		
0.15	45		
0.063	40		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	38.0
Sand	22.0
Silt & Clay	40.0

Grading Analysis	
D100	63.00
D60	1.50
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

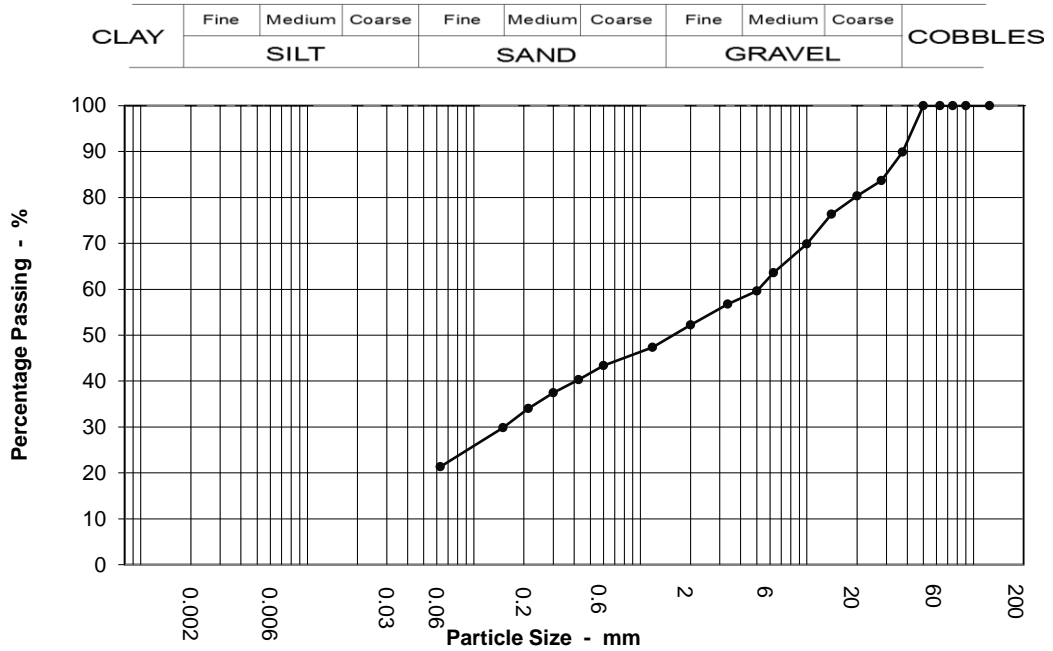
Job Ref	P21076
Borehole / Pit No	BH09A
Sample No	2
Depth	4.00 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Very clayey very sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	90		
28	84		
20	80		
14	76		
10	70		
6.3	64		
5	60		
3.35	57		
2	52		
1.18	47		
0.6	43		
0.425	40		
0.3	37		
0.212	34		
0.15	30		
0.063	21		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	48.0
Sand	31.0
Silt & Clay	21.0

Grading Analysis	
D100	50.00
D60	5.10
D10	
Uniformity Coefficient	

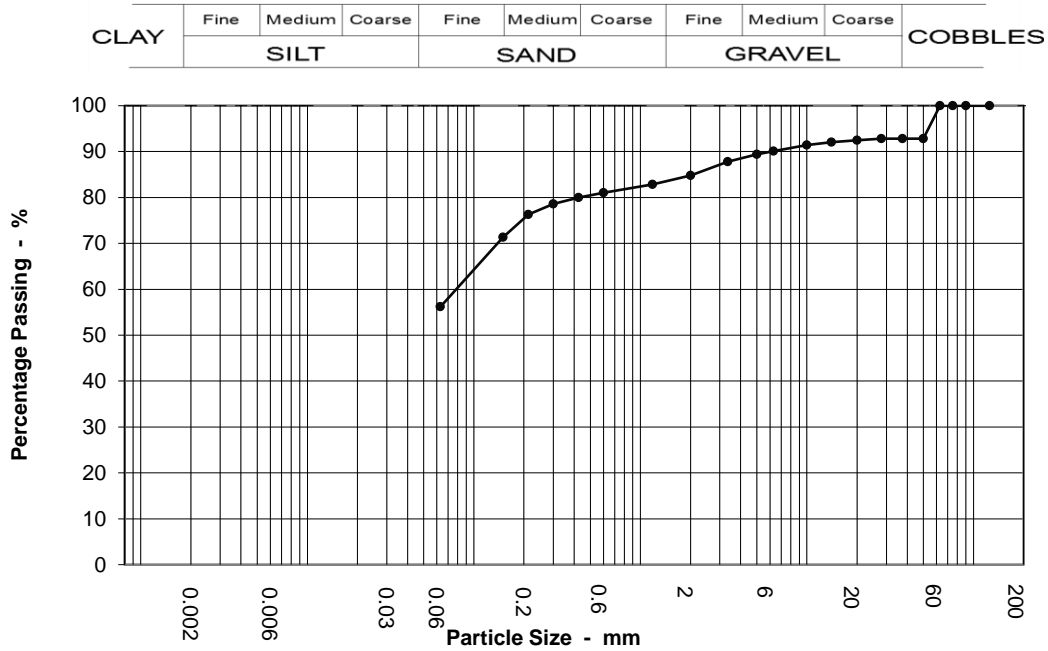


PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref	P21076
Borehole / Pit No	BH09A
Sample No	3
Depth	5.00 m
Sample type	B

Location	The Creamfields (Former CMP Dairy Site) Ground Investigation
Soil Description	Slightly sandy slightly gravelly SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	93		
37.5	93		
28	93		
20	93		
14	92		
10	91		
6.3	90		
5	89		
3.35	88		
2	85		
1.18	83		
0.6	81		
0.425	80		
0.3	79		
0.212	76		
0.15	71		
0.063	56		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	15.0
Sand	29.0
Silt & Clay	56.0

Grading Analysis	
D100	63.00
D60	0.08
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

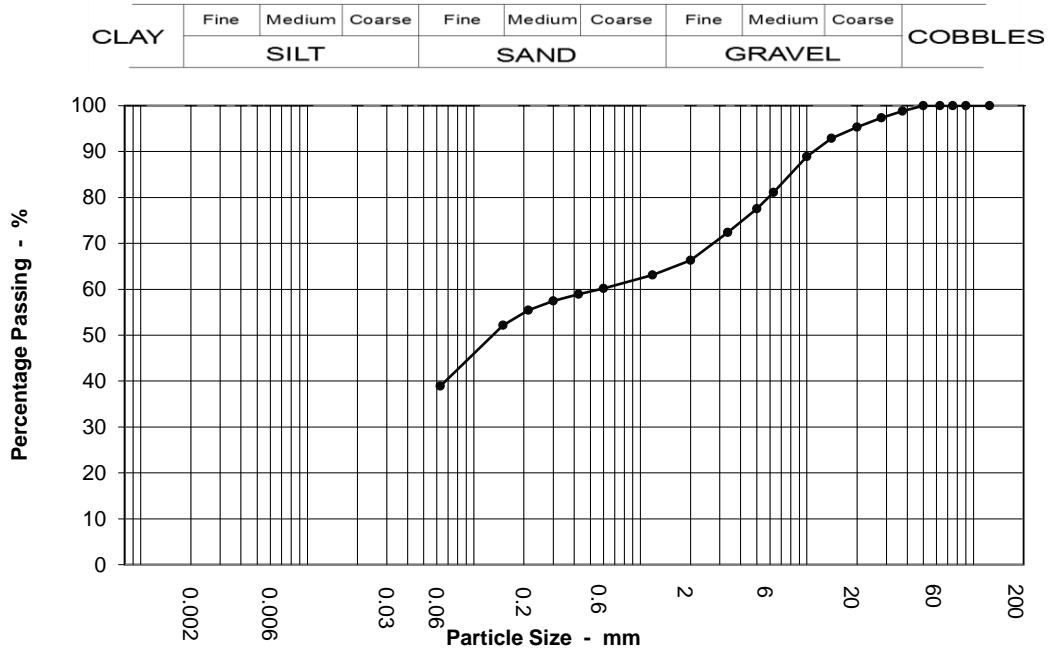
Job Ref	P21076
Borehole / Pit No	BH09A
Sample No	5
Depth	7.00 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	99		
28	97		
20	95		
14	93		
10	89		
6.3	81		
5	78		
3.35	72		
2	66		
1.18	63		
0.6	60		
0.425	59		
0.3	57		
0.212	55		
0.15	52		
0.063	39		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	34.0
Sand	27.0
Silt & Clay	39.0

Grading Analysis	
D100	50.00
D60	0.57
D10	
Uniformity Coefficient	

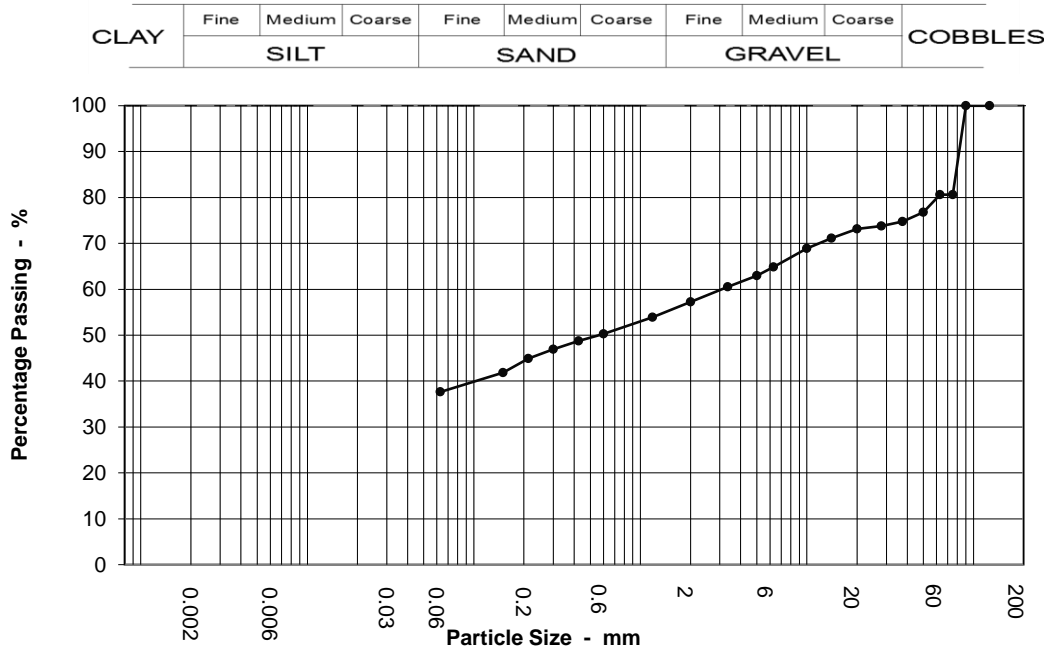


PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref	P21076
Borehole / Pit No	TP01
Sample No	5
Depth	0.50 m
Sample type	B

Location	The Creamfields (Former CMP Dairy Site) Ground Investigation
Soil Description	Slightly sandy slightly gravelly CLAY with medium cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	81		
63	81		
50	77		
37.5	75		
28	74		
20	73		
14	71		
10	69		
6.3	65		
5	63		
3.35	61		
2	57		
1.18	54		
0.6	50		
0.425	49		
0.3	47		
0.212	45		
0.15	42		
0.063	38		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	19.0
Gravel	23.0
Sand	20.0
Silt & Clay	38.0

Grading Analysis	
D100	90.00
D60	3.09
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

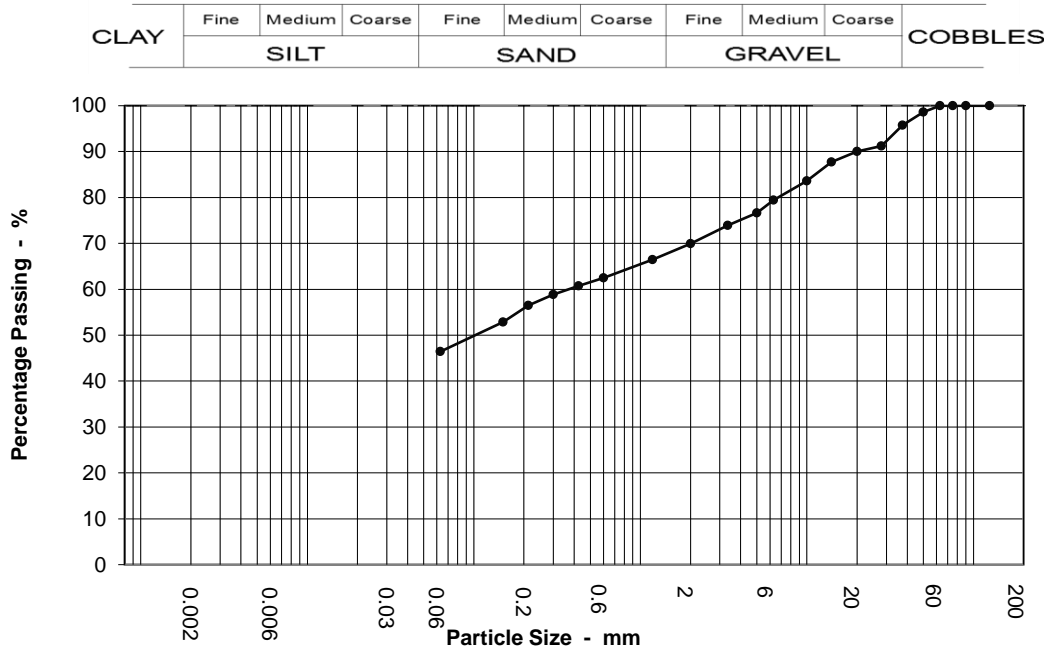
Job Ref	P21076
Borehole / Pit No	TP01
Sample No	7
Depth	2.50 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	99		
37.5	96		
28	91		
20	90		
14	88		
10	84		
6.3	79		
5	77		
3.35	74		
2	70		
1.18	66		
0.6	62		
0.425	61		
0.3	59		
0.212	56		
0.15	53		
0.063	46		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	30.0
Sand	24.0
Silt & Clay	46.0

Grading Analysis	
D100	63.00
D60	0.37
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

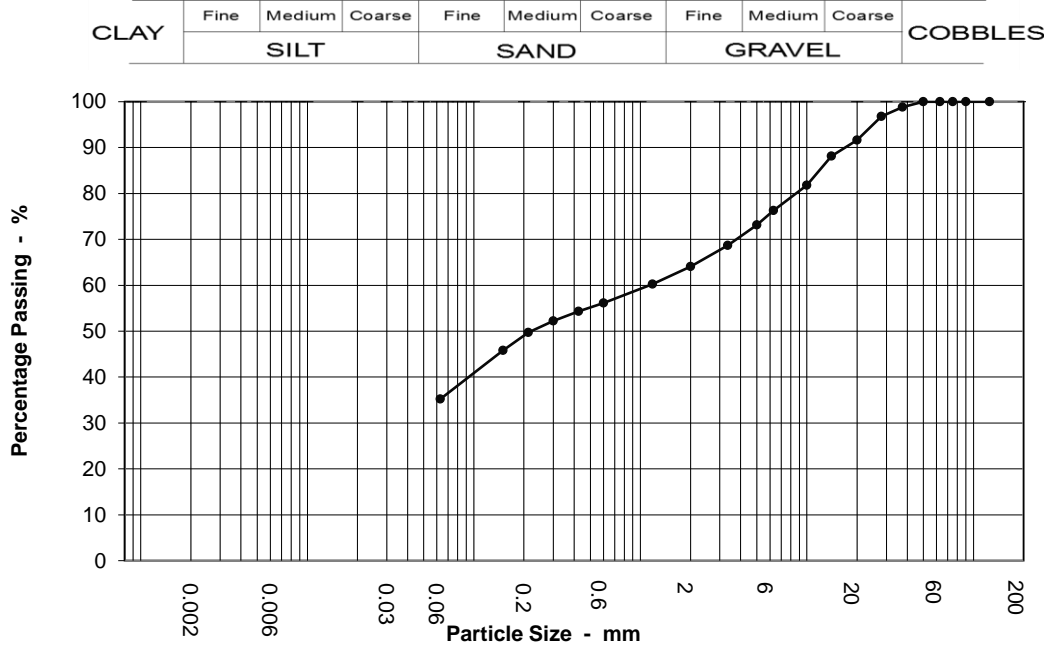
Job Ref	P21076
Borehole / Pit No	TP01
Sample No	9
Depth	3.10 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	99		
28	97		
20	92		
14	88		
10	82		
6.3	76		
5	73		
3.35	69		
2	64		
1.18	60		
0.6	56		
0.425	54		
0.3	52		
0.212	50		
0.15	46		
0.063	35		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	36.0
Sand	29.0
Silt & Clay	35.0

Grading Analysis	
D100	50.00
D60	1.14
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

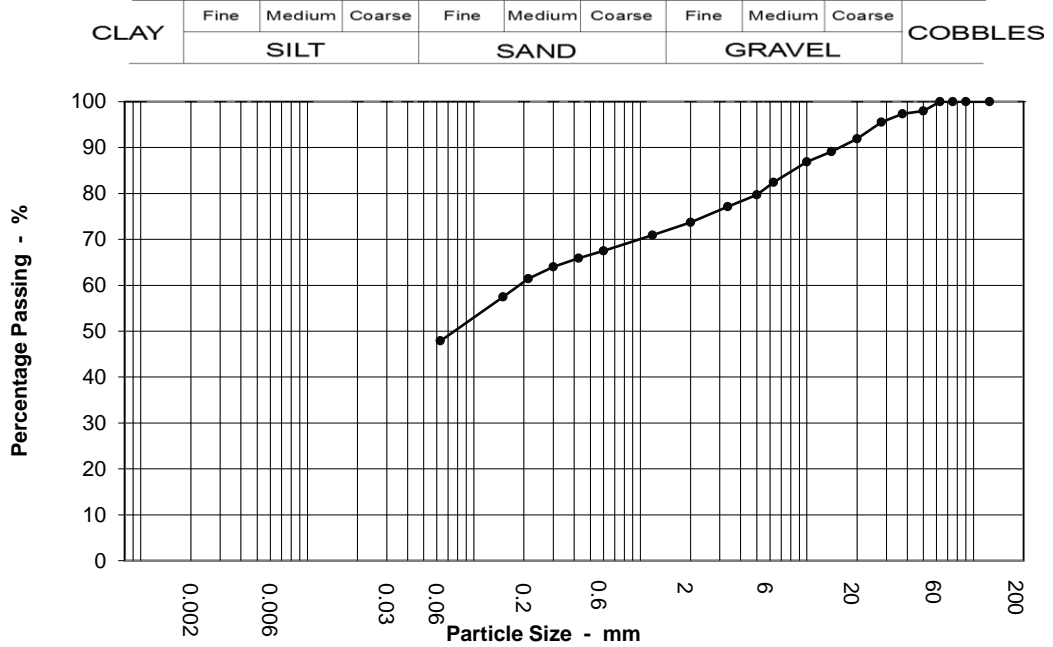
Job Ref	P21076
Borehole / Pit No	TP02
Sample No	5
Depth	1.50 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	98		
37.5	97		
28	96		
20	92		
14	89		
10	87		
6.3	82		
5	80		
3.35	77		
2	74		
1.18	71		
0.6	68		
0.425	66		
0.3	64		
0.212	61		
0.15	57		
0.063	48		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	26.0
Sand	26.0
Silt & Clay	48.0

Grading Analysis	
D100	63.00
D60	0.19
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

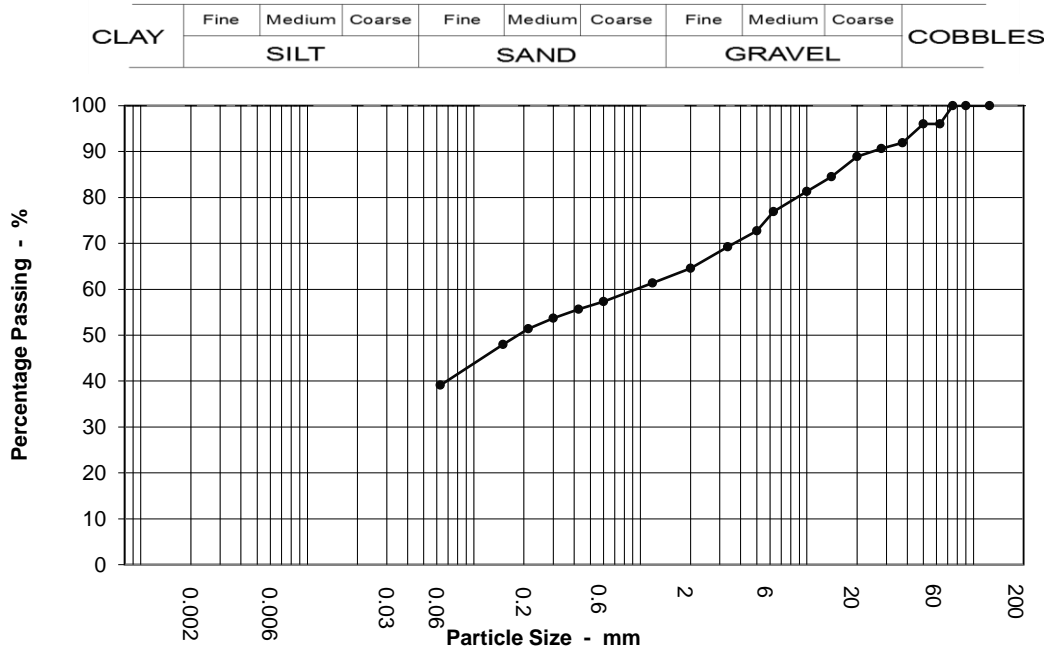
Job Ref	P21076
Borehole / Pit No	TP02
Sample No	7
Depth	3.00 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy slightly gravelly CLAY with low cobble content



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	96		
50	96		
37.5	92		
28	91		
20	89		
14	85		
10	81		
6.3	77		
5	73		
3.35	69		
2	65		
1.18	61		
0.6	57		
0.425	56		
0.3	54		
0.212	51		
0.15	48		
0.063	39		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	4.0
Gravel	31.0
Sand	25.0
Silt & Clay	39.0

Grading Analysis	
D100	75.00
D60	0.94
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

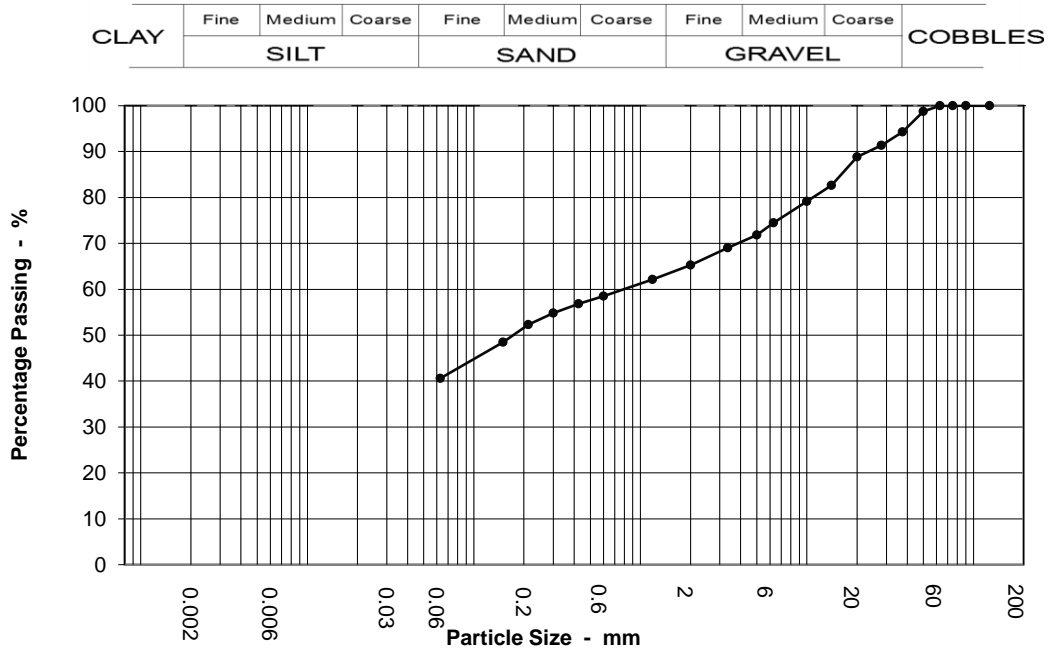
Job Ref	P21076
Borehole / Pit No	TP03
Sample No	6
Depth	2.50 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	99		
37.5	94		
28	91		
20	89		
14	83		
10	79		
6.3	74		
5	72		
3.35	69		
2	65		
1.18	62		
0.6	58		
0.425	57		
0.3	55		
0.212	52		
0.15	48		
0.063	41		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	35.0
Sand	25.0
Silt & Clay	41.0

Grading Analysis	
D100	63.00
D60	0.79
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

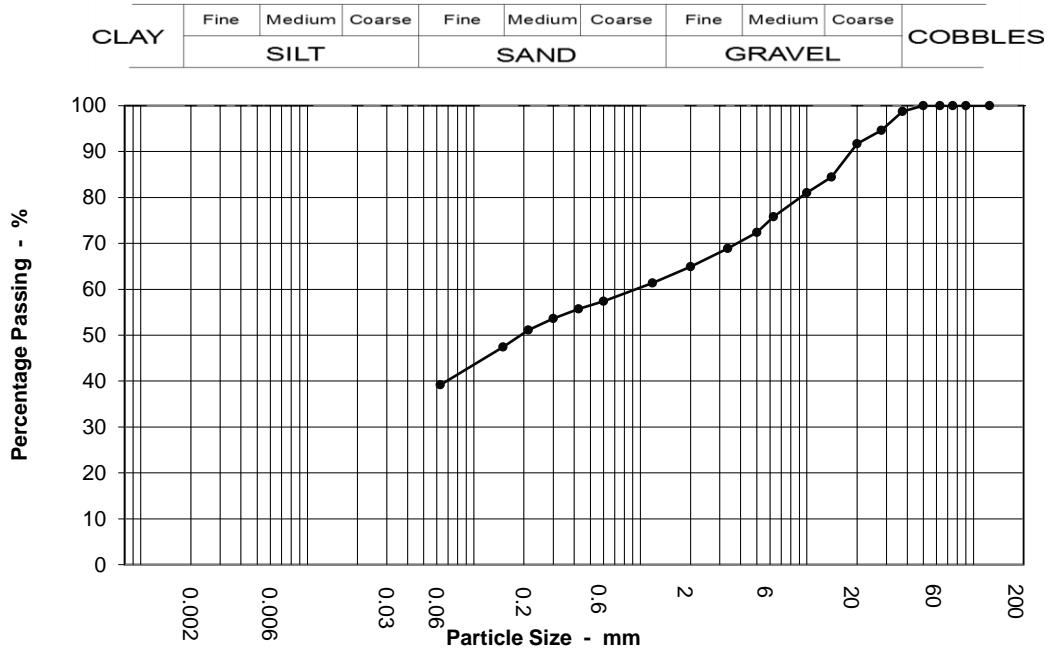
Job Ref	P21076
Borehole / Pit No	TP04
Sample No	11
Depth	3.50 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	99		
28	95		
20	92		
14	84		
10	81		
6.3	76		
5	72		
3.35	69		
2	65		
1.18	61		
0.6	57		
0.425	56		
0.3	54		
0.212	51		
0.15	47		
0.063	39		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	35.0
Sand	26.0
Silt & Clay	39.0

Grading Analysis	
D100	50.00
D60	0.93
D10	
Uniformity Coefficient	



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

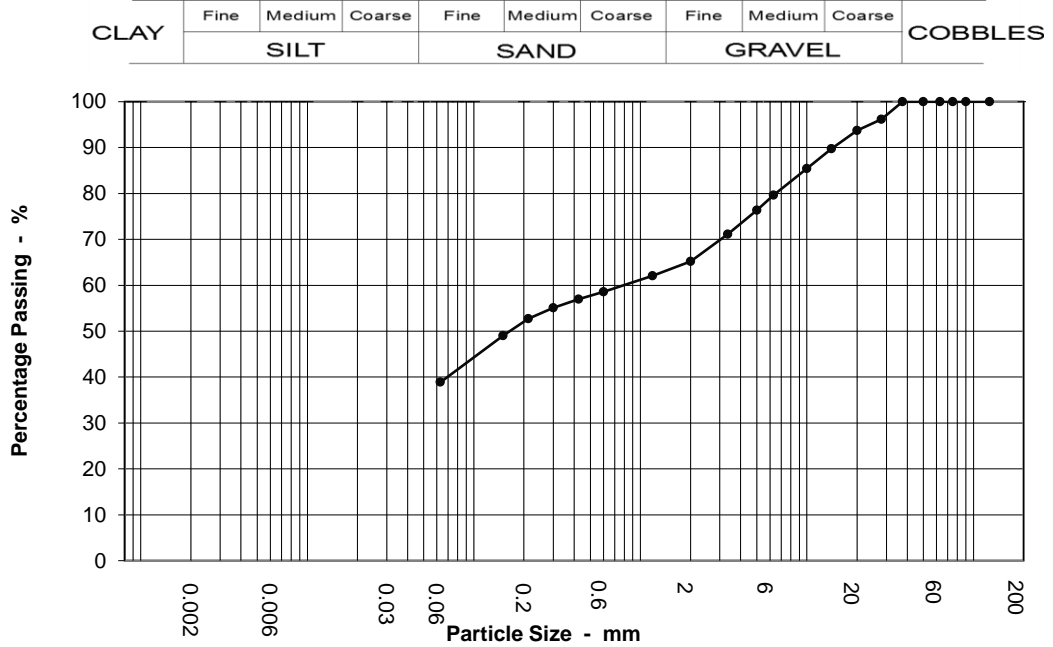
Job Ref	P21076
Borehole / Pit No	TP05
Sample No	11
Depth	3.50 m
Sample type	B

Location

The Creamfields (Former CMP Dairy Site) Ground Investigation

Soil Description

Slightly sandy gravelly CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	96		
20	94		
14	90		
10	85		
6.3	80		
5	76		
3.35	71		
2	65		
1.18	62		
0.6	59		
0.425	57		
0.3	55		
0.212	53		
0.15	49		
0.063	39		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	35.0
Sand	26.0
Silt & Clay	39.0

Grading Analysis	
D100	37.50
D60	0.79
D10	
Uniformity Coefficient	



Final Report

Report No.: 21-24675-1
Initial Date of Issue: 22-Jul-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P21076 Cream Fields
Quotation No.: Q17-09116 **Date Received:** 19-Jul-2021
Order No.: 13694 **Date Instructed:** 19-Jul-2021
No. of Samples: 3
Turnaround (Wkdays): 5 **Results Due:** 23-Jul-2021
Date Approved: 22-Jul-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: P21076 Cream Fields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-24675	21-24675	21-24675	
Quotation No.: Q17-09116		Chemtest Sample ID.:		1242725	1242726	1242727	
		Sample Location:		BH08B	BH07C	TP01	
		Sample Type:		SOIL	SOIL	SOIL	
		Top Depth (m):		5.0	5.0	2.5	
		Date Sampled:		12-Jul-2021	12-Jul-2021	12-Jul-2021	
Determinand	Accred.	SOP	Units	LOD			
Moisture	N	2030	%	0.020	13	12	12
pH (2.5:1)	N	2010		4.0	8.2	8.5	7.9
Magnesium (Water Soluble)	N	2120	g/l	0.010	< 0.010	< 0.010	< 0.010
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	0.062	< 0.010	0.089
Total Sulphur	U	2175	%	0.010	0.032	0.017	0.024
Chloride (Water Soluble)	U	2220	g/l	0.010	0.010	< 0.010	< 0.010
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010	< 0.010	< 0.010
Sulphate (Acid Soluble)	U	2430	%	0.010	0.030	< 0.010	0.017

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-23679-1
Initial Date of Issue: 14-Jul-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P2107b Creamfields
Quotation No.: Q17-09116 **Date Received:** 09-Jul-2021
Order No.: 13694 **Date Instructed:** 09-Jul-2021
No. of Samples: 5
Turnaround (Wkdays): 5 **Results Due:** 15-Jul-2021
Date Approved: 14-Jul-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: P2107b Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-23679	21-23679	21-23679	21-23679	21-23679	
Quotation No.: Q17-09116		Chemtest Sample ID.:		1237782	1237783	1237784	1237785	1237786	
		Sample Location:		TP09	BH01	TP05	BH9A	BH06	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		4.5	3.2	3.5	7.0	3.2	
		Date Sampled:		07-Jul-2021	07-Jul-2021	07-Jul-2021	07-Jul-2021	07-Jul-2021	
Determinand	Accred.	SOP	Units	LOD					
Moisture	N	2030	%	0.020	13	11	17	12	17
pH (2.5:1)	N	2010		4.0	8.5	8.5	8.4	8.6	8.2
Magnesium (Water Soluble)	N	2120	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	0.013	< 0.010	< 0.010	< 0.010	0.031
Total Sulphur	U	2175	%	0.010	0.047	< 0.010	0.020	0.022	0.038
Chloride (Water Soluble)	U	2220	g/l	0.010	0.41	0.024	< 0.010	< 0.010	< 0.010
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Sulphate (Acid Soluble)	U	2430	%	0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.023

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.

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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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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

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For all other tests the samples were dried at < 37°C prior to analysis

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Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-19246-1
Initial Date of Issue: 15-Jun-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P21076 Creamfields
Quotation No.: Q20-22417 **Date Received:** 08-Jun-2021
Order No.: 13694 **Date Instructed:** 08-Jun-2021
No. of Samples: 4
Turnaround (Wkdays): 5 **Results Due:** 14-Jun-2021
Date Approved: 15-Jun-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-19246	21-19246	21-19246	21-19246
Quotation No.: Q20-22417		Chemtest Sample ID.:		1216394	1216395	1216396	1216397
	Client Sample ID.:	ES4	ES5	ES5	ES6		
	Sample Location:	BH07	BH07	BH08	BH08		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	3.5	5.5	4.0	5.0		
	Bottom Depth (m):	4.0	6.0	4.5	5.5		
	Date Sampled:	31-May-2021	31-May-2021	31-May-2021	31-May-2021		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	22	14	20
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0
pH	M	2010		4.0	8.3	8.7	8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40
Arsenic	M	2450	mg/kg	1.0	6.3	3.6	8.4
Barium	M	2450	mg/kg	10	70	18	66
Cadmium	M	2450	mg/kg	0.10	0.34	0.19	0.31
Chromium	M	2450	mg/kg	1.0	28	12	21
Mercury Low Level	M	2450	mg/kg	0.05	0.11	< 0.05	0.14
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	24	9.3	18
Nickel	M	2450	mg/kg	0.50	32	18	25
Lead	M	2450	mg/kg	0.50	39	10	36
Selenium	M	2450	mg/kg	0.20	0.34	< 0.20	0.33
Zinc	M	2450	mg/kg	0.50	66	37	62
Chromium (Trivalent)	N	2490	mg/kg	1.0	28	12	21
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
LOI	M	2610	%	0.10	3.7	1.5	4.9
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	34	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	14	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	1.5	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	2.1	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	16	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	34	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	7.7	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	3.2	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	12	< 1.0	< 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-19246	21-19246	21-19246	21-19246
Quotation No.: Q20-22417		Chemtest Sample ID.:		1216394	1216395	1216396	1216397
		Client Sample ID.:		ES4	ES5	ES5	ES6
		Sample Location:		BH07	BH07	BH08	BH08
		Sample Type:		SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		3.5	5.5	4.0	5.0
		Bottom Depth (m):		4.0	6.0	4.5	5.5
		Date Sampled:		31-May-2021	31-May-2021	31-May-2021	31-May-2021
		Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	8.2	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	29	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	60	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	94	< 10	< 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0			< 1.0
Chloromethane	M	2760	µg/kg	1.0			< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0			< 1.0
Bromomethane	M	2760	µg/kg	20			< 20
Chloroethane	U	2760	µg/kg	2.0			< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0			< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0			< 1.0
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0			< 1.0
1,1-Dichloroethane	M	2760	µg/kg	1.0			< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0			< 1.0
Bromochloromethane	U	2760	µg/kg	5.0			< 5.0
Trichloromethane	M	2760	µg/kg	1.0			< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0			< 1.0
Tetrachloromethane	M	2760	µg/kg	1.0			< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0			< 1.0
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0			< 2.0
Trichloroethene	N	2760	µg/kg	1.0			< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0			< 1.0
Dibromomethane	M	2760	µg/kg	1.0			< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0			< 5.0
cis-1,3-Dichloropropene	N	2760	µg/kg	10			< 10
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10			< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10			< 10
Tetrachloroethene	M	2760	µg/kg	1.0			< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0			< 2.0
Dibromochloromethane	U	2760	µg/kg	10			< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0			< 5.0
Chlorobenzene	M	2760	µg/kg	1.0			< 1.0
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0			< 2.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-19246	21-19246	21-19246	21-19246
Quotation No.: Q20-22417		Chemtest Sample ID.:		1216394	1216395	1216396	1216397
	Client Sample ID.:	ES4	ES5	ES5	ES6		
	Sample Location:	BH07	BH07	BH08	BH08		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	3.5	5.5	4.0	5.0		
	Bottom Depth (m):	4.0	6.0	4.5	5.5		
	Date Sampled:	31-May-2021	31-May-2021	31-May-2021	31-May-2021		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0			< 1.0
Tribromomethane	U	2760	µg/kg	1.0			< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0			< 1.0
Bromobenzene	M	2760	µg/kg	1.0			< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50			< 50
N-Propylbenzene	U	2760	µg/kg	1.0			< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0			< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0			< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0			< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0			< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0			< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0			< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0			< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0			< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0			< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0			< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0			< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50			< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0			< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0			< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0			< 2.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50			< 0.50
Phenol	M	2790	mg/kg	0.50			< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50			< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50			< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50			< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50			< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50			< 0.50
2-Methylphenol	M	2790	mg/kg	0.50			< 0.50

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-19246	21-19246	21-19246	21-19246
Quotation No.: Q20-22417		Chemtest Sample ID.:		1216394	1216395	1216396	1216397
	Client Sample ID.:	ES4	ES5	ES5	ES6		
	Sample Location:	BH07	BH07	BH08	BH08		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	3.5	5.5	4.0	5.0		
	Bottom Depth (m):	4.0	6.0	4.5	5.5		
	Date Sampled:	31-May-2021	31-May-2021	31-May-2021	31-May-2021		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50			< 0.50
Hexachloroethane	N	2790	mg/kg	0.50			< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50			< 0.50
4-Methylphenol	M	2790	mg/kg	0.50			< 0.50
Nitrobenzene	M	2790	mg/kg	0.50			< 0.50
Isophorone	M	2790	mg/kg	0.50			< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50			< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50			< 0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50			< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50			< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50			< 0.50
Naphthalene	M	2790	mg/kg	0.50			< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50			< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50			< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50			< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50			< 0.50
4-Nitrophenol	N	2790	mg/kg	0.50			< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50			< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50			< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50			< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50			< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50			< 0.50
Acenaphthylene	M	2790	mg/kg	0.50			< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50			< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50			< 0.50
Acenaphthene	M	2790	mg/kg	0.50			< 0.50
3-Nitroaniline	N	2790	mg/kg	0.50			< 0.50
Dibenzofuran	M	2790	mg/kg	0.50			< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50			< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50			< 0.50
Fluorene	M	2790	mg/kg	0.50			< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50			< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50			< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50			< 0.50
Azobenzene	M	2790	mg/kg	0.50			< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50			< 0.50
Hexachlorobenzene	M	2790	mg/kg	0.50			< 0.50

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-19246	21-19246	21-19246	21-19246
Quotation No.: Q20-22417		Chemtest Sample ID.:		1216394	1216395	1216396	1216397
	Client Sample ID.:	ES4	ES5	ES5	ES6		
	Sample Location:	BH07	BH07	BH08	BH08		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	3.5	5.5	4.0	5.0		
	Bottom Depth (m):	4.0	6.0	4.5	5.5		
	Date Sampled:	31-May-2021	31-May-2021	31-May-2021	31-May-2021		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
Pentachlorophenol	N	2790	mg/kg	0.50			< 0.50
Phenanthrene	M	2790	mg/kg	0.50			< 0.50
Anthracene	M	2790	mg/kg	0.50			< 0.50
Carbazole	M	2790	mg/kg	0.50			< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50			< 0.50
Fluoranthene	M	2790	mg/kg	0.50			< 0.50
Pyrene	M	2790	mg/kg	0.50			< 0.50
Butylbenzyl Phthalate	M	2790	mg/kg	0.50			< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50			< 0.50
Chrysene	M	2790	mg/kg	0.50			< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50			< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50			< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50			< 0.50
Benzo[k]fluoranthene	M	2790	mg/kg	0.50			< 0.50
Benzo[a]pyrene	M	2790	mg/kg	0.50			< 0.50
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50			< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50			< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50			< 0.50
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-19246	21-19246	21-19246	21-19246
Quotation No.: Q20-22417		Chemtest Sample ID.:		1216394	1216395	1216396	1216397
	Client Sample ID.:	ES4	ES5	ES5	ES6		
	Sample Location:	BH07	BH07	BH08	BH08		
	Sample Type:	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	3.5	5.5	4.0	5.0		
	Bottom Depth (m):	4.0	6.0	4.5	5.5		
	Date Sampled:	31-May-2021	31-May-2021	31-May-2021	31-May-2021		
	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD			
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A			None Detected
VOC TIC	N	2760	µg/kg	N/A			None Detected

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-19246				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1216394							
Sample Ref:							
Sample ID: ES4							
Sample Location: BH07							
Top Depth(m): 3.5							
Bottom Depth(m): 4.0				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 31-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0023	0.023	0.5	2	25
Barium	1455	U	0.021	0.21	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0032	0.032	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0026	0.026	0.5	10	30
Nickel	1455	U	0.0021	0.021	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0008	0.0078	0.06	0.7	5
Selenium	1455	U	0.0008	0.0081	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.7	17	800	15000	25000
Fluoride	1220	U	0.071	< 1.0	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	120	1200	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	19	190	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	22

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-19246				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1216395							
Sample Ref:							
Sample ID: ES5							
Sample Location: BH07							
Top Depth(m): 5.5							
Bottom Depth(m): 6.0							
Sampling Date: 31-May-2021				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0006	0.0055	0.5	2	25
Barium	1455	U	0.010	0.10	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0014	0.014	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0020	0.021	0.5	10	30
Nickel	1455	U	0.0018	0.018	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0006	0.0061	0.06	0.7	5
Selenium	1455	U	0.0007	0.0067	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.0	10	800	15000	25000
Fluoride	1220	U	0.073	< 1.0	10	150	500
Sulphate	1220	U	1.7	17	1000	20000	50000
Total Dissolved Solids	1020	N	65	650	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	15	150	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-19246 Chemtest Sample ID: 1216396 Sample Ref: Sample ID: ES5 Sample Location: BH08 Top Depth(m): 4.0 Bottom Depth(m): 4.5 Sampling Date: 31-May-2021				Landfill Waste Acceptance Criteria Limits			
				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0022	0.023	0.5	2	25
Barium	1455	U	0.027	0.27	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0039	0.039	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0040	0.040	0.5	10	30
Nickel	1455	U	0.0009	0.0086	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0014	0.014	0.06	0.7	5
Selenium	1455	U	0.0008	0.0083	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.077	< 1.0	10	150	500
Sulphate	1220	U	12	120	1000	20000	50000
Total Dissolved Solids	1020	N	140	1400	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	14	140	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	20

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-19246				Landfill Waste Acceptance Criteria			
Chemtest Sample ID: 1216397				Limits			
Sample Ref:				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID: ES6							
Sample Location: BH08							
Top Depth(m): 5.0							
Bottom Depth(m): 5.5							
Sampling Date: 31-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon				3	5	6	
Loss on Ignition				--	--	10	
Total BTEX				6	--	--	
Total PCBs (7 congeners)				1	--	--	
TPH Total WAC (Mineral Oil)				500	--	--	
Total (of 17) PAHs				100	--	--	
pH				--	>6	--	
Acid Neutralisation Capacity				--	To evaluate	To evaluate	
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0011	0.011	0.5	2	25
Barium	1455	U	0.015	0.15	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0014	0.014	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0034	0.034	0.5	10	30
Nickel	1455	U	0.0015	0.015	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0014	0.014	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.11	1.1	10	150	500
Sulphate	1220	U	15	150	1000	20000	50000
Total Dissolved Solids	1020	N	98	970	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	13	130	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity 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.
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).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
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.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2780	Glycols, Aldehydes, Amines, Ethers and Ketones	Glycols, Aldehydes, Amines, Ethers and Ketones	GCMS detection
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil 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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7 Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	Compliance Test for Leaching of Granular Waste Material and Sludge

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Amended Report

Report No.:	21-18633-2	Date of Re-Issue:	24-Jun-2021
Initial Date of Issue:	17-Jun-2021		
Client	Priority Geotechnical Ltd		
Client Address:	Unit 12 Owenacurra Business Park Midleton County Cork Ireland		
Contact(s):	Colette Kelly		
Project	P21076 Creamfields		
Quotation No.:		Date Received:	03-Jun-2021
Order No.:	13694	Date Instructed:	03-Jun-2021
No. of Samples:	16		
Turnaround (Wkdays):	5	Results Due:	09-Jun-2021
Date Approved:	17-Jun-2021	Subcon Results Due:	24-Jun-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd					Chemtest Job No.: 21-18633																	
Quotation No.:					Chemtest Sample ID.:																	
Client Sample ID.:					1213287	1213288	1213289	1213290	1213291	1213292	1213293	1213294	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	
Sample Location:					ES1	ES2	ES3	ES4	ES1	ES2	ES3	ES4	TPBH04	TPBH04	TPBH04	TPBH04	TP06A	TP06A	TP06A	TP06A	TP06A	TP06A
Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):					0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	0.5	1.5
Date Sampled:					25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021
Asbestos Lab:					DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD																		
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Asbestos	U	2192	%	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	6.1	6.3	6.8	6.7	6.5	11	11	20										
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Dioxin (Subcon)	S		ng/kg	N/A																		See Attached
Dioxins, Furans & Dioxin like PCBs(Sub)	S		mg/kg	N/A																		See Attached
Furans (Subcon)	S		ng/kg	N/A																		See Attached
pH	M	2010		4.0	8.9	8.8	8.8	8.9	9.8	8.5	8.4	7.7										
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	0.46	< 0.40	< 0.40	0.60	< 0.40	< 0.40										
Arsenic	M	2450	mg/kg	1.0	15	13	12	15	30	36	12	17										
Barium	M	2450	mg/kg	10	76	55	42	56	19	310	80	110										
Cadmium	M	2450	mg/kg	0.10	0.25	0.20	0.17	0.25	0.45	0.70	0.15	0.34										
Chromium	M	2450	mg/kg	1.0	39	40	30	33	6.0	33	31	50										
Mercury Low Level	M	2450	mg/kg	0.05	0.06	0.06	< 0.05	0.05	< 0.05	0.26	0.08	0.30										
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0										
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4	< 2.0	< 2.0										
Copper	M	2450	mg/kg	0.50	28	25	22	29	9.0	65	12	23										
Nickel	M	2450	mg/kg	0.50	61	59	48	51	11	36	48	84										
Lead	M	2450	mg/kg	0.50	33	25	18	23	15	93	24	84										
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.43										
Zinc	M	2450	mg/kg	0.50	110	120	91	95	42	130	100	210										
Chromium (Trivalent)	N	2490	mg/kg	1.0	39	40	30	33	6.0	33	31	50										
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50										
LOI	M	2610	%	0.10	1.5	1.5	1.6	1.7	1.6	6.3	4.2	5.0										
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10	14	< 10	< 10										
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8	< 1.0	< 1.0										
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.9	< 1.0	< 1.0										
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	14	< 5.0	< 5.0										
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213287	1213288	1213289	1213290	1213291	1213292	1213293	1213294	
		Client Sample ID.:		ES1	ES2	ES3	ES4	ES1	ES2	ES3	ES4	
		Sample Location:		TPBH04	TPBH04	TPBH04	TPBH04	TP06A	TP06A	TP06A	TP06A	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	
		Date Sampled:		25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	8.7	< 1.0	< 1.0	< 1.0	3.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	64	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	21	< 5.0	< 5.0	< 5.0	67	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	21	< 10	< 10	< 10	81	< 10	< 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0							< 1.0	
Chloromethane	M	2760	µg/kg	1.0							< 1.0	
Vinyl Chloride	M	2760	µg/kg	1.0							< 1.0	
Bromomethane	M	2760	µg/kg	20							< 20	
Chloroethane	U	2760	µg/kg	2.0							< 2.0	
Trichlorofluoromethane	M	2760	µg/kg	1.0							< 1.0	
1,1-Dichloroethene	M	2760	µg/kg	1.0							< 1.0	
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0							< 1.0	
1,1-Dichloroethane	M	2760	µg/kg	1.0							< 1.0	
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0							< 1.0	
Bromochloromethane	U	2760	µg/kg	5.0							< 5.0	
Trichloromethane	M	2760	µg/kg	1.0							< 1.0	
1,1,1-Trichloroethane	M	2760	µg/kg	1.0							< 1.0	
Tetrachloromethane	M	2760	µg/kg	1.0							< 1.0	
1,1-Dichloropropene	U	2760	µg/kg	1.0							< 1.0	
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0							< 2.0	
Trichloroethene	N	2760	µg/kg	1.0							< 1.0	
1,2-Dichloropropane	M	2760	µg/kg	1.0							< 1.0	
Dibromomethane	M	2760	µg/kg	1.0							< 1.0	
Bromodichloromethane	M	2760	µg/kg	5.0							< 5.0	
cis-1,3-Dichloropropene	N	2760	µg/kg	10							< 10	
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10							< 10	
1,1,2-Trichloroethane	M	2760	µg/kg	10							< 10	
Tetrachloroethene	M	2760	µg/kg	1.0							< 1.0	
1,3-Dichloropropane	U	2760	µg/kg	2.0							< 2.0	
Dibromochloromethane	U	2760	µg/kg	10							< 10	
1,2-Dibromoethane	M	2760	µg/kg	5.0							< 5.0	

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213287	1213288	1213289	1213290	1213291	1213292	1213293	1213294	
		Client Sample ID.:		ES1	ES2	ES3	ES4	ES1	ES2	ES3	ES4	
		Sample Location:		TPBH04	TPBH04	TPBH04	TPBH04	TP06A	TP06A	TP06A	TP06A	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	
		Date Sampled:		25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD								
Chlorobenzene	M	2760	µg/kg	1.0								< 1.0
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0								< 2.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0								< 1.0
Tribromomethane	U	2760	µg/kg	1.0								< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0								< 1.0
Bromobenzene	M	2760	µg/kg	1.0								< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50								< 50
N-Propylbenzene	U	2760	µg/kg	1.0								< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0								< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0								< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0								< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0								< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0								< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0								< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0								< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0								< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0								< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0								< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0								< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50								< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0								< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0								< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0								< 2.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50								< 0.50
Phenol	M	2790	mg/kg	0.50								< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50								< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50								< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50								< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50								< 0.50

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213287	1213288	1213289	1213290	1213291	1213292	1213293	1213294
		Client Sample ID.:		ES1	ES2	ES3	ES4	ES1	ES2	ES3	ES4
		Sample Location:		TPBH04	TPBH04	TPBH04	TPBH04	TP06A	TP06A	TP06A	TP06A
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5
		Date Sampled:		25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD							
1,2-Dichlorobenzene	M	2790	mg/kg	0.50						< 0.50	
2-Methylphenol	M	2790	mg/kg	0.50						< 0.50	
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50						< 0.50	
Hexachloroethane	N	2790	mg/kg	0.50						< 0.50	
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50						< 0.50	
4-Methylphenol	M	2790	mg/kg	0.50						< 0.50	
Nitrobenzene	M	2790	mg/kg	0.50						< 0.50	
Isophorone	M	2790	mg/kg	0.50						< 0.50	
2-Nitrophenol	N	2790	mg/kg	0.50						< 0.50	
2,4-Dimethylphenol	N	2790	mg/kg	0.50						< 0.50	
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50						< 0.50	
2,4-Dichlorophenol	M	2790	mg/kg	0.50						< 0.50	
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50						< 0.50	
Naphthalene	M	2790	mg/kg	0.50						< 0.50	
4-Chloroaniline	N	2790	mg/kg	0.50						< 0.50	
Hexachlorobutadiene	M	2790	mg/kg	0.50						< 0.50	
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50						< 0.50	
2-Methylnaphthalene	M	2790	mg/kg	0.50						< 0.50	
4-Nitrophenol	N	2790	mg/kg	0.50						< 0.50	
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50						< 0.50	
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50						< 0.50	
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50						< 0.50	
2-Chloronaphthalene	M	2790	mg/kg	0.50						< 0.50	
2-Nitroaniline	M	2790	mg/kg	0.50						< 0.50	
Acenaphthylene	M	2790	mg/kg	0.50						< 0.50	
Dimethylphthalate	M	2790	mg/kg	0.50						< 0.50	
2,6-Dinitrotoluene	M	2790	mg/kg	0.50						< 0.50	
Acenaphthene	M	2790	mg/kg	0.50						< 0.50	
3-Nitroaniline	N	2790	mg/kg	0.50						< 0.50	
Dibenzofuran	M	2790	mg/kg	0.50						< 0.50	
4-Chlorophenylphenylether	M	2790	mg/kg	0.50						< 0.50	
2,4-Dinitrotoluene	M	2790	mg/kg	0.50						< 0.50	
Fluorene	M	2790	mg/kg	0.50						< 0.50	
Diethyl Phthalate	M	2790	mg/kg	0.50						< 0.50	
4-Nitroaniline	M	2790	mg/kg	0.50						< 0.50	
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50						< 0.50	
Azobenzene	M	2790	mg/kg	0.50						< 0.50	
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50						< 0.50	

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213287	1213288	1213289	1213290	1213291	1213292	1213293	1213294	1213294
		Client Sample ID.:		ES1	ES2	ES3	ES4	ES1	ES2	ES3	ES4	ES4
		Sample Location:		TPBH04	TPBH04	TPBH04	TPBH04	TP06A	TP06A	TP06A	TP06A	TP06A
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	3.5
		Date Sampled:		25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Hexachlorobenzene	M	2790	mg/kg	0.50								< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50								< 0.50
Phenanthrene	M	2790	mg/kg	0.50								< 0.50
Anthracene	M	2790	mg/kg	0.50								< 0.50
Carbazole	M	2790	mg/kg	0.50								< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50								< 0.50
Fluoranthene	M	2790	mg/kg	0.50								< 0.50
Pyrene	M	2790	mg/kg	0.50								< 0.50
Butylbenzyl Phthalate	M	2790	mg/kg	0.50								< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50								< 0.50
Chrysene	M	2790	mg/kg	0.50								< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50								< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50								< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50								< 0.50
Benzo[k]fluoranthene	M	2790	mg/kg	0.50								< 0.50
Benzo[a]pyrene	M	2790	mg/kg	0.50								< 0.50
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50								< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50								< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50								< 0.50
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.7	0.44	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.46	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.1	0.31	0.21
Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.7	0.22	0.20
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.8	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.57	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.0	< 0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	17	< 2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213287	1213288	1213289	1213290	1213291	1213292	1213293	1213294	1213294
		Client Sample ID.:		ES1	ES2	ES3	ES4	ES1	ES2	ES3	ES4	ES4
		Sample Location:		TPBH04	TPBH04	TPBH04	TPBH04	TP06A	TP06A	TP06A	TP06A	TP06A
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	2.5	3.5	0.5	1.5	2.5	3.5	3.5
		Date Sampled:		25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021	25-May-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A							None Detected	
VOC TIC	N	2760	µg/kg	N/A							None Detected	

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213295	1213296	1213298	1213299	1213300	1213301	1213302	1213303	1213303
		Client Sample ID.:		ES1	ES2	ES1	ES2	ES3	ES1	ES2	ES3	ES3
		Sample Location:		TPBH07	TPBH07	TPBH08	TPBH08	TPBH08	TPBH09	TPBH09	TPBH09	TPBH09
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	0.5	1.5	2.5	0.5	1.5	2.5	2.5
		Date Sampled:		31-May-2021	31-May-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	Fibres/Clumps	-	Fibres/Clumps
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Chrysotile	No Asbestos Detected	Chrysotile
Asbestos by Gravimetry	U	2192	%	0.001	-	-	-	-	-	0.008	-	0.002
Total Asbestos	U	2192	%	0.001	-	-	-	-	-	0.008	-	0.002
Moisture	N	2030	%	0.020	10	8.0	11	13	13	9.4	12	17
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dioxin (Subcon)	S		ng/kg	N/A								
Dioxins, Furans & Dioxin like PCBs(Sub)	S		mg/kg	N/A								
Furans (Subcon)	S		ng/kg	N/A								
pH	M	2010		4.0	8.3	8.4	8.1	8.0	7.8	9.8	10.6	9.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	0.51	0.50
Arsenic	M	2450	mg/kg	1.0	12	6.1	25	14	16	23	19	17
Barium	M	2450	mg/kg	10	53	44	78	51	63	73	71	110
Cadmium	M	2450	mg/kg	0.10	0.32	0.27	0.45	0.25	0.37	0.43	0.46	0.33
Chromium	M	2450	mg/kg	1.0	26	22	37	22	32	79	34	31
Mercury Low Level	M	2450	mg/kg	0.05	0.09	0.19	0.45	0.37	0.25	0.18	0.13	0.18
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	2.8	< 2.0	< 2.0	< 2.0	3.6	< 2.0	2.9
Copper	M	2450	mg/kg	0.50	27	24	51	36	33	32	34	39
Nickel	M	2450	mg/kg	0.50	41	42	55	32	54	65	40	43
Lead	M	2450	mg/kg	0.50	36	21	86	65	52	40	38	140
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.46	0.36	0.32	< 0.20	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	90	96	140	86	120	140	120	180
Chromium (Trivalent)	N	2490	mg/kg	1.0	26	22	37	22	32	79	34	31
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
LOI	M	2610	%	0.10	2.1	2.4	3.0	4.0	2.7	3.1	3.0	2.3
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	26	49	43	27	< 10	< 10	< 10	90
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	1.9	2.2	1.8	1.3	< 1.0	< 1.0	< 1.0	4.5
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	2.9	4.2	5.8	2.7	< 1.0	< 1.0	< 1.0	15
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	6.7	7.4	6.1	5.5	< 1.0	< 1.0	< 1.0	20
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	15	34	30	18	< 1.0	< 1.0	< 1.0	50
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	26	49	43	27	< 5.0	< 5.0	< 5.0	90
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213295	1213296	1213298	1213299	1213300	1213301	1213302	1213303	1213303
		Client Sample ID.:		ES1	ES2	ES1	ES2	ES3	ES1	ES2	ES3	ES3
		Sample Location:		TPBH07	TPBH07	TPBH08	TPBH08	TPBH08	TPBH09	TPBH09	TPBH09	TPBH09
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	0.5	1.5	2.5	0.5	1.5	2.5	2.5
		Date Sampled:		31-May-2021	31-May-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.5
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	31	29	35	52	< 1.0	< 1.0	< 1.0	53
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	31	29	35	52	< 5.0	< 5.0	< 5.0	55
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	57	78	78	79	< 10	< 10	< 10	150
Dichlorodifluoromethane	U	2760	µg/kg	1.0					< 1.0			
Chloromethane	M	2760	µg/kg	1.0					< 1.0			
Vinyl Chloride	M	2760	µg/kg	1.0					< 1.0			
Bromomethane	M	2760	µg/kg	20					< 20			
Chloroethane	U	2760	µg/kg	2.0					< 2.0			
Trichlorofluoromethane	M	2760	µg/kg	1.0					< 1.0			
1,1-Dichloroethene	M	2760	µg/kg	1.0					< 1.0			
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0					< 1.0			
1,1-Dichloroethane	M	2760	µg/kg	1.0					< 1.0			
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0					< 1.0			
Bromochloromethane	U	2760	µg/kg	5.0					< 5.0			
Trichloromethane	M	2760	µg/kg	1.0					< 1.0			
1,1,1-Trichloroethane	M	2760	µg/kg	1.0					< 1.0			
Tetrachloromethane	M	2760	µg/kg	1.0					< 1.0			
1,1-Dichloropropene	U	2760	µg/kg	1.0					< 1.0			
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0					< 2.0			
Trichloroethene	N	2760	µg/kg	1.0					< 1.0			
1,2-Dichloropropane	M	2760	µg/kg	1.0					< 1.0			
Dibromomethane	M	2760	µg/kg	1.0					< 1.0			
Bromodichloromethane	M	2760	µg/kg	5.0					< 5.0			
cis-1,3-Dichloropropene	N	2760	µg/kg	10					< 10			
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10					< 10			
1,1,2-Trichloroethane	M	2760	µg/kg	10					< 10			
Tetrachloroethene	M	2760	µg/kg	1.0					< 1.0			
1,3-Dichloropropane	U	2760	µg/kg	2.0					< 2.0			
Dibromochloromethane	U	2760	µg/kg	10					< 10			
1,2-Dibromoethane	M	2760	µg/kg	5.0					< 5.0			

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213295	1213296	1213298	1213299	1213300	1213301	1213302	1213303	
		Client Sample ID.:		ES1	ES2	ES1	ES2	ES3	ES1	ES2	ES3	
		Sample Location:		TPBH07	TPBH07	TPBH08	TPBH08	TPBH08	TPBH09	TPBH09	TPBH09	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.5	1.5	0.5	1.5	2.5	0.5	1.5	2.5	
		Date Sampled:		31-May-2021	31-May-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD								
Chlorobenzene	M	2760	µg/kg	1.0					< 1.0			
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0					< 2.0			
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0					< 1.0			
Tribromomethane	U	2760	µg/kg	1.0					< 1.0			
Isopropylbenzene	M	2760	µg/kg	1.0					< 1.0			
Bromobenzene	M	2760	µg/kg	1.0					< 1.0			
1,2,3-Trichloropropane	N	2760	µg/kg	50					< 50			
N-Propylbenzene	U	2760	µg/kg	1.0					< 1.0			
2-Chlorotoluene	M	2760	µg/kg	1.0					< 1.0			
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0					< 1.0			
4-Chlorotoluene	U	2760	µg/kg	1.0					< 1.0			
Tert-Butylbenzene	U	2760	µg/kg	1.0					< 1.0			
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0					< 1.0			
Sec-Butylbenzene	U	2760	µg/kg	1.0					< 1.0			
1,3-Dichlorobenzene	M	2760	µg/kg	1.0					< 1.0			
4-Isopropyltoluene	U	2760	µg/kg	1.0					< 1.0			
1,4-Dichlorobenzene	M	2760	µg/kg	1.0					< 1.0			
N-Butylbenzene	U	2760	µg/kg	1.0					< 1.0			
1,2-Dichlorobenzene	M	2760	µg/kg	1.0					< 1.0			
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50					< 50			
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0					< 1.0			
Hexachlorobutadiene	U	2760	µg/kg	1.0					< 1.0			
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0					< 2.0			
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50					< 0.50			
Phenol	M	2790	mg/kg	0.50					< 0.50			
2-Chlorophenol	M	2790	mg/kg	0.50					< 0.50			
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50					< 0.50			
1,3-Dichlorobenzene	M	2790	mg/kg	0.50					< 0.50			
1,4-Dichlorobenzene	N	2790	mg/kg	0.50					< 0.50			

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213295	1213296	1213298	1213299	1213300	1213301	1213302	1213303
		Client Sample ID.:		ES1	ES2	ES1	ES2	ES3	ES1	ES2	ES3
		Sample Location:		TPBH07	TPBH07	TPBH08	TPBH08	TPBH08	TPBH09	TPBH09	TPBH09
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	0.5	1.5	2.5	0.5	1.5	2.5
		Date Sampled:		31-May-2021	31-May-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD							
1,2-Dichlorobenzene	M	2790	mg/kg	0.50				< 0.50			
2-Methylphenol	M	2790	mg/kg	0.50				< 0.50			
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50				< 0.50			
Hexachloroethane	N	2790	mg/kg	0.50				< 0.50			
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50				< 0.50			
4-Methylphenol	M	2790	mg/kg	0.50				< 0.50			
Nitrobenzene	M	2790	mg/kg	0.50				< 0.50			
Isophorone	M	2790	mg/kg	0.50				< 0.50			
2-Nitrophenol	N	2790	mg/kg	0.50				< 0.50			
2,4-Dimethylphenol	N	2790	mg/kg	0.50				< 0.50			
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50				< 0.50			
2,4-Dichlorophenol	M	2790	mg/kg	0.50				< 0.50			
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50				< 0.50			
Naphthalene	M	2790	mg/kg	0.50				< 0.50			
4-Chloroaniline	N	2790	mg/kg	0.50				< 0.50			
Hexachlorobutadiene	M	2790	mg/kg	0.50				< 0.50			
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50				< 0.50			
2-Methylnaphthalene	M	2790	mg/kg	0.50				< 0.50			
4-Nitrophenol	N	2790	mg/kg	0.50				< 0.50			
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50				< 0.50			
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50				< 0.50			
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50				< 0.50			
2-Chloronaphthalene	M	2790	mg/kg	0.50				< 0.50			
2-Nitroaniline	M	2790	mg/kg	0.50				< 0.50			
Acenaphthylene	M	2790	mg/kg	0.50				< 0.50			
Dimethylphthalate	M	2790	mg/kg	0.50				< 0.50			
2,6-Dinitrotoluene	M	2790	mg/kg	0.50				< 0.50			
Acenaphthene	M	2790	mg/kg	0.50				< 0.50			
3-Nitroaniline	N	2790	mg/kg	0.50				< 0.50			
Dibenzofuran	M	2790	mg/kg	0.50				< 0.50			
4-Chlorophenylphenylether	M	2790	mg/kg	0.50				< 0.50			
2,4-Dinitrotoluene	M	2790	mg/kg	0.50				< 0.50			
Fluorene	M	2790	mg/kg	0.50				< 0.50			
Diethyl Phthalate	M	2790	mg/kg	0.50				< 0.50			
4-Nitroaniline	M	2790	mg/kg	0.50				< 0.50			
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50				< 0.50			
Azobenzene	M	2790	mg/kg	0.50				< 0.50			
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50				< 0.50			

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213295	1213296	1213298	1213299	1213300	1213301	1213302	1213303	1213303
		Client Sample ID.:		ES1	ES2	ES1	ES2	ES3	ES1	ES2	ES3	
		Sample Location:		TPBH07	TPBH07	TPBH08	TPBH08	TPBH08	TPBH09	TPBH09	TPBH09	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.5	1.5	0.5	1.5	2.5	0.5	1.5	2.5	
		Date Sampled:		31-May-2021	31-May-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD								
Hexachlorobenzene	M	2790	mg/kg	0.50						< 0.50		
Pentachlorophenol	N	2790	mg/kg	0.50						< 0.50		
Phenanthrene	M	2790	mg/kg	0.50						< 0.50		
Anthracene	M	2790	mg/kg	0.50						< 0.50		
Carbazole	M	2790	mg/kg	0.50						< 0.50		
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50						< 0.50		
Fluoranthene	M	2790	mg/kg	0.50						< 0.50		
Pyrene	M	2790	mg/kg	0.50						< 0.50		
Butylbenzyl Phthalate	M	2790	mg/kg	0.50						< 0.50		
Benzo[a]anthracene	M	2790	mg/kg	0.50						< 0.50		
Chrysene	M	2790	mg/kg	0.50						< 0.50		
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50						< 0.50		
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50						< 0.50		
Benzo[b]fluoranthene	M	2790	mg/kg	0.50						< 0.50		
Benzo[k]fluoranthene	M	2790	mg/kg	0.50						< 0.50		
Benzo[a]pyrene	M	2790	mg/kg	0.50						< 0.50		
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50						< 0.50		
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50						< 0.50		
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50						< 0.50		
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	0.26	< 0.10	< 0.10	< 0.10	0.17
Pyrene	M	2800	mg/kg	0.10	0.12	< 0.10	< 0.10	0.17	< 0.10	< 0.10	< 0.10	0.15
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	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	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633	21-18633
Quotation No.:		Chemtest Sample ID.:		1213295	1213296	1213298	1213299	1213300	1213301	1213302	1213303	1213303
		Client Sample ID.:		ES1	ES2	ES1	ES2	ES3	ES1	ES2	ES3	ES3
		Sample Location:		TPBH07	TPBH07	TPBH08	TPBH08	TPBH08	TPBH09	TPBH09	TPBH09	TPBH09
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.5	1.5	0.5	1.5	2.5	0.5	1.5	2.5	2.5
		Date Sampled:		31-May-2021	31-May-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021	01-Jun-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A					None Detected			
VOC TIC	N	2760	µg/kg	N/A					None Detected			

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213287							
Sample Ref:							
Sample ID: ES1							
Sample Location: TPBH04							
Top Depth(m): 0.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0011	0.011	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0023	0.023	0.5	10	70
Copper	1455	U	0.0008	0.0080	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0006	0.0057	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.23	2.3	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	58	580	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.7	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.1

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213288							
Sample Ref:							
Sample ID: ES2							
Sample Location: TPBH04							
Top Depth(m): 1.5				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0015	0.015	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0010	0.010	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0006	0.0057	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.32	3.2	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	48	470	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	7.0	70	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.3

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213289							
Sample Ref:							
Sample ID: ES3							
Sample Location: TPBH04							
Top Depth(m): 2.5				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0012	0.012	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0007	0.0074	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0005	0.0045	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.20	2.0	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	48	470	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	7.5	75	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.8

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213290							
Sample Ref:							
Sample ID: ES4							
Sample Location: TPBH04							
Top Depth(m): 3.5				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0007	0.0067	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0006	0.0060	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0005	0.0047	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.19	1.9	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	53	530	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.2	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.7

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213291							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP06A							
Top Depth(m): 0.5				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0064	0.064	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0006	0.0061	0.5	10	70
Copper	1455	U	0.0025	0.025	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0016	0.016	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.3	13	800	15000	25000
Fluoride	1220	U	0.13	1.3	10	150	500
Sulphate	1220	U	3.4	34	1000	20000	50000
Total Dissolved Solids	1020	N	46	460	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.1	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.5

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213292							
Sample Ref:							
Sample ID: ES2							
Sample Location: TP06A							
Top Depth(m): 1.5				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0079	0.079	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0016	0.016	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0002	0.0025	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0007	0.0066	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.20	2.0	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	40	400	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	19	190	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213293							
Sample Ref:							
Sample ID: ES3							
Sample Location: TP06A							
Top Depth(m): 2.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0016	0.016	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0010	0.010	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0008	0.0081	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.22	2.2	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	65	650	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	7.8	78	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213294							
Sample Ref:							
Sample ID: ES4							
Sample Location: TP06A							
Top Depth(m): 3.5				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 25-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0022	0.022	0.5	2	25
Barium	1455	U	0.008	0.075	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0020	0.020	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0026	0.026	0.5	10	30
Nickel	1455	U	0.0007	0.0068	0.4	10	40
Lead	1455	U	0.0009	0.0090	0.5	10	50
Antimony	1455	U	0.0015	0.015	0.06	0.7	5
Selenium	1455	U	0.0009	0.0086	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.16	1.6	10	150	500
Sulphate	1220	U	5.5	55	1000	20000	50000
Total Dissolved Solids	1020	N	78	780	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	18	180	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	20

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213295							
Sample Ref:							
Sample ID: ES1							
Sample Location: TPBH07							
Top Depth(m): 0.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 31-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0011	0.011	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0032	0.032	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0012	0.012	0.5	10	30
Nickel	1455	U	0.0005	0.0050	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0005	0.0053	0.06	0.7	5
Selenium	1455	U	0.0005	0.0052	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.16	1.6	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	64	640	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	8.6	86	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213296							
Sample Ref:							
Sample ID: ES2							
Sample Location: TPBH07							
Top Depth(m): 1.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 31-May-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0008	0.0081	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0012	0.012	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0015	0.015	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.17	1.7	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	57	570	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	6.0	60	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	8.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213298							
Sample Ref:							
Sample ID: ES1							
Sample Location: TPBH08							
Top Depth(m): 0.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 01-Jun-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0015	0.015	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0012	0.012	0.5	10	70
Copper	1455	U	0.0036	0.036	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0010	0.011	0.5	10	30
Nickel	1455	U	0.0007	0.0074	0.4	10	40
Lead	1455	U	0.0030	0.030	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0005	0.0050	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.32	3.2	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	48	480	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	50	500	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213299							
Sample Ref:							
Sample ID: ES2							
Sample Location: TPBH08							
Top Depth(m): 1.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 01-Jun-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0011	0.011	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0008	0.0080	0.5	10	70
Copper	1455	U	0.0038	0.039	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0024	0.024	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	0.0005	0.0051	0.5	10	50
Antimony	1455	U	0.0005	0.0055	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.17	1.7	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	98	970	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	10	100	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213300							
Sample Ref:							
Sample ID: ES3							
Sample Location: TPBH08							
Top Depth(m): 2.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 01-Jun-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0035	0.035	0.5	2	25
Barium	1455	U	0.005	0.051	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0023	0.023	0.5	10	70
Copper	1455	U	0.0054	0.054	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0003	0.0025	0.5	10	30
Nickel	1455	U	0.0030	0.031	0.4	10	40
Lead	1455	U	0.0062	0.062	0.5	10	50
Antimony	1455	U	0.0014	0.014	0.06	0.7	5
Selenium	1455	U	0.0006	0.0061	0.1	0.5	7
Zinc	1455	U	0.011	0.11	4	50	200
Chloride	1220	U	1.2	12	800	15000	25000
Fluoride	1220	U	0.12	1.2	10	150	500
Sulphate	1220	U	4.0	40	1000	20000	50000
Total Dissolved Solids	1020	N	25	250	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	47	470	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213301							
Sample Ref:							
Sample ID: ES1							
Sample Location: TPBH09							
Top Depth(m): 0.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 01-Jun-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0057	0.057	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0023	0.023	0.5	10	70
Copper	1455	U	0.0030	0.030	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0023	0.023	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0016	0.016	0.06	0.7	5
Selenium	1455	U	0.0006	0.0062	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.15	1.5	10	150	500
Sulphate	1220	U	18	180	1000	20000	50000
Total Dissolved Solids	1020	N	91	910	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	6.6	66	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	9.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213302							
Sample Ref:							
Sample ID: ES2							
Sample Location: TPBH09							
Top Depth(m): 1.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 01-Jun-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0059	0.059	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0022	0.022	0.5	10	70
Copper	1455	U	0.0026	0.026	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0019	0.019	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0012	0.012	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.15	1.5	10	150	500
Sulphate	1220	U	15	150	1000	20000	50000
Total Dissolved Solids	1020	N	85	840	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	8.1	81	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	12

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-18633				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1213303							
Sample Ref:							
Sample ID: ES3							
Sample Location: TPBH09							
Top Depth(m): 2.5							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 01-Jun-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0017	0.017	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0007	0.0070	0.5	10	70
Copper	1455	U	0.0017	0.017	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0011	0.012	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	0.0006	0.0059	0.5	10	50
Antimony	1455	U	0.0009	0.0088	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.15	1.5	10	150	500
Sulphate	1220	U	3.9	39	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	17

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity 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.
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).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
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.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2780	Glycols, Aldehydes, Amines, Ethers and Ketones	Glycols, Aldehydes, Amines, Ethers and Ketones	GCMS detection
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil 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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7 Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	Compliance Test for Leaching of Granular Waste Material and Sludge

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-17563-1
Initial Date of Issue: 30-May-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P21076 Creamfields
Quotation No.: **Date Received:** 25-May-2021
Order No.: 13694 **Date Instructed:** 25-May-2021
No. of Samples: 2
Turnaround (Wkdays): 5 **Results Due:** 01-Jun-2021
Date Approved: 30-May-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Bulk Identification Certificate

Client: Priority Geotechnical Ltd
Site Address:
Date Sampled: 20-Apr-2021
Date Received: 25-May-2021

Your Ref.:
Project: P21076 Creamfields
Job Number: 21-17563
No Samples:
Date Reported: 30-May-2021

Sample No.	Sample ID	Sample Ref.	Description	Top (m)	Bottom (m)	SOP	Accred.	Laboratory	Material	Result
1207954			TP08	2.5		2185	U	COVENTRY	Cement	Chrysotile

The in-house procedure SOP2185 is in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248).

The results relate only to items tested as supplied by the client.

Comments and interpretations are beyond the scope of UKAS accreditation.

Samples associated with asbestos in building surveys are retained for six months (HSG 264 refers)

Bulk Identification Certificate

Client: Priority Geotechnical Ltd
Site Address:
Date Sampled: 21-Apr-2021
Date Received: 25-May-2021

Your Ref.:
Project: P21076 Creamfields
Job Number: 21-17563
No Samples:
Date Reported: 30-May-2021

Sample No.	Sample ID	Sample Ref.	Description	Top (m)	Bottom (m)	SOP	Accred.	Laboratory	Material	Result
1207953			TP06	1.0		2185	U	COVENTRY	Cement	Chrysotile

The in-house procedure SOP2185 is in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248).

The results relate only to items tested as supplied by the client.

Comments and interpretations are beyond the scope of UKAS accreditation.

Samples associated with asbestos in building surveys are retained for six months (HSG 264 refers)

Test Methods

SOP	Title	Parameters included	Method summary
2185	Asbestos	Asbestos	Polarised light microscopy
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-14753-1
Initial Date of Issue: 14-May-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P21076 Creamfields
Quotation No.: Q20-22417 **Date Received:** 06-May-2021
Order No.: 13694 **Date Instructed:** 10-May-2021
No. of Samples: 13
Turnaround (Wkdays): 5 **Results Due:** 14-May-2021
Date Approved: 14-May-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.: 21-14753																	
Quotation No.: Q20-22417		Chemtest Sample ID.: 1193888																	
Sample Location:		BH01		BH01		BH02		BH02		BH02		BH03		BH03		BH05			
Sample Type:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
Top Depth (m):		0.50		1.50		1.50		2.50		3.50		4.50		1.00		2.00			
Date Sampled:		21-Apr-2021		21-Apr-2021		26-Apr-2021		26-Apr-2021		26-Apr-2021		26-Apr-2021		27-Apr-2021		27-Apr-2021		22-Apr-2021	
Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM	
Determinand	Accred.	SOP	Units	LOD															
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	14	10	14	17	12	11	12	28	9.7						
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
pH	M	2010		4.0	8.7	8.5	8.4	8.3	8.2	8.7	10.8	8.5	10.2						
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Arsenic	M	2450	mg/kg	1.0	4.5	5.5	6.6	4.9	8.8	7.3	12	7.0	15						
Barium	M	2450	mg/kg	10	16	19	23	26	49	32	27	52	16						
Cadmium	M	2450	mg/kg	0.10	0.16	0.20	0.29	0.18	0.76	0.41	0.13	0.13	0.26						
Chromium	M	2450	mg/kg	1.0	11	11	16	14	17	15	11	11	12						
Mercury Low Level	M	2450	mg/kg	0.05	0.06	< 0.05	0.11	0.09	0.08	0.08	0.08	0.14	0.05						
Molybdenum	M	2450	mg/kg	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	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	9.9	12	12	11	16	13	29	14	14						
Nickel	M	2450	mg/kg	0.50	20	24	28	20	35	28	14	15	19						
Lead	M	2450	mg/kg	0.50	16	17	23	28	21	17	30	62	26						
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	48	51	64	49	78	59	42	50	110						
Chromium (Trivalent)	N	2490	mg/kg	1.0	11	11	16	14	17	15	11	11	12						
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
LOI	M	2610	%	0.10	1.7	1.1	1.6	2.7	1.4	1.1	2.9	8.1	2.3						
Mineral Oil	N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0	[B] < 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	[B] < 5.0						
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0						

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.: 21-14753										
Quotation No.: Q20-22417		Chemtest Sample ID.: 1193888										
Sample Location:		BH01	BH01	BH02	BH02	BH02	BH02	BH02	BH03	BH03	BH05	
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Top Depth (m):		0.50	1.50	1.50	2.50	3.50	4.50	1.00	2.00	0.50		
Date Sampled:		21-Apr-2021	21-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	27-Apr-2021	27-Apr-2021	22-Apr-2021		
Asbestos Lab:		DURHAM		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM		
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0	[B] < 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	[B] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[B] < 10	[B] < 10	< 10	< 10	< 10	< 10	< 10	[B] < 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0				< 1.0				
Chloromethane	M	2760	µg/kg	1.0				< 1.0				
Vinyl Chloride	M	2760	µg/kg	1.0				< 1.0				
Bromomethane	M	2760	µg/kg	20				< 20				
Chloroethane	U	2760	µg/kg	2.0				< 2.0				
Trichlorofluoromethane	M	2760	µg/kg	1.0				< 1.0				
1,1-Dichloroethene	M	2760	µg/kg	1.0				< 1.0				
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0				< 1.0				
1,1-Dichloroethane	M	2760	µg/kg	1.0				< 1.0				
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0				< 1.0				
Bromochloromethane	U	2760	µg/kg	5.0				< 5.0				
Trichloromethane	M	2760	µg/kg	1.0				< 1.0				
1,1,1-Trichloroethane	M	2760	µg/kg	1.0				< 1.0				
Tetrachloromethane	M	2760	µg/kg	1.0				< 1.0				
1,1-Dichloropropene	U	2760	µg/kg	1.0				< 1.0				
Benzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0				< 2.0				
Trichloroethene	N	2760	µg/kg	1.0				< 1.0				
1,2-Dichloropropane	M	2760	µg/kg	1.0				< 1.0				
Dibromomethane	M	2760	µg/kg	1.0				< 1.0				
Bromodichloromethane	M	2760	µg/kg	5.0				< 5.0				
cis-1,3-Dichloropropene	N	2760	µg/kg	10				< 10				
Toluene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10				< 10				
1,1,2-Trichloroethane	M	2760	µg/kg	10				< 10				
Tetrachloroethene	M	2760	µg/kg	1.0				< 1.0				
1,3-Dichloropropane	U	2760	µg/kg	2.0				< 2.0				
Dibromochloromethane	U	2760	µg/kg	10				< 10				
1,2-Dibromoethane	M	2760	µg/kg	5.0				< 5.0				
Chlorobenzene	M	2760	µg/kg	1.0				< 1.0				
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0				< 2.0				
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
Styrene	M	2760	µg/kg	1.0				< 1.0				

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:										
Quotation No.: Q20-22417		Chemtest Sample ID.:		21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753
		Sample Location:		BH01	BH01	BH02	BH02	BH02	BH02	BH03	BH03	BH05
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.50	1.50	1.50	2.50	3.50	4.50	1.00	2.00	0.50
		Date Sampled:		21-Apr-2021	21-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	27-Apr-2021	27-Apr-2021	22-Apr-2021
		Asbestos Lab:		DURHAM		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Tribromomethane	U	2760	µg/kg	1.0				< 1.0				
Isopropylbenzene	M	2760	µg/kg	1.0				< 1.0				
Bromobenzene	M	2760	µg/kg	1.0				< 1.0				
1,2,3-Trichloropropane	N	2760	µg/kg	50				< 50				
N-Propylbenzene	U	2760	µg/kg	1.0				< 1.0				
2-Chlorotoluene	M	2760	µg/kg	1.0				< 1.0				
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0				< 1.0				
4-Chlorotoluene	U	2760	µg/kg	1.0				< 1.0				
Tert-Butylbenzene	U	2760	µg/kg	1.0				< 1.0				
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0				< 1.0				
Sec-Butylbenzene	U	2760	µg/kg	1.0				< 1.0				
1,3-Dichlorobenzene	M	2760	µg/kg	1.0				< 1.0				
4-Isopropyltoluene	U	2760	µg/kg	1.0				< 1.0				
1,4-Dichlorobenzene	M	2760	µg/kg	1.0				< 1.0				
N-Butylbenzene	U	2760	µg/kg	1.0				< 1.0				
1,2-Dichlorobenzene	M	2760	µg/kg	1.0				< 1.0				
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50				< 50				
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0				< 1.0				
Hexachlorobutadiene	U	2760	µg/kg	1.0				< 1.0				
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0				< 2.0				
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50				< 0.50				
Phenol	M	2790	mg/kg	0.50				< 0.50				
2-Chlorophenol	M	2790	mg/kg	0.50				< 0.50				
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50				< 0.50				
1,3-Dichlorobenzene	M	2790	mg/kg	0.50				< 0.50				
1,4-Dichlorobenzene	N	2790	mg/kg	0.50				< 0.50				
1,2-Dichlorobenzene	M	2790	mg/kg	0.50				< 0.50				
2-Methylphenol	M	2790	mg/kg	0.50				< 0.50				
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50				< 0.50				
Hexachloroethane	N	2790	mg/kg	0.50				< 0.50				
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50				< 0.50				
4-Methylphenol	M	2790	mg/kg	0.50				< 0.50				
Nitrobenzene	M	2790	mg/kg	0.50				< 0.50				

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	
Quotation No.: Q20-22417		Chemtest Sample ID.:		1193888	1193889	1193890	1193891	1193892	1193893	1193894	1193895	1193899
Sample Location:		BH01	BH01	BH02	BH02	BH02	BH02	BH02	BH02	BH03	BH03	BH05
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		0.50	1.50	1.50	2.50	3.50	4.50	1.00	2.00	0.50		
Date Sampled:		21-Apr-2021	21-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	22-Apr-2021
Asbestos Lab:		DURHAM		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Isophorone	M	2790	mg/kg	0.50				< 0.50				
2-Nitrophenol	N	2790	mg/kg	0.50				< 0.50				
2,4-Dimethylphenol	N	2790	mg/kg	0.50				< 0.50				
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50				< 0.50				
2,4-Dichlorophenol	M	2790	mg/kg	0.50				< 0.50				
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50				< 0.50				
Naphthalene	M	2790	mg/kg	0.50				< 0.50				
4-Chloroaniline	N	2790	mg/kg	0.50				< 0.50				
Hexachlorobutadiene	M	2790	mg/kg	0.50				< 0.50				
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50				< 0.50				
2-Methylnaphthalene	M	2790	mg/kg	0.50				< 0.50				
4-Nitrophenol	N	2790	mg/kg	0.50				< 0.50				
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50				< 0.50				
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50				< 0.50				
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50				< 0.50				
2-Chloronaphthalene	M	2790	mg/kg	0.50				< 0.50				
2-Nitroaniline	M	2790	mg/kg	0.50				< 0.50				
Acenaphthylene	M	2790	mg/kg	0.50				< 0.50				
Dimethylphthalate	M	2790	mg/kg	0.50				< 0.50				
2,6-Dinitrotoluene	M	2790	mg/kg	0.50				< 0.50				
Acenaphthene	M	2790	mg/kg	0.50				< 0.50				
3-Nitroaniline	N	2790	mg/kg	0.50				< 0.50				
Dibenzofuran	M	2790	mg/kg	0.50				< 0.50				
4-Chlorophenylphenylether	M	2790	mg/kg	0.50				< 0.50				
2,4-Dinitrotoluene	M	2790	mg/kg	0.50				< 0.50				
Fluorene	M	2790	mg/kg	0.50				< 0.50				
Diethyl Phthalate	M	2790	mg/kg	0.50				< 0.50				
4-Nitroaniline	M	2790	mg/kg	0.50				< 0.50				
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50				< 0.50				
Azobenzene	M	2790	mg/kg	0.50				< 0.50				
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50				< 0.50				
Hexachlorobenzene	M	2790	mg/kg	0.50				< 0.50				
Pentachlorophenol	N	2790	mg/kg	0.50				< 0.50				
Phenanthrene	M	2790	mg/kg	0.50				< 0.50				
Anthracene	M	2790	mg/kg	0.50				< 0.50				
Carbazole	M	2790	mg/kg	0.50				< 0.50				
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50				< 0.50				
Fluoranthene	M	2790	mg/kg	0.50				< 0.50				
Pyrene	M	2790	mg/kg	0.50				< 0.50				

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417		Chemtest Sample ID.:		1193888	1193889	1193890	1193891	1193892	1193893	1193894	1193895	1193899
Sample Location:		BH01	BH01	BH02	BH02	BH02	BH02	BH02	BH02	BH03	BH03	BH05
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		0.50	1.50	1.50	2.50	3.50	4.50	1.00	2.00	0.50		
Date Sampled:		21-Apr-2021	21-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	27-Apr-2021	27-Apr-2021	22-Apr-2021	
Asbestos Lab:		DURHAM		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Butylbenzyl Phthalate	M	2790	mg/kg	0.50				< 0.50				
Benzo[a]anthracene	M	2790	mg/kg	0.50				< 0.50				
Chrysene	M	2790	mg/kg	0.50				< 0.50				
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50				< 0.50				
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50				< 0.50				
Benzo[b]fluoranthene	M	2790	mg/kg	0.50				< 0.50				
Benzo[k]fluoranthene	M	2790	mg/kg	0.50				< 0.50				
Benzo[a]pyrene	M	2790	mg/kg	0.50				< 0.50				
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50				< 0.50				
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50				< 0.50				
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50				< 0.50				
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.29
Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	0.26
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	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	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A				None Detected				

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417	Chemtest Sample ID.:		1193888	1193889	1193890	1193891	1193892	1193893	1193894	1193895	1193899
	Sample Location:		BH01	BH01	BH02	BH02	BH02	BH02	BH03	BH03	BH05
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.50	1.50	1.50	2.50	3.50	4.50	1.00	2.00	0.50
	Date Sampled:		21-Apr-2021	21-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	27-Apr-2021	27-Apr-2021	22-Apr-2021
	Asbestos Lab:		DURHAM		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD							
VOC TIC	N	2760	µg/kg	N/A			None Detected				

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417		Chemtest Sample ID.:		1193900	1193901	1193902	1193933
		Sample Location:		BH05	BH06	BH06	BH02
		Sample Type:		SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		1.50	0.50	1.50	0.50
		Date Sampled:		22-Apr-2021	23-Apr-2021	23-Apr-2021	26-Apr-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-
Moisture	N	2030	%	0.020	9.2	8.0	11
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0
pH	M	2010		4.0	11.2	11.1	8.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40
Arsenic	M	2450	mg/kg	1.0	19	7.5	4.8
Barium	M	2450	mg/kg	10	33	20	28
Cadmium	M	2450	mg/kg	0.10	0.45	0.28	0.13
Chromium	M	2450	mg/kg	1.0	17	11	11
Mercury Low Level	M	2450	mg/kg	0.05	0.15	0.05	0.14
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	4.1	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	39	6.2	10
Nickel	M	2450	mg/kg	0.50	29	19	16
Lead	M	2450	mg/kg	0.50	30	13	31
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	310	42	48
Chromium (Trivalent)	N	2490	mg/kg	1.0	17	11	11
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
LOI	M	2610	%	0.10	2.3	2.3	2.9
Mineral Oil	N	2670	mg/kg	10	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417		Chemtest Sample ID.:		1193900	1193901	1193902	1193933
		Sample Location:		BH05	BH06	BH06	BH02
		Sample Type:		SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		1.50	0.50	1.50	0.50
		Date Sampled:		22-Apr-2021	23-Apr-2021	23-Apr-2021	26-Apr-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[B] < 10	[B] < 10	[B] < 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0			
Chloromethane	M	2760	µg/kg	1.0			
Vinyl Chloride	M	2760	µg/kg	1.0			
Bromomethane	M	2760	µg/kg	20			
Chloroethane	U	2760	µg/kg	2.0			
Trichlorofluoromethane	M	2760	µg/kg	1.0			
1,1-Dichloroethene	M	2760	µg/kg	1.0			
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0			
1,1-Dichloroethane	M	2760	µg/kg	1.0			
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0			
Bromochloromethane	U	2760	µg/kg	5.0			
Trichloromethane	M	2760	µg/kg	1.0			
1,1,1-Trichloroethane	M	2760	µg/kg	1.0			
Tetrachloromethane	M	2760	µg/kg	1.0			
1,1-Dichloropropene	U	2760	µg/kg	1.0			
Benzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0			
Trichloroethene	N	2760	µg/kg	1.0			
1,2-Dichloropropane	M	2760	µg/kg	1.0			
Dibromomethane	M	2760	µg/kg	1.0			
Bromodichloromethane	M	2760	µg/kg	5.0			
cis-1,3-Dichloropropene	N	2760	µg/kg	10			
Toluene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10			
1,1,2-Trichloroethane	M	2760	µg/kg	10			
Tetrachloroethene	M	2760	µg/kg	1.0			
1,3-Dichloropropane	U	2760	µg/kg	2.0			
Dibromochloromethane	U	2760	µg/kg	10			
1,2-Dibromoethane	M	2760	µg/kg	5.0			
Chlorobenzene	M	2760	µg/kg	1.0			
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0			
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Styrene	M	2760	µg/kg	1.0			

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:				21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417		Chemtest Sample ID.:				1193900	1193901	1193902	1193933
		Sample Location:				BH05	BH06	BH06	BH02
		Sample Type:				SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				1.50	0.50	1.50	0.50
		Date Sampled:				22-Apr-2021	23-Apr-2021	23-Apr-2021	26-Apr-2021
		Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD					
Tribromomethane	U	2760	µg/kg	1.0					
Isopropylbenzene	M	2760	µg/kg	1.0					
Bromobenzene	M	2760	µg/kg	1.0					
1,2,3-Trichloropropane	N	2760	µg/kg	50					
N-Propylbenzene	U	2760	µg/kg	1.0					
2-Chlorotoluene	M	2760	µg/kg	1.0					
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0					
4-Chlorotoluene	U	2760	µg/kg	1.0					
Tert-Butylbenzene	U	2760	µg/kg	1.0					
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0					
Sec-Butylbenzene	U	2760	µg/kg	1.0					
1,3-Dichlorobenzene	M	2760	µg/kg	1.0					
4-Isopropyltoluene	U	2760	µg/kg	1.0					
1,4-Dichlorobenzene	M	2760	µg/kg	1.0					
N-Butylbenzene	U	2760	µg/kg	1.0					
1,2-Dichlorobenzene	M	2760	µg/kg	1.0					
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50					
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0					
Hexachlorobutadiene	U	2760	µg/kg	1.0					
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0					
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	< 1.0	
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	
N-Nitrosodimethylamine	M	2790	mg/kg	0.50					
Phenol	M	2790	mg/kg	0.50					
2-Chlorophenol	M	2790	mg/kg	0.50					
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50					
1,3-Dichlorobenzene	M	2790	mg/kg	0.50					
1,4-Dichlorobenzene	N	2790	mg/kg	0.50					
1,2-Dichlorobenzene	M	2790	mg/kg	0.50					
2-Methylphenol	M	2790	mg/kg	0.50					
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50					
Hexachloroethane	N	2790	mg/kg	0.50					
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50					
4-Methylphenol	M	2790	mg/kg	0.50					
Nitrobenzene	M	2790	mg/kg	0.50					

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:			
Quotation No.: Q20-22417		21-14753	21-14753	21-14753	21-14753
Chemtest Sample ID.:		1193900	1193901	1193902	1193933
Sample Location:		BH05	BH06	BH06	BH02
Sample Type:		SOIL	SOIL	SOIL	SOIL
Top Depth (m):		1.50	0.50	1.50	0.50
Date Sampled:		22-Apr-2021	23-Apr-2021	23-Apr-2021	26-Apr-2021
Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD	
Isophorone	M	2790	mg/kg	0.50	
2-Nitrophenol	N	2790	mg/kg	0.50	
2,4-Dimethylphenol	N	2790	mg/kg	0.50	
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50	
2,4-Dichlorophenol	M	2790	mg/kg	0.50	
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50	
Naphthalene	M	2790	mg/kg	0.50	
4-Chloroaniline	N	2790	mg/kg	0.50	
Hexachlorobutadiene	M	2790	mg/kg	0.50	
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	
2-Methylnaphthalene	M	2790	mg/kg	0.50	
4-Nitrophenol	N	2790	mg/kg	0.50	
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	
2-Chloronaphthalene	M	2790	mg/kg	0.50	
2-Nitroaniline	M	2790	mg/kg	0.50	
Acenaphthylene	M	2790	mg/kg	0.50	
Dimethylphthalate	M	2790	mg/kg	0.50	
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	
Acenaphthene	M	2790	mg/kg	0.50	
3-Nitroaniline	N	2790	mg/kg	0.50	
Dibenzofuran	M	2790	mg/kg	0.50	
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	
Fluorene	M	2790	mg/kg	0.50	
Diethyl Phthalate	M	2790	mg/kg	0.50	
4-Nitroaniline	M	2790	mg/kg	0.50	
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	
Azobenzene	M	2790	mg/kg	0.50	
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	
Hexachlorobenzene	M	2790	mg/kg	0.50	
Pentachlorophenol	N	2790	mg/kg	0.50	
Phenanthrene	M	2790	mg/kg	0.50	
Anthracene	M	2790	mg/kg	0.50	
Carbazole	M	2790	mg/kg	0.50	
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50	
Fluoranthene	M	2790	mg/kg	0.50	
Pyrene	M	2790	mg/kg	0.50	

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417		Chemtest Sample ID.:		1193900	1193901	1193902	1193933
		Sample Location:		BH05	BH06	BH06	BH02
		Sample Type:		SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		1.50	0.50	1.50	0.50
		Date Sampled:		22-Apr-2021	23-Apr-2021	23-Apr-2021	26-Apr-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
Butylbenzyl Phthalate	M	2790	mg/kg	0.50			
Benzo[a]anthracene	M	2790	mg/kg	0.50			
Chrysene	M	2790	mg/kg	0.50			
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50			
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50			
Benzo[b]fluoranthene	M	2790	mg/kg	0.50			
Benzo[k]fluoranthene	M	2790	mg/kg	0.50			
Benzo[a]pyrene	M	2790	mg/kg	0.50			
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50			
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50			
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50			
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	1.5
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.15
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.12	1.8
Pyrene	M	2800	mg/kg	0.10	< 0.10	0.12	1.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.56
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.74
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.69
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.24
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.56
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.34
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.38
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	8.4
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A			

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:		21-14753	21-14753	21-14753	21-14753
Quotation No.: Q20-22417	Chemtest Sample ID.:		1193900	1193901	1193902	1193933
	Sample Location:		BH05	BH06	BH06	BH02
	Sample Type:		SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		1.50	0.50	1.50	0.50
	Date Sampled:		22-Apr-2021	23-Apr-2021	23-Apr-2021	26-Apr-2021
	Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD		
VOC TIC	N	2760	µg/kg	N/A		

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits					
Chemtest Sample ID: 1193888									
Sample Ref:									
Sample ID:									
Sample Location: BH01									
Top Depth(m): 0.50				Inert Waste Landfill		Stable, Non-reactive hazardous waste in non-hazardous Landfill		Hazardous Waste Landfill	
Bottom Depth(m):									
Sampling Date: 21-Apr-2021									
Determinand	SOP	Accred.	Units						
Total Organic Carbon					3	5	6		
Loss on Ignition					--	--	10		
Total BTEX					6	--	--		
Total PCBs (7 congeners)					1	--	--		
TPH Total WAC (Mineral Oil)					500	--	--		
Total (of 17) PAHs					100	--	--		
pH					--	>6	--		
Acid Neutralisation Capacity					--	To evaluate	To evaluate		
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg				
Arsenic	1455	U	0.0007	0.0066	0.5	2	25		
Barium	1455	U	< 0.005	< 0.0005	20	100	300		
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5		
Chromium	1455	U	0.022	0.21	0.5	10	70		
Copper	1455	U	0.0017	0.017	2	50	100		
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2		
Molybdenum	1455	U	0.0009	0.0092	0.5	10	30		
Nickel	1455	U	0.0095	0.096	0.4	10	40		
Lead	1455	U	0.0009	0.0088	0.5	10	50		
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5		
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7		
Zinc	1455	U	< 0.003	< 0.003	4	50	200		
Chloride	1220	U	< 1.0	< 10	800	15000	25000		
Fluoride	1220	U	0.099	< 1.0	10	150	500		
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000		
Total Dissolved Solids	1020	N	38	380	4000	60000	100000		
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-		
Dissolved Organic Carbon	1610	U	14	140	500	800	1000		

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753					Landfill Waste Acceptance Criteria Limits		
Chemtest Sample ID: 1193889					Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample Ref:							
Sample ID:							
Sample Location: BH01							
Top Depth(m): 1.50							
Bottom Depth(m):							
Sampling Date: 21-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.022	0.22	0.5	10	70
Copper	1455	U	0.0010	0.010	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0004	0.0045	0.5	10	30
Nickel	1455	U	0.0092	0.092	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.091	< 1.0	10	150	500
Sulphate	1220	U	2.1	21	1000	20000	50000
Total Dissolved Solids	1020	N	22	220	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193890							
Sample Ref:							
Sample ID:							
Sample Location: BH02							
Top Depth(m): 1.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 26-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0010	0.0095	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.032	0.32	0.5	10	70
Copper	1455	U	0.0023	0.023	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0021	0.021	0.5	10	30
Nickel	1455	U	0.015	0.15	0.4	10	40
Lead	1455	U	0.0007	0.0065	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0011	0.011	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.16	1.6	10	150	500
Sulphate	1220	U	5.8	58	1000	20000	50000
Total Dissolved Solids	1020	N	65	650	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.1	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193891							
Sample Ref:							
Sample ID:							
Sample Location: BH02							
Top Depth(m): 2.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 26-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0016	0.017	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.090	0.90	0.5	10	70
Copper	1455	U	0.0047	0.047	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0026	0.026	0.5	10	30
Nickel	1455	U	0.046	0.46	0.4	10	40
Lead	1455	U	0.0039	0.039	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0015	0.015	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	2.3	23	800	15000	25000
Fluoride	1220	U	0.16	1.6	10	150	500
Sulphate	1220	U	4.7	47	1000	20000	50000
Total Dissolved Solids	1020	N	42	420	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	12	120	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	17

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193892							
Sample Ref:							
Sample ID:							
Sample Location: BH02							
Top Depth(m): 3.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 26-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.026	0.26	0.5	10	70
Copper	1455	U	0.0014	0.014	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0006	0.0063	0.5	10	30
Nickel	1455	U	0.012	0.12	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.11	1.1	10	150	500
Sulphate	1220	U	2.4	24	1000	20000	50000
Total Dissolved Solids	1020	N	24	240	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	12

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193893							
Sample Ref:							
Sample ID:							
Sample Location: BH02							
Top Depth(m): 4.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 26-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0003	0.0025	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.027	0.27	0.5	10	70
Copper	1455	U	0.0014	0.014	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0011	0.011	0.5	10	30
Nickel	1455	U	0.013	0.13	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.14	1.4	10	150	500
Sulphate	1220	U	1.9	19	1000	20000	50000
Total Dissolved Solids	1020	N	44	440	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193894							
Sample Ref:							
Sample ID:							
Sample Location: BH03							
Top Depth(m): 1.00				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 27-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0034	0.034	0.5	2	25
Barium	1455	U	0.005	0.054	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.072	0.72	0.5	10	70
Copper	1455	U	0.033	0.33	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0029	0.029	0.5	10	30
Nickel	1455	U	0.026	0.26	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0008	0.0081	0.1	0.5	7
Zinc	1455	U	0.004	0.040	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.28	2.8	10	150	500
Sulphate	1220	U	21	210	1000	20000	50000
Total Dissolved Solids	1020	N	310	3100	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	6.8	68	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	12

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753							
Chemtest Sample ID: 1193895							
Sample Ref:							
Sample ID:							
Sample Location: BH03							
Top Depth(m): 2.00				Landfill Waste Acceptance Criteria Limits			
Bottom Depth(m):							
Sampling Date: 27-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0032	0.032	0.5	2	25
Barium	1455	U	0.009	0.090	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.032	0.31	0.5	10	70
Copper	1455	U	0.011	0.11	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0055	0.055	0.5	10	30
Nickel	1455	U	0.015	0.15	0.4	10	40
Lead	1455	U	0.013	0.13	0.5	10	50
Antimony	1455	U	0.0009	0.0087	0.06	0.7	5
Selenium	1455	U	0.0021	0.021	0.1	0.5	7
Zinc	1455	U	0.010	0.10	4	50	200
Chloride	1220	U	7.4	74	800	15000	25000
Fluoride	1220	U	0.22	2.2	10	150	500
Sulphate	1220	U	59	590	1000	20000	50000
Total Dissolved Solids	1020	N	160	1600	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.4	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	28

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193899							
Sample Ref:							
Sample ID:							
Sample Location: BH05							
Top Depth(m): 0.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 22-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0033	0.033	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.052	0.52	0.5	10	70
Copper	1455	U	0.0031	0.031	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0047	0.047	0.5	10	30
Nickel	1455	U	0.020	0.20	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0009	0.0087	0.06	0.7	5
Selenium	1455	U	0.0009	0.0090	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.31	3.1	10	150	500
Sulphate	1220	U	23	230	1000	20000	50000
Total Dissolved Solids	1020	N	140	1400	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.7

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193900							
Sample Ref:							
Sample ID:							
Sample Location: BH05							
Top Depth(m): 1.50				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m):							
Sampling Date: 22-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0012	0.012	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.080	0.80	0.5	10	70
Copper	1455	U	0.0053	0.053	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0019	0.019	0.5	10	30
Nickel	1455	U	0.037	0.37	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.28	2.8	10	150	500
Sulphate	1220	U	3.5	35	1000	20000	50000
Total Dissolved Solids	1020	N	110	1100	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.2

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193901							
Sample Ref:							
Sample ID:							
Sample Location: BH06							
Top Depth(m): 0.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 23-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0007	0.0073	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.13	1.3	0.5	10	70
Copper	1455	U	0.0068	0.068	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0027	0.027	0.5	10	30
Nickel	1455	U	0.067	0.67	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.088	< 1.0	10	150	500
Sulphate	1220	U	1.8	18	1000	20000	50000
Total Dissolved Solids	1020	N	38	380	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	8.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193902							
Sample Ref:							
Sample ID:							
Sample Location: BH06							
Top Depth(m): 1.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 23-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0006	0.0056	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.13	1.3	0.5	10	70
Copper	1455	U	0.0052	0.052	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0025	0.025	0.5	10	30
Nickel	1455	U	0.067	0.67	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0006	0.0064	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.083	< 1.0	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	22	210	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.2	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14753				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1193933							
Sample Ref:							
Sample ID:							
Sample Location: BH02							
Top Depth(m): 0.50							
Bottom Depth(m):				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 26-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0045	0.045	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0036	0.036	0.5	10	70
Copper	1455	U	0.0032	0.032	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0009	0.0089	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.13	1.3	10	150	500
Sulphate	1220	U	3.7	37	1000	20000	50000
Total Dissolved Solids	1020	N	36	360	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	4.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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:
1193888			BH01	21-Apr-2021	B	Amber Glass 250ml
1193888			BH01	21-Apr-2021	B	Amber Glass 60ml
1193888			BH01	21-Apr-2021	B	Plastic Tub 500g
1193889			BH01	21-Apr-2021	B	Amber Glass 250ml
1193889			BH01	21-Apr-2021	B	Amber Glass 60ml
1193889			BH01	21-Apr-2021	B	Plastic Tub 500g
1193899			BH05	22-Apr-2021	B	Amber Glass 250ml
1193899			BH05	22-Apr-2021	B	Amber Glass 60ml
1193899			BH05	22-Apr-2021	B	Plastic Tub 500g
1193900			BH05	22-Apr-2021	B	Amber Glass 250ml
1193900			BH05	22-Apr-2021	B	Amber Glass 60ml
1193900			BH05	22-Apr-2021	B	Plastic Tub 500g
1193901			BH06	23-Apr-2021	B	Amber Glass 250ml
1193901			BH06	23-Apr-2021	B	Amber Glass 60ml
1193901			BH06	23-Apr-2021	B	Plastic Tub 500g
1193902			BH06	23-Apr-2021	B	Amber Glass 250ml
1193902			BH06	23-Apr-2021	B	Amber Glass 60ml
1193902			BH06	23-Apr-2021	B	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity 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.
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).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
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.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2780	Glycols, Aldehydes, Amines, Ethers and Ketones	Glycols, Aldehydes, Amines, Ethers and Ketones	GCMS detection
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil 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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7 Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	Compliance Test for Leaching of Granular Waste Material and Sludge

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

- 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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Amended Report

Report No.:	21-14379-3	Date of Re-Issue:	19-May-2021
Initial Date of Issue:	19-May-2021		
Client	Priority Geotechnical Ltd		
Client Address:	Unit 12 Owenacurra Business Park Midleton County Cork Ireland		
Contact(s):	Colette Kelly		
Project	P21076 Creamfields		
Quotation No.:	Q20-22417	Date Received:	30-Apr-2021
Order No.:	13694	Date Instructed:	04-May-2021
No. of Samples:	17		
Turnaround (Wkdays):	5	Results Due:	10-May-2021
Date Approved:	19-May-2021	Subcon Results Due:	25-May-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191643	1191644	1191645	1191646	1191647	1191648	1191649	1191650	
	Client Sample ID.:	ES1	ES4	ES1	ES2	ES1	ES1	ES3	ES1			
	Sample Location:	TP01	TP01	TP02	TP02	TP03	TP04	TP04	TP05			
	Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
	Top Depth (m):	0.20	3.20	0.50	1.50	1.00	0.40	2.50	0.30			
	Bottom Depth (m):	0.40	3.50	0.70	1.70	1.20	0.60	2.70	0.50			
	Date Sampled:	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021			
	Asbestos Lab:	DURHAM		DURHAM		DURHAM		DURHAM	DURHAM			DURHAM
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	14	8.8	14	13	13	8.4	11	7.9
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dioxin (Subcon)	S		ng/kg	N/A								
Dioxins, Furans & Dioxin like PCBs(Sub)	S		mg/kg	N/A								
Furans (Subcon)	S		ng/kg	N/A								
pH	M	2010		4.0	8.0	8.2	8.1	8.1	7.3	9.9	8.4	8.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	0.46	< 0.40	0.45	< 0.40	< 0.40	< 0.40
Arsenic	M	2450	mg/kg	1.0	9.4	12	12	12	12	22	10	2.5
Barium	M	2450	mg/kg	10	51	45	86	36	82	58	34	30
Cadmium	M	2450	mg/kg	0.10	0.35	0.53	0.45	0.48	0.30	0.62	0.30	0.16
Chromium	M	2450	mg/kg	1.0	21	18	22	22	22	28	18	15
Mercury Low Level	M	2450	mg/kg	0.05	0.17	< 0.05	0.28	0.11	0.26	0.10	0.05	< 0.05
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	19	18	25	22	28	32	18	3.5
Nickel	M	2450	mg/kg	0.50	27	32	25	39	23	44	30	38
Lead	M	2450	mg/kg	0.50	68	20	62	28	82	39	21	6.1
Selenium	M	2450	mg/kg	0.20	0.66	< 0.20	0.35	< 0.20	0.50	< 0.20	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	77	72	94	99	81	110	77	82
Chromium (Trivalent)	N	2490	mg/kg	1.0	21	18	22	22	22	28	18	15
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
LOI	M	2610	%	0.10	3.8	1.5	4.3	2.0	6.0	2.2	1.6	1.3
Mineral Oil	N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191643	1191644	1191645	1191646	1191647	1191648	1191649	1191650	
Client Sample ID.:		ES1	ES4	ES1	ES2	ES1	ES1	ES3	ES1			
Sample Location:		TP01	TP01	TP02	TP02	TP03	TP04	TP04	TP05			
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Top Depth (m):		0.20	3.20	0.50	1.50	1.00	0.40	2.50	0.30			
Bottom Depth (m):		0.40	3.50	0.70	1.70	1.20	0.60	2.70	0.50			
Date Sampled:		20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021
Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM			DURHAM
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0			< 1.0					
Chloromethane	M	2760	µg/kg	1.0			< 1.0					
Vinyl Chloride	M	2760	µg/kg	1.0			< 1.0					
Bromomethane	M	2760	µg/kg	20			< 20					
Chloroethane	U	2760	µg/kg	2.0			< 2.0					
Trichlorofluoromethane	M	2760	µg/kg	1.0			< 1.0					
1,1-Dichloroethene	M	2760	µg/kg	1.0			< 1.0					
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0			< 1.0					
1,1-Dichloroethane	M	2760	µg/kg	1.0			< 1.0					
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0			< 1.0					
Bromochloromethane	U	2760	µg/kg	5.0			< 5.0					
Trichloromethane	M	2760	µg/kg	1.0			< 1.0					
1,1,1-Trichloroethane	M	2760	µg/kg	1.0			< 1.0					
Tetrachloromethane	M	2760	µg/kg	1.0			< 1.0					
1,1-Dichloropropene	U	2760	µg/kg	1.0			< 1.0					
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0			< 2.0					
Trichloroethene	N	2760	µg/kg	1.0			< 1.0					
1,2-Dichloropropane	M	2760	µg/kg	1.0			< 1.0					
Dibromomethane	M	2760	µg/kg	1.0			< 1.0					
Bromodichloromethane	M	2760	µg/kg	5.0			< 5.0					
cis-1,3-Dichloropropene	N	2760	µg/kg	10			< 10					
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10			< 10					
1,1,2-Trichloroethane	M	2760	µg/kg	10			< 10					
Tetrachloroethene	M	2760	µg/kg	1.0			< 1.0					
1,3-Dichloropropane	U	2760	µg/kg	2.0			< 2.0					
Dibromochloromethane	U	2760	µg/kg	10			< 10					

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191643	1191644	1191645	1191646	1191647	1191648	1191649	1191650	
Client Sample ID.:		ES1	ES4	ES1	ES2	ES1	ES1	ES3	ES1			
Sample Location:		TP01	TP01	TP02	TP02	TP03	TP04	TP04	TP05			
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Top Depth (m):		0.20	3.20	0.50	1.50	1.00	0.40	2.50	0.30			
Bottom Depth (m):		0.40	3.50	0.70	1.70	1.20	0.60	2.70	0.50			
Date Sampled:		20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021
Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM			DURHAM
Determinand	Accred.	SOP	Units	LOD								
1,2-Dibromoethane	M	2760	µg/kg	5.0								
Chlorobenzene	M	2760	µg/kg	1.0								
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0								
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0								
Tribromomethane	U	2760	µg/kg	1.0								
Isopropylbenzene	M	2760	µg/kg	1.0								
Bromobenzene	M	2760	µg/kg	1.0								
1,2,3-Trichloropropane	N	2760	µg/kg	50								
N-Propylbenzene	U	2760	µg/kg	1.0								
2-Chlorotoluene	M	2760	µg/kg	1.0								
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0								
4-Chlorotoluene	U	2760	µg/kg	1.0								
Tert-Butylbenzene	U	2760	µg/kg	1.0								
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0								
Sec-Butylbenzene	U	2760	µg/kg	1.0								
1,3-Dichlorobenzene	M	2760	µg/kg	1.0								
4-Isopropyltoluene	U	2760	µg/kg	1.0								
1,4-Dichlorobenzene	M	2760	µg/kg	1.0								
N-Butylbenzene	U	2760	µg/kg	1.0								
1,2-Dichlorobenzene	M	2760	µg/kg	1.0								
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50								
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0								
Hexachlorobutadiene	U	2760	µg/kg	1.0								
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0								
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50								
Phenol	M	2790	mg/kg	0.50								
2-Chlorophenol	M	2790	mg/kg	0.50								
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50								

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191643	1191644	1191645	1191646	1191647	1191648	1191649	1191650	
Client Sample ID.:		ES1	ES4	ES1	ES2	ES1	ES1	ES3	ES1			
Sample Location:		TP01	TP01	TP02	TP02	TP03	TP04	TP04	TP05			
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Top Depth (m):		0.20	3.20	0.50	1.50	1.00	0.40	2.50	0.30			
Bottom Depth (m):		0.40	3.50	0.70	1.70	1.20	0.60	2.70	0.50			
Date Sampled:		20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021			
Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM			DURHAM
Determinand	Accred.	SOP	Units	LOD								
1,3-Dichlorobenzene	M	2790	mg/kg	0.50				< 0.50				
1,4-Dichlorobenzene	N	2790	mg/kg	0.50				< 0.50				
1,2-Dichlorobenzene	M	2790	mg/kg	0.50				< 0.50				
2-Methylphenol	M	2790	mg/kg	0.50				< 0.50				
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50				< 0.50				
Hexachloroethane	N	2790	mg/kg	0.50				< 0.50				
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50				< 0.50				
4-Methylphenol	M	2790	mg/kg	0.50				< 0.50				
Nitrobenzene	M	2790	mg/kg	0.50				< 0.50				
Isophorone	M	2790	mg/kg	0.50				< 0.50				
2-Nitrophenol	N	2790	mg/kg	0.50				< 0.50				
2,4-Dimethylphenol	N	2790	mg/kg	0.50				< 0.50				
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50				< 0.50				
2,4-Dichlorophenol	M	2790	mg/kg	0.50				< 0.50				
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50				< 0.50				
Naphthalene	M	2790	mg/kg	0.50				< 0.50				
4-Chloroaniline	N	2790	mg/kg	0.50				< 0.50				
Hexachlorobutadiene	M	2790	mg/kg	0.50				< 0.50				
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50				< 0.50				
2-Methylnaphthalene	M	2790	mg/kg	0.50				< 0.50				
4-Nitrophenol	N	2790	mg/kg	0.50				< 0.50				
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50				< 0.50				
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50				< 0.50				
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50				< 0.50				
2-Chloronaphthalene	M	2790	mg/kg	0.50				< 0.50				
2-Nitroaniline	M	2790	mg/kg	0.50				< 0.50				
Acenaphthylene	M	2790	mg/kg	0.50				< 0.50				
Dimethylphthalate	M	2790	mg/kg	0.50				< 0.50				
2,6-Dinitrotoluene	M	2790	mg/kg	0.50				< 0.50				
Acenaphthene	M	2790	mg/kg	0.50				< 0.50				
3-Nitroaniline	N	2790	mg/kg	0.50				< 0.50				
Dibenzofuran	M	2790	mg/kg	0.50				< 0.50				
4-Chlorophenylphenylether	M	2790	mg/kg	0.50				< 0.50				
2,4-Dinitrotoluene	M	2790	mg/kg	0.50				< 0.50				
Fluorene	M	2790	mg/kg	0.50				< 0.50				
Diethyl Phthalate	M	2790	mg/kg	0.50				< 0.50				
4-Nitroaniline	M	2790	mg/kg	0.50				< 0.50				

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191643	1191644	1191645	1191646	1191647	1191648	1191649	1191650
Client Sample ID.:		ES1	ES4	ES1	ES2	ES1	ES1	ES3	ES1		
Sample Location:		TP01	TP01	TP02	TP02	TP03	TP04	TP04	TP05		
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
Top Depth (m):		0.20	3.20	0.50	1.50	1.00	0.40	2.50	0.30		
Bottom Depth (m):		0.40	3.50	0.70	1.70	1.20	0.60	2.70	0.50		
Date Sampled:		20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021		
Asbestos Lab:		DURHAM		DURHAM		DURHAM	DURHAM	DURHAM			
Determinand	Accred.	SOP	Units	LOD							
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50			< 0.50				
Azobenzene	M	2790	mg/kg	0.50			< 0.50				
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50			< 0.50				
Hexachlorobenzene	M	2790	mg/kg	0.50			< 0.50				
Pentachlorophenol	N	2790	mg/kg	0.50			< 0.50				
Phenanthrene	M	2790	mg/kg	0.50			< 0.50				
Anthracene	M	2790	mg/kg	0.50			< 0.50				
Carbazole	M	2790	mg/kg	0.50			< 0.50				
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50			< 0.50				
Fluoranthene	M	2790	mg/kg	0.50			< 0.50				
Pyrene	M	2790	mg/kg	0.50			< 0.50				
Butylbenzyl Phthalate	M	2790	mg/kg	0.50			< 0.50				
Benzo[a]anthracene	M	2790	mg/kg	0.50			< 0.50				
Chrysene	M	2790	mg/kg	0.50			< 0.50				
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50			< 0.50				
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50			< 0.50				
Benzo[b]fluoranthene	M	2790	mg/kg	0.50			< 0.50				
Benzo[k]fluoranthene	M	2790	mg/kg	0.50			< 0.50				
Benzo[a]pyrene	M	2790	mg/kg	0.50			< 0.50				
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50			< 0.50				
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50			< 0.50				
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50			< 0.50				
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.18	< 0.10	0.20	< 0.10	0.24	< 0.10	0.27
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.41	< 0.10	0.34	< 0.10	0.26	< 0.10	0.38
Pyrene	M	2800	mg/kg	0.10	0.43	< 0.10	0.29	< 0.10	0.21	< 0.10	0.37
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.21	< 0.10	0.15	< 0.10	0.16	< 0.10	0.27
Chrysene	M	2800	mg/kg	0.10	0.23	< 0.10	0.18	< 0.10	0.20	< 0.10	0.28
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.39	< 0.10	0.28	< 0.10	0.28	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.12	< 0.10	0.11	< 0.10	0.13	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.37	< 0.10	0.18	< 0.10	0.19	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.16	< 0.10	0.26	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10	< 0.10

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191643	1191644	1191645	1191646	1191647	1191648	1191649	1191650	
		Client Sample ID.:		ES1	ES4	ES1	ES2	ES1	ES1	ES3	ES1	
		Sample Location:		TP01	TP01	TP02	TP02	TP03	TP04	TP04	TP05	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.20	3.20	0.50	1.50	1.00	0.40	2.50	0.30	
		Bottom Depth (m):		0.40	3.50	0.70	1.70	1.20	0.60	2.70	0.50	
		Date Sampled:		20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	20-Apr-2021	
		Asbestos Lab:		DURHAM		DURHAM		DURHAM	DURHAM		DURHAM	
Determinand	Accred.	SOP	Units	LOD								
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.18	< 0.10	0.21	< 0.10	< 0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	2.3	< 2.0	2.1	< 2.0	2.4	< 2.0	< 2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A			None Detected					
VOC TIC	N	2760	µg/kg	N/A			None Detected					

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191651	1191652	1191653	1191654	1191655	1191656	1191657	1191658	1191658
Client Sample ID.:		ES4	ES1	ES2	ES1	ES3	ES1	ES4	ES1	ES4	ES1	ES1
Sample Location:		TP05	TP07	TP07	TP08	TP08	TP09	TP09	TP09	TP09	TP10	TP10
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		2.80	0.50	1.40	0.20	2.50	0.50	3.50	0.50	3.50	0.50	0.50
Bottom Depth (m):		3.00	0.70	1.60	0.50	2.70	0.50	3.70	0.50	3.70	0.70	0.70
Date Sampled:		20-Apr-2021	21-Apr-2021	21-Apr-2021	20-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021
Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	10	7.9	16	5.4	9.4	6.0	17	6.8
Glycols	N	2780	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dioxin (Subcon)	S		ng/kg	N/A	See Attached						See Attached	See Attached
Dioxins, Furans & Dioxin like PCBs(Sub)	S		mg/kg	N/A	See Attached						See Attached	See Attached
Furans (Subcon)	S		ng/kg	N/A	See Attached						See Attached	See Attached
pH	M	2010		4.0	8.5	9.6	8.6	8.5	8.1	8.7	7.2	8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	0.48	< 0.40	0.41	< 0.40	< 0.40	< 0.40
Arsenic	M	2450	mg/kg	1.0	24	11	6.6	14	19	19	14	< 1.0
Barium	M	2450	mg/kg	10	68	77	39	55	94	18	51	30
Cadmium	M	2450	mg/kg	0.10	0.36	0.25	0.26	0.27	1.3	0.70	0.32	< 0.10
Chromium	M	2450	mg/kg	1.0	19	21	22	20	26	4.1	18	10
Mercury Low Level	M	2450	mg/kg	0.05	0.29	0.23	0.08	0.31	0.48	< 0.05	0.32	< 0.05
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	3.2	2.7	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	65	25	28	44	48	9.4	27	2.4
Nickel	M	2450	mg/kg	0.50	29	26	29	32	36	8.8	26	23
Lead	M	2450	mg/kg	0.50	66	26	30	39	130	17	58	6.2
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.20	< 0.20	0.33	< 0.20
Zinc	M	2450	mg/kg	0.50	130	84	110	90	340	47	85	49
Chromium (Trivalent)	N	2490	mg/kg	1.0	19	21	22	20	26	4.1	18	10
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
LOI	M	2610	%	0.10	3.6	2.3	4.5	1.8	4.4	0.44	5.9	1.8
Mineral Oil	N	2670	mg/kg	10	< 10	< 10	< 10	< 10	130	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191651	1191652	1191653	1191654	1191655	1191656	1191657	1191658	1191658
Client Sample ID.:		ES4	ES1	ES2	ES1	ES3	ES1	ES4	ES1	ES4	ES1	ES1
Sample Location:		TP05	TP07	TP07	TP08	TP08	TP09	TP09	TP09	TP09	TP10	TP10
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		2.80	0.50	1.40	0.20	2.50	0.50	3.50	0.50	3.50	0.50	0.50
Bottom Depth (m):		3.00	0.70	1.60	0.50	2.70	0.50	3.70	0.50	3.70	0.70	0.70
Date Sampled:		20-Apr-2021	21-Apr-2021	21-Apr-2021	20-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021
Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	84	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	84	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	220	< 10	< 10	< 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Chloromethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Bromomethane	M	2760	µg/kg	20	< 20		< 20			< 20	< 20	< 20
Chloroethane	U	2760	µg/kg	2.0	< 2.0		< 2.0			< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Bromochloromethane	U	2760	µg/kg	5.0	< 5.0		< 5.0			< 5.0	< 5.0	< 5.0
Trichloromethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Tetrachloromethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0	< 2.0		< 2.0			< 2.0	< 2.0	< 2.0
Trichloroethene	N	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Dibromomethane	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0	< 5.0		< 5.0			< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	N	2760	µg/kg	10	< 10		< 10			< 10	< 10	< 10
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10	< 10		< 10			< 10	< 10	< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10	< 10		< 10			< 10	< 10	< 10
Tetrachloroethene	M	2760	µg/kg	1.0	< 1.0		< 1.0			< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0	< 2.0		< 2.0			< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	2760	µg/kg	10	< 10		< 10			< 10	< 10	< 10

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191651	1191652	1191653	1191654	1191655	1191656	1191657	1191658	1191658
Client Sample ID.:		ES4	ES1	ES2	ES1	ES3	ES1	ES4	ES1	ES4	ES1	ES1
Sample Location:		TP05	TP07	TP07	TP08	TP08	TP09	TP09	TP09	TP09	TP10	TP10
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		2.80	0.50	1.40	0.20	2.50	0.50	3.50	0.50	3.50	0.50	0.50
Bottom Depth (m):		3.00	0.70	1.60	0.50	2.70	0.50	3.70	0.50	3.70	0.70	0.70
Date Sampled:		20-Apr-2021	21-Apr-2021	21-Apr-2021	20-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021
Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
1,2-Dibromoethane	M	2760	µg/kg	5.0	< 5.0			< 5.0			< 5.0	< 5.0
Chlorobenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0	< 2.0			< 2.0			< 2.0	< 2.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
Tribromomethane	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
Bromobenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50	< 50			< 50			< 50	< 50
N-Propylbenzene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50	< 50			< 50			< 50	< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0	< 1.0			< 1.0			< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0	< 2.0			< 2.0			< 2.0	< 2.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Phenol	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191651	1191652	1191653	1191654	1191655	1191656	1191657	1191658
	Client Sample ID.:	ES4	ES1	ES2	ES1	ES3	ES1	ES4	ES1		
	Sample Location:	TP05	TP07	TP07	TP08	TP08	TP09	TP09	TP10		
	Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
	Top Depth (m):	2.80	0.50	1.40	0.20	2.50	0.50	3.50	0.50		
	Bottom Depth (m):	3.00	0.70	1.60	0.50	2.70	0.50	3.70	0.70		
	Date Sampled:	20-Apr-2021	21-Apr-2021	21-Apr-2021	20-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021
	Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD							
1,3-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2-Methylphenol	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
4-Methylphenol	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Nitrobenzene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Isophorone	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Naphthalene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
4-Nitrophenol	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Acenaphthylene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Acenaphthene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
3-Nitroaniline	N	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Dibenzofuran	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Fluorene	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50	< 0.50		< 0.50			< 0.50	< 0.50

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191651	1191652	1191653	1191654	1191655	1191656	1191657	1191658	1191658
Client Sample ID.:		ES4	ES1	ES2	ES1	ES3	ES1	ES4	ES1	ES4	ES1	ES1
Sample Location:		TP05	TP07	TP07	TP08	TP08	TP09	TP09	TP09	TP09	TP10	TP10
Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		2.80	0.50	1.40	0.20	2.50	0.50	3.50	0.50	3.50	0.50	0.50
Bottom Depth (m):		3.00	0.70	1.60	0.50	2.70	0.50	3.70	0.50	3.70	0.70	0.70
Date Sampled:		20-Apr-2021	21-Apr-2021	21-Apr-2021	20-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021
Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Azobenzene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Hexachlorobenzene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Phenanthrene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Anthracene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Carbazole	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Fluoranthene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Pyrene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Butylbenzyl Phthalate	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Chrysene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Benzo[k]fluoranthene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Benzo[a]pyrene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50	< 0.50			< 0.50			< 0.50	< 0.50
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.31	0.23	< 0.10	0.55	0.38	< 0.10	0.26	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.32	0.17	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.65	0.28	< 0.10	1.4	0.89	< 0.10	0.40	< 0.10
Pyrene	M	2800	mg/kg	0.10	0.56	0.36	< 0.10	1.1	0.69	< 0.10	0.29	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.32	< 0.10	< 0.10	0.75	0.39	< 0.10	0.21	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	0.88	0.44	< 0.10	0.33	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.53	< 0.10	< 0.10	1.0	0.64	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.31	< 0.10	< 0.10	0.65	0.26	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.49	< 0.10	< 0.10	0.99	0.58	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.60	< 0.10	< 0.10	1.1	0.52	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379	21-14379
Quotation No.: Q20-22417		Chemtest Sample ID.:		1191651	1191652	1191653	1191654	1191655	1191656	1191657	1191658	1191658
		Client Sample ID.:		ES4	ES1	ES2	ES1	ES3	ES1	ES4	ES1	ES1
		Sample Location:		TP05	TP07	TP07	TP08	TP08	TP09	TP09	TP10	TP10
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		2.80	0.50	1.40	0.20	2.50	0.50	3.50	0.50	0.50
		Bottom Depth (m):		3.00	0.70	1.60	0.50	2.70	0.50	3.70	0.70	0.70
		Date Sampled:		20-Apr-2021	21-Apr-2021	21-Apr-2021	20-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021	21-Apr-2021
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.36	< 0.10	< 0.10	0.77	0.38	< 0.10	< 0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	4.5	< 2.0	< 2.0	9.9	5.3	< 2.0	< 2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 52	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A	None Detected		None Detected				None Detected	None Detected
VOC TIC	N	2760	µg/kg	N/A	None Detected		None Detected				None Detected	None Detected

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:				21-14379
Quotation No.: Q20-22417	Chemtest Sample ID.:				1191659
	Client Sample ID.:				ES2
	Sample Location:				TP10
	Sample Type:				SOIL
	Top Depth (m):				1.50
	Bottom Depth (m):				1.70
	Date Sampled:				21-Apr-2021
	Asbestos Lab:				DURHAM
Determinand	Accred.	SOP	Units	LOD	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-
Moisture	N	2030	%	0.020	8.7
Glycols	N	2780	mg/kg	1.0	< 1.0
Dioxin (Subcon)	S		ng/kg	N/A	
Dioxins, Furans & Dioxin like PCBs(Sub)	S		mg/kg	N/A	
Furans (Subcon)	S		ng/kg	N/A	
pH	M	2010		4.0	8.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40
Arsenic	M	2450	mg/kg	1.0	2.2
Barium	M	2450	mg/kg	10	33
Cadmium	M	2450	mg/kg	0.10	0.13
Chromium	M	2450	mg/kg	1.0	17
Mercury Low Level	M	2450	mg/kg	0.05	< 0.05
Molybdenum	M	2450	mg/kg	2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0
Copper	M	2450	mg/kg	0.50	5.8
Nickel	M	2450	mg/kg	0.50	39
Lead	M	2450	mg/kg	0.50	9.0
Selenium	M	2450	mg/kg	0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	84
Chromium (Trivalent)	N	2490	mg/kg	1.0	17
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
LOI	M	2610	%	0.10	2.0
Mineral Oil	N	2670	mg/kg	10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:		21-14379		
Quotation No.: Q20-22417	Chemtest Sample ID.:		1191659		
	Client Sample ID.:		ES2		
	Sample Location:		TP10		
	Sample Type:		SOIL		
	Top Depth (m):		1.50		
	Bottom Depth (m):		1.70		
	Date Sampled:		21-Apr-2021		
	Asbestos Lab:		DURHAM		
Determinand	Accred.	SOP	Units	LOD	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10
Dichlorodifluoromethane	U	2760	µg/kg	1.0	
Chloromethane	M	2760	µg/kg	1.0	
Vinyl Chloride	M	2760	µg/kg	1.0	
Bromomethane	M	2760	µg/kg	20	
Chloroethane	U	2760	µg/kg	2.0	
Trichlorofluoromethane	M	2760	µg/kg	1.0	
1,1-Dichloroethene	M	2760	µg/kg	1.0	
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0	
1,1-Dichloroethane	M	2760	µg/kg	1.0	
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0	
Bromochloromethane	U	2760	µg/kg	5.0	
Trichloromethane	M	2760	µg/kg	1.0	
1,1,1-Trichloroethane	M	2760	µg/kg	1.0	
Tetrachloromethane	M	2760	µg/kg	1.0	
1,1-Dichloropropene	U	2760	µg/kg	1.0	
Benzene	M	2760	µg/kg	1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0	
Trichloroethene	N	2760	µg/kg	1.0	
1,2-Dichloropropane	M	2760	µg/kg	1.0	
Dibromomethane	M	2760	µg/kg	1.0	
Bromodichloromethane	M	2760	µg/kg	5.0	
cis-1,3-Dichloropropene	N	2760	µg/kg	10	
Toluene	M	2760	µg/kg	1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10	
1,1,2-Trichloroethane	M	2760	µg/kg	10	
Tetrachloroethene	M	2760	µg/kg	1.0	
1,3-Dichloropropane	U	2760	µg/kg	2.0	
Dibromochloromethane	U	2760	µg/kg	10	

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:				21-14379
Quotation No.: Q20-22417	Chemtest Sample ID.:				1191659
	Client Sample ID.:				ES2
	Sample Location:				TP10
	Sample Type:				SOIL
	Top Depth (m):				1.50
	Bottom Depth (m):				1.70
	Date Sampled:				21-Apr-2021
	Asbestos Lab:				DURHAM
Determinand	Accred.	SOP	Units	LOD	
1,2-Dibromoethane	M	2760	µg/kg	5.0	
Chlorobenzene	M	2760	µg/kg	1.0	
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0	
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Styrene	M	2760	µg/kg	1.0	
Tribromomethane	U	2760	µg/kg	1.0	
Isopropylbenzene	M	2760	µg/kg	1.0	
Bromobenzene	M	2760	µg/kg	1.0	
1,2,3-Trichloropropane	N	2760	µg/kg	50	
N-Propylbenzene	U	2760	µg/kg	1.0	
2-Chlorotoluene	M	2760	µg/kg	1.0	
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0	
4-Chlorotoluene	U	2760	µg/kg	1.0	
Tert-Butylbenzene	U	2760	µg/kg	1.0	
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0	
Sec-Butylbenzene	U	2760	µg/kg	1.0	
1,3-Dichlorobenzene	M	2760	µg/kg	1.0	
4-Isopropyltoluene	U	2760	µg/kg	1.0	
1,4-Dichlorobenzene	M	2760	µg/kg	1.0	
N-Butylbenzene	U	2760	µg/kg	1.0	
1,2-Dichlorobenzene	M	2760	µg/kg	1.0	
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50	
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0	
Hexachlorobutadiene	U	2760	µg/kg	1.0	
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Propylene Glycol	N	2780	mg/kg	0.10	< 0.10
Ethylene Glycol	N	2780	mg/kg	0.10	< 0.10
Butylene Glycol	N	2780	mg/kg	0.10	< 0.10
Diethylene Glycol	N	2780	mg/kg	0.10	< 0.10
Triethylene Glycol	N	2780	mg/kg	0.10	< 0.10
N-Nitrosodimethylamine	M	2790	mg/kg	0.50	
Phenol	M	2790	mg/kg	0.50	
2-Chlorophenol	M	2790	mg/kg	0.50	
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50	

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:			21-14379
Quotation No.: Q20-22417	Chemtest Sample ID.:			1191659
	Client Sample ID.:			ES2
	Sample Location:			TP10
	Sample Type:			SOIL
	Top Depth (m):			1.50
	Bottom Depth (m):			1.70
	Date Sampled:			21-Apr-2021
	Asbestos Lab:			DURHAM
Determinand	Accred.	SOP	Units	LOD
1,3-Dichlorobenzene	M	2790	mg/kg	0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50
2-Methylphenol	M	2790	mg/kg	0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50
Hexachloroethane	N	2790	mg/kg	0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50
4-Methylphenol	M	2790	mg/kg	0.50
Nitrobenzene	M	2790	mg/kg	0.50
Isophorone	M	2790	mg/kg	0.50
2-Nitrophenol	N	2790	mg/kg	0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50
Naphthalene	M	2790	mg/kg	0.50
4-Chloroaniline	N	2790	mg/kg	0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50
4-Nitrophenol	N	2790	mg/kg	0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50
2-Nitroaniline	M	2790	mg/kg	0.50
Acenaphthylene	M	2790	mg/kg	0.50
Dimethylphthalate	M	2790	mg/kg	0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50
Acenaphthene	M	2790	mg/kg	0.50
3-Nitroaniline	N	2790	mg/kg	0.50
Dibenzofuran	M	2790	mg/kg	0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50
Fluorene	M	2790	mg/kg	0.50
Diethyl Phthalate	M	2790	mg/kg	0.50
4-Nitroaniline	M	2790	mg/kg	0.50

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:				21-14379
Quotation No.: Q20-22417	Chemtest Sample ID.:				1191659
	Client Sample ID.:				ES2
	Sample Location:				TP10
	Sample Type:				SOIL
	Top Depth (m):				1.50
	Bottom Depth (m):				1.70
	Date Sampled:				21-Apr-2021
	Asbestos Lab:				DURHAM
Determinand	Accred.	SOP	Units	LOD	
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	
Azobenzene	M	2790	mg/kg	0.50	
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	
Hexachlorobenzene	M	2790	mg/kg	0.50	
Pentachlorophenol	N	2790	mg/kg	0.50	
Phenanthrene	M	2790	mg/kg	0.50	
Anthracene	M	2790	mg/kg	0.50	
Carbazole	M	2790	mg/kg	0.50	
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50	
Fluoranthene	M	2790	mg/kg	0.50	
Pyrene	M	2790	mg/kg	0.50	
Butylbenzyl Phthalate	M	2790	mg/kg	0.50	
Benzo[a]anthracene	M	2790	mg/kg	0.50	
Chrysene	M	2790	mg/kg	0.50	
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50	
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50	
Benzo[b]fluoranthene	M	2790	mg/kg	0.50	
Benzo[k]fluoranthene	M	2790	mg/kg	0.50	
Benzo[a]pyrene	M	2790	mg/kg	0.50	
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50	
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50	
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50	
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10

Results - Soil

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd	Chemtest Job No.:		21-14379		
Quotation No.: Q20-22417	Chemtest Sample ID.:		1191659		
	Client Sample ID.:		ES2		
	Sample Location:		TP10		
	Sample Type:		SOIL		
	Top Depth (m):		1.50		
	Bottom Depth (m):		1.70		
	Date Sampled:		21-Apr-2021		
	Asbestos Lab:		DURHAM		
Determinand	Accred.	SOP	Units	LOD	
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Coronene	N	2800	mg/kg	0.10	< 0.10
Total Of 17 PAH's	N	2800	mg/kg	2.0	< 2.0
PCB 28	U	2815	mg/kg	0.010	< 0.010
PCB 52	U	2815	mg/kg	0.010	< 0.010
PCB 90+101	U	2815	mg/kg	0.010	< 0.010
PCB 118	U	2815	mg/kg	0.010	< 0.010
PCB 153	U	2815	mg/kg	0.010	< 0.010
PCB 138	U	2815	mg/kg	0.010	< 0.010
PCB 180	U	2815	mg/kg	0.010	< 0.010
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10	< 0.10
SVOC TIC	N	2790	mg/kg	N/A	
VOC TIC	N	2760	µg/kg	N/A	

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191643							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP01							
Top Depth(m): 0.20							
Bottom Depth(m): 0.40				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0014	0.014	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.039	0.39	0.5	10	70
Copper	1455	U	0.0027	0.027	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0011	0.011	0.5	10	30
Nickel	1455	U	0.017	0.17	0.4	10	40
Lead	1455	U	0.0035	0.035	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0010	0.0098	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.12	1.2	10	150	500
Sulphate	1220	U	4.9	49	1000	20000	50000
Total Dissolved Solids	1020	N	16	160	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.3	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits					
Chemtest Sample ID: 1191644									
Sample Ref:									
Sample ID: ES4									
Sample Location: TP01									
Top Depth(m): 3.20									
Bottom Depth(m): 3.50				Inert Waste Landfill		Stable, Non-reactive hazardous waste in non-hazardous Landfill		Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021									
Determinand	SOP	Accred.	Units						
Total Organic Carbon					3	5	6		
Loss on Ignition					--	--	10		
Total BTEX					6	--	--		
Total PCBs (7 congeners)					1	--	--		
TPH Total WAC (Mineral Oil)					500	--	--		
Total (of 17) PAHs					100	--	--		
pH					--	>6	--		
Acid Neutralisation Capacity					--	To evaluate	To evaluate		
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg				
Arsenic	1455	U	0.0010	0.010	0.5	2	25		
Barium	1455	U	< 0.005	< 0.0005	20	100	300		
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5		
Chromium	1455	U	0.028	0.28	0.5	10	70		
Copper	1455	U	0.0019	0.019	2	50	100		
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2		
Molybdenum	1455	U	0.0018	0.018	0.5	10	30		
Nickel	1455	U	0.013	0.13	0.4	10	40		
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50		
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5		
Selenium	1455	U	0.0009	0.0086	0.1	0.5	7		
Zinc	1455	U	< 0.003	< 0.003	4	50	200		
Chloride	1220	U	< 1.0	< 10	800	15000	25000		
Fluoride	1220	U	0.13	1.3	10	150	500		
Sulphate	1220	U	4.0	40	1000	20000	50000		
Total Dissolved Solids	1020	N	59	590	4000	60000	100000		
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-		
Dissolved Organic Carbon	1610	U	2.6	< 50	500	800	1000		

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	8.8

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191645							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP02							
Top Depth(m): 0.50							
Bottom Depth(m): 0.70				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0027	0.027	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.033	0.33	0.5	10	70
Copper	1455	U	0.0025	0.025	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0022	0.023	0.5	10	30
Nickel	1455	U	0.015	0.15	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.17	1.7	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	49	490	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.9	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191646							
Sample Ref:							
Sample ID: ES2							
Sample Location: TP02							
Top Depth(m): 1.50							
Bottom Depth(m): 1.70				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0023	0.023	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.052	0.52	0.5	10	70
Copper	1455	U	0.0031	0.031	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0025	0.025	0.5	10	30
Nickel	1455	U	0.024	0.24	0.4	10	40
Lead	1455	U	0.0008	0.0082	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.13	1.3	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	43	430	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.4	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379							
Chemtest Sample ID: 1191647							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP03							
Top Depth(m): 1.00				Landfill Waste Acceptance Criteria Limits			
Bottom Depth(m): 1.20							
Sampling Date: 20-Apr-2021				Inert Waste Landfill		Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Determinand	SOP	Accred.	Units				
Total Organic Carbon				3		5	6
Loss on Ignition				--		--	10
Total BTEX				6		--	--
Total PCBs (7 congeners)				1		--	--
TPH Total WAC (Mineral Oil)				500		--	--
Total (of 17) PAHs				100		--	--
pH				--		>6	--
Acid Neutralisation Capacity				--		To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0041	0.041	0.5	2	25
Barium	1455	U	0.008	0.085	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.050	0.50	0.5	10	70
Copper	1455	U	0.0086	0.086	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0029	0.029	0.5	10	30
Nickel	1455	U	0.023	0.23	0.4	10	40
Lead	1455	U	0.0060	0.060	0.5	10	50
Antimony	1455	U	0.0014	0.014	0.06	0.7	5
Selenium	1455	U	0.0011	0.011	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.7	17	800	15000	25000
Fluoride	1220	U	0.14	1.4	10	150	500
Sulphate	1220	U	5.0	50	1000	20000	50000
Total Dissolved Solids	1020	N	31	310	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	8.4	84	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits					
Chemtest Sample ID: 1191648									
Sample Ref:									
Sample ID: ES1									
Sample Location: TP04									
Top Depth(m): 0.40									
Bottom Depth(m): 0.60				Inert Waste Landfill		Stable, Non-reactive hazardous waste in non-hazardous Landfill		Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021									
Determinand	SOP	Accred.	Units						
Total Organic Carbon					3	5	6		
Loss on Ignition					--	--	10		
Total BTEX					6	--	--		
Total PCBs (7 congeners)					1	--	--		
TPH Total WAC (Mineral Oil)					500	--	--		
Total (of 17) PAHs					100	--	--		
pH					--	>6	--		
Acid Neutralisation Capacity					--	To evaluate	To evaluate		
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg				
Arsenic	1455	U	0.0032	0.032	0.5	2	25		
Barium	1455	U	< 0.005	< 0.0005	20	100	300		
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5		
Chromium	1455	U	0.047	0.47	0.5	10	70		
Copper	1455	U	0.022	0.22	2	50	100		
Mercury	1455	U	0.00007	0.00066	0.01	0.2	2		
Molybdenum	1455	U	0.0042	0.042	0.5	10	30		
Nickel	1455	U	0.015	0.15	0.4	10	40		
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50		
Antimony	1455	U	0.0016	0.016	0.06	0.7	5		
Selenium	1455	U	0.0021	0.021	0.1	0.5	7		
Zinc	1455	U	< 0.003	< 0.003	4	50	200		
Chloride	1220	U	1.2	12	800	15000	25000		
Fluoride	1220	U	0.29	2.9	10	150	500		
Sulphate	1220	U	19	190	1000	20000	50000		
Total Dissolved Solids	1020	N	310	3100	4000	60000	100000		
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-		
Dissolved Organic Carbon	1610	U	6.5	65	500	800	1000		

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	8.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191649							
Sample Ref:							
Sample ID: ES3							
Sample Location: TP04							
Top Depth(m): 2.50				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m): 2.70							
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0034	0.034	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.032	0.32	0.5	10	70
Copper	1455	U	0.0058	0.058	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0016	0.016	0.5	10	30
Nickel	1455	U	0.016	0.16	0.4	10	40
Lead	1455	U	0.0044	0.045	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0006	0.0060	0.1	0.5	7
Zinc	1455	U	0.008	0.081	4	50	200
Chloride	1220	U	1.6	16	800	15000	25000
Fluoride	1220	U	0.12	1.2	10	150	500
Sulphate	1220	U	1.1	11	1000	20000	50000
Total Dissolved Solids	1020	N	35	350	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	5.0	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191650							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP05							
Top Depth(m): 0.30							
Bottom Depth(m): 0.50				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0006	0.0062	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.038	0.38	0.5	10	70
Copper	1455	U	0.0018	0.018	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0013	0.013	0.5	10	30
Nickel	1455	U	0.017	0.17	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.13	1.3	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	36	360	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	< 2.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	7.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191651							
Sample Ref:							
Sample ID: ES4							
Sample Location: TP05							
Top Depth(m): 2.80				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Bottom Depth(m): 3.00							
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0057	0.057	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.046	0.46	0.5	10	70
Copper	1455	U	0.0050	0.051	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0019	0.019	0.5	10	30
Nickel	1455	U	0.020	0.20	0.4	10	40
Lead	1455	U	0.0006	0.0057	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.0	10	800	15000	25000
Fluoride	1220	U	0.18	1.8	10	150	500
Sulphate	1220	U	4.5	45	1000	20000	50000
Total Dissolved Solids	1020	N	59	580	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.2	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191652							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP07							
Sampling Date: 21-Apr-2021							
Top Depth(m):	0.50						
Bottom Depth(m):	0.70						
Determinand	SOP	Accred.	Units		Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0041	0.041	0.5	2	25
Barium	1455	U	0.005	0.051	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.080	0.80	0.5	10	70
Copper	1455	U	0.0067	0.067	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0027	0.027	0.5	10	30
Nickel	1455	U	0.037	0.37	0.4	10	40
Lead	1455	U	0.0011	0.011	0.5	10	50
Antimony	1455	U	0.0011	0.011	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.3	13	800	15000	25000
Fluoride	1220	U	0.14	1.4	10	150	500
Sulphate	1220	U	15	150	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.8	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	7.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits					
Chemtest Sample ID: 1191653									
Sample Ref:									
Sample ID: ES2									
Sample Location: TP07									
Top Depth(m): 1.40									
Bottom Depth(m): 1.60				Inert Waste Landfill		Stable, Non-reactive hazardous waste in non-hazardous Landfill		Hazardous Waste Landfill	
Sampling Date: 21-Apr-2021									
Determinand	SOP	Accred.	Units						
Total Organic Carbon					3	5	6		
Loss on Ignition					--	--	10		
Total BTEX					6	--	--		
Total PCBs (7 congeners)					1	--	--		
TPH Total WAC (Mineral Oil)					500	--	--		
Total (of 17) PAHs					100	--	--		
pH					--	>6	--		
Acid Neutralisation Capacity					--	To evaluate	To evaluate		
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg				
Arsenic	1455	U	0.0027	0.027	0.5	2	25		
Barium	1455	U	0.006	0.062	20	100	300		
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5		
Chromium	1455	U	0.11	1.1	0.5	10	70		
Copper	1455	U	0.0074	0.074	2	50	100		
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2		
Molybdenum	1455	U	0.0035	0.035	0.5	10	30		
Nickel	1455	U	0.048	0.48	0.4	10	40		
Lead	1455	U	0.0017	0.017	0.5	10	50		
Antimony	1455	U	0.0007	0.0068	0.06	0.7	5		
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7		
Zinc	1455	U	< 0.003	< 0.003	4	50	200		
Chloride	1220	U	1.9	19	800	15000	25000		
Fluoride	1220	U	0.12	1.2	10	150	500		
Sulphate	1220	U	7.0	70	1000	20000	50000		
Total Dissolved Solids	1020	N	78	780	4000	60000	100000		
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-		
Dissolved Organic Carbon	1610	U	7.3	73	500	800	1000		

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	16

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191654							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP08							
Top Depth(m): 0.20							
Bottom Depth(m): 0.50				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 20-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0010	0.010	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.13	1.3	0.5	10	70
Copper	1455	U	0.0076	0.076	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0035	0.035	0.5	10	30
Nickel	1455	U	0.054	0.54	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.1	11	800	15000	25000
Fluoride	1220	U	0.13	1.3	10	150	500
Sulphate	1220	U	7.3	73	1000	20000	50000
Total Dissolved Solids	1020	N	62	620	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.5	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	5.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191655							
Sample Ref:							
Sample ID: ES3							
Sample Location: TP08							
Top Depth(m): 2.50							
Bottom Depth(m): 2.70							
Sampling Date: 21-Apr-2021							
Determinand	SOP	Accred.	Units		Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0015	0.015	0.5	2	25
Barium	1455	U	0.033	0.33	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.080	0.80	0.5	10	70
Copper	1455	U	0.0038	0.038	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0029	0.029	0.5	10	30
Nickel	1455	U	0.034	0.34	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0005	0.0051	0.06	0.7	5
Selenium	1455	U	0.0012	0.012	0.1	0.5	7
Zinc	1455	U	0.005	0.048	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.078	< 1.0	10	150	500
Sulphate	1220	U	1300	13000	1000	20000	50000
Total Dissolved Solids	1020	N	1300	13000	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.1	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	9.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191656							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP09							
Top Depth(m): 0.50							
Bottom Depth(m): 0.50				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 21-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0020	0.020	0.5	2	25
Barium	1455	U	0.006	0.061	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.13	1.3	0.5	10	70
Copper	1455	U	0.014	0.14	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0044	0.044	0.5	10	30
Nickel	1455	U	0.054	0.54	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0011	0.011	0.06	0.7	5
Selenium	1455	U	0.0006	0.0057	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.16	1.6	10	150	500
Sulphate	1220	U	26	260	1000	20000	50000
Total Dissolved Solids	1020	N	200	1900	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.0	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits					
Chemtest Sample ID: 1191657									
Sample Ref:									
Sample ID: ES4									
Sample Location: TP09									
Top Depth(m): 3.50									
Bottom Depth(m): 3.70				Inert Waste Landfill		Stable, Non-reactive hazardous waste in non-hazardous Landfill		Hazardous Waste Landfill	
Sampling Date: 21-Apr-2021									
Determinand	SOP	Accred.	Units						
Total Organic Carbon					3	5	6		
Loss on Ignition					--	--	10		
Total BTEX					6	--	--		
Total PCBs (7 congeners)					1	--	--		
TPH Total WAC (Mineral Oil)					500	--	--		
Total (of 17) PAHs					100	--	--		
pH					--	>6	--		
Acid Neutralisation Capacity					--	To evaluate	To evaluate		
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg				
Arsenic	1455	U	0.0036	0.036	0.5	2	25		
Barium	1455	U	0.005	0.050	20	100	300		
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5		
Chromium	1455	U	0.068	0.68	0.5	10	70		
Copper	1455	U	0.0065	0.065	2	50	100		
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2		
Molybdenum	1455	U	0.0036	0.036	0.5	10	30		
Nickel	1455	U	0.031	0.31	0.4	10	40		
Lead	1455	U	0.0066	0.066	0.5	10	50		
Antimony	1455	U	0.0019	0.019	0.06	0.7	5		
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7		
Zinc	1455	U	< 0.003	< 0.003	4	50	200		
Chloride	1220	U	1.7	17	800	15000	25000		
Fluoride	1220	U	0.13	1.3	10	150	500		
Sulphate	1220	U	7.0	70	1000	20000	50000		
Total Dissolved Solids	1020	N	52	520	4000	60000	100000		
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-		
Dissolved Organic Carbon	1610	U	7.0	70	500	800	1000		

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	17

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID: 1191658							
Sample Ref:							
Sample ID: ES1							
Sample Location: TP10							
Top Depth(m): 0.50							
Bottom Depth(m): 0.70				Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sampling Date: 21-Apr-2021							
Determinand	SOP	Accred.	Units				
Total Organic Carbon					3	5	6
Loss on Ignition					--	--	10
Total BTEX					6	--	--
Total PCBs (7 congeners)					1	--	--
TPH Total WAC (Mineral Oil)					500	--	--
Total (of 17) PAHs					100	--	--
pH					--	>6	--
Acid Neutralisation Capacity					--	To evaluate	To evaluate
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0010	0.010	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5
Chromium	1455	U	0.060	0.60	0.5	10	70
Copper	1455	U	0.0023	0.023	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0016	0.016	0.5	10	30
Nickel	1455	U	0.026	0.26	0.4	10	40
Lead	1455	U	0.0006	0.0060	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.13	1.3	10	150	500
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020	N	22	210	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.2	< 50	500	800	1000

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	6.8

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P21076 Creamfields

Chemtest Job No: 21-14379				Landfill Waste Acceptance Criteria Limits						
Chemtest Sample ID: 1191659										
Sample Ref:										
Sample ID: ES2										
Sample Location: TP10										
Top Depth(m): 1.50										
Bottom Depth(m): 1.70				Inert Waste Landfill			Stable, Non-reactive hazardous waste in non-hazardous Landfill		Hazardous Waste Landfill	
Sampling Date: 21-Apr-2021										
Determinand	SOP	Accred.	Units							
Total Organic Carbon					3	5	6			
Loss on Ignition					--	--	10			
Total BTEX					6	--	--			
Total PCBs (7 congeners)					1	--	--			
TPH Total WAC (Mineral Oil)					500	--	--			
Total (of 17) PAHs					100	--	--			
pH					--	>6	--			
Acid Neutralisation Capacity					--	To evaluate	To evaluate			
Eluate Analysis			10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg					
Arsenic	1455	U	0.0010	0.010	0.5	2	25			
Barium	1455	U	< 0.005	< 0.0005	20	100	300			
Cadmium	1455	U	< 0.00012	< 0.0012	0.04	1	5			
Chromium	1455	U	0.051	0.51	0.5	10	70			
Copper	1455	U	0.010	0.10	2	50	100			
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2			
Molybdenum	1455	U	0.0013	0.013	0.5	10	30			
Nickel	1455	U	0.024	0.24	0.4	10	40			
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50			
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5			
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7			
Zinc	1455	U	0.005	0.050	4	50	200			
Chloride	1220	U	5.7	57	800	15000	25000			
Fluoride	1220	U	0.10	1.0	10	150	500			
Sulphate	1220	U	< 1.0	< 10	1000	20000	50000			
Total Dissolved Solids	1020	N	45	450	4000	60000	100000			
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-			
Dissolved Organic Carbon	1610	U	3.8	< 50	500	800	1000			

Solid Information

Dry mass of test portion/kg	0.090
Moisture (%)	8.7

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity 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.
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).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
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.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2780	Glycols, Aldehydes, Amines, Ethers and Ketones	Glycols, Aldehydes, Amines, Ethers and Ketones	GCMS detection
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil 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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7 Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	Compliance Test for Leaching of Granular Waste Material and Sludge

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-22783-1
Initial Date of Issue: 08-Jul-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P21076 Creamfields
Quotation No.: Q20-22417 **Date Received:** 02-Jul-2021
Order No.: 13694 **Date Instructed:** 02-Jul-2021
No. of Samples: 3
Turnaround (Wkdays): 5 **Results Due:** 08-Jul-2021
Date Approved: 08-Jul-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-22783	21-22783	21-22783
Quotation No.: Q20-22417		Chemtest Sample ID.:		1233409	1233410	1233411
		Sample Location:		BH1	BH6	BH9
		Sample Type:		WATER	WATER	WATER
		Date Sampled:		30-Jun-2021	30-Jun-2021	30-Jun-2021
Determinand	Accred.	SOP	Units	LOD		
Glycols	N		mg/l	0.10	< 0.10	< 0.10
Suspended Solids At 105C	U	1030	mg/l	5.0	10000	42
Total Dissolved Solids	N	1020	mg/l	1.0	1800	780
Biochemical Oxygen Demand Low Level	N	1090	mg O2/l	1.0	< 1.0	< 1.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	< 10	< 10
Alkalinity (Total)	U	1220	mg/l	10	430	450
Chloride	U	1220	mg/l	1.0	21	24
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.11	0.057
Nitrate	U	1220	mg/l	0.50	7.1	21
Phosphate	U	1220	mg/l	0.200	< 0.20	< 0.20
Sulphate	U	1220	mg/l	1.0	64	39
Calcium	U	1455	mg/l	2.00	77	98
Potassium	U	1455	mg/l	0.50	30	2.1
Magnesium	U	1455	mg/l	0.20	13	6.9
Sodium	U	1455	mg/l	1.50	130	34
Arsenic (Dissolved)	U	1455	µg/l	0.20	0.41	0.26
Barium (Dissolved)	U	1455	µg/l	5.00	22	7.5
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	0.14
Chromium (Dissolved)	U	1455	µg/l	0.50	5.1	7.2
Copper (Dissolved)	U	1455	µg/l	0.50	2.6	4.3
Iron (Dissolved)	N	1455	µg/l	5.0	< 5.0	< 5.0
Manganese (Dissolved)	U	1455	µg/l	0.50	100	65
Molybdenum (Dissolved)	U	1455	µg/l	0.20	4.6	3.2
Nickel (Dissolved)	U	1455	µg/l	0.50	12	23
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50
Selenium (Dissolved)	U	1455	µg/l	0.50	15	1.3
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5	< 2.5
Mercury Low Level	U	1460	µg/l	0.010	< 0.010	< 0.010
Chromium (Trivalent)	N	1490	µg/l	20	< 20	< 20
Low-Level Chromium (Hexavalent)	U	1495	µg/l	0.10	< 0.10	0.18
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-22783	21-22783	21-22783
Quotation No.: Q20-22417		Chemtest Sample ID.:		1233409	1233410	1233411
		Sample Location:		BH1	BH6	BH9
		Sample Type:		WATER	WATER	WATER
		Date Sampled:		30-Jun-2021	30-Jun-2021	30-Jun-2021
Determinand	Accred.	SOP	Units	LOD		
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-22783	21-22783	21-22783	
Quotation No.: Q20-22417		Chemtest Sample ID.:		1233409	1233410	1233411	
		Sample Location:		BH1	BH6	BH9	
		Sample Type:		WATER	WATER	WATER	
		Date Sampled:		30-Jun-2021	30-Jun-2021	30-Jun-2021	
Determinand	Accred.	SOP	Units	LOD			
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-22783	21-22783	21-22783
Quotation No.: Q20-22417		Chemtest Sample ID.:		1233409	1233410	1233411
		Sample Location:		BH1	BH6	BH9
		Sample Type:		WATER	WATER	WATER
		Date Sampled:		30-Jun-2021	30-Jun-2021	30-Jun-2021
Determinand	Accred.	SOP	Units	LOD		
Nitrobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-22783	21-22783	21-22783
Quotation No.: Q20-22417		Chemtest Sample ID.:		1233409	1233410	1233411
		Sample Location:		BH1	BH6	BH9
		Sample Type:		WATER	WATER	WATER
		Date Sampled:		30-Jun-2021	30-Jun-2021	30-Jun-2021
Determinand	Accred.	SOP	Units	LOD		
Chrysene	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
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.
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].
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.
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).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1495	Low Level Hexavalent Chromium in Waters	Chromium [VI]	Colorimetric determination of hexavalent chromium expressed as Cr (VI) µg/l in water, using Ion Chromatography and UV-visible spectrophotometry.
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5-C6, >C6-C8, >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35-C44 Aromatics: >C5-C7, >C7-C8, >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35-C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1780	Alcohols	Alcohols	GCMS detection
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

- 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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-25470-1
Initial Date of Issue: 29-Jul-2021
Client: Priority Geotechnical Ltd
Client Address: Unit 12
Owenacurra Business Park
Midleton
County Cork
Ireland
Contact(s): Colette Kelly
Project: P21076 Creamfields
Quotation No.: Q20-22417 **Date Received:** 23-Jul-2021
Order No.: 13692 **Date Instructed:** 23-Jul-2021
No. of Samples: 5
Turnaround (Wkdays): 5 **Results Due:** 29-Jul-2021
Date Approved: 29-Jul-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-25470	21-25470	21-25470	21-25470	21-25470
Quotation No.: Q20-22417		Chemtest Sample ID.:		1246983	1246984	1246985	1246986	1246987
		Sample Location:		BH7	BH6	BH1	BH8	BH9
		Sample Type:		WATER	WATER	WATER	WATER	WATER
		Date Sampled:		21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021
Determinand	Accred.	SOP	Units	LOD				
Glycols	N		mg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Suspended Solids At 105C	U	1030	mg/l	5.0	1500	58	43	1400
Total Dissolved Solids	N	1020	mg/l	1.0	470	440	450	460
Biochemical Oxygen Demand Low Level	N	1090	mg O2/l	1.0	< 1.0	10	< 1.0	< 1.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	28	35	14	15
Alkalinity (Total)	U	1220	mg/l	10	430	360	380	440
Chloride	U	1220	mg/l	1.0	15	22	22	13
Ammoniacal Nitrogen	U	1220	mg/l	0.050	9.3	0.39	0.16	2.4
Nitrate	U	1220	mg/l	0.50	< 0.50	16	9.1	< 0.50
Phosphate	U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20
Sulphate	U	1220	mg/l	1.0	< 1.0	38	52	< 1.0
Calcium	U	1455	mg/l	2.00	94	96	93	110
Potassium	U	1455	mg/l	0.50	5.7	2.6	5.6	5.7
Magnesium	U	1455	mg/l	0.20	10	7.4	10	6.2
Sodium	U	1455	mg/l	1.50	22	37	18	13
Arsenic (Dissolved)	U	1455	µg/l	0.20	1.9	0.79	1.1	0.66
Barium (Dissolved)	U	1455	µg/l	5.00	120	10	120	130
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	0.22	< 0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	3.2	3.7	< 0.50	< 0.50
Copper (Dissolved)	U	1455	µg/l	0.50	8.0	6.5	0.65	0.97
Iron (Dissolved)	N	1455	µg/l	5.0	1900	< 5.0	160	13
Manganese (Dissolved)	U	1455	µg/l	0.50	13000	350	14000	17000
Molybdenum (Dissolved)	U	1455	µg/l	0.20	28	31	14	3.6
Nickel (Dissolved)	U	1455	µg/l	0.50	28	30	24	9.9
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Selenium (Dissolved)	U	1455	µg/l	0.50	1.6	1.2	< 0.50	< 0.50
Zinc (Dissolved)	U	1455	µg/l	2.5	290	51	15	15
Mercury Low Level	U	1460	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chromium (Trivalent)	N	1490	µg/l	20	< 20	< 20	< 20	< 20
Low-Level Chromium (Hexavalent)	U	1495	µg/l	0.10	< 0.10	3.6	3.2	< 0.10
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-25470	21-25470	21-25470	21-25470	21-25470
Quotation No.: Q20-22417		Chemtest Sample ID.:		1246983	1246984	1246985	1246986	1246987
		Sample Location:		BH7	BH6	BH1	BH8	BH9
		Sample Type:		WATER	WATER	WATER	WATER	WATER
		Date Sampled:		21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021
Determinand	Accred.	SOP	Units	LOD				
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	< 10	< 10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5	< 5	< 5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5	< 5	< 5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10	< 10	< 10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10	< 10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10	< 10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10	< 10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10	< 10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5	< 5	< 5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-25470	21-25470	21-25470	21-25470	21-25470
Quotation No.: Q20-22417		Chemtest Sample ID.:		1246983	1246984	1246985	1246986	1246987
		Sample Location:		BH7	BH6	BH1	BH8	BH9
		Sample Type:		WATER	WATER	WATER	WATER	WATER
		Date Sampled:		21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021
Determinand	Accred.	SOP	Units	LOD				
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50	< 50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Propylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Ethylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Butylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Triethylene Glycol	N	1780	mg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-25470	21-25470	21-25470	21-25470	21-25470
Quotation No.: Q20-22417		Chemtest Sample ID.:		1246983	1246984	1246985	1246986	1246987
		Sample Location:		BH7	BH6	BH1	BH8	BH9
		Sample Type:		WATER	WATER	WATER	WATER	WATER
		Date Sampled:		21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021
Determinand	Accred.	SOP	Units	LOD				
Nitrobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50

Results - Water

Project: P21076 Creamfields

Client: Priority Geotechnical Ltd		Chemtest Job No.:		21-25470	21-25470	21-25470	21-25470	21-25470
Quotation No.: Q20-22417		Chemtest Sample ID.:		1246983	1246984	1246985	1246986	1246987
		Sample Location:		BH7	BH6	BH1	BH8	BH9
		Sample Type:		WATER	WATER	WATER	WATER	WATER
		Date Sampled:		21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021	21-Jul-2021
Determinand	Accred.	SOP	Units	LOD				
Chrysene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
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.
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].
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.
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).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1495	Low Level Hexavalent Chromium in Waters	Chromium [VI]	Colorimetric determination of hexavalent chromium expressed as Cr (VI) µg/l in water, using Ion Chromatography and UV-visible spectrophotometry.
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5-C6, >C6-C8, >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35-C44 Aromatics: >C5-C7, >C7-C8, >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35-C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1780	Alcohols	Alcohols	GCMS detection
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

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

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com

UKAS accredited testing laboratory No. 1668

Name of Client : Eurofins Chemtest Ltd
Address : Depot Road, Newmarket, Suffolk, CB8 0AL, UK

Test Certificate No: 119241

ANALYSIS OF PCDDs and PCDFs

Job Reference: 21-14379
Sample Identifier : 21-14379, 1191651, TP05
Sample No: 119241
Order No: 20779
Sample Type: Soil
Sample Condition : conforming
Instrument : Premier
GC Column : DB5
Calibration File : 210507

Date of Receipt : 05/05/21
Date of Analysis : 07/05/21
Date of Report : 11/05/21

Test Method : 2002
Blank : 40521
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	2.34	0.287	93	2378-TCDD	*	0.589	118
12378-PCDF	1.35	0.256	85	12378-PCDD	0.623	0.498	86
23478-PCDF	1.73	0.256	82	123478-HxCDD	0.894	0.308	90
123478-HxCDF	1.74	0.251	103	123678-HxCDD	3.76	0.346	96
123678-HxCDF	1.76	0.254	106	123789-HxCDD	1.7	0.322	
234678-HxCDF	2.3	0.265	93	1234678-HpCDD	92.5	0.5	76
123789-HxCDF	*	0.333	81	OCDD	895	0.467	58
1234678-HpCDF	22.1	0.167	82				
1234789-HpCDF	0.964	0.232	67				
OCDF	41.3	0.368					
Total 2,3,7,8-Furans	75.5			Total 2,3,7,8-Dioxins	995		
TEQ (Nato)		TEQ¹ 5.41	TEQ² 4.78	TEQ (WHO)- Mammals		TEQ¹ 4.69	TEQ² 4.07
				TEQ (WHO)- Fish		3.79	3.17
				TEQ (WHO)- Birds		6.7	6.08

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected Congeners at Detection Limit
TEQ² Concentration of Non Detected Congeners at Zero

Reported by : Karolina Pettit
Position : Manager

Signature : *K. Pettit*



1668



Marchwood Scientific Services

**371 Millbrook Rd West
Southampton
SO15 0HW**

Tel: 02380 786979

UKAS accredited testing laboratory No. 1668

Name of Client : Eurofins Chemtest Ltd
Address : Depot Road, Newmarket, Suffolk, CB8 0AL, UK

Test Certificate No: 119241

ANALYSIS OF PCBs

Job Reference: 21-14379
Sample Identifier : 21-14379, 1191651, TP05
Sample No: 119241
Order No: 20779
Sample Type: Soil
Sample Condition : conforming
Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 210430

Date of Receipt : 05/05/21
Date of Analysis : 07/05/21
Date of Report : 11/05/21

Test Method : 2002
Blank : 40521
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	0.36	0.179	97
PCB-77	3.87	0.202	97
PCB-123	1.37	0.444	93
PCB-118	31.2	0.443	87
PCB-114	*	0.445	100
PCB-105	14.9	0.532	90
PCB-126	0.946	0.159	111
PCB-167	4.03	0.568	108
PCB-156	8.37	0.546	103
PCB-157	3.57	0.549	101
PCB-169	0.682	0.159	102
PCB-189	2.54	0.652	83
Total-PCBs	71.8		
		TEQ1	TEQ2
TEQ (WHO)- Mammals		0.118	0.118
TEQ (WHO)- Fish		0.0057	0.0057
TEQ (WHO)- Birds		0.328	0.328

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected Congeners at Detection Limit
TEQ² Concentration of Non Detected Congeners at Zero

Reported by : Karolina Pettit
Position : Manager

Signature : *K. Pettit*



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Eurofins Chemtest Ltd
Address : Depot Road, Newmarket, Suffolk, CB8 0AL, UK

Test Certificate No: 119242

ANALYSIS OF PCDDs and PCDFs

Job Reference: 21-14379
Sample Identifier : 21-14379, 1191657, TP09
Sample No: 119242
Order No: 20779
Sample Type: Soil
Sample Condition : conforming
Instrument : Premier
GC Column : DB5
Calibration File : 210507

Date of Receipt : 05/05/21
Date of Analysis : 07/05/21
Date of Report : 11/05/21

Test Method : 2002
Blank : 40521
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	1.92	0.405	94	2378-TCDD	*	0.479	121
12378-PCDF	1.46	0.28	88	12378-PCDD	*	0.532	91
23478-PCDF	1.64	0.272	88	123478-HxCDD	0.44	0.162	90
123478-HxCDF	1.45	0.171	100	123678-HxCDD	0.523	0.183	94
123678-HxCDF	1.3	0.172	103	123789-HxCDD	0.586	0.17	
234678-HxCDF	1.36	0.177	92	1234678-HpCDD	5.33	0.267	78
123789-HxCDF	*	0.228	80	OCDD	18.4	0.362	62
1234678-HpCDF	6.91	0.138	83				
1234789-HpCDF	0.413	0.183	69				
OCDF	4.31	0.323					
Total 2,3,7,8-Furans	20.8			Total 2,3,7,8-Dioxins	25.3		
TEQ (Nato)		TEQ¹ 2.57	TEQ² 1.8	TEQ (WHO)- Mammals		TEQ¹ 2.46	TEQ² 1.43
				TEQ (WHO)- Fish		2.75	1.71
				TEQ (WHO)- Birds		5.32	4.29

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected Congeners at Detection Limit
TEQ² Concentration of Non Detected Congeners at Zero

Reported by : Karolina Pettit
Position : Manager

Signature : *K. Pettit*



1668



Marchwood Scientific Services

**371 Millbrook Rd West
Southampton
SO15 0HW**

Tel: 02380 786979

UKAS accredited testing laboratory No. 1668

Name of Client : Eurofins Chemtest Ltd
Address : Depot Road, Newmarket, Suffolk, CB8 0AL, UK

Test Certificate No: 119242

ANALYSIS OF PCBs

Job Reference: 21-14379
Sample Identifier : 21-14379, 1191657, TP09
Sample No: 119242
Order No: 20779
Sample Type: Soil
Sample Condition : conforming
Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 210430

Date of Receipt : 05/05/21
Date of Analysis : 07/05/21
Date of Report : 11/05/21

Test Method : 2002
Blank : 40521
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	0.62	0.212	96
PCB-77	7.8	0.243	96
PCB-123	2.81	0.286	91
PCB-118	94.6	0.295	83
PCB-114	0.995	0.276	101
PCB-105	29.9	0.351	86
PCB-126	2.33	0.165	115
PCB-167	11.5	0.655	96
PCB-156	21.3	0.661	95
PCB-157	3.7	0.652	90
PCB-169	0.461	0.221	104
PCB-189	4.16	0.57	88
Total-PCBs	180		
		TEQ1	TEQ2
TEQ (WHO)- Mammals		0.253	0.253
TEQ (WHO)- Fish		0.0136	0.0136
TEQ (WHO)- Birds		0.692	0.692

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Reported by : Karolina Pettit
Position : Manager

Signature : *K. Pettit*



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Eurofins Chemtest Ltd
Address : Depot Road, Newmarket, Suffolk, CB8 0AL, UK

Test Certificate No: 119243

ANALYSIS OF PCDDs and PCDFs

Job Reference: 21-14379
Sample Identifier : 21-14379, 1191658, TP10
Sample No: 119243
Order No: 20779
Sample Type: Soil
Sample Condition : conforming
Instrument : Premier
GC Column : DB5
Calibration File : 210507

Date of Receipt : 05/05/21
Date of Analysis : 11/05/21
Date of Report : 13/05/21

Test Method : 2002
Blank : 40521
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	1.06	0.207	79	2378-TCDD	*	0.281	105
12378-PCDF	*	0.198	53	12378-PCDD	*	0.471	69
23478-PCDF	*	0.177	60	123478-HxCDD	*	0.144	81
123478-HxCDF	*	0.164	80	123678-HxCDD	*	0.157	84
123678-HxCDF	*	0.163	80	123789-HxCDD	*	0.146	
234678-HxCDF	*	0.166	74	1234678-HpCDD	0.278	0.228	76
123789-HxCDF	*	0.219	63	OCDD	2.89	0.384	73
1234678-HpCDF	0.273	0.13	70				
1234789-HpCDF	*	0.17	60				
OCDF	*	0.272					
Total 2,3,7,8-Furans	1.33			Total 2,3,7,8-Dioxins	3.16		
		TEQ¹	TEQ²			TEQ¹	TEQ²
TEQ (Nato)		0.847	0.114	TEQ (WHO)- Mammals		1.04	0.112
				TEQ (WHO)- Fish		1.05	0.0562
				TEQ (WHO)- Birds		2.11	1.06

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected Congeners at Detection Limit
TEQ² Concentration of Non Detected Congeners at Zero

Reported by : Karolina Pettit
Position : Manager

Signature : *K. Pettit*



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Eurofins Chemtest Ltd
Address : Depot Road, Newmarket, Suffolk, CB8 0AL, UK

Test Certificate No: 119243

ANALYSIS OF PCBs

Job Reference: 21-14379
Sample Identifier : 21-14379, 1191658, TP10
Sample No: 119243
Order No: 20779
Sample Type: Soil
Sample Condition : conforming
Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 210430

Date of Receipt : 05/05/21
Date of Analysis : 07/05/21
Date of Report : 11/05/21

Test Method : 2002
Blank : 40521
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	*	0.131	81
PCB-77	0.788	0.147	80
PCB-123	0.195	0.133	94
PCB-118	5.12	0.134	88
PCB-114	*	0.129	100
PCB-105	2.9	0.15	93
PCB-126	*	0.13	78
PCB-167	0.449	0.307	95
PCB-156	0.959	0.284	96
PCB-157	0.344	0.283	93
PCB-169	*	0.12	82
PCB-189	*	0.324	92
Total-PCBs	10.8		
		TEQ1	TEQ2
TEQ (WHO)- Mammals		0.017	0.0004
TEQ (WHO)- Fish		0.0009	0.0001
TEQ (WHO)- Birds		0.0661	0.0399

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Reported by : Karolina Pettit
Position : Manager

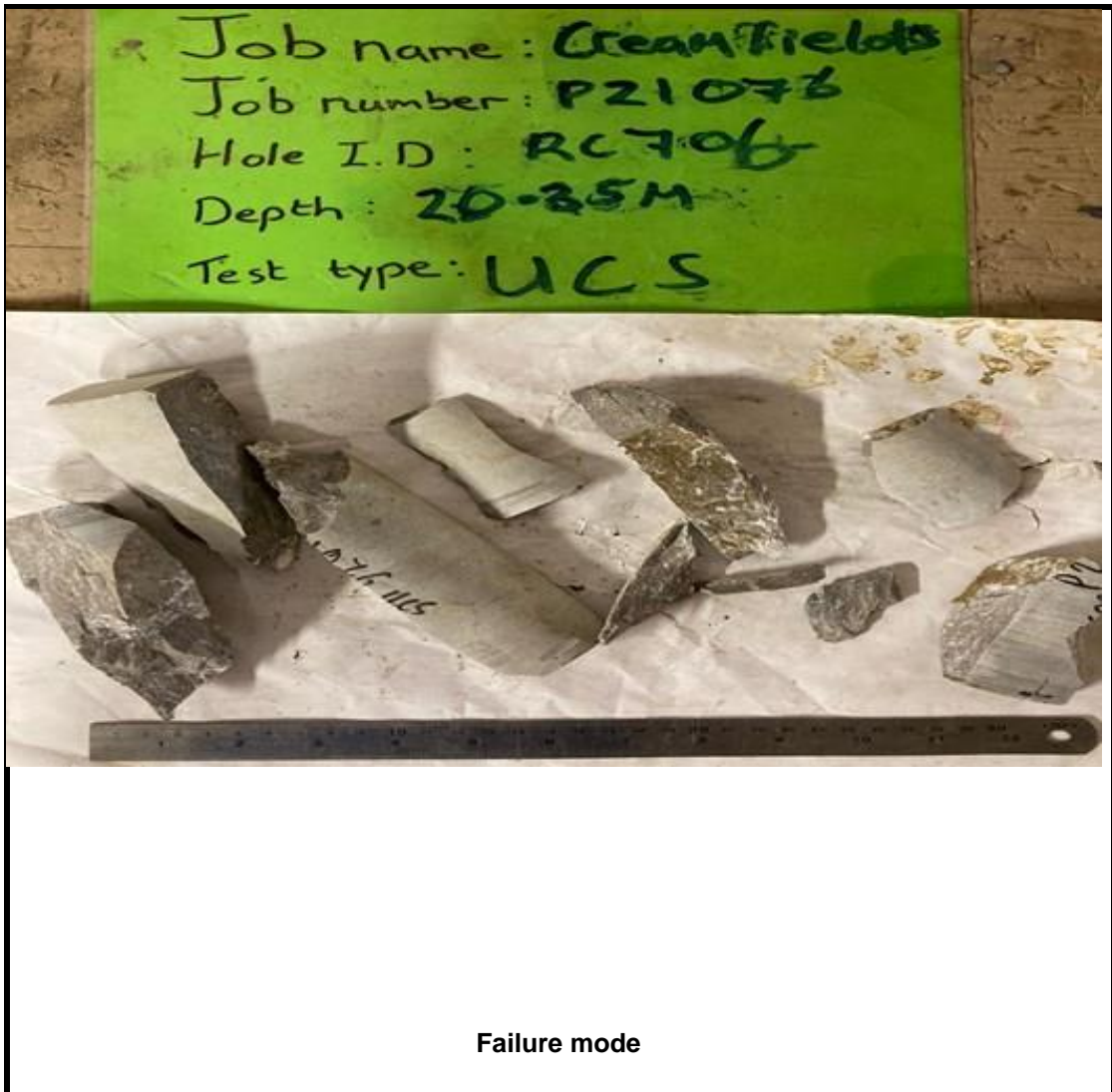
Signature : *K. Pettit*



1668

Unconfined Compressive Strength, UCS

Job Name	The Creamfields (Former CMP Dairy Site) Ground Investigation	
Job Number	P21076	
Borehole:	RC06	
Depth:	20.35	m
Rock Type	LIMESTONE	
Bulk Density	2.64	Mg/m ³
Load at Failure, P	298.9	kN
Stress at Failure	65.97	MPa





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The Creamfields (Former CMP Dairy Site)
Geophysical Survey Report
Report Number: P21076_Gp_Rp_D01
Project: P21076



REPORT CONTROL SHEET

Client	Watfore Developments Ltd.					
Engineer Representative	ARUP					
Project Name	The Creamfields (Former CMP Dairy Site)					
Document Type	Technical Report					
Project Number	P21076					
This Report Comprises of	TOC	Text	No. of Volume	No. of Appendices	Drawings	Electronic data
	1	1	1	1	2	*.dwg, *.pdf

Revision	Status	Author(s)	Approved by	Issue Date
D01	Draft	HP (PGeo, EurGeol)	GH	20/08/2021

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Acronyms

- bgl – below ground level
- ERT – Electrical Resistivity Tomography
- SRP – Seismic Refraction Profiling
- MASW – Multi-Channel Analysis of Surface Waves
- PGL – Priority Geotechnical Ltd.
- ITM – Irish Transverse Mercator
- OD Malin – metres above Ordnance Datum Malin (OSGM15)

A) Executive Summary

Priority Geotechnical Ltd. was instructed by ARUP Consulting Engineers on behalf of the Watfore Developments Ltd. to undertake a geophysical investigation at The Creamfields (Former CMP Dairy Site), Cork. The geophysical survey is in conjunction with an overall site investigation project.

The survey consisted of seismic refraction, multichannel analysis of surface waves and electrical resistivity tomography in accordance with BS5930 and BS7022 and the Geological Society Engineering Group Working Party Report on Engineering Geophysics. The survey locations are shown in Figure B-1 below.

The survey was carried out on from 13th to 20th April 2021.

The survey consisted of 4 ERT profiles totaling a total linear distance of 436m, 8 SRP profiles with a total linear distance of 368m and 2 MASW profiles with a total linear distance of 212m. The survey profile positions, modelled profiles and geophysical interpretations are shown in APPENDIX A: Drawing No. P21076_GP_D01 to D02. These drawings are plotted at paper size ISO A3 and are also supplied in AutoCAD format.

The main survey objective was to determine the position of a former railway and siding known to have crossed the site and is thought to have been backfilled.

Four (4) ERT profiles were recorded during this survey and are all marked on Drawing No. P21076_GP_D01. ERT profiles R1 and R2 were recorded on and very close to an old building foundation. These profiles were subject to very high levels of interference very likely related to steel reinforcing within the ground. SRP profile S4 was also subject to very high levels of interference likely related to the thickness of the slab in this location. In order to compensate for the interference experienced in these areas additional MASW profiles were undertaken (M1 and M2) and were of high quality with strong dispersion curves resolved.

No obvious evidence was seen within the geophysical survey results to indicate a backfilled former railway and siding. A full geological interpretation is included for each successfully recorded profile in APPENDIX A: Drawing No. P21076_GP_D01 to D02 as described in section D.2).

B) Introduction

B.1) Scope of Works

Priority Geotechnical Ltd. was instructed by ARUP Consulting Engineers on behalf of Watfore Developments Ltd. to undertake a geophysical investigation at The Creamfields (Former CMP Dairy Site), Cork. The geophysical survey is in conjunction with an overall site investigation project.

The survey consisted of seismic refraction, multichannel analysis of surface waves and electrical resistivity tomography in accordance with BS5930 and BS7022 and the Geological Society Engineering Group Working Party Report on Engineering Geophysics. The survey locations are shown in Figure B-1 below.

The survey was carried out from 13th to 20th April 2021.

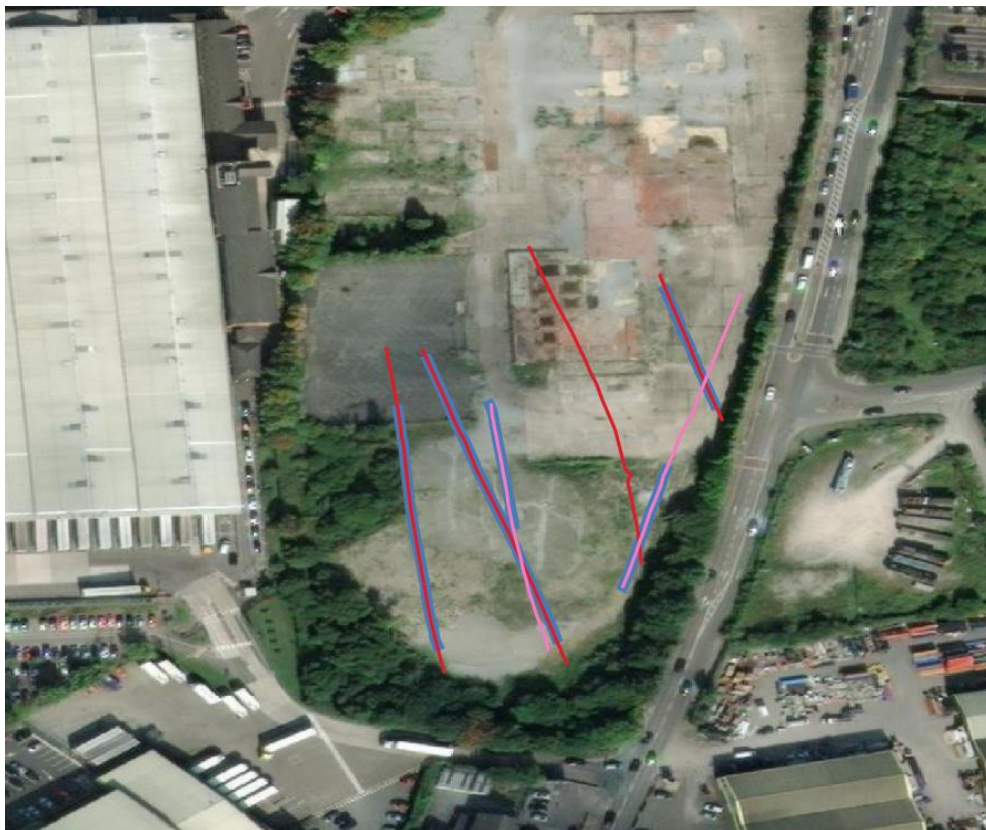


Figure B-1: Satellite image (Bing Maps) showing surveyed geophysical profiles across the survey area (red = ERT, blue = SRP, pink = MASW).

B.2) Survey Objectives

The main survey objective was to determine the position of a former railway and siding known to have crossed the site and is thought to have been backfilled.

B.3) Site Topography

The survey area is situated in a disused factory site with areas of building foundations and hardcore.

B.4) Coordinate System and Datum

All coordinates are given in Irish Transverse Mercator (ITM EPSG code 2157). All elevations are given in metres Ordnance Datum Malin (OD Malin) corrected using geoid model OSGM15.

B.5) Intrusive Works

This report considers all relevant site investigation results. All relevant site investigation results have been overlaid on the interpretive drawings.

B.6) Site Geology

According to the GSI 100k Geology Map (see Figure B-2) the survey area is underlain by one main formation known as the “Waulsortian limestones” shown in blue, described as “massive, unbedded lime-mudstone”.



Figure B-2: GSI 100k Bedrock Geology Map of the site.

According to the GSI Quaternary Soils Map (see Figure B-3) the survey area is underlain by various soil types. The south of the site is underlain by “Till derived from Devonian sandstones”, shown in red. The north of the survey area is underlain by “urban soils”, shown in blue.



Figure B-3: Quaternary Sediments Map of the site.

All above mapping is available for free viewing on the Geological Survey of Ireland website at <https://www.gsi.ie/en-ie/Pages/default.aspx>. Both Figure B-2 and Figure B-3 contain Irish Public Sector Data (Geological Survey) licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

C) Methodology

The below details the geophysical technique background and the exact specification with which each methodology was used.

C.1) 2D Electrical Resistivity Tomography

The geophysical survey comprised of 2D electrical resistivity tomography (ERT), a technique commonly used for imaging sub surface structures through electrical resistivity measurements taken at the ground surface.

The resistivity survey was comprised of four (4) profiles along pre-determined lines which were named R1 through R4. These profiles were collected with an electrode spacing of 2m measuring 58m to 126m in length. Small holes were drilled into hardstanding gravel, tarmac and concrete along the profiles to facilitate the survey.

C.1.i) Data Acquisition

Survey data was collected using a 64-channel Allied Tigre resistivity meter. The Tigre has a maximum power of 36 watts and maximum current output of 200mA (manually selected). The receiver incorporates automatic gain steps providing a range of measurements from 0.001ohm to 360kohm.

Multicore resistivity cables with 32 take-outs were used with stainless steel electrodes. Contact resistivities were checked prior to running the survey, to ensure an adequate electrical contact between the ground and the electrodes were made. Electrodes with poor contacts were treated with saline solution and rechecked till an optimum contact resistance were obtained.

The Tigre was connected to a laptop running Imager Pro 2006 acquisition software. All data was checked on site subsequently by viewing and inverting using Res2DInv software. Any spurious readings were repeated until satisfactory results were achieved.

C.1.ii) Array Type

The Wenner Alpha Array protocol was utilized during this survey. The Wenner Array uses four equally spaced electrodes. Current is injected through the two outer electrodes and the resulting

voltage difference at two inner electrodes. From the current (I) and the voltage (V) an apparent resistivity (ρ_a) value is calculated.

$$\rho_a = k V/I$$

Where k is the geometric factor which depends on the arrangement of the 4 electrodes. This calculated resistivity value is not the true resistivity of the subsurface but an “apparent” resistivity value, i.e. the resistivity of a homogenous ground which would give the same resistance value for the same electrode arrangement. To determine “true” ground resistivity an inversion of the measured apparent resistivity is undertaken, in this case using Res2DInv software.

The Wenner array is relatively sensitive to vertical changes (i.e. horizontal structures), but relatively poor in detecting horizontal changes (i.e. narrow vertical structures). Among the common array types for ERT profiling the Wenner alpha array has the strongest signal strength (Loke, 2000).

C.1.iii) Data Processing

Survey data was processed using Res2DInv, where the raw files were edited and inverted. The software does this by first dividing the subsurface 2D model into rectangular blocks and then calculates the resistivity of these blocks such that the calculated apparent resistivity measurements of the blocks agree with the measured values from the field survey.

Up to 5 iterations of the inversion of the measured data were carried out for each profile to obtain a 2D pseudosection of the apparent resistivities. The least squares inversion was used to produce the apparent resistivity depth model.

A degree of fit between the measured apparent resistances and the inverted resistances is calculated by the program, allowing an assessment of the degree of confidence of the inverted data. A damping factor can be applied to smooth erroneous data points; however, resolution lessens with an increased damping factor. A moderate damping factor was used during all inversions.

The below Table C-1 details RMS errors involved in the inversions.

ERT Profile	RMS Error Inversion (%)	Iteration Number
R1	75.37%	5
R2	17.76%	5
R3	8.77%	4
R4	9.62%	4

Table C-1: RMS Errors for ERT inversion through RES2Dinv software (<10% low divergence inversion)

Resistivity values in the inverted profiles varied from approximately 30 to 1200 Ohm-m.

C.2) Seismic Refraction Profiling (SRP)

Seismic refraction measurements are made by measuring the travel time of direct and refracted acoustic waves as they travel from the surface through one layer to another and back to the surface where their arrival times are recorded. The travel time is a function of the seismic or acoustic velocity and geometry of the subsurface layers of soil and rock.

PGL recorded eight (8) SRP profiles in total across the survey which are named S1 to S9 (not including S6). The SRP profiles followed the same orientation as the ERT profiles.

C.2.i) Data Acquisition

A 24-channel Geometrics Geode seismic system was utilized with a 24-channel seismic multicore cable and 4.5Hz geophones. A sledge hammer and a HDPE plate were used as a seismic source. A geophone spacing of 2m was utilised during data acquisition resulting in profile lengths of 46m.

Data was recorded using SGOS Seismodule Controller software. A total of 7 shots were undertaken on each seismic line; 2 end-shots, 2 off-shots and 3 mid-shots. To improve signal to noise ratio, individual hammer shots were stacked at each shot location where necessary.

C.2.ii) Data Processing

Data processing was undertaken utilizing Seisimager Seismic 2D software programs. Surveyed topography was input for each seismic spread. First breaks were picked after which a time term inversion was computed using travel-time computation via ray-tracing. Velocity modeling and travel time plots were constructed for each spread. Seismic velocity phases were picked, and the thickness of each velocity unit calculated using the intercept-time method.

Modelled seismic velocities (V_p) ranged from 150 to 2315 m/s over two or three separate layers. The resulting layer boundaries and seismic velocities are shown as thick dashed lines on cross sections in the attached drawings. The model was developed with average velocities and boundaries moved to minimise the model deviation.

The below is a table of RMS errors involved in the inversions.

SEISMIC PROFILE	RMSE (msec)	RAY Tracing RMS
S1	0.51	1.21
S2	0.62	0.87
S3	0.72	1.48
S4	unusable	unusable
S5	0.12	0.98
S7	0.83	1.30
S8	0.39	1.60
S9	0.42	1.15

Table C-2: RMS Errors for seismic refraction inversion through Plotrefa software

C.2.iii) Data Interpretation

It should be noted that when layer thicknesses are modelled from the seismic data the areas of greatest coverage (i.e. the centre of the spread) will have the greatest accuracy. At the edges of the spread less ray coverage reduces the accuracy of layer interpretation and thickness calculation.

Approximate errors for velocities are estimated to be +/-10%. Errors for the calculated layer thickness are of the order of +/-15%. Possible errors due to the “hidden layer” and “velocity” effects may also occur (Soske, 1959). Seismic refraction generally determines the depth to horizontal or near horizontal layers where the compaction/strength/rock quality changes. Where low velocity layers are present or where layers dip with more than 20 degrees angle the accuracy becomes less.

C.3) Multi-channel Analysis of Surface Waves

PGL recorded two (2) MASW profiles labelled M1 and M2.

The results of the MASW are presented as shear wave velocities and included with the SRP and ERT results.

C.3.i) Methodology and Data Acquisition

In the MASW survey method a surface wave is generated by a source (sledgehammer) at the surface resulting in the generation of a surface wave. Surface waves, often referred to as 'ground roll' are characterized as being of low velocity, low frequency and relatively high amplitude.

Surface waves are dispersive, with the frequency range of the surface waves all having different velocities. The surface wave phase velocity spectrum (the velocity of the different frequencies of surface waves) is a good proxy for shear wave velocities.

The frequency range of the surface wave spectrum determines the depth of investigation possible. Lower frequencies see deeper and higher frequencies see shallower.

A 24 channel Geometrics Geode seismic system was utilized with a 24-channel seismic multicore cable, 4.5Hz geophones, and a sledgehammer and plate as a seismic source. A geophone spacing of 2m was used for all profiles. All geophones were mounted on a streamer, the setup is displayed in Figure C-1.

Data was recorded using SGOS Seismodule Controller software. No data acquisition filters were used in the acquisition of the MASW shots. The results of the MASW profile are only for the centre of the acquisition profile.



Figure C-1: MASW streamer in operation

C.3.ii) Data Processing

Multi-channel Analysis of Surface Waves (MASW) for seismic data collected for this project was processed using the SurfSeis6 surface wave analysis software.

Initial phase velocities were derived for each shot from each spread. All resultant dispersions curves were then assessed and the best curve for each spread selected. These were then further edited with any higher nodes or low-quality data removed.

Inversions were then performed on the edited curves based on an initial model comprising 10 layers. The initial model incorporated the P-wave velocities from the seismic refraction in the calculations. 1D S-wave velocity models were then produced over 10 layers of variable thickness.

Derived S-wave velocities are then used with corresponding derived P-wave velocities from seismic refraction models to derive dynamic moduli at relevant depths.

C.3.iii) Data Interpretation

Unlike in seismic refraction profiling, surface wave analysis is capable of mapping low velocity zones at depth. The methodology does not require an increase in velocity with depth. Vertical resolution was seen to be variable on the acquired data. Generally, there was high resolution at shallower depths with dense data points but as depth increased the resolution markedly decreased. As a result, thin layers, at depth cannot be identified by this method.

C.4) Geospatial Relocation

Horizontal control and elevation were provided by a Trimble VRS (Real Time Kinematic/Virtual Reference Station) enabled GPS. Trimble Access software was used to provide high-accuracy, GNSS positioning. All positions are plotted in ITM. Elevations are to OD Malin using geoid model OSGM15.

D) Results and Geophysical Interpretation

The survey profile positions, modelled profiles and geophysical interpretations are shown in APPENDIX A: Drawing No. P21076_GP_D01 to D02. These drawings are plotted at paper size ISO A3 and are also supplied in AutoCAD format.

D.1) Survey data quality

Four (4) ERT profiles were recorded during this survey and are all marked on Drawing No. P21076_GP_D01. ERT profiles R1 and R2 were recorded on and very close to an old building foundation. These profiles were subject to very high levels of interference very likely related to steel reinforcing within the ground. SRP profile S4 was also subject to very high levels of interference likely related to the thickness of the slab in this location. In order to compensate for the interference experienced in these areas additional MASW profiles were undertaken (M1 and M2) and were of high quality with strong dispersion curves resolved.



Figure D-1: Area to east of survey area where geophysical data quality was impaired.



Figure D-2: Area to east of survey area where geophysical data quality was impaired.

D.2) Geophysical Interpretation Summary

3 layers were defined through the geological interpretation.

The most upper layer at the surface comprised a firm GRAVEL dominant overburden, likely mainly made ground with a thickness of 3-6m. This is then underlain by a more CLAY dominant very stiff overburden with an estimated thickness of 6-8m. This second layer is interpreted as sandy gravelly CLAY. Areas of possible bedrock are interpreted as an increase in resistivity at depth on R3 and R4 but should be confirmed via direct investigation (rotary coreholes).

The main objective of the survey was to screen the area for signs of a former railway and siding known to have crossed the site and is thought to have been backfilled. This was hoped to be visualised through the ERT / seismic methods as an anomalous zone of velocity / resistivity.

The two MASW profiles (M1 and M2) show a band of low velocity (c. 200 m/s) at c. 3-4m bgl and a gradually increasing velocity beneath. No evidence is seen of a markedly low velocity zone within the ERT data.

From the SRP dataset there are a number of dips in refractor surfaces. Of note are dips present on S5 (southern end), on S7 (centre of profile) and on S8 (centre of profile) however is not seen on S1 (lying in between S5 and S8 profiles). No evidence of an obvious anomalous refractor slope is seen within the dataset.

From the ERT dataset an anomalous zone of high resistivity associated with GRAVEL dominant fill material was thought to possibly indicate the former rain line. The northern end of R3 showed two pockets of high resistivity but it is likely to the author that these are related to gravel dominant made ground which directly underlies the entire site. Anomalous zones of very low resistivity could also be related to the presence of a clay dominant infill of the rail line. An area of anomalous low resistivity is present on R3 at 70m along profile, but again the author is not confident this is not related to background ground conditions.

APPENDIX A: DRAWINGS

Drawing Number	Description	Scale
P21076_GP_D01	Location Map with Geophysical Results and Interpreted Cross-Sections – Sheet 1	1:800 @ A3
P21076_GP_D02	Location Map with Geophysical Results and Interpreted Cross-Sections – Sheet 2	1:1800 @ A3

FIGURE 1: LOCATION MAP SHOWING GEOPHYSICAL PROFILE LOCATIONS
SCALE: 1:800

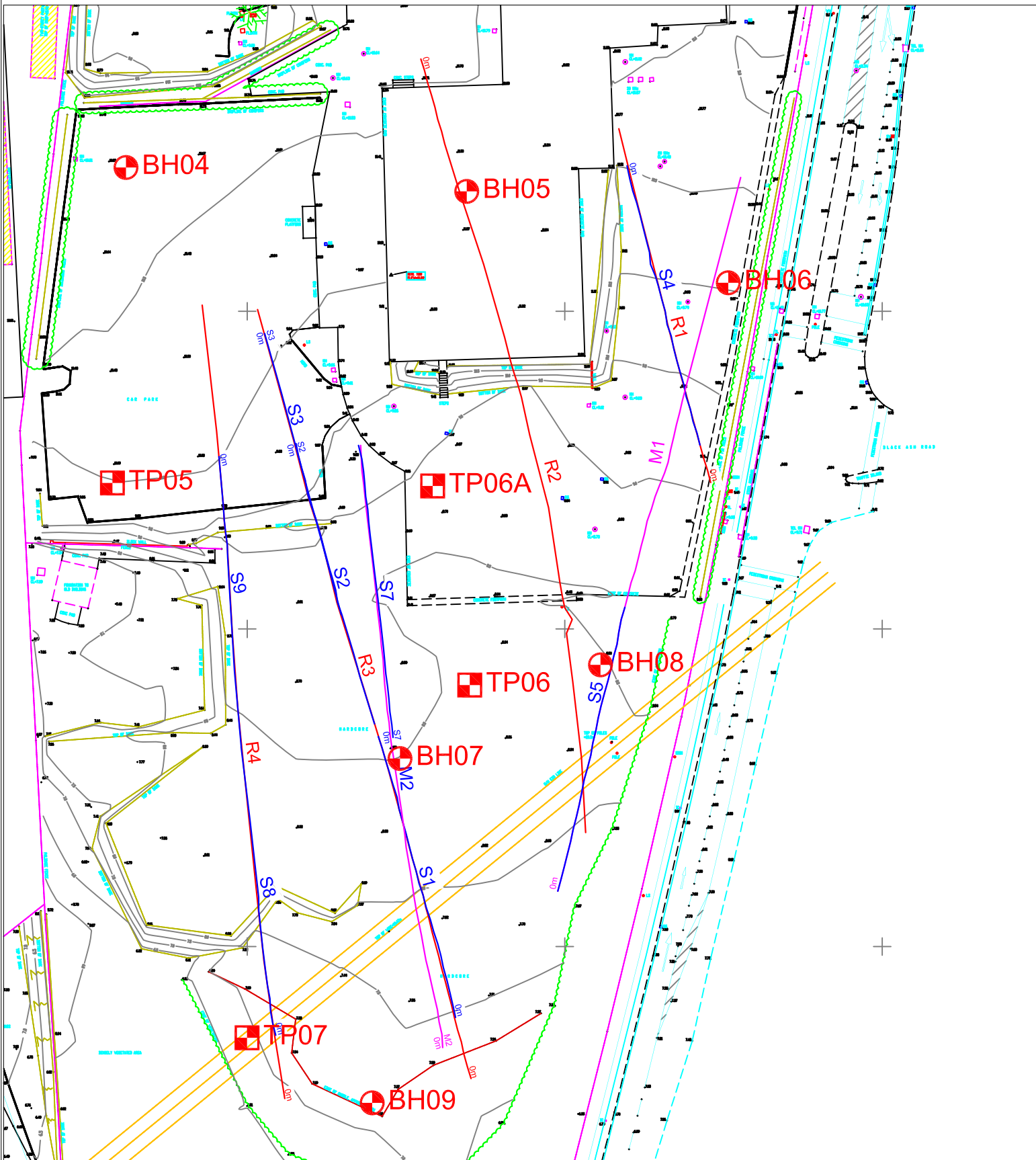
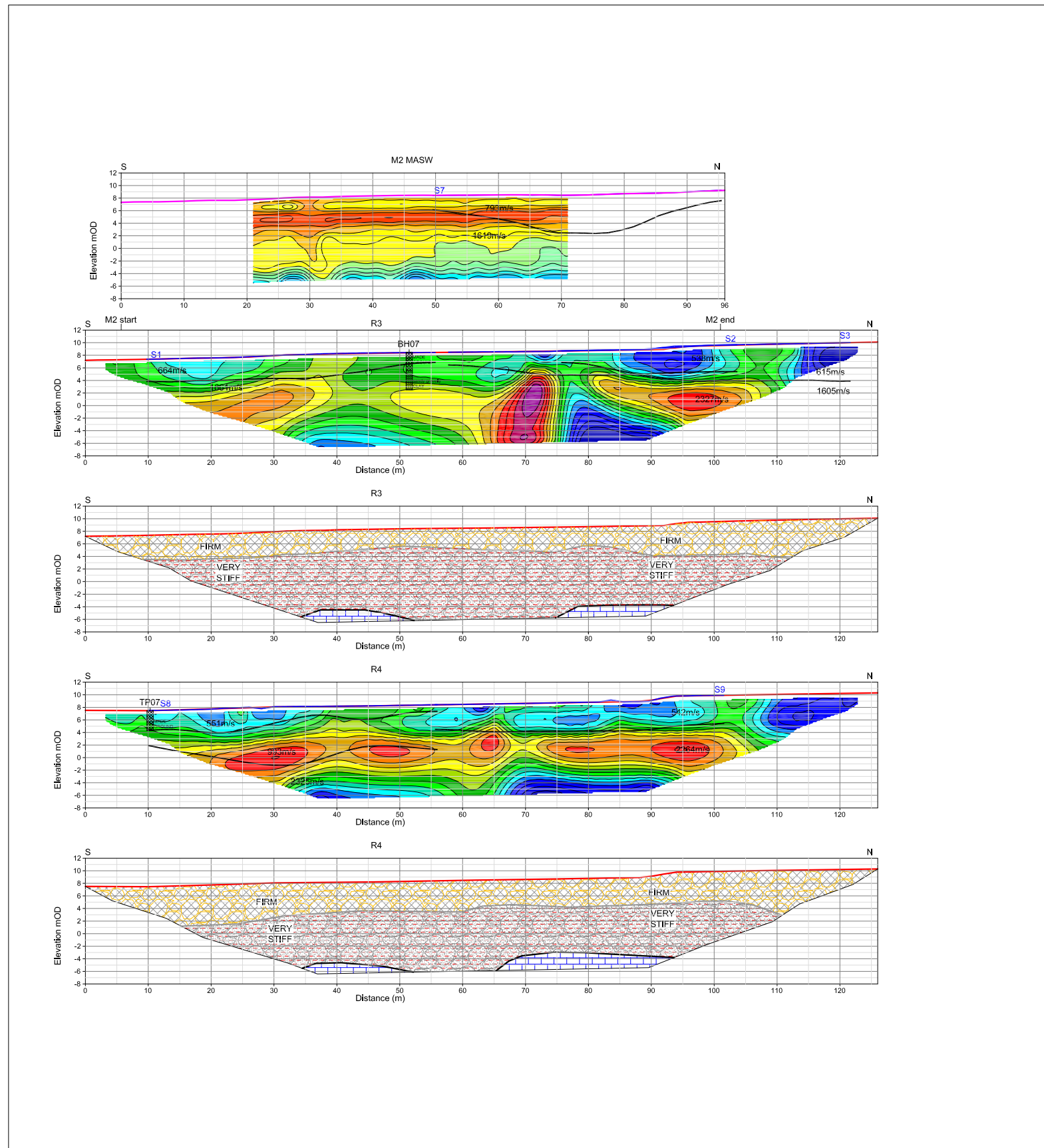


FIGURE 2: GEOPHYSICAL DATA PSEUDOSECTIONS AND GEOLOGICAL INTERPRETATION
SCALE: 1:800



PROJECT: THE CREAMFIELDS	CLIENT: WATFORD DEVELOPMENTS	JOB NUMBER: P21076	DRAWN BY: HP	APPROVED: GH
CONSULTING ENGINEERS: ARUP		DRAWING NUMBER: P21076_GP_D01	COORDINATE SYSTEM: ITM	
SHEET TITLE: GEOPHYSICAL SURVEY RESULTS SHEET 1 OF 2		REVISION: D01 - DRAFT FOR COMMENT	VERTICAL DATUM: Malin	
SURVEYED BY: 		SCALE: 1:800@A3	ISSUE DATE: 18/08/2021	

LEGEND:

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 m ground surface
- 1000 m layer 1 / layer 2 boundary
- 3000 m layer 2 / layer 3 boundary

ERT boundaries and Resistivity colour scale (Ωm)

0 30 46 57 70 86 106 131 162 201 248 306 378 466 576 711 894 1194

Resistivity (Ωm)

100 150 200 300 400 500 550 600 700 800

Shear wave velocity (m/s)

Interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named Site Investigation work

Overburden types

- Sand
- Gravel
- Clay
- Silt
- Sandy Gravel / Made Ground
- Sandy Gravel CLAY

Rock types

- Limestone

Location Map

- S seismic Profile
- R ERT Profile
- M MASW Profile

- RC01 Rotary Core
- BH01 Borehole
- TP01 Trial Pit

Site Location

FIGURE 1: LOCATION MAP SHOWING GEOPHYSICAL PROFILE LOCATIONS
SCALE: 1:800

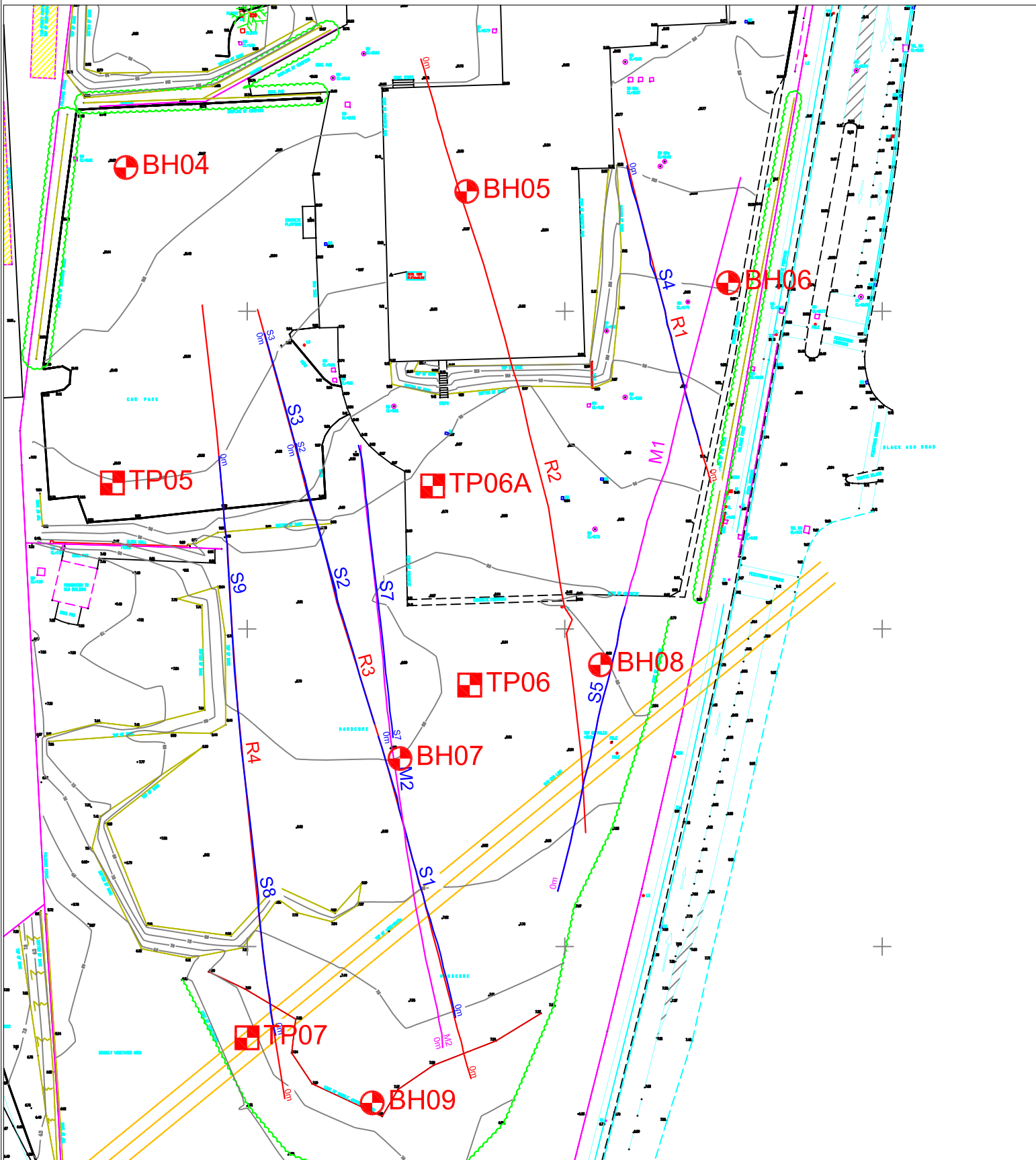
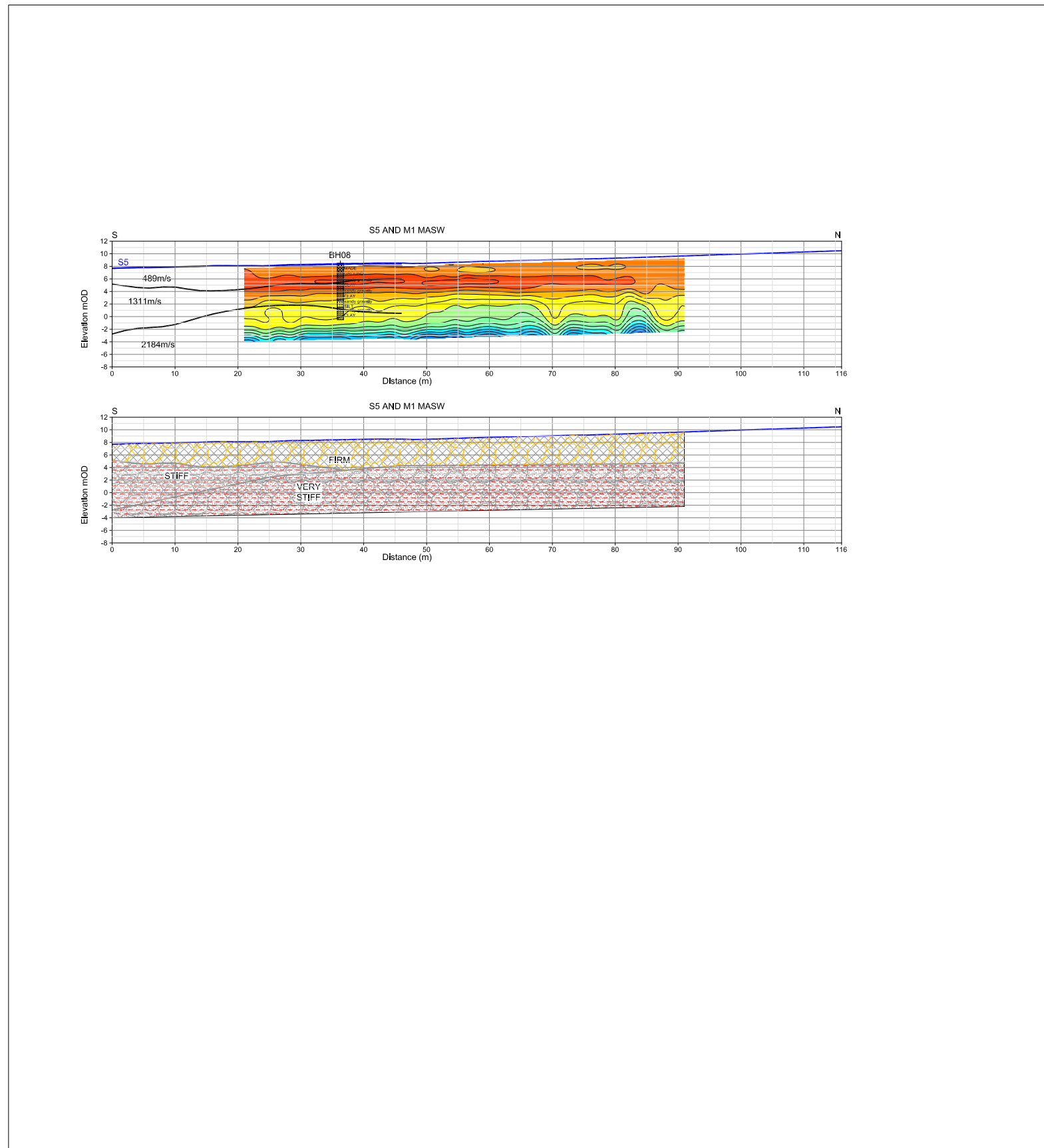
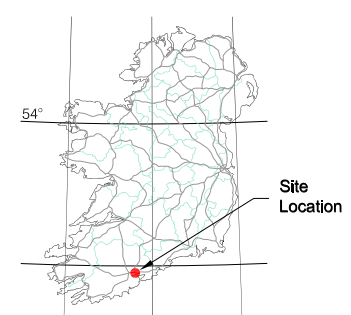


FIGURE 2: GEOPHYSICAL DATA PSEUDOSECTIONS AND GEOLOGICAL INTERPRETATION
SCALE: 1:800



PROJECT: THE CREAMFIELDS	CLIENT: WATFORD DEVELOPMENTS	JOB NUMBER: P21076	DRAWN BY: HP	APPROVED: GH	<p>LEGEND:</p> <p>Seismic refraction boundaries with P-wave velocities (m/s)</p> <ul style="list-style-type: none"> 300 m — ground surface 1000 m — layer 1 / layer 2 boundary 3000 m — layer 2 / layer 3 boundary <p>ERT boundaries and Resistivity colour scale (Ωm)</p> <ul style="list-style-type: none"> ground surface <p>Resistivity (Ωm)</p> <p>0 30 46 57 70 86 106 131 162 201 248 306 378 466 576 711 880 1194</p> <p>Shear wave velocity (m/s)</p> <p>100 150 200 250 300 350 400 450 500 550 600 650 700 750 800</p> <p>Interpretation</p> <ul style="list-style-type: none"> R6 — Intersection of another named profile BH22 — Approx location of named Site Investigation work <p>Overburden types</p> <ul style="list-style-type: none"> Sand Gravel Clay Silt Sandy Gravel / Made Ground Sandy Gravel CLAY <p>Rock types</p> <ul style="list-style-type: none"> Limestone <p>Location Map</p> <ul style="list-style-type: none"> Sismic Profile ERT Profile MASW Profile RC01 — Rotary Core BH01 — Borehole TP01 — Trial Pit <p>Change In Overburden Boundary</p> <p>Rock surface Boundary</p> <p>Change In Rock Boundary</p>
SHEET TITLE: GEOPHYSICAL SURVEY RESULTS SHEET 2 OF 2	CONSULTING ENGINEERS: ARUP	DRAWING NUMBER: P21076_GP_D01	COORDINATE SYSTEM: ITM		
SURVEYED BY: 		REVISION: D01 - DRAFT FOR COMMENT	VERTICAL DATUM: Malin		
		SCALE: 1:800@A3	ISSUE DATE: 18/08/2021		



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