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Attention: Peter Britland

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Subject **Coed Darcy Stockpiles - Factual Report**
Stockpiles (formerly SP162 - 167 and SP171)

Englobe reference: C1870

The following sections report on the samples taken of selected stockpiles on and adjacent to the Crymlyn tip at Coed Darcy, and also materials sampled from stockpiles at the former Glasstech Recycling Ltd site in Llandarcy.

The stockpiles sampled have been analysed at an accredited laboratory for a suite of determinands to provide initial assessment and indication of their suitability for re-use as capping materials for the stockpiles on and adjacent to the site, and as drainage layer materials for the Glasstech material, as part of the Crymlyn Tip permit surrender works.

1 Crymlyn Tip Stockpiles

The stockpiles formerly known as stockpiles 162 - 167 and stockpile 171 have been re-named as stockpile E-1 to E-7 respectively. The following sections summarise the stockpile volumes, sampling undertaken of the stockpile materials and the laboratory analysis results. Stockpiles are shown on Drawing D1870/SP/A in Appendix A.

1.1 Stockpile Volumes

The volumes of the stockpiles being investigated have been estimated from the available previous survey data and from recent surveys during the site investigation. The estimated volumes of the stockpiles are summarised in Table 1.

Table 1: Estimated Stockpile Volumes

Stockpile Number	Estimated Volume (m ³)
Stockpile E-1	155
Stockpile E-2	534
Stockpile E-3	428

Stockpile Number	Estimated Volume (m³)
Stockpile E-4	532
Stockpile E-5	5,351
Stockpile E-6	3,830
Stockpile E-7	15,000
Total:	25,830

1.2 Sampling

Between 1st and 3rd of October 2022 following vegetation clearance, 21 trial pits were excavated by Englobe into the stockpiles SPE-2 to SPE-7 shown on Drawing D1870/SP/A in Appendix A. The stockpile SPE-1 was inaccessible due to the extent of overgrowth present.

Representative composite samples of the stockpiled material were taken from pit arisings, which were collected using stainless steel tools or by hand and placed in laboratory supplied containers. The samples were stored in cool boxes with ice packs until courier transport to the laboratory. The samples are listed in Table 2 below.

Table 2: Stockpile Samples

Stockpile Number	Number of Samples	Sample References
SPE-2	2	SPE-2 S1, S2
SPE-3	1	SPE-3 S1
SPE-4	3	SPE-4 S1, S2, S3
SPE-5	6	SPE-5 S1, S2, S3, S4, S5, S6
SPE-6	5	SPE-6 S1, S2, S3, S4, S5
SPE-7	4	SPE-7 S1, S2, S3, S4

For each sample the location was recorded, photographs of the sample materials taken, and a description of the material logged. The logs and photographs of each sample are in Appendix B and C respectively.

Most materials sampled from stockpiles E-2 to E-6 comprised brown silt with frequent wood chip and inclusions of various building materials, occasional waste materials and gravel. Olfactory evidence of contamination ranged from 'no odour' to 'moderate hydrocarbon odours'.

Materials from stockpile E-7 were wet dark grey silts with frequent wood chip and occasional cobble and boulders with olfactory evidence of contamination from strong to very strong hydrocarbon odours recorded.

1.3 Analysis

A selection of samples were analysed for the following analysis suites;

- Standard Suite: LOI, moisture content, stone content, phenols, PAH (EPA 16), TPH (CWG), cyanide (total, complex, free), thiocyanate, elemental sulphur, sulphate, chloride, ammonium, PCB (7 congeners) metals, asbestos screen and ID
- WAC Analysis (inert solid and single stage 10:1)
- Asbestos quantification if required
- PFAS
- SVOCs
- VOCs
- SVOC TICs
- VOC TICs

1.4 Results Summary

1.4.1 WAC Analysis Results Summary

Five stockpile samples were scheduled for WAC analysis from stockpiles E-4 to E-7. All samples analysed were classed as hazardous by total organic carbon (TOC) in solid analysis. Table 3 below summarises the WAC analysis results. Laboratory results certificated are included in Appendix D.

Table 3: WAC Analysis Results Summary

Stockpile	Sample Reference	Solid WAC	Eluate Analysis
SP-E4	SP-E4-S2	Hazardous (by TOC)	Inert
SP-E5	SP-E5-S1	Hazardous (by TOC)	Inert
SP-E5	SP-E5-S2	Hazardous (by TOC)	Stable Non-Reactive Hazardous (by Antimony)
SP-E6	SP-E6-S3	Hazardous (by TOC)	Inert
SP-E7	SP-E7-S1	Hazardous (by TOC)	Inert
	Final Classification for sample based on solid and leachate analysis results		

1.4.2 Solid Analysis Results Summary

1.4.2.1 General Inorganics

The determinands where all samples had results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D.

SPE2 and SPE3 have one set of sample results per stockpile and so individual results are recorded in the summary.

Table 4: General Inorganics Results Summary (mg/kg)

	Stockpile E-2	Stockpile E-3	Stockpile E-4			
Determinand			No. Samples	Min	Max	Average
Total Cyanide	2.50	8.30	3	8.30	13	10.17
Complex Cyanide	< 1.0	1.40	3	< 1.0	13	10.95
Free Cyanide	4.10	6.90	3	< 1.0	7.60	2.53
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	0.00		2	290	3,600	1,945
Water Soluble Chloride (2:1)	65	20	3	20	36	26
Elemental Sulphur	< 5.0	980	3	< 5.0	0.00	< 5.0
Ammonium Exchangeable as NH ₄	22	9.10	3	1.20	5	3.10
Loss on Ignition @ 450°C*	17.80	18	3	15.80	16.90	16.20

*LOI %

	Stockpile E-5				Stockpile E-6			
Determinand	No. Samples	Min	Max	Average	No. Samples	Min	Max	Average
Total Cyanide	7	< 1.0	4.40	2.40	4	1.60	2.60	1.93
Complex Cyanide	7	< 1.0	4.40	2.40	4	1.60	2.60	1.93
Free Cyanide	7	< 1.0	< 1.0	< 1.0	4	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	6	1,300	3,400	2,283.33	4	2,000	6,900	4,025
Water Soluble Chloride (2:1)	7	25	280	113.29	4	17	89	52.25
Elemental Sulphur	7	140	3,200	1,430	4	54	2,100	706.50
Ammonium Exchangeable as NH ₄	7	1	180	103	4	1.40	210	74.55
Loss on Ignition @ 450°C*	7	23.20	26.70	25.21	4	18	26.10	23.08

*LOI %

	Stockpile E-7			
Determinand	No. Samples	Min	Max	Average
Total Cyanide	4	4	8	6.43
Complex Cyanide	4	4	6.30	5.30
Free Cyanide	4	< 1.0	1.70	1.53
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	1	980	980	980
Water Soluble Chloride (2:1)	4	71	94	81
Elemental Sulphur	4	2,100	3,600	3,000
Ammonium Exchangeable as NH ₄	4	260	380	300
Loss on Ignition @ 450°C*	4	12.50	27.60	21.13

*LOI %

1.4.2.2 Heavy Metals/Metaloids

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D. SPE2 and SPE3 have one set of sample results per stockpile and so individual results are recorded in the summary.

Higher concentrations of metals were generally found in stockpiles S-5 and S-6.

Table 5: Heavy Metals/Metaloids Results Summary (mg/kg)

	Stockpile E-2	Stockpile E-3	Stockpile E-4			
Determinand			No. Samples	Min	Max	Average
Arsenic (aqua regia extractable)	32	25	3	25	31	27.33
Boron (water soluble)	0.90	0.90	3	0.40	1.20	0.83
Cadmium (aqua regia extractable)	2.70	1.90	3	1.70	2.80	2.17
Chromium (hexavalent)	< 1.8	< 1.8	3	< 1.8	2.30	2.30
Chromium (aqua regia extractable)	29	41	3	23	33	28.67
Cobalt (aqua regia extractable)	15	10	3	9.70	13	11.23
Copper (aqua regia extractable)	130	110	3	82	150	114
Lead (aqua regia extractable)	320	250	3	200	310	250
Mercury (aqua regia extractable)	1.10	0.90	3	0.70	1.10	0.93
Molybdenum (aqua regia extractable)	2.90	2.50	3	2.20	2.80	2.47
Nickel (aqua regia extractable)	46	39	3	39	45	42
Selenium (aqua regia extractable)	< 1.0	< 1.0	3	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	39	32	3	29	35	31.33
Zinc (aqua regia extractable)	580	490	3	440	700	556.67

	Stockpile E-5				Stockpile E-6			
Determinand	No. Samples	Min	Max	Average	No. Samples	Min	Max	Average
Arsenic (aqua regia extractable)	7	29	55	39.29	4	31	44	36.75
Boron (water soluble)	7	2.20	4.50	3.07	4	1.50	2.20	1.73
Cadmium (aqua regia extractable)	7	1.50	3.40	2.37	4	1.80	2.80	2.30
Chromium (hexavalent)	7	< 1.8	< 1.8	< 1.8	4	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	7	28	71	49.29	4	37	77	49.75
Cobalt (aqua regia extractable)	7	8.30	16	12.16	4	9.30	14	11.33
Copper (aqua regia extractable)	7	120	280	201.43	4	180	250	202.50
Lead (aqua regia extractable)	7	220	440	331.43	4	240	390	335
Mercury (aqua regia extractable)	7	0.60	1.90	1.31	4	1	1.40	1.25
Molybdenum (aqua regia extractable)	7	1.70	4	2.96	4	2.20	3.20	2.80
Nickel (aqua regia extractable)	7	28	64	46.29	4	38	53	43.25
Selenium (aqua regia extractable)	7	< 1.0	1.30	0.19	4	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	7	27	69	49.43	4	44	69	51
Zinc (aqua regia extractable)	7	430	970	718.57	4	570	940	737.50

Determinand	Stockpile E-7			
	No. Samples	Min	Max	Average
Arsenic (aqua regia extractable)	4	16	35	27
Boron (water soluble)	4	0.80	3	1.58
Cadmium (aqua regia extractable)	4	1.20	3.10	2.28
Chromium (hexavalent)	4	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	4	21	32	26.50
Cobalt (aqua regia extractable)	4	9.50	13	11.13
Copper (aqua regia extractable)	4	64	160	131
Lead (aqua regia extractable)	4	130	330	260
Mercury (aqua regia extractable)	4	0.80	2	1.43
Molybdenum (aqua regia extractable)	4	1.50	3.30	2.65
Nickel (aqua regia extractable)	4	37	49	42
Selenium (aqua regia extractable)	4	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	4	30	56	48.75
Zinc (aqua regia extractable)	4	340	740	572.50

1.4.2.3 Hydrocarbons

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D. SPE2 and SPE3 have one set of sample results per stockpile and so individual results are recorded in the summary.

Various petroleum hydrocarbon bands were detected in all stockpiles with stockpiles E-5, E-6 and E-7 having the greatest concentrations.

Total PAHs were below the laboratory limit of detection in stockpiles E-2 and E-3. Stockpile E-5 and E-7 had the highest PAH concentrations.

A summary of the concentrations of individual TPH fractions and speciated PAHs is included in Table 6 below.

Table 6: Hydrocarbons Results Summary (mg/kg)

	Stockpile E-2	Stockpile E-3	Stockpile E-4			
Determinand			No. Samples	Min	Max	Average
Petroleum Hydrocarbons						
TPHCWG Aliphatic >EC10 EC12 EH_CU_1D_AL	3.50	< 1.0	3	< 1.0	15	8.70
TPHCWG Aliphatic >EC12 EC16 EH_CU_1D_AL	140	430	3	100	520	333.33
TPHCWG Aliphatic >EC16 EC21 EH_CU_1D_AL	810	1,700	3	530	1,400	1,076.67
TPHCWG Aliphatic >EC21 EC35 EH_CU_1D_AL	1,800	3,100	3	1,100	3,500	2,366.67
TPHCWG Aliphatic (EC5 EC35) EH_CU+HS_1D_AL	2,800	5,200	3	1,700	5,200	3,766.67
TPHCWG Aromatic >EC10 EC12 EH_CU_1D_AR	< 1.0	< 1.0	3	< 1.0	16	16
TPHCWG Aromatic >EC12 EC16 EH_CU_1D_AR	29	83	3	30	130	80
TPHCWG Aromatic >EC16 EC21 EH_CU_1D_AR	450	960	3	410	1,100	823.33

	Stockpile E-2	Stockpile E-3	Stockpile E-4			
Determinand			No. Samples	Min	Max	Average
TPHCWG Aromatic >EC21 EC35 EH_CU_1D_AR	2,100	3,400	3	1,900	5,200	3,466.67
TPHCWG Aromatic (EC5 EC35) EH_CU+HS_1D_AR	2,600	4,400	3	2,300	6,400	4,366.67
Speciated PAHs						
Naphthalene	< 0.05	0.15	3	< 0.05	0.14	0.14
Acenaphthylene	< 0.05	< 0.05	3	< 0.05	0.23	0.20
Acenaphthene	< 0.05	< 0.05	3	< 0.05	< 0.05	< 0.05
Fluorene	< 0.05	< 0.05	3	< 0.05	< 0.05	< 0.05
Phenanthrene	< 0.05	< 0.05	3	< 0.05	0.57	0.41
Anthracene	< 0.05	< 0.05	3	< 0.05	0.71	0.61
Fluoranthene	< 0.05	< 0.05	3	< 0.05	0.46	0.31
Pyrene	< 0.05	< 0.05	3	< 0.05	0.64	0.44
Benzo(a)anthracene	< 0.05	< 0.05	3	< 0.05	0.27	0.22
Chrysene	< 0.05	< 0.05	3	< 0.05	0.66	0.44
Benzo(b)fluoranthene	< 0.05	< 0.05	3	< 0.05	0.34	0.24
Benzo(k)fluoranthene	< 0.05	< 0.05	3	< 0.05	0.13	0.10
Benzo(a)pyrene	< 0.05	< 0.05	3	< 0.05	0.22	0.22
Indeno(1,2,3cd)pyrene	< 0.05	< 0.05	3	< 0.05	0.38	0.31
Dibenz(a,h)anthracene	< 0.05	< 0.05	3	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	< 0.05	< 0.05	3	< 0.05	0.76	0.71
Total PAH						
Speciated Total EPA16 PAHs	< 0.80	< 0.80	3	< 0.80	5.51	4.15

	Stockpile E-5				Stockpile E-6			
Determinand	No. Samples	Min	Max	Average	No. Samples	Min	Max	Average
Petroleum Hydrocarbons								
TPHCWG Aliphatic >EC10 EC12 EH_CU_1D_AL	7	< 1.0	29	14.82	4	3.10	9.50	6.98
TPHCWG Aliphatic >EC12 EC16 EH_CU_1D_AL	7	99	370	265.57	4	60	280	132.50
TPHCWG Aliphatic >EC16 EC21 EH_CU_1D_AL	7	230	1,600	885.71	4	230	1,200	512.50
TPHCWG Aliphatic >EC21 EC35 EH_CU_1D_AL	7	490	2,700	1,398.57	4	450	1,900	910
TPHCWG Aliphatic (EC5 EC35) EH_CU+HS_1D_AL	7	840	4,600	2,548.57	4	850	3,400	1,552.50
TPHCWG Aromatic >EC10 EC12 EH_CU_1D_AR	7	< 1.0	7.10	4.50	4	< 1.0	7.40	5
TPHCWG Aromatic >EC12 EC16 EH_CU_1D_AR	7	25	240	102.29	4	5.80	160	62.20
TPHCWG Aromatic >EC16 EC21 EH_CU_1D_AR	7	170	1,600	755.71	4	99	1,300	484.75
TPHCWG Aromatic >EC21 EC35 EH_CU_1D_AR	7	270	3,900	1,770	4	260	3,400	1,440
TPHCWG Aromatic (EC5 EC35) EH_CU+HS_1D_AR	7	500	5,800	2,627.14	4	360	4,900	1,965
Speciated PAHs								
Naphthalene	7	< 0.05	0.39	0.17	4	< 0.05	0.20	0.16
Acenaphthylene	7	< 0.05	0.26	0.21	4	0.17	0.47	0.29
Acenaphthene	7	< 0.05	1.60	0.80	4	0.11	0.17	0.14
Fluorene	7	< 0.05	1.40	0.70	4	< 0.05	0.27	0.24
Phenanthrene	7	0.39	4.10	1.74	4	0.37	0.65	0.52
Anthracene	7	0.12	0.74	0.54	4	0.15	0.69	0.37

	Stockpile E-5				Stockpile E-6			
Determinand	No. Samples	Min	Max	Average	No. Samples	Min	Max	Average
Fluoranthene	7	0.35	5.20	2.49	4	< 0.05	1.90	1.06
Pyrene	7	0.52	6.20	3.05	4	< 0.05	2	1.22
Benzo(a)anthracene	7	0.23	2	0.81	4	< 0.05	0.36	0.32
Chrysene	7	0.24	2.20	1.21	4	< 0.05	0.81	0.69
Benzo(b)fluoranthene	7	0.27	1.80	0.99	4	< 0.05	0.74	0.58
Benzo(k)fluoranthene	7	0.11	1.70	0.62	4	< 0.05	0.45	0.27
Benzo(a)pyrene	7	0.22	2.50	1.10	4	< 0.05	0.69	0.58
Indeno(1,2,3cd)pyrene	7	0.17	1.40	0.87	4	< 0.05	0.55	0.51
Dibenz(a,h)anthracene	7	< 0.05	0.29	0.29	4	< 0.05	< 0.05	< 0.05!
Benzo(ghi)perylene	7	0.24	2.30	1.51	4	< 0.05	1.30	1.19
Total PAH								
Speciated Total EPA16 PAHs	7	3.09	28.20	16.44	4	1.44	9.51	6.30

	Stockpile E-7			
Determinand	No. Samples	Min	Max	Average
Petroleum Hydrocarbons				
TPHCWG Aliphatic >EC10 EC12 EH_CU_1D_AL	4	< 1.0	2.20	1.90
TPHCWG Aliphatic >EC12 EC16 EH_CU_1D_AL	4	540	970	740
TPHCWG Aliphatic >EC16 EC21 EH_CU_1D_AL	4	1,700	2,800	2,475
TPHCWG Aliphatic >EC21 EC35 EH_CU_1D_AL	4	2,600	4,500	3,850
TPHCWG Aliphatic (EC5 EC35) EH_CU+HS_1D_AL	4	4,800	7,900	7,075
TPHCWG Aromatic >EC12 EC16 EH_CU_1D_AR	4	130	460	320
TPHCWG Aromatic >EC16 EC21 EH_CU_1D_AR	4	1,200	2,800	2,200
TPHCWG Aromatic >EC21 EC35 EH_CU_1D_AR	4	2,700	6,500	5,200
TPHCWG Aromatic (EC5 EC35) EH_CU+HS_1D_AR	4	4,000	9,800	7,700
Speciated PAHs				
Phenanthrene	4	0.94	1.50	1.24
Anthracene	4	0.86	1.20	1.07
Fluoranthene	4	0.98	1.30	1.12
Pyrene	4	2.70	2.80	2.78
Benzo(a)anthracene	4	0.86	2.50	1.82
Chrysene	4	0.67	2.80	1.32
Benzo(b)fluoranthene	4	0.65	1	0.82
Benzo(k)fluoranthene	4	0.20	0.65	0.38
Benzo(a)pyrene	4	0.85	1.10	0.95
Indeno(1,2,3cd)pyrene	4	0.71	0.88	0.76
Benzo(ghi)perylene	4	1.20	1.50	1.33
Total PAH				
Speciated Total EPA16 PAHs	4	12	14.60	13.55

1.4.2.4 SVOC, VOC & TIC

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D.

SPE2 and SPE3 have one set of sample results per stockpile and so individual results are recorded in the summary. 1 sample only from SPE4 and SPE7 was analysed for the SVOC suite.

Total phenols were below the laboratory limit of detection in stockpiles E-2, E-3, E-4, E-5 and E-6, a maximum of 1.4mg/kg was recorded in stockpile E-7.

SVOCs were detected in all stockpiles with the exception of stockpile E-4 in which all SVOC concentrations were below the laboratory limit of detection. SVOC concentrations were generally higher in stockpiles E-5, E-6 and E-7.

No VOCs were recorded above the laboratory limit of detection in all 6 stockpiles sampled. No VOC or SVOC tentatively identified compounds (TICs) were detected in the 8 samples analysed.

Table 7: SVOC, VOC & TIC Results Summary (mg/kg)

	Stockpile E-2	Stockpile E-3
SVOCs		
1,3Dichlorobenzene	0.30	< 0.2
Naphthalene	0.14	0.15
2Methylnaphthalene	0.20	0.40
Phenanthrene	0.18	< 0.05
Anthracene	0.46	< 0.05

	Stockpile E-5				Stockpile E-6			
	No. Samples	Min	Max	Average	No. Samples	Min	Max	Average
SVOCs								
Aniline	2	0.90	1.40	1.15	3	1.10	2	1.47
Naphthalene	2	< 0.05	0.12	0.12	3	< 0.05	0.12	0.12
2Methylnaphthalene	2	< 0.1	0.50	0.50	3	< 0.1	0.50	0.50
Acenaphthylene	2	0.17	0.26	0.22	3	< 0.05	0.47	0.32
Acenaphthene	2	0.18	0.34	0.26	3	0.11	0.17	0.14
Fluorene	2	0.27	0.49	0.38	3	< 0.05	0.27	0.26
Phenanthrene	2	0.62	0.97	0.80	3	0.37	0.65	0.55
Anthracene	2	0.44	0.53	0.49	3	0.15	0.69	0.41
Fluoranthene	2	1.20	1.60	1.40	3	0.52	1.90	1.06
Pyrene	2	1.50	2.60	2.05	3	0.77	2	1.22
Benzo(a)anthracene	2	0.39	0.63	0.51	3	0.29	0.36	0.32
Chrysene	2	0.70	1	0.85	3	0.54	0.81	0.69
Benzo(b)fluoranthene	2	0.61	0.62	0.62	3	0.42	0.74	0.58
Benzo(k)fluoranthene	2	0.22	0.32	0.27	3	0.18	0.45	0.27
Benzo(a)pyrene	2	0.50	0.64	0.57	3	0.50	0.69	0.58
Indeno(1,2,3cd)pyrene	2	0.44	0.93	0.69	3	0.48	0.55	0.51
Benzo(ghi)perylene	2	0.91	2.30	1.61	3	0.96	1.30	1.19
Phenols by HPLC								
Resorcinol	7	< 0.10	0.71	0.71	4	< 0.10	< 0.10	< 0.10

	Stockpile E-7			
	No. Samples	Min	Max	Average
SVOCs				
Phenanthrene	1	1.50	1.50	1.50
Anthracene	1	1.10	1.10	1.10
Fluoranthene	1	1	1	1
Pyrene	1	2.70	2.70	2.70
Benzo(a)anthracene	1	2.50	2.50	2.50
Chrysene	1	0.67	0.67	0.67
Benzo(b)fluoranthene	1	0.81	0.81	0.81
Benzo(k)fluoranthene	1	0.65	0.65	0.65
Benzo(a)pyrene	1	1.10	1.10	1.10
Indeno(1,2,3cd)pyrene	1	0.72	0.72	0.72
Benzo(ghi)perylene	1	1.20	1.20	1.20
Phenols by HPLC				
Catechol	4	< 0.10	1.40	1.19
Resorcinol	4	< 0.10	0.92	0.92
Total Phenols				
Total Phenols (HPLC)	4	< 1.3	1.40	1.40

1.4.2.5 PCBs

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D.

SPE2 and SPE3 had 1 sample per stockpile analysed for PCBs with results below the laboratory limit of detection. Samples from SPE4 and SPE6 had 3 and 4 samples, analysed for PCBs respectively, all results were below the laboratory limit of detection.

Stockpiles E-5 and E7 had maximum total PCB concentrations of 0.008 mg/kg and 1.40mg/kg respectively. The majority of samples analysed had PCBs reported at below the laboratory limit of detection with only 3 samples returning results over the limit of detection.

Table 8:PCBs Results Summary (mg/kg)

	Stockpile E-5			
	No. Samples	Min	Max	Average
Total PCBs	7	< 0.007	0.008	0.001

	Stockpile E-7			
	No. Samples	Min	Max	Average
Total PCBs	4	< 0.007	1.40	0.35

1.4.2.6 PFAS

1 sample from stockpile E-5 was analysed for a PFAS suite, Determinands from the PFAS suite were reported to be below the laboratory limit of detection with the exception of 1mg/kg of PFOS C8 Sulphonate detected in the sample. The full suite that the samples were analysed for can be seen in Appendix D.

1.4.2.7 Asbestos ID

22 samples from stockpiles E-2 to E-7 were screened for asbestos. Asbestos was detected in 3 samples from stockpile E-5 and 1 sample from stockpile E-6. Samples with asbestos detected were further analysed for asbestos quantification with % asbestos in these samples ranging from <0.001% to 0.272%, 3 samples contained chrysotile, 1 sample contained amosite. A summary of the asbestos analysis results is presented in Table 9.

Table 9: Asbestos Analysis Results Summary

Stockpile Reference	No. Samples Analysed	No. Samples Asbestos Detected	Sample Reference (if detected)	Asbestos Quantification (%)	Asbestos Type
Stockpile E-2	2	0	-	-	-
Stockpile E-3	1	0	-	-	-
Stockpile E-4	3	0	-	-	-
Stockpile E-5	7	3	SP E-5 S3	<0.001	Chrysotile
			SP E-5 S4	0.001	Chrysotile
			SP E-5 S5	0.002	Amosite
Stockpile E-6	5	1	SP E-6 S5	0.272	Chrysotile
Stockpile E-7	4	0	-	-	-

2 Former Glasstech Recycling Ltd Stockpiles

2.1 Sampling

On 4th of October 10 samples of stockpile material at the former Glasstech Recycling Ltd site were obtained by hand from 2 stockpiles, SP-GT 1 'unprocessed' material and SP-GT 3 '<20mm screened' material shown on drawing D1870/SP/B.

Samples were taken across accessible areas of the stockpiles. Samples representative of the sample locations were collected using stainless steel tools and placed in laboratory supplied containers. The samples were stored in cool boxes with ice packs until courier transport to the laboratory. The samples are listed in Table 10 below.

Table 10: Stockpile Samples

Stockpile Number	Samples No.	Sample References
SP-GT-1	8	SP-GT1 S1, S2, S3, S4, S5, S6, S7, S8
SP-GT-3	2	SP-GT-3 S1, S2

For each sample the location was recorded, and photographs of the sample materials taken and a description of the material logged. The photographs of each sample location are in Appendix C.

A description of the materials from each stockpile is summarised below.

Table 11: Stockpile Samples

Stockpile	Material Description
SP-GT-1 (Unprocessed)	Mixed broken glass of various sizes and thickness with abundant waste plastic, occasional other waste materials, sometimes with silt/soil-like coating.
SP-GT-3 (Screened)	Screened mixed broken glass generally of <20mm size, with occasional fragments of plastic with silt/soil coating.

Aside from the inclusion of household waste (mostly plastic) materials there was no other visual or olfactory evidence of contamination.

2.2 Analysis

A selection of samples were analysed for the following analysis suites;

- Standard Suite: LOI, moisture content, stone content, phenols, PAH (EPA 16), TPH (CWG), cyanide (total, complex, free), thiocyanate, elemental sulphur, sulphate, chloride, ammonium, PCB (7 congeners) metals, asbestos screen and ID
- WAC Analysis (inert solid and single stage 10:1)
- Asbestos quantification if required
- SVOCs
- VOCs

2.3 Results Summary

2.3.1 WAC Analysis Results Summary

6 samples from stockpile GT-1 and 2 samples from stockpile GT-3 were analysed for the WAC suite. 4 samples from stockpile GT-1 were classified as inert based on solid and eluate analysis, a further two samples from stockpile GT-1 were classified as Stable Non-Reactive Hazardous (SNRH) based on their solid TOC concentration.

Both samples from stockpile GT-3 were classified as inert.

Table 12: Glasstech WAC Analysis Results Summary

Stockpile	Sample Reference	Solid WAC Analysis	Eluate Analysis
GT-1	SP GT-1 S1	Stable Non-Reactive Hazardous (by TOC)	Inert

Stockpile	Sample Reference	Solid WAC Analysis	Eluate Analysis
GT-1	SP GT-1 S3	Inert	Inert
GT-1	SP GT-1 S4	Stable Non-Reactive Hazardous (by TOC)	Inert
GT-1	SP GT-1 S6	Inert	Inert
GT-1	SP GT-1 S7	Inert	Inert
GT-1	SP GT-1 S8	Inert	Inert
GT-3	SP GT-3 S1	Inert	Inert
GT-3	SP GT-3 S2	Inert	Inert
	Final Classification for sample based on solid and eluate analysis results		

2.3.2 Solid Analysis Results Summary

2.3.2.1 General Inorganics

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D.

Total, complex and free cyanide, thiocyanate and ammonium were all reported as below the laboratory limit of detection in stockpiles GT-1 and GT-3. Elemental sulphur was also below the laboratory limit of detection in stockpile GT-3.

Table 13: Glasstech Stockpile GT1 General Inorganics Results Summary (mg/kg)

	Stockpile GT-1			
	No. Samples	Min	Max	Average
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	8	12	83	42.5
Water Soluble Chloride (2:1)	8	4	31	11.2
Elemental Sulphur	8	< 5.0	27	27
Loss on Ignition @ 450oC*	8	1.6	17	6.5875

* LOI %

Table 14: Glasstech Stockpile GT3 General Inorganics Results Summary (mg/kg)

	Stockpile GT-3			
	No. Samples	Min	Max	Average
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	2	26	32	29

	Stockpile GT-3			
	No. Samples	Min	Max	Average
Water Soluble Chloride (2:1)	2	10	11	10.5
Loss on Ignition @ 450oC*	2	5	5.8	5.4

* LOI %

2.3.2.2 Heavy Metals/Metaloids

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D. Hexavalent chromium, germanium and selenium were all below laboratory LOD samples from both stockpiles.

Metal concentrations were generally highest in stockpile SP-GT1 compared with stockpile GT-3.

Table 15:Glasstech Stockpile GT1 Heavy Metals/Metaloids Results Summary (mg/kg)

	Stockpile GT-1			
	No. Samples	Min	Max	Average
Arsenic (aqua regia extractable)	8	1.5	14	4.54
Boron (water soluble)	8	0.3	1.9	0.9
Cadmium (aqua regia extractable)	8	0.4	17	3.78
Chromium (aqua regia extractable)	8	7.8	43	26.46
Cobalt (aqua regia extractable)	8	1.4	7.6	4.2
Copper (aqua regia extractable)	8	21	250	117.63
Lead (aqua regia extractable)	8	20	190	113.5
Mercury (aqua regia extractable)	8	0.3	0.5	0.46
Molybdenum (aqua regia extractable)	8	0.96	4.8	2.61
Nickel (aqua regia extractable)	8	7.6	90	36.43
Vanadium (aqua regia extractable)	8	5.2	15	8.85
Zinc (aqua regia extractable)	8	170	2000	1002.5

Table 16:Glasstech Stockpile GT3 Heavy Metals/Metaloids Results Summary (mg/kg)

	Stockpile GT-3			
	No. Samples	Min	Max	Average
Arsenic (aqua regia extractable)	2	2.4	2.4	2.4
Boron (water soluble)	2	0.6	0.8	0.7
Cadmium (aqua regia extractable)	2	0.5	1.4	0.95
Chromium (aqua regia extractable)	2	8.3	18	13.15
Cobalt (aqua regia extractable)	2	1	2.2	1.6
Copper (aqua regia extractable)	2	24	68	46
Lead (aqua regia extractable)	2	32	73	52.5

	Stockpile GT-3			
	No. Samples	Min	Max	Average
Mercury (aqua regia extractable)	2	0.5	0.5	0.5
Molybdenum (aqua regia extractable)	2	0.86	1.9	1.38
Nickel (aqua regia extractable)	2	6.9	19	12.95
Vanadium (aqua regia extractable)	2	2.5	7.2	4.85
Zinc (aqua regia extractable)	2	230	1700	965

2.3.2.3 Hydrocarbons

The determinands where all samples returned results below the laboratory limit of detection (LOD) have been omitted from the summary below (including those TPH bands with results below LOD), for full laboratory results certificates see Appendix D.

No PAHs were detected above the laboratory limit of detection in the Glasstech samples analysed.

Most TPH aromatic and aliphatic bands were below the LOD in Stockpile GT-3. Of the bands which had concentrations above the laboratory LOD they were of lower concentrations than in stockpile GT-1.

Various TPH aliphatic and aromatic bands were detected in all samples in stockpile GT-1 as summarised in Table 17.

Table 17: Glasstech Stockpile GT 1 - Hydrocarbons Results Summary (mg/kg)

	Stockpile GT-1			
	No. Samples	Min	Max	Average
TPHCWG Aliphatic >EC12 EC16 EH_CU_1D_AL	8	4.6	4.6	4.6
TPHCWG Aliphatic >EC16 EC21 EH_CU_1D_AL	8	11	20	14
TPHCWG Aliphatic >EC21 EC35 EH_CU_1D_AL	8	23	170	113.5
TPHCWG Aliphatic (EC5 EC35) EH_CU+HS_1D_AL	8	23	190	121.125
TPHCWG Aromatic >EC10 EC12 EH_CU_1D_AR	8	12	12	12
TPHCWG Aromatic >EC12 EC16 EH_CU_1D_AR	8	40	40	40
TPHCWG Aromatic >EC16 EC21 EH_CU_1D_AR	8	63	63	63
TPHCWG Aromatic >EC21 EC35 EH_CU_1D_AR	8	14	220	61.29
TPHCWG Aromatic (EC5 EC35) EH_CU+HS_1D_AR	8	15	340	80.43

Table 18: Glasstech Stockpile GT 3 - Hydrocarbons Results Summary (mg/kg)

	Stockpile GT-3			
	No. Samples	Min	Max	Average
TPHCWG Aliphatic >EC21 EC35 EH_CU_1D_AL	2	51	77	64

	Stockpile GT-3			
	No. Samples	Min	Max	Average
TPHCWG Aliphatic (EC5 EC35) EH_CU+HS_1D_AL	2	51	80	65.5
TPHCWG Aromatic >EC21 EC35 EH_CU_1D_AR	2	16	16	16
TPHCWG Aromatic (EC5 EC35) EH_CU+HS_1D_AR	2	17	17	17

2.3.2.4 SVOC and VOC

No SVOCs or VOCs were detected above the laboratory limit of detection in the Glasstech samples analysed.

No BTEX or MTBE were detected above the laboratory limit of detection in the Glasstech samples analysed.

2.3.2.5 PCBs

The determinands where all samples returned results below the laboratory limit of detection have been omitted from the summary below, for full laboratory results certificates see Appendix D.

PCB congeners 138 and 153 were detected above laboratory LOD in 1 sample only, from stockpile GT-1 (sample 1), no PCBs were detected above laboratory LOD in stockpile GT-3.

Table 19: Glasstech Stockpiles GT1 and GT3 PCBs Results Summary (mg/kg)

	Stockpile GT-1				Stockpile GT-3			
	No. Samples	Min	Max	Average	No. Samples	Min	Max	Average
PCB Congener 138	8	< 0.001	0.002	0.002	2	< 0.001	< 0.001	< 0.001
PCB Congener 153	8	< 0.001	0.002	0.002	2	< 0.001	< 0.001	< 0.001

Yours Sincerely

Englobe Corp.

A. Bates 

APPENDICES

Appendix A	Drawings
Appendix B	Sample Logs
Appendix C	Sample Photographs
Appendix D	Laboratory Analysis Results

Revisions and publications log

REVISION No.	DATE	DESCRIPTION
0A	November 30, 2022	First draft
0B		
00		

Distribution

1 PDF copy	By email: Peter Britland, PJA Coed Darcy Project Team, Stoke Coed Darcy Group, Englobe
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Appendix A Drawings

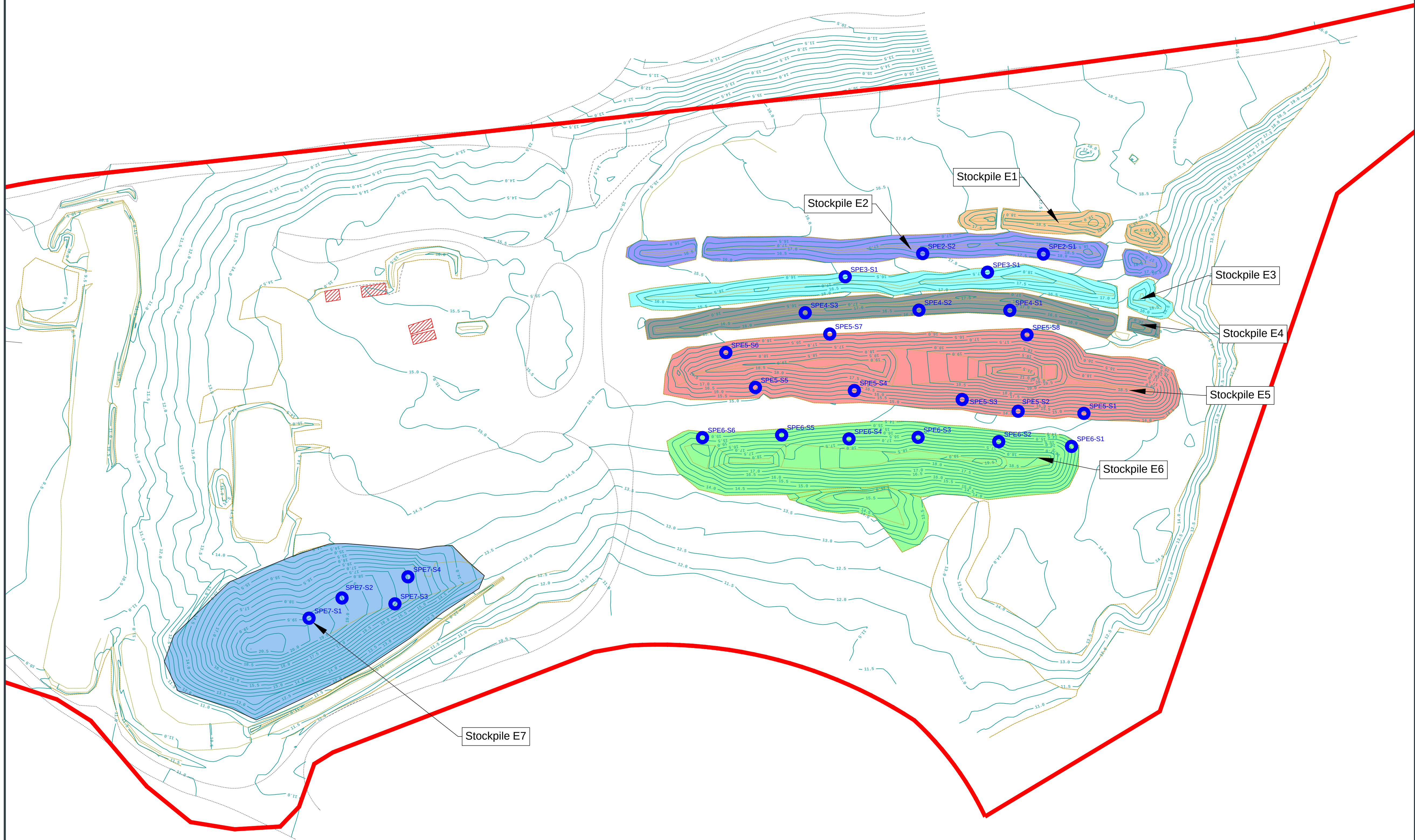


eNGLOBE



Legend

Environment Agency Permit Boundary



3	Added new Englobe BHs	17/11/22
2	Slurry Wall Alignment Amended	20/10/22
1	Englobe Boreholes Amended	13/10/22
0	First Draft	Sept 22

REV	COMMENT	DATE
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Unit 8, Commerce Park Brunel Road Theale Reading RG7 4AB 01189 167340	Columbus House Greenmeadow Springs Tongwynlais Cardiff CF15 7NE 02920 368636	enquiries@englobecorp.com www.englobecorp.com
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Client
St Modwen Homes

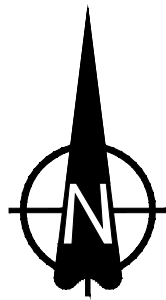
Project
Coed Darcy Tip
Locations

Title
SP-E1 to SP-E7

Drawn by JA	Checked Date	Authorised Date
Original Scale NTS	Date 07.10.22	Rev 3
Drawing Number		Paper A1

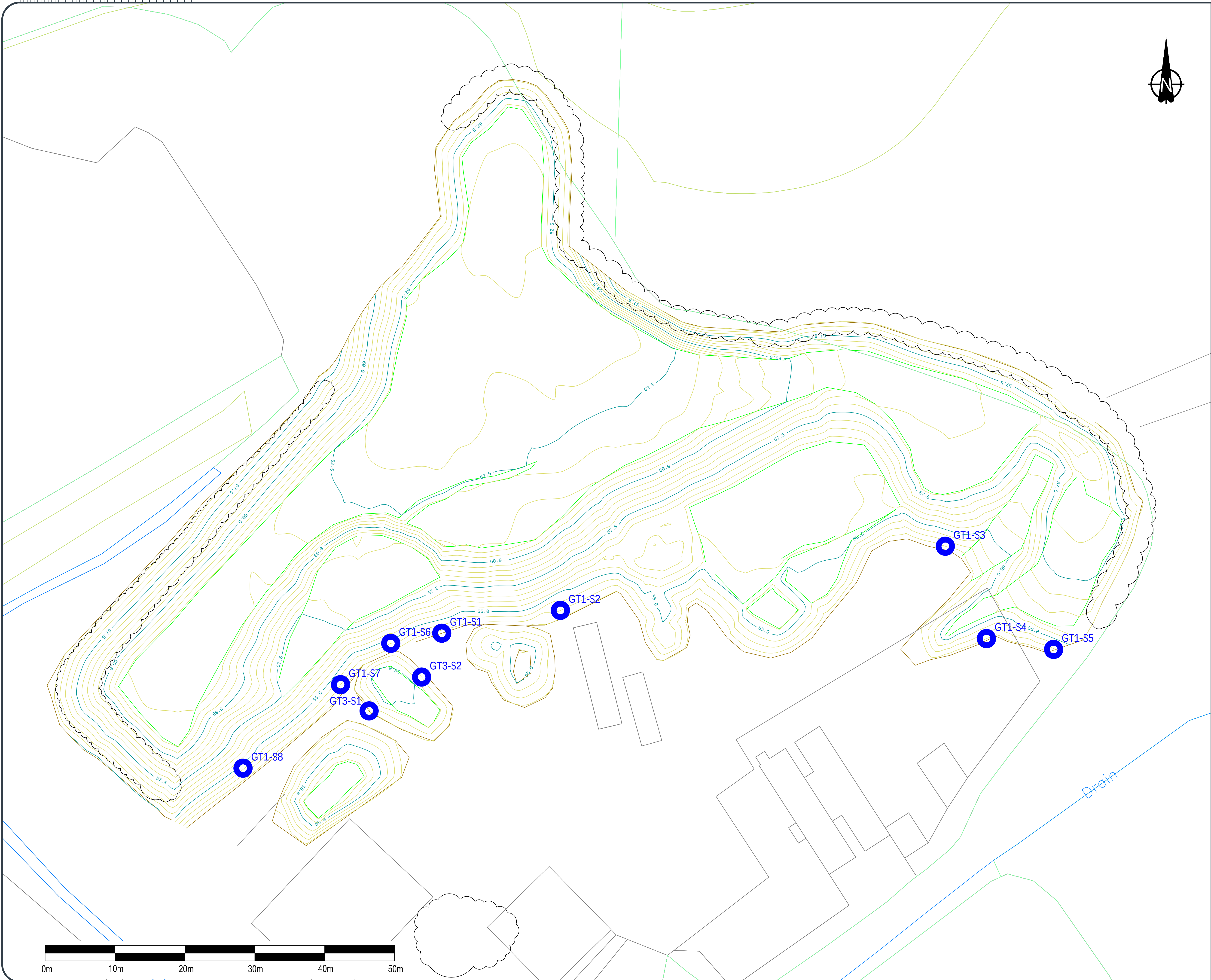
D1870/SP/A

mm 10 20 30 40 50 60 70 80 90 100



Legend

Site Co-ords:271262.07,195399.86



0	First Issue	
REV	COMMENT	DATE

ENGLOBE 		
Unit 8, Commerce Park Brunel Road Theale Reading RG7 4AB 01189 167340	Columbus House Greenmeadow Springs Tongwynlais Cardiff CF15 7NE 02920 368636	enquiries@englobecorp.com www.englobecorp.com

Client
St Modwen

Project
Coed Darcy

Title
Glasstech Stockpiles

Drawn by JA	Checked Date	Authorised Date	
Original Scale 1:250	Date 24.11.22	Rev 0	Paper A1

Drawing Number
D1870/SP/B (Glasstech)

Appendix B Sample Logs



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Stockpile Sample Logs

03/11/2022
Stockpile E-2
SP E-2 S1
Brown silt with frequent woodchip and occasional cobble and gravel
No visual or olfactory evidence of contamination

03/11/2022
Stockpile E-2
SP E-2 S2
Brown silt with frequent woodchip and occasional cobble and gravel
No visual or olfactory evidence of contamination

03/11/2022
Stockpile E-3
SP E-3 S1 (composite of 2 pits)
Some oily sleepers at surface, dark brown and grey silt with occasional cobble and stones, plant material
No visual or olfactory evidence of contamination

02/11/2022
Stockpile E-4
SP E-4 S2
Light brown/brown silt with frequent wood chip and cobble
No visual or olfactory evidence of contamination

02/11/2022
Stockpile E-4
SP E-4 S2
Light brown/brown silt with frequent wood chip and cobble
No visual or olfactory evidence of contamination

02/11/2022
Stockpile E-4
SP E-4 S3
Brown silt with roots, frequent wood chip and stone cobbles, occasional paper, wood, plastic, rare pockets of grey silt with frequent wood chip and hydrocarbon odour
Hydrocarbon odour

01/11/2022
Stockpile E-5
SP E-5 S6
Dark grey-brown silt with frequent wood chip, cobble, gravel and wood
Mild hydrocarbon odour

01/11/2022
Stockpile E-5
SP E-5 S7
Dark grey-brown silt with frequent wood chip, occasional brick and cobble
Moderate hydrocarbon odour

01/11/2022
Stockpile E-5
SP E-5 S4
Dark grey cohesive silt with frequent wood chip, occasional wood pieces, stone cobbles, rare brick, ceramic, plastic, fibrous cardboard
Mild to moderate hydrocarbon odour

01/11/2022
Stockpile E-5
SP E-5 S5
Dark grey cohesive silt with frequent wood chip, occasional wood pieces, stone cobbles, rare brick, ceramic, plastic
Mild to moderate hydrocarbon odour, light sheen on water (puddles)

01/11/2022
Stockpile E-5
SP E-5 S3
Dark grey (wet) cohesive slightly sandy silt with frequent wood chip, occasional brick, stone and concrete cobble, rare glass,
Hydrocarbon odour

02/11/2022
Stockpile E-5
SP E-5 S8
Brown and dark grey silt with frequent cobbles and gravel, occasional boulders, wood chip, rare metal, plastic
Mild hydrocarbon odour

11/10/2022
Stockpile E-5
SP E-5 S1
Dry brown silt, frequent bark, vegetation, pockets of cohesive odourous grey silt with hydrocarbon odour, occasional plastic pieces and plastic sheet

11/10/2022
Stockpile E-6
SP E-6 S1
Dry brown silt, frequent bark, vegetation
No visual or olfactory evidence of contamination

01/11/2022
Stockpile E-6
SP E-6 S2
Dark grey (wet) cohesive silt with frequent wood chip, occasional brick, stone and concrete cobble,
Hydrocarbon odour

01/11/2022
Stockpile E-6
SP E-6 S3
Dark grey (wet) cohesive slightly sandy silt with frequent wood chip, occasional brick, stone and concrete cobble, mudstone, chipboard, plastic, a few small fragments of fibrous paper

01/11/2022
Stockpile E-6
SP E-6 S4
Dark grey cohesive silt with frequent wood chip, occasional wood pieces, stone cobbles, wood, 1 stained section of sleeper
Mild to moderate hydrocarbon odour, light sheen on water (puddles)

01/11/2022
Stockpile E-6
SP E-6 S5
Dark brown silty soil with frequent wood chip, stone cobbles, gravel, roots
No visual or olfactory evidence of contamination

03/11/2022

Stockpile E-7

SP E-7 S1, S2, S3, S4

Very dark grey silt with frequent wood chip, occasional cobble and boulder

Wet material with strong/v.strong hydrocarbon odour

Pits dug 3.5 - 4.0m bgl from top of stockpile

Appendix C Sample Photographs



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Stockpile Photographs

Stockpile E-2, Sample 1



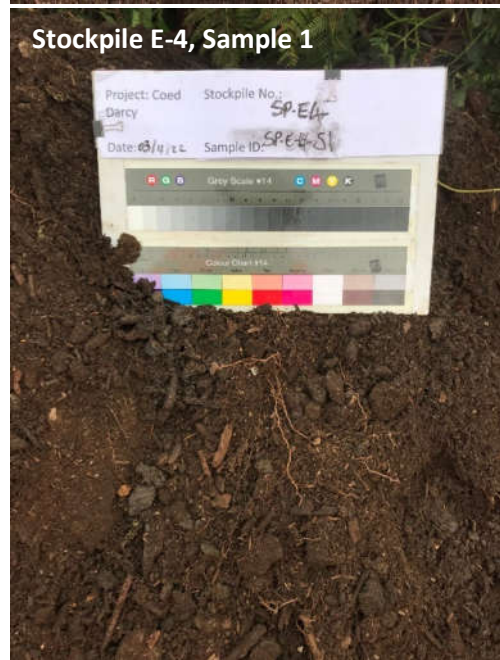
Stockpile E-2, Sample 2



Stockpile E-3, Sample 1



Stockpile E-4, Sample 1



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Stockpile E-4, Sample 2



Stockpile E-4, Sample 3



Stockpile E-5, Sample 1



Stockpile E-5, Sample 2



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Stockpile E-5, Sample 3



Stockpile E-5, Sample 4



Stockpile E-5, Sample 5



Stockpile E-5, Sample 6



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Stockpile E-5, Sample 7



Stockpile E-5, Sample 8



Stockpile E-6, Sample 1



Stockpile E-6, Sample S3



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Stockpile E-6, Sample 4



Stockpile E-6, Sample 5



Stockpile E-6, Sample 6



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Stockpile E-7, Sample 1



Stockpile E-7, Sample 2



Stockpile E-7, Sample 3



Stockpile E-7, Sample 4



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Glasstech GT1 (unprocessed) Stockpile Photos

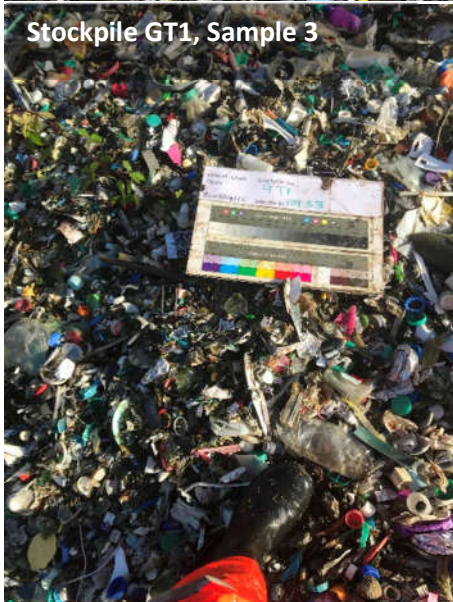
Stockpile GT1, Sample 1



Stockpile GT1, Sample 2



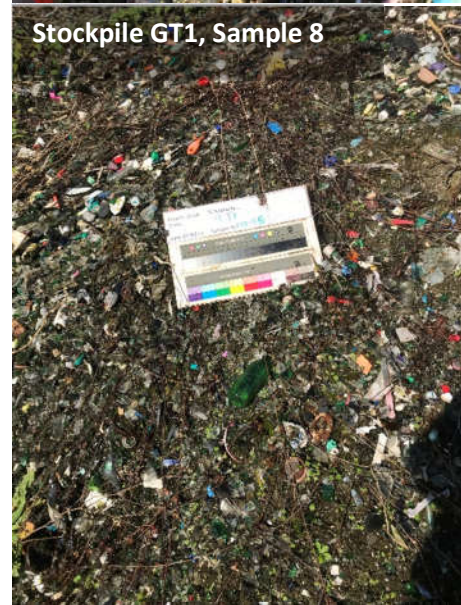
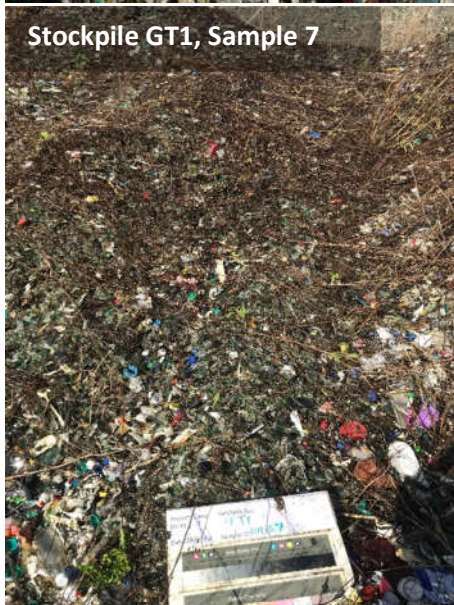
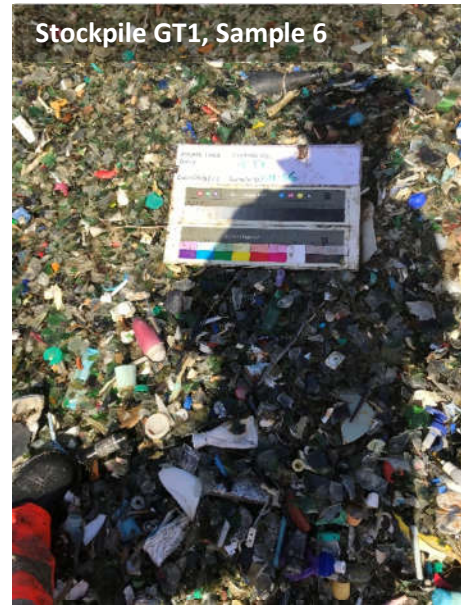
Stockpile GT1, Sample 3



Stockpile GT1, Sample 4



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Glasstech GT3 (screened) Stockpile Photos

Stockpile GT3, Sample 1



Stockpile GT3, Sample 2



Stockpile GT3



Stockpile GT3



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Appendix D Laboratory Analysis Results



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e: kirsty.sweeny@englobecorp.com

Analytical Report Number : 22-93872

Project / Site name:	Coed Darcy	Samples received on:	02/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	02/11/2022
Your order number:	83764	Analysis completed by:	14/11/2022
Report Issue Number:	1	Report issued on:	14/11/2022
Samples Analysed:	11 soil samples		

Signed:

Izabela Wójcik
Izabela Wójcik
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483508	2483509	2483510	2483511	2483512
Sample Reference				SP-E6-S1	SP-E5-S1	SP-E5-S2	SP-E6-S2	SP-E5-S3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	23	21	25	24
Total mass of sample received	kg	0.001	NONE	0.8	1.7	0.8	0.8	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	< 0.001
Asbestos Analyst ID	N/A	N/A	N/A	SPU	SPU	SPU	SPU	MLO

General Inorganics

pH - Manual	pH Units	N/A	MCERTS	7.4	7.3	7.7	-	-
pH - Automated	pH Units	N/A	MCERTS	-	-	-	7	7.7
Total Cyanide	mg/kg	1	MCERTS	1.6	1.3	< 1.0	1.6	4.4
Complex Cyanide	mg/kg	1	MCERTS	1.6	1.3	< 1.0	1.6	4.4
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	6900	3200	1300	5000	1800
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	3.4	1.6	0.65	2.5	0.88
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	3430	1600	651	2490	878
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	17	25	42	82	280
Elemental Sulphur	mg/kg	5	NONE	54	450	140	2100	2000
Ammonium - Exchangeable as NH ₄	mg/kg	0.5	MCERTS	1.4	1	49	84	150
Loss on Ignition @ 450oC	%	0.2	MCERTS	18	26.7	26.3	26.1	26.5

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Resorcinol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
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Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483508	2483509	2483510	2483511	2483512
Sample Reference				SP-E6-S1	SP-E5-S1	SP-E5-S2	SP-E6-S2	SP-E5-S3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	0.12	0.12	0.08	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	0.47	0.26	< 0.05	< 0.05	0.17
Acenaphthene	mg/kg	0.05	NONE	0.17	0.18	< 0.05	0.15	0.34
Fluorene	mg/kg	0.05	NONE	0.27	0.27	0.15	0.24	0.49
Phenanthrene	mg/kg	0.05	NONE	0.63	0.62	0.39	0.65	0.97
Anthracene	mg/kg	0.05	NONE	0.69	0.44	0.12	0.4	0.53
Fluoranthene	mg/kg	0.05	NONE	0.76	1.2	0.35	1.9	1.6
Pyrene	mg/kg	0.05	NONE	0.88	1.5	0.52	2	2.6
Benzo(a)anthracene	mg/kg	0.05	NONE	0.3	0.39	0.23	0.36	0.63
Chrysene	mg/kg	0.05	NONE	0.54	0.7	0.24	0.71	1
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.42	0.62	0.27	0.74	0.61
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.45	0.32	0.11	0.19	0.22
Benzo(a)pyrene	mg/kg	0.05	NONE	0.54	0.5	0.22	0.69	0.64
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.48	0.44	0.17	0.5	0.93
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.3	0.91	0.24	0.96	2.3

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	7.98	8.39	3.09	9.51	13.1
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	31	29	32	44	45
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5	3.6	2.2	2.2	2.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.8	1.5	1.7	2.8	2.8
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	47	28	29	77	61
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	10	8.3	9.8	14	12
Copper (aqua regia extractable)	mg/kg	1	MCERTS	190	120	130	250	250
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	240	220	220	370	420
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1	0.6	0.7	1.4	1.9
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	2.2	1.7	1.9	3.2	3.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	38	28	32	53	54
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	46	27	31	69	66
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	570	430	550	940	870

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483508	2483509	2483510	2483511	2483512
Sample Reference				SP-E6-S1	SP-E5-S1	SP-E5-S2	SP-E6-S2	SP-E5-S3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	NONE	3.1	18	17	9.5	10
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	NONE	70	99	150	280	330
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	NONE	340	230	340	1200	1400
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	NONE	720	490	540	1900	2000
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	1100	840	1000	3400	3700

TPH-CWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	NONE	< 1.0	< 1.0	2.2	7.4	6
TPH-CWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	NONE	5.8	25	56	160	240
TPH-CWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	NONE	99	200	170	1300	1600
TPH-CWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	NONE	260	630	270	3400	3500
TPH-CWG - Aromatic (EC5 - EC35) _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	360	850	500	4900	5300

VOCs

Chloromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Bromomethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Trichloromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Benzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Trichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Dibromomethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Styrene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483508	2483509	2483510	2483511	2483512
Sample Reference				SP-E6-S1	SP-E5-S1	SP-E5-S2	SP-E6-S2	SP-E5-S3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
o-Xylene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Bromobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Butylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND	ND
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SVOCs

Aniline	mg/kg	0.1	NONE	1.1	0.9	-	1.3	1.4
Phenol	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
Isophorone	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	NONE	0.12	0.12	-	< 0.05	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	0.5	0.5	-	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	NONE	0.47	0.26	-	< 0.05	0.17
Acenaphthene	mg/kg	0.05	NONE	0.17	0.18	-	0.15	0.34
2,4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483508	2483509	2483510	2483511	2483512
Sample Reference				SP-E6-S1	SP-E5-S1	SP-E5-S2	SP-E6-S2	SP-E5-S3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Dibenzofuran	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
Fluorene	mg/kg	0.05	NONE	0.27	0.27	-	0.24	0.49
Azobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	NONE	0.63	0.62	-	0.65	0.97
Anthracene	mg/kg	0.05	NONE	0.69	0.44	-	0.4	0.53
Carbazole	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2	< 0.2	-	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	NONE	0.76	1.2	-	1.9	1.6
Pyrene	mg/kg	0.05	NONE	0.88	1.5	-	2	2.6
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3	< 0.3	-	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	NONE	0.3	0.39	-	0.36	0.63
Chrysene	mg/kg	0.05	NONE	0.54	0.7	-	0.71	1
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.42	0.62	-	0.74	0.61
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.45	0.32	-	0.19	0.22
Benzo(a)pyrene	mg/kg	0.05	NONE	0.54	0.5	-	0.69	0.64
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.48	0.44	-	0.5	0.93
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.3	0.91	-	0.96	2.3

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND	ND
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	0.013	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	0.007	0.008
PCB Congener 180	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	< 0.007	< 0.007	< 0.007	0.021	0.008
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Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483508	2483509	2483510	2483511	2483512
Sample Reference				SP-E6-S1	SP-E5-S1	SP-E5-S2	SP-E6-S2	SP-E5-S3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
PFAS Suite 3								
PFBS C4 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PHPS C5 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFHxS C6 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFHpS C7 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFOS C8 Sulphonate	µg/kg	0.1	NONE	-	1	-	-	-
PFNS C9 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFDS C10 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFUDS C11 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFDoS C12 Sulphonate	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFBA C4 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFPeA C5 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFHxA C6 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFHpA C7 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFOA C8 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFNA C9 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFDA C10 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFUDa C11 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-
PFDoA C12 Carboxylic acid	µg/kg	0.1	NONE	-	< 0.1	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483513	2483514	2483515	2483516	2483517
Sample Reference				SP-E6-S3	SP-E5-S4	SP-E5-S5	SP-E6-S4	SP-E6-S5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	-	19	23	21	16
Total mass of sample received	kg	0.001	NONE	-	0.8	0.8	0.3	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile	Amosite	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.001	0.002	-	0.272
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.001	0.002	-	0.272
Asbestos Analyst ID	N/A	N/A	N/A	PDO	PDO	PDO	SPU	PDO

General Inorganics

pH - Manual	pH Units	N/A	MCERTS	-	-	-	-	-
pH - Automated	pH Units	N/A	MCERTS	-	7	6.7	7.5	6.9
Total Cyanide	mg/kg	1	MCERTS	-	< 1.0	2.5	2.6	1.9
Complex Cyanide	mg/kg	1	MCERTS	-	< 1.0	2.5	2.6	1.9
Free Cyanide	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	< 1.0
Thiocyanate as SCN	mg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	2200	3400	2000	2200
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	1.1	1.7	1	1.1
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	1120	1690	999	1100
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	160	150	89	21
Elemental Sulphur	mg/kg	5	NONE	-	720	1900	600	72
Ammonium - Exchangeable as NH ₄	mg/kg	0.5	MCERTS	-	150	170	210	2.8
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	23.2	23.3	23.4	24.8

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	-	< 0.10	< 0.10	< 0.10	< 0.10
Resorcinol	mg/kg	0.1	NONE	-	< 0.10	< 0.10	< 0.10	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	-	< 0.30	< 0.30	< 0.30	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	-	< 0.20	< 0.20	< 0.20	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	-	< 0.10	< 0.10	< 0.10	< 0.10
Phenol	mg/kg	0.1	NONE	-	< 0.10	< 0.10	< 0.10	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	-	< 0.10	< 0.10	< 0.10	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	-	< 0.30	< 0.30	< 0.30	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	-	< 1.3	< 1.3	< 1.3	< 1.3
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Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483513	2483514	2483515	2483516	2483517
Sample Reference				SP-E6-S3	SP-E5-S4	SP-E5-S5	SP-E6-S4	SP-E6-S5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	NONE	-	0.11	0.15	< 0.05	0.2
Acenaphthylene	mg/kg	0.05	NONE	-	0.16	0.18	0.17	0.24
Acenaphthene	mg/kg	0.05	NONE	-	0.56	1.3	0.11	0.11
Fluorene	mg/kg	0.05	NONE	-	0.58	1.4	< 0.05	0.22
Phenanthrene	mg/kg	0.05	NONE	-	1.7	2.8	0.37	0.44
Anthracene	mg/kg	0.05	NONE	-	0.74	0.73	0.15	0.23
Fluoranthene	mg/kg	0.05	NONE	-	2	2.6	0.52	< 0.05
Pyrene	mg/kg	0.05	NONE	-	2.8	3.2	0.77	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	-	0.4	0.55	0.29	< 0.05
Chrysene	mg/kg	0.05	NONE	-	1.1	1.1	0.81	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	0.56	1.5	0.58	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	0.46	0.36	0.18	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	-	0.65	1.4	0.5	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	0.82	1.1	0.55	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	1.3	1.9	1.3	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	-	14	20.2	6.26	1.44
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	55	35	36	36
Boron (water soluble)	mg/kg	0.2	MCERTS	-	2.3	3	1.6	1.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	3.4	2.3	2.2	2.4
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	59	53	37	38
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	-	15	13	9.3	12
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	260	180	180	190
Germanium (aqua regia extractable)	mg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	440	330	340	390
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	1.8	1.3	1.4	1.2
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	-	3.9	3.2	2.8	3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	58	47	39	43
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	61	49	45	44
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	970	660	780	660

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483513	2483514	2483515	2483516	2483517
Sample Reference				SP-E6-S3	SP-E5-S4	SP-E5-S5	SP-E6-S4	SP-E6-S5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	NONE	-	12	< 1.0	7	8.3
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	NONE	-	360	190	120	60
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	NONE	-	1600	770	280	230
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	NONE	-	2700	1200	450	570
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	-	4600	2200	850	860

TPH-CWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	NONE	-	2.7	< 1.0	2.6	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	NONE	-	200	63	66	17
TPH-CWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	NONE	-	1600	790	380	160
TPH-CWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	NONE	-	3900	2000	1000	1100
TPH-CWG - Aromatic (EC5 - EC35) _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	-	5800	2800	1400	1200

VOCs

Chloromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Chloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Bromomethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-	-	< 1.0	-
Trichloromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-	-	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
Benzene	µg/kg	1	NONE	-	-	-	< 1.0	-
Tetrachloromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-	-	< 1.0	-
Trichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
Dibromomethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Bromodichloromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	< 1.0	-
Toluene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-	-	< 1.0	-
Dibromochloromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Chlorobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Ethylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
p & m-Xylene	µg/kg	1	NONE	-	-	-	< 1.0	-
Styrene	µg/kg	1	NONE	-	-	-	< 1.0	-
Tribromomethane	µg/kg	1	NONE	-	-	-	< 1.0	-

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483513	2483514	2483515	2483516	2483517
Sample Reference				SP-E6-S3	SP-E5-S4	SP-E5-S5	SP-E6-S4	SP-E6-S5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
o-Xylene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Isopropylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
Bromobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
n-Propylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
2-Chlorotoluene	µg/kg	1	NONE	-	-	-	< 1.0	-
4-Chlorotoluene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
tert-Butylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
sec-Butylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
Butylbenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-	-	< 1.0	-

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	-	-	-	ND	-
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SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	2	-
Phenol	mg/kg	0.2	NONE	-	-	-	< 0.2	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-	-	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2-Methylphenol	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Hexachloroethane	mg/kg	0.05	NONE	-	-	-	< 0.05	-
Nitrobenzene	mg/kg	0.3	NONE	-	-	-	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Isophorone	mg/kg	0.2	NONE	-	-	-	< 0.2	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-	-	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Naphthalene	mg/kg	0.05	NONE	-	-	-	< 0.05	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-	-	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	0.17	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	0.11	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	< 0.2	-

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483513	2483514	2483515	2483516	2483517
Sample Reference				SP-E6-S3	SP-E5-S4	SP-E5-S5	SP-E6-S4	SP-E6-S5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Dibenzofuran	mg/kg	0.2	NONE	-	-	-	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-	-	< 0.2	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Fluorene	mg/kg	0.05	NONE	-	-	-	< 0.05	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	0.37	-
Anthracene	mg/kg	0.05	NONE	-	-	-	0.15	-
Carbazole	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Fluoranthene	mg/kg	0.05	NONE	-	-	-	0.52	-
Pyrene	mg/kg	0.05	NONE	-	-	-	0.77	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	0.29	-
Chrysene	mg/kg	0.05	NONE	-	-	-	0.81	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	0.58	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	0.18	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	0.5	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	0.55	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	1.3	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	ND	-
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 180	mg/kg	0.001	NONE	-	< 0.001	< 0.001	< 0.001	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	-	< 0.007	< 0.007	< 0.007	< 0.007
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Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483513	2483514	2483515	2483516	2483517
Sample Reference				SP-E6-S3	SP-E5-S4	SP-E5-S5	SP-E6-S4	SP-E6-S5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/11/2022	01/11/2022	01/11/2022	01/11/2022	01/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
PFAS Suite 3								
PFBS C4 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PHPS C5 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFHxS C6 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFHpS C7 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFOS C8 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFNS C9 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFDS C10 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFUDS C11 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFDoS C12 Sulphonate	µg/kg	0.1	NONE	-	-	-	-	-
PFBA C4 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFPeA C5 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFHxA C6 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFHpA C7 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFDA C8 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFNA C9 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFDA C10 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFUDa C11 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-
PFDoA C12 Carboxylic acid	µg/kg	0.1	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-93872
 Project / Site name: Coed Darcy
 Your Order No: 83764

Lab Sample Number				2483518
Sample Reference				SP-E5-S6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				01/11/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	19
Total mass of sample received	kg	0.001	NONE	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-
Asbestos Quantification Total	%	0.001	ISO 17025	-
Asbestos Analyst ID	N/A	N/A	N/A	PDO

General Inorganics

pH - Manual	pH Units	N/A	MCERTS	7.6
pH - Automated	pH Units	N/A	MCERTS	-
Total Cyanide	mg/kg	1	MCERTS	1.7
Complex Cyanide	mg/kg	1	MCERTS	1.7
Free Cyanide	mg/kg	1	MCERTS	< 1.0
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1800
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.89
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	894
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	62
Elemental Sulphur	mg/kg	5	NONE	1600
Ammonium - Exchangeable as NH ₄	mg/kg	0.5	MCERTS	180
Loss on Ignition @ 450oC	%	0.2	MCERTS	24.6

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10
Resorcinol	mg/kg	0.1	NONE	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10
Phenol	mg/kg	0.1	NONE	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3
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Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2483518
Sample Reference				SP-E5-S6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				01/11/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Speciated PAHs				
Naphthalene	mg/kg	0.05	NONE	0.17
Acenaphthylene	mg/kg	0.05	NONE	0.26
Acenaphthene	mg/kg	0.05	NONE	1.6
Fluorene	mg/kg	0.05	NONE	1.3
Phenanthrene	mg/kg	0.05	NONE	4.1
Anthracene	mg/kg	0.05	NONE	0.51
Fluoranthene	mg/kg	0.05	NONE	4.5
Pyrene	mg/kg	0.05	NONE	4.5
Benzo(a)anthracene	mg/kg	0.05	NONE	1.5
Chrysene	mg/kg	0.05	NONE	2.2
Benzo(b)fluoranthene	mg/kg	0.05	NONE	1.6
Benzo(k)fluoranthene	mg/kg	0.05	NONE	1.2
Benzo(a)pyrene	mg/kg	0.05	NONE	1.8
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	1.2
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	0.28
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.7

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	28.2
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	31
Boron (water soluble)	mg/kg	0.2	MCERTS	3.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.1
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	44
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	11
Copper (aqua regia extractable)	mg/kg	1	MCERTS	190
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	310
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.2
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	2.4
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	41
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	43
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	680

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0
Toluene	µg/kg	1	NONE	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number					2483518
Sample Reference					SP-E5-S6
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					01/11/2022
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.001	NONE	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.001	NONE	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.001	NONE	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	NONE	29	
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	NONE	370	
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	NONE	660	
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	NONE	960	
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	2000	

TPH-CWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.001	NONE	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.001	NONE	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.001	NONE	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	NONE	7.1	
TPH-CWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	NONE	87	
TPH-CWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	NONE	360	
TPH-CWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	NONE	490	
TPH-CWG - Aromatic (EC5 - EC35) _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	940	

VOCs

Chloromethane	µg/kg	1	NONE	-
Chloroethane	µg/kg	1	NONE	-
Bromomethane	µg/kg	1	NONE	-
Vinyl Chloride	µg/kg	1	NONE	-
Trichlorofluoromethane	µg/kg	1	NONE	-
1,1-Dichloroethene	µg/kg	1	NONE	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-
1,1-Dichloroethane	µg/kg	1	NONE	-
2,2-Dichloropropane	µg/kg	1	NONE	-
Trichloromethane	µg/kg	1	NONE	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-
1,2-Dichloroethane	µg/kg	1	NONE	-
1,1-Dichloropropene	µg/kg	1	NONE	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-
Benzene	µg/kg	1	NONE	-
Tetrachloromethane	µg/kg	1	NONE	-
1,2-Dichloropropane	µg/kg	1	NONE	-
Trichloroethene	µg/kg	1	NONE	-
Dibromomethane	µg/kg	1	NONE	-
Bromodichloromethane	µg/kg	1	NONE	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-
Toluene	µg/kg	1	NONE	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-
1,3-Dichloropropane	µg/kg	1	NONE	-
Dibromochloromethane	µg/kg	1	NONE	-
Tetrachloroethene	µg/kg	1	NONE	-
1,2-Dibromoethane	µg/kg	1	NONE	-
Chlorobenzene	µg/kg	1	NONE	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-
Ethylbenzene	µg/kg	1	NONE	-
p & m-Xylene	µg/kg	1	NONE	-
Styrene	µg/kg	1	NONE	-
Tribromomethane	µg/kg	1	NONE	-

Analytical Report Number: 22-93872
 Project / Site name: Coed Darcy
 Your Order No: 83764

Lab Sample Number					2483518
Sample Reference					SP-E5-S6
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					01/11/2022
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
o-Xylene	µg/kg	1	NONE	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-
Bromobenzene	µg/kg	1	NONE	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-
sec-Butylbenzene	µg/kg	1	NONE	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-
Butylbenzene	µg/kg	1	NONE	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	-
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SVOCs

Aniline	mg/kg	0.1	NONE	-
Phenol	mg/kg	0.2	NONE	-
2-Chlorophenol	mg/kg	0.1	NONE	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-
2-Methylphenol	mg/kg	0.3	NONE	-
Hexachloroethane	mg/kg	0.05	NONE	-
Nitrobenzene	mg/kg	0.3	NONE	-
4-Methylphenol	mg/kg	0.2	NONE	-
Isophorone	mg/kg	0.2	NONE	-
2-Nitrophenol	mg/kg	0.3	NONE	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-
Naphthalene	mg/kg	0.05	NONE	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-
4-Chloroaniline	mg/kg	0.1	NONE	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-
Dimethylphthalate	mg/kg	0.1	NONE	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-
Acenaphthylene	mg/kg	0.05	NONE	-
Acenaphthene	mg/kg	0.05	NONE	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-

Analytical Report Number: 22-93872
 Project / Site name: Coed Darcy
 Your Order No: 83764

Lab Sample Number					2483518
Sample Reference					SP-E5-S6
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					01/11/2022
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Dibenzofuran	mg/kg	0.2	NONE	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-
Fluorene	mg/kg	0.05	NONE	-	-
Azobenzene	mg/kg	0.3	NONE	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-
Anthracene	mg/kg	0.05	NONE	-	-
Carbazole	mg/kg	0.3	NONE	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-
Fluoranthene	mg/kg	0.05	NONE	-	-
Pyrene	mg/kg	0.05	NONE	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-
Chrysene	mg/kg	0.05	NONE	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	< 0.001
PCB Congener 180	mg/kg	0.001	NONE	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	< 0.007
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Analytical Report Number: 22-93872
 Project / Site name: Coed Darcy
 Your Order No: 83764

Lab Sample Number				2483518
Sample Reference				SP-E5-S6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				01/11/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
PFAS Suite 3				
PFBS C4 Sulphonate	µg/kg	0.1	NONE	-
PHPS C5 Sulphonate	µg/kg	0.1	NONE	-
PFHxS C6 Sulphonate	µg/kg	0.1	NONE	-
PFHpS C7 Sulphonate	µg/kg	0.1	NONE	-
PFOS C8 Sulphonate	µg/kg	0.1	NONE	-
PFNS C9 Sulphonate	µg/kg	0.1	NONE	-
PFDS C10 Sulphonate	µg/kg	0.1	NONE	-
PFUDS C11 Sulphonate	µg/kg	0.1	NONE	-
PFDoS C12 Sulphonate	µg/kg	0.1	NONE	-
PFBA C4 Carboxylic acid	µg/kg	0.1	NONE	-
PFPeA C5 Carboxylic acid	µg/kg	0.1	NONE	-
PFHxA C6 Carboxylic acid	µg/kg	0.1	NONE	-
PFHpA C7 Carboxylic acid	µg/kg	0.1	NONE	-
PFOA C8 Carboxylic acid	µg/kg	0.1	NONE	-
PFNA C9 Carboxylic acid	µg/kg	0.1	NONE	-
PFDA C10 Carboxylic acid	µg/kg	0.1	NONE	-
PFUDa C11 Carboxylic acid	µg/kg	0.1	NONE	-
PFDoA C12 Carboxylic acid	µg/kg	0.1	NONE	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-93872
Project / Site name: Coed Darcy
Your Order No: 83764

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2483512	SP-E5-S3		146	Loose Fibres	Chrysotile	< 0.001	< 0.001
2483514	SP-E5-S4		118	Loose Fibres	Chrysotile	0.001	0.001
2483515	SP-E5-S5		101	Loose Fibres	Amosite	0.002	0.002
2483517	SP-E6-S5		117	Sheeting/Board Debris	Chrysotile	0.272	0.272

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 22-93872

Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2483508	SP-E6-S1	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
2483509	SP-E5-S1	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
2483510	SP-E5-S2	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.
2483511	SP-E6-S2	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.
2483512	SP-E5-S3	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.
2483514	SP-E5-S4	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.
2483515	SP-E5-S5	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.
2483516	SP-E6-S4	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.
2483517	SP-E6-S5	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
2483518	SP-E5-S6	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.

Analytical Report Number : 22-93872

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Complex Cyanide in soil	Determination of complex cyanide by calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in acetonitrile followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in water followed by acidification followed by addition of ferric nitrate followed by discrete analyser (spectrophotometer).	In-house method	L082-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

Analytical Report Number : 22-93872

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Tentatively identified compounds (VOC) in soil	Determination of volatile organic compounds total ion count in soil by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Exchangeable Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
Exotic Metals Aqua Regia Extractable	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
EF - PFAS in soil by LC-MS/MS	PFAS suite 3 by LC-MS/MS	In-house method	UK	W	NONE
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
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Analytical Report Number : 22-93872

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
HS	Headspace Analysis				
MS	Mass spectrometry				
FID	Flame Ionisation Detector				
GC	Gas Chromatography				
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))				
CU	Clean-up - e.g. by Florisil®, silica gel				
1D	GC - Single coil/column gas chromatography				
2D	GC-GC - Double coil/column gas chromatography				
Total	Aliphatics & Aromatics				
AL	Aliphatics				
AR	Aromatics				
#1	EH_2D_Total but with humics mathematically subtracted				
#2	EH_2D_Total but with fatty acids mathematically subtracted				
_	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				

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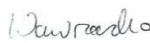
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Analytical Report Number : 22-93879

Project / Site name:	Coed Darcy	Samples received on:	02/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	02/11/2022
Your order number:	83764	Analysis completed by:	14/11/2022
Report Issue Number:	1	Report issued on:	14/11/2022
Samples Analysed:	2 10:1 WAC samples		


Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

i2 Analytical

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Waste Acceptance Criteria Analytical Results							
Report No:	22-93879						
				Client: ENGLOBE			
Location	Coed Darcy						
Lab Reference (Sample Number)	2483547 / 2483548			Landfill Waste Acceptance Criteria			
Sampling Date	01/11/2022			Limits			
Sample ID	SP-E5-S1			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)							
Solid Waste Analysis							
TOC (%)**	9.5			3%	5%	6%	
Loss on Ignition (%) **	-			--	--	10%	
BTEX (µg/kg)	< 10			6000	--	--	
Sum of PCBs (mg/kg)	< 0.007			1	--	--	
Mineral Oil (mg/kg) EH, 10, CU, AL	440			500	--	--	
Total PAH (WAC-17) (mg/kg)	8.40			100	--	--	
pH (units)**	-			--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	-			--	To be evaluated	To be evaluated	
Eluate Analysis							
	10:1		10:1	Limit values for compliance leaching test			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l		mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *	< 0.0010		< 0.0100	0.5	2	25	
Barium *	0.0556		0.335	20	100	300	
Cadmium *	< 0.0001		< 0.0008	0.04	1	5	
Chromium *	0.0014		0.0087	0.5	10	70	
Copper *	0.033		0.20	2	50	100	
Mercury *	< 0.0005		< 0.0050	0.01	0.2	2	
Molybdenum *	0.0052		0.0315	0.5	10	30	
Nickel *	0.0056		0.034	0.4	10	40	
Lead *	0.0071		0.043	0.5	10	50	
Antimony *	< 0.0017		< 0.017	0.06	0.7	5	
Selenium *	< 0.0040		< 0.040	0.1	0.5	7	
Zinc *	0.064		0.39	4	50	200	
Chloride *	1.4		8.7	800	15000	25000	
Fluoride*	0.70		4.2	10	150	500	
Sulphate *	100		610	1000	20000	50000	
TDS*	210		1300	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010		< 0.10	1	-	-	
DOC	22.9		138	500	800	1000	
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.7						
Dry Matter (%)	77						
Moisture (%)	23						
Results are expressed on a dry weight basis, after correction for moisture content where applicable. * = UKAS accredited (liquid eluate analysis only)							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited							
Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3. This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.							

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Waste Acceptance Criteria Analytical Results							
Report No:	22-93879						
					Client: ENGLOBE		
Location	Coed Darcy						
Lab Reference (Sample Number)	2483555 / 2483556				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	01/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	SP-E6-S3						
Depth (m)							
Solid Waste Analysis							
TOC (%)**	11				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, 10, CU, AL	3100				500	--	--
Total PAH (WAC-17) (mg/kg)	7.15				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis					Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	0.0138			0.0789	0.5	2	25
Barium *	0.0461			0.264	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0034			0.020	0.5	10	70
Copper *	0.061			0.35	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0234			0.134	0.5	10	30
Nickel *	0.0091			0.052	0.4	10	40
Lead *	0.018			0.10	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.072			0.41	4	50	200
Chloride *	11			61	800	15000	25000
Fluoride*	0.65			3.7	10	150	500
Sulphate *	35			200	1000	20000	50000
TDS*	180			1000	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	53.0			303	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.80						
Dry Matter (%)	76						
Moisture (%)	24						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					* = UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited		
Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.							
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.							

Analytical Report Number : 22-93879

Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2483547	SP-E5-S1	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
2483555	SP-E6-S3	None Supplied	None Supplied	Black loam and clay with gravel and vegetation.

Analytical Report Number : 22-93879

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as received, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L023-PL	D	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined aravimetrically using the moisture content which is carried out at a maximum of 30oC

Analytical Report Number : 22-93879

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total



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Analytical Report Number : 22-94200

Project / Site name:	Coed Darcy	Samples received on:	03/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	03/11/2022
Your order number:	83764	Analysis completed by:	20/11/2022
Report Issue Number:	1	Report issued on:	21/11/2022
Samples Analysed:	8 soil samples		


Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-94200

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2485471	2485472
Sample Reference				SP-E4-S1	SP-E4-S2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/11/2022	02/11/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	34	32
Total mass of sample received	kg	0.001	NONE	0.9	0.9

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MJN	MJN

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	5.9	7.4
Total Cyanide	mg/kg	1	MCERTS	13	8.9
Complex Cyanide	mg/kg	1	MCERTS	13	8.9
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3600	290
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.8	0.14
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1810	144
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	22	20
Elemental Sulphur	mg/kg	5	NONE	< 5.0	< 5.0
Ammonium - Exchangeable as NH ₄	mg/kg	0.5	MCERTS	1.2	< 0.5
Loss on Ignition @ 450oC	%	0.2	MCERTS	15.8	16.9

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10	< 0.10
Resorcinol	mg/kg	0.1	NONE	< 0.10	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10	< 0.10
Phenol	mg/kg	0.1	NONE	< 0.10	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3	< 1.3
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Analytical Report Number: 22-94200

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2485471	2485472
Sample Reference				SP-E4-S1	SP-E4-S2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/11/2022	02/11/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	0.14	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	0.23	0.17
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.57	0.25
Anthracene	mg/kg	0.05	NONE	0.71	0.51
Fluoranthene	mg/kg	0.05	NONE	0.46	0.15
Pyrene	mg/kg	0.05	NONE	0.64	0.24
Benzo(a)anthracene	mg/kg	0.05	NONE	0.27	0.17
Chrysene	mg/kg	0.05	NONE	0.66	0.21
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.34	0.14
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.13	0.06
Benzo(a)pyrene	mg/kg	0.05	NONE	0.22	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.38	0.23
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.76	0.66

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	5.51	2.79
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	31	26
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.8	2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	2.3	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	33
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	13	11
Copper (aqua regia extractable)	mg/kg	1	MCERTS	150	110
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	310	240
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.1	0.7
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	2.8	2.4
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	45	39
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	35	30
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	700	530

Analytical Report Number: 22-94200

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2485471	2485472
Sample Reference				SP-E4-S1	SP-E4-S2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/11/2022	02/11/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	15	2.4
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	520	100
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	1400	530
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	2500	1100
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	4400	1700

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	16	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	130	30
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	960	410
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	3300	1900
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	4400	2300

VOCs

Chloromethane	µg/kg	1	NONE	-	-
Chloroethane	µg/kg	1	NONE	-	-
Bromomethane	µg/kg	1	NONE	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-
Trichloromethane	µg/kg	1	NONE	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-
Benzene	µg/kg	1	NONE	-	-
Tetrachloromethane	µg/kg	1	NONE	-	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-
Trichloroethene	µg/kg	1	NONE	-	-
Dibromomethane	µg/kg	1	NONE	-	-
Bromodichloromethane	µg/kg	1	NONE	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-
Toluene	µg/kg	1	NONE	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-
Dibromochloromethane	µg/kg	1	NONE	-	-

Analytical Report Number: 22-94200

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2485471	2485472
Sample Reference				SP-E4-S1	SP-E4-S2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/11/2022	02/11/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Tetrachloroethene	µg/kg	1	NONE	-	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-
Chlorobenzene	µg/kg	1	NONE	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-
Ethylbenzene	µg/kg	1	NONE	-	-
p & m-Xylene	µg/kg	1	NONE	-	-
Styrene	µg/kg	1	NONE	-	-
Tribromomethane	µg/kg	1	NONE	-	-
o-Xylene	µg/kg	1	NONE	-	-
1,1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-
Bromobenzene	µg/kg	1	NONE	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-
sec-Butylbenzene	µg/kg	1	NONE	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-
Butylbenzene	µg/kg	1	NONE	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	-	-
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SVOCs

Aniline	mg/kg	0.1	NONE	-	-
Phenol	mg/kg	0.2	NONE	-	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-
2-Methylphenol	mg/kg	0.3	NONE	-	-
Hexachloroethane	mg/kg	0.05	NONE	-	-
Nitrobenzene	mg/kg	0.3	NONE	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-
Isophorone	mg/kg	0.2	NONE	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-
Naphthalene	mg/kg	0.05	NONE	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-

Analytical Report Number: 22-94200

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2485471	2485472
Sample Reference				SP-E4-S1	SP-E4-S2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/11/2022	02/11/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-
Dibenzofuran	mg/kg	0.2	NONE	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-
Fluorene	mg/kg	0.05	NONE	-	-
Azobenzene	mg/kg	0.3	NONE	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-
Anthracene	mg/kg	0.05	NONE	-	-
Carbazole	mg/kg	0.3	NONE	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-
Fluoranthene	mg/kg	0.05	NONE	-	-
Pyrene	mg/kg	0.05	NONE	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-
Chrysene	mg/kg	0.05	NONE	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-

Analytical Report Number: 22-94200

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2485471	2485472
Sample Reference				SP-E4-S1	SP-E4-S2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/11/2022	02/11/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	< 0.001	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	< 0.001	< 0.001
PCB Congener 180	mg/kg	0.001	NONE	< 0.001	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	< 0.007	< 0.007
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 22-94200
Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2485471	SP-E4-S1	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
2485472	SP-E4-S2	None Supplied	None Supplied	Brown loam and sand with vegetation and gravel.

Analytical Report Number : 22-94200

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Complex Cyanide in soil	Determination of complex cyanide by calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in acetonitrile followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in water followed by acidification followed by addition of ferric nitrate followed by discrete analyser (spectrophotometer).	In-house method	L082-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE

Analytical Report Number : 22-94200

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Tentatively identified compounds (VOC) in soil	Determination of volatile organic compounds total ion count in soil by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Exchangeable Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
Exotic Metals Aqua Regia Extractable	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics

Analytical Report Number : 22-94200

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
AR	Aromatics				
#1	EH_2D_Total but with humics mathematically subtracted				
#2	EH_2D_Total but with fatty acids mathematically subtracted				
-	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				



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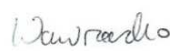
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Analytical Report Number : 22-94205

Project / Site name:	Coed Darcy	Samples received on:	03/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	03/11/2022
Your order number:	83764	Analysis completed by:	20/11/2022
Report Issue Number:	1	Report issued on:	21/11/2022
Samples Analysed:	2 10:1 WAC Samples		


Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results							
Report No:	22-94205						
					Client: ENGLOBE		
Location	Coed Darcy						
Lab Reference (Sample Number)	2485497 / 2485498				Landfill Waste Acceptance Criteria		
Sampling Date	02/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	SP-E5-S2						
Depth (m)							
Solid Waste Analysis							
TOC (%)**	11				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH_ID_CU_AL	3100				500	--	--
Total PAH (WAC-17) (mg/kg)	9.37				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0031			0.0165	0.5	2	25
Barium *	0.133			0.716	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0014			0.0074	0.5	10	70
Copper *	0.064			0.35	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0151			0.0813	0.5	10	30
Nickel *	0.0088			0.048	0.4	10	40
Lead *	0.0030			0.016	0.5	10	50
Antimony *	0.023			0.13	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.10			0.55	4	50	200
Chloride *	5.4			29	800	15000	25000
Fluoride*	0.46			2.5	10	150	500
Sulphate *	130			720	1000	20000	50000
TDS*	310			1700	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	37.3			201	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.90						
Dry Matter (%)	51						
Moisture (%)	49						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					* = UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCFRTS accredited		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results							
Report No:	22-94205						
					Client: ENGLOBE		
Location	Coed Darcy						
Lab Reference (Sample Number)	2485499 / 2485500				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	02/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	SP-E4-S2						
Depth (m)							
Solid Waste Analysis							
TOC (%)**	8.3				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, ID, CU, AL	2200				500	--	--
Total PAH (WAC-17) (mg/kg)	3.30				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0027			0.0171	0.5	2	25
Barium *	0.0544			0.348	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0015			0.0096	0.5	10	70
Copper *	0.089			0.57	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30
Nickel *	0.0098			0.063	0.4	10	40
Lead *	0.034			0.21	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.16			1.0	4	50	200
Chloride *	1.7			11	800	15000	25000
Fluoride*	0.37			2.4	10	150	500
Sulphate *	14			87	1000	20000	50000
TDS*	60			380	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	29.2			187	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.90						
Dry Matter (%)	68						
Moisture (%)	32						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					*= UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 22-94205

Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2485497	SP-E5-S2	None Supplied	None Supplied	Black clay and sand with gravel and vegetation.
2485499	SP-E4-S2	None Supplied	None Supplied	Brown loam and sand with vegetation and gravel.

Analytical Report Number : 22-94205

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L023-PL	D	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025

Analytical Report Number : 22-94205

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total



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Analytical Report Number : 22-94475

Project / Site name:	Coed Darcy	Samples received on:	04/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	04/11/2022
Your order number:	83764	Analysis completed by:	23/11/2022
Report Issue Number:	1	Report issued on:	23/11/2022
Samples Analysed:	11 soil samples		

Signed:

Izabela Wójcik

Izabela Wójcik
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-94475

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2486844	2486845	2486846	2486847	2486848
Sample Reference				SP-E5-S8	SP-E4-S3	SPE-3-S1	SP-E2-S1	SP-E2-S2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	46	21	38	32	23
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	0.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	SZS	SZS	SZS	SZS	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.4	6.5	5.6	6.3	-
Total Cyanide	mg/kg	1	MCERTS	2.1	8.6	8.3	2.5	-
Complex Cyanide	mg/kg	1	MCERTS	2.1	< 1.0	1.4	< 1.0	-
Free Cyanide	mg/kg	1	MCERTS	< 1.0	7.6	6.9	4.1	-
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	-
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.1	1.3	0.84	1.2	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4100	2600	1700	2300	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2060	1320	841	1170	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	74	36	20	65	-
Elemental Sulphur	mg/kg	5	NONE	3200	< 5.0	980	< 5.0	-
Ammonium - Exchangeable as NH4	mg/kg	0.5	MCERTS	21	5	9.1	22	-
Loss on Ignition @ 450oC	%	0.2	MCERTS	25.9	15.9	18	17.8	-

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	-
Resorcinol	mg/kg	0.1	NONE	0.71	< 0.10	< 0.10	< 0.10	-
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	-
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	-
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	-
Phenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	-
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	-
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	-

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3	< 1.3	< 1.3	< 1.3	-
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Analytical Report Number: 22-94475

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2486844	2486845	2486846	2486847	2486848
Sample Reference				SP-E5-S8	SP-E4-S3	SPE-3-S1	SP-E2-S1	SP-E2-S2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	0.39	< 0.05	0.15	< 0.05	-
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Phenanthrene	mg/kg	0.05	NONE	1.6	< 0.05	< 0.05	< 0.05	-
Anthracene	mg/kg	0.05	NONE	0.69	< 0.05	< 0.05	< 0.05	-
Fluoranthene	mg/kg	0.05	NONE	5.2	< 0.05	< 0.05	< 0.05	-
Pyrene	mg/kg	0.05	NONE	6.2	< 0.05	< 0.05	< 0.05	-
Benzo(a)anthracene	mg/kg	0.05	NONE	2	< 0.05	< 0.05	< 0.05	-
Chrysene	mg/kg	0.05	NONE	2.1	< 0.05	< 0.05	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	1.8	< 0.05	< 0.05	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	1.7	< 0.05	< 0.05	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	NONE	2.5	< 0.05	< 0.05	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	1.4	< 0.05	< 0.05	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	0.29	< 0.05	< 0.05	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	2.2	< 0.05	< 0.05	< 0.05	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	28.1	< 0.80	< 0.80	< 0.80	-
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	48	25	25	32	-
Boron (water soluble)	mg/kg	0.2	MCERTS	4.5	1.2	0.9	0.9	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.8	1.7	1.9	2.7	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	71	23	41	29	-
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	16	9.7	10	15	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	280	82	110	130	-
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	380	200	250	320	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.7	1	0.9	1.1	-
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	4	2.2	2.5	2.9	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	64	42	39	46	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.3	< 1.0	< 1.0	< 1.0	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	69	29	32	39	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	870	440	490	580	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-

Analytical Report Number: 22-94475

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number	2486844	2486845	2486846	2486847	2486848
Sample Reference	SP-E5-S8	SP-E4-S3	SPE-3-S1	SP-E2-S1	SP-E2-S2
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	2.9	< 1.0	< 1.0	3.5	-
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	360	380	430	140	-
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	1200	1300	1700	810	-
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	1900	3500	3100	1800	-
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	3500	5200	5200	2800	-

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	45	81	83	29	-
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	570	1100	960	450	-
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	1600	5200	3400	2100	-
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	2200	6400	4400	2600	-

VOCs

Chloromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Bromomethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trichloromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Benzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Tetrachloromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Dibromomethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Bromodichloromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Toluene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Dibromochloromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Chlorobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
p & m-Xylene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Styrene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0

Analytical Report Number: 22-94475
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2486844	2486845	2486846	2486847	2486848
Sample Reference				SP-E5-S8	SP-E4-S3	SPE-3-S1	SP-E2-S1	SP-E2-S2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
o-Xylene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Isopropylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Bromobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
n-Propylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
2-Chlorotoluene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
4-Chlorotoluene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
tert-Butylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
sec-Butylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Butylbenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	-	ND	ND	-	ND
VOC % Match	%	N/A	NONE	-			-	

SVOCs

Aniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Phenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
2-Chlorophenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	0.3
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2-Methylphenol	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Hexachloroethane	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Nitrobenzene	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Isophorone	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Naphthalene	mg/kg	0.05	NONE	-	< 0.05	0.15	-	0.14
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	0.4	-	0.2
2-Chloronaphthalene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Dimethylphthalate	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Acenaphthylene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05

Analytical Report Number: 22-94475
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2486844	2486845	2486846	2486847	2486848
Sample Reference				SP-E5-S8	SP-E4-S3	SPE-3-S1	SP-E2-S1	SP-E2-S2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Acenaphthene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Dibenzofuran	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Diethyl phthalate	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Fluorene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Azobenzene	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Phenanthrene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	0.18
Anthracene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	0.46
Carbazole	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Anthraquinone	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Fluoranthene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Pyrene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	< 0.3	< 0.3	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	< 0.05	< 0.05	-	< 0.05

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	ND	ND	-	ND
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	
SVOCs TICs Compound Name		N/A	NONE	-			-	
SVOC % Match	%	N/A	NONE	-			-	

Analytical Report Number: 22-94475

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2486844	2486845	2486846	2486847	2486848
Sample Reference				SP-E5-S8	SP-E4-S3	SPE-3-S1	SP-E2-S1	SP-E2-S2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
PCB Congener 52	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
PCB Congener 101	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
PCB Congener 138	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
PCB Congener 153	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-
PCB Congener 180	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	< 0.007	< 0.007	< 0.007	< 0.007	-
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-94475

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2486849	2486850	2486851	2486852
Sample Reference				SP-E7-S1	SP-E7-S2	SP-E7-S3	SP-E7-S4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	21	36	30	36
Total mass of sample received	kg	0.001	NONE	1.2	0.9	0.9	0.9

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SZS	SZS	SZS	SZS

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8	7.5	7.9	7.3
Total Cyanide	mg/kg	1	MCERTS	4	6.5	7.2	8
Complex Cyanide	mg/kg	1	MCERTS	4	5.3	5.6	6.3
Free Cyanide	mg/kg	1	MCERTS	< 1.0	1.2	1.7	1.7
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	980	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.49	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	489	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	0.52	0.25	0.32
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	1000	490	650
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	525	247	323
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	71	86	73	94
Elemental Sulphur	mg/kg	5	NONE	2100	3600	2900	3400
Ammonium - Exchangeable as NH4	mg/kg	0.5	MCERTS	280	380	280	260
Loss on Ignition @ 450oC	%	0.2	MCERTS	27.6	23	12.5	21.4

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10	< 0.10	0.97	1.4
Resorcinol	mg/kg	0.1	NONE	< 0.10	0.92	< 0.10	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10
Phenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3	< 1.3	< 1.3	1.4
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Analytical Report Number: 22-94475
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2486849	2486850	2486851	2486852
Sample Reference				SP-E7-S1	SP-E7-S2	SP-E7-S3	SP-E7-S4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Speciated PAHs							
Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	1.5	1.2	1.3	0.94
Anthracene	mg/kg	0.05	NONE	1.1	1.2	1.1	0.86
Fluoranthene	mg/kg	0.05	NONE	1	0.98	1.3	1.2
Pyrene	mg/kg	0.05	NONE	2.7	2.8	2.8	2.8
Benzo(a)anthracene	mg/kg	0.05	NONE	2.5	2.5	0.86	1.4
Chrysene	mg/kg	0.05	NONE	0.67	1	2.8	0.81
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.81	0.65	1	0.8
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.65	0.33	0.2	0.34
Benzo(a)pyrene	mg/kg	0.05	NONE	1.1	0.85	0.95	0.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.72	0.88	0.74	0.71
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.2	1.4	1.5	1.2

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	13.9	13.7	14.6	12
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	27	35	16	30
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	3	1	1.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.1	3.1	1.2	2.7
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	32	21	28
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	9.5	13	10	12
Copper (aqua regia extractable)	mg/kg	1	MCERTS	150	160	64	150
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	280	330	130	300
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2	1.6	0.8	1.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	2.6	3.2	1.5	3.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	37	49	37	45
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	55	56	30	54
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	590	740	340	620

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-94475
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2486849	2486850	2486851	2486852
Sample Reference				SP-E7-S1	SP-E7-S2	SP-E7-S3	SP-E7-S4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	2.2	1.6	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	590	860	540	970
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	2800	2700	1700	2700
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	4500	4200	2600	4100
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	7900	7800	4800	7800

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	300	390	130	460
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	2600	2200	1200	2800
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	6200	5400	2700	6500
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	9100	7900	4000	9800

VOCS

Chloromethane	µg/kg	1	NONE	< 1.0	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-
Bromomethane	µg/kg	1	NONE	< 1.0	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	< 1.0	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	-	-	-
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	-	-	-
2,2-Dichloropropane	µg/kg	1	NONE	< 1.0	-	-	-
Trichloromethane	µg/kg	1	NONE	< 1.0	-	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0	-	-	-
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0	-	-	-
1,1-Dichloropropene	µg/kg	1	NONE	< 1.0	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-
Benzene	µg/kg	1	NONE	< 1.0	-	-	-
Tetrachloromethane	µg/kg	1	NONE	< 1.0	-	-	-
1,2-Dichloropropane	µg/kg	1	NONE	< 1.0	-	-	-
Trichloroethene	µg/kg	1	NONE	< 1.0	-	-	-
Dibromomethane	µg/kg	1	NONE	< 1.0	-	-	-
Bromodichloromethane	µg/kg	1	NONE	< 1.0	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	< 1.0	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	< 1.0	-	-	-
Toluene	µg/kg	1	NONE	< 1.0	-	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0	-	-	-
1,3-Dichloropropane	µg/kg	1	NONE	< 1.0	-	-	-
Dibromochloromethane	µg/kg	1	NONE	< 1.0	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-
1,2-Dibromoethane	µg/kg	1	NONE	< 1.0	-	-	-
Chlorobenzene	µg/kg	1	NONE	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
p & m-Xylene	µg/kg	1	NONE	< 1.0	-	-	-
Styrene	µg/kg	1	NONE	< 1.0	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-

Analytical Report Number: 22-94475
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2486849	2486850	2486851	2486852
Sample Reference				SP-E7-S1	SP-E7-S2	SP-E7-S3	SP-E7-S4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
o-Xylene	µg/kg	1	NONE	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	-	-	-
Isopropylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
Bromobenzene	µg/kg	1	NONE	< 1.0	-	-	-
n-Propylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
2-Chlorotoluene	µg/kg	1	NONE	< 1.0	-	-	-
4-Chlorotoluene	µg/kg	1	NONE	< 1.0	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
tert-Butylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
sec-Butylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	< 1.0	-	-	-
p-Isopropyltoluene	µg/kg	1	NONE	< 1.0	-	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	< 1.0	-	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	< 1.0	-	-	-
Butylbenzene	µg/kg	1	NONE	< 1.0	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	< 1.0	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	< 1.0	-	-	-
Hexachlorobutadiene	µg/kg	1	NONE	< 1.0	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	< 1.0	-	-	-

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	ND	-	-	-
VOC % Match	%	N/A	NONE		-	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-
Phenol	mg/kg	0.2	NONE	< 0.2	-	-	-
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	< 0.2	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	< 0.1	-	-	-
2-Methylphenol	mg/kg	0.3	NONE	< 0.3	-	-	-
Hexachloroethane	mg/kg	0.05	NONE	< 0.05	-	-	-
Nitrobenzene	mg/kg	0.3	NONE	< 0.3	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-
Isophorone	mg/kg	0.2	NONE	< 0.2	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3	-	-	-
Naphthalene	mg/kg	0.05	NONE	< 0.05	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-
Dimethylphthalate	mg/kg	0.1	NONE	< 0.1	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	-	-	-

Analytical Report Number: 22-94475
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2486849	2486850	2486851	2486852
Sample Reference				SP-E7-S1	SP-E7-S2	SP-E7-S3	SP-E7-S4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Acenaphthene	mg/kg	0.05	NONE	< 0.05	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2	-	-	-
Dibenzofuran	mg/kg	0.2	NONE	< 0.2	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3	-	-	-
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2	-	-	-
Fluorene	mg/kg	0.05	NONE	< 0.05	-	-	-
Azobenzene	mg/kg	0.3	NONE	< 0.3	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	< 0.2	-	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3	-	-	-
Phenanthrene	mg/kg	0.05	NONE	1.5	-	-	-
Anthracene	mg/kg	0.05	NONE	1.1	-	-	-
Carbazole	mg/kg	0.3	NONE	< 0.3	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2	-	-	-
Anthraquinone	mg/kg	0.3	NONE	< 0.3	-	-	-
Fluoranthene	mg/kg	0.05	NONE	1	-	-	-
Pyrene	mg/kg	0.05	NONE	2.7	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	2.5	-	-	-
Chrysene	mg/kg	0.05	NONE	0.67	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.81	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.65	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	1.1	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.72	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.2	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-

Analytical Report Number: 22-94475

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2486849	2486850	2486851	2486852
Sample Reference				SP-E7-S1	SP-E7-S2	SP-E7-S3	SP-E7-S4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/11/2022	03/11/2022	03/11/2022	03/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	NONE	0.22	< 0.001	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	0.41	< 0.001	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	0.082	< 0.001	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	0.11	< 0.001	< 0.001	< 0.001
PCB Congener 180	mg/kg	0.001	NONE	0.58	< 0.001	< 0.001	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	1.4	< 0.007	< 0.007	< 0.007
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-94475

Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2486844	SP-E5-S8	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486845	SP-E4-S3	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486846	SPE-3-S1	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486847	SP-E2-S1	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486848	SP-E2-S2	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486849	SP-E7-S1	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486850	SP-E7-S2	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486851	SP-E7-S3	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486852	SP-E7-S4	None Supplied	None Supplied	Brown loam with gravel and vegetation.

Analytical Report Number : 22-94475

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Complex Cyanide in soil	Determination of complex cyanide by calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in acetonitrile followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in water followed by acidification followed by addition of ferric nitrate followed by discrete analyser (spectrophotometer).	In-house method	L082-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE

Analytical Report Number : 22-94475

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Tentatively identified compounds (VOC) in soil	Determination of volatile organic compounds total ion count in soil by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Exchangeable Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
Exotic Metals Aqua Regia Extractable	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography

Analytical Report Number : 22-94475

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
2D	GC-GC - Double coil/column gas chromatography				
Total	Aliphatics & Aromatics				
AL	Aliphatics				
AR	Aromatics				
#1	EH_2D_Total but with humics mathematically subtracted				
#2	EH_2D_Total but with fatty acids mathematically subtracted				
-	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				



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Analytical Report Number : 22-94480

Project / Site name:	Coed Darcy	Samples received on:	04/11/2022
Your job number:	C18970	Samples instructed on/ Analysis started on:	04/11/2022
Your order number:	83764	Analysis completed by:	20/11/2022
Report Issue Number:	1	Report issued on:	21/11/2022
Samples Analysed:	2 10:1 WAC Samples		

Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results								
Report No:	22-94480							
					Client: ENGLOBE			
Location	Coed Darcy							
Lab Reference (Sample Number)	2486871 / 2486872				Landfill Waste Acceptance Criteria			
Sampling Date	03/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	SP-E2-S2							Limits
Depth (m)								
Solid Waste Analysis								
TOC (%)**	6.9				3%	5%	6%	
Loss on Ignition (%) **	-				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH_ID_CU_AL	1500				500	--	--	
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--	
pH (units)**	-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated	
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *	0.0011			< 0.0100	0.5	2	25	
Barium *	0.0280			0.174	20	100	300	
Cadmium *	0.0002			0.0014	0.04	1	5	
Chromium *	< 0.0004			< 0.0040	0.5	10	70	
Copper *	0.063			0.39	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	0.0005			< 0.0040	0.5	10	30	
Nickel *	0.0071			0.044	0.4	10	40	
Lead *	0.010			0.062	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.22			1.4	4	50	200	
Chloride *	1.6			9.9	800	15000	25000	
Fluoride*	0.15			0.92	10	150	500	
Sulphate *	19			120	1000	20000	50000	
TDS*	45			280	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	20.4			127	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.80							
Dry Matter (%)	77							
Moisture (%)	23							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					* = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCFRTS accredited			

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results							
Report No:	22-94480						
					Client: ENGLOBE		
Location	Coed Darcy						
Lab Reference (Sample Number)	2486873 / 2486874				Landfill Waste Acceptance Criteria		
Sampling Date	03/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	SP-E7-S1						
Depth (m)							
Solid Waste Analysis							
TOC (%)**	12				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, ID, CU, AL	8800				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0038			0.0235	0.5	2	25
Barium *	0.0537			0.334	20	100	300
Cadmium *	0.0002			0.0010	0.04	1	5
Chromium *	0.0012			0.0076	0.5	10	70
Copper *	0.077			0.48	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0241			0.150	0.5	10	30
Nickel *	0.0081			0.051	0.4	10	40
Lead *	0.013			0.083	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.025			0.16	4	50	200
Chloride *	6.3			39	800	15000	25000
Fluoride*	0.45			2.8	10	150	500
Sulphate *	18			110	1000	20000	50000
TDS*	170			1000	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	79.4			494	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	79						
Moisture (%)	21						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					* = UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCFRTS accredited		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 22-94480
Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2486871	SP-E2-S2	None Supplied	None Supplied	Brown loam with gravel and vegetation.
2486873	SP-E7-S1	None Supplied	None Supplied	Brown loam with gravel and vegetation.

Analytical Report Number : 22-94480

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L023-PL	D	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

Analytical Report Number : 22-94480

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total



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Analytical Report Number : 22-94834

Project / Site name:	Coed Darcy	Samples received on:	07/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	07/11/2022
Your order number:	83764	Analysis completed by:	16/11/2022
Report Issue Number:	1	Report issued on:	20/11/2022
Samples Analysed:	10 soil samples		

Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-94834

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	6	7.6	13	14	13
Total mass of sample received	kg	0.001	NONE	1.2	0.8	0.8	0.8	0.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DSA	DSA	DSA	DSA	DSA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.4	8.8	11.1	8	8
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	32	47	48	34	83
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.016	0.024	0.024	0.017	0.042
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	16.2	23.7	24.2	16.8	41.5
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	4	31	11	13	11
Elemental Sulphur	mg/kg	5	NONE	27	< 5.0	27	< 5.0	< 5.0
Ammonium - Exchangeable as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Loss on Ignition @ 450oC	%	0.2	MCERTS	1.6	17	6.8	7.2	10.2

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Resorcinol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
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Analytical Report Number: 22-94834
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	1.9	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.54	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.79	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	1.1	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.13	0.19	7.2	< 0.05	0.18
Anthracene	mg/kg	0.05	NONE	< 0.05	0.05	1.8	< 0.05	0.06
Fluoranthene	mg/kg	0.05	NONE	0.11	0.14	7.5	< 0.05	0.5
Pyrene	mg/kg	0.05	NONE	0.12	0.16	7.3	< 0.05	0.45
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	0.09	4.7	< 0.05	0.29
Chrysene	mg/kg	0.05	NONE	< 0.05	0.14	3.8	< 0.05	0.28
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.17	3.6	< 0.05	0.24
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.07	1.9	< 0.05	0.17
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	3.7	< 0.05	0.17
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	1.5	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.4	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	< 0.05	1.6	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	< 0.80	1.01	49.2	< 0.80	2.34
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.2	2.4	14	2.7	4.6
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.3	0.7	1	1.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	17	1.7	2.5	2.7	4.7
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	31	33	43	32
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	5.2	3.1	7.6	6.3	4.8
Copper (aqua regia extractable)	mg/kg	1	MCERTS	200	140	120	110	250
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	150	100	190	110	180
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.5	< 0.3	0.5	< 0.3	0.5
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	4.4	4.8	2	2.4	3.8
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	51	36	37	42	90
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	14	11	15	5.4	8.4
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1600	750	1100	1700	2000

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 22-94834

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	4.6	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	20	11	11	< 8.0	14
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	170	160	140	91	150
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	190	170	150	92	170

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	12	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	40	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	63	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	78	18	220	48	33
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	78	18	340	55	37

Analytical Report Number: 22-94834
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/kg	1	NONE	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	NONE	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloromethane	µg/kg	1	NONE	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloroethene	µg/kg	1	NONE	-	-	-	-	-
Dibromomethane	µg/kg	1	NONE	-	-	-	-	-
Bromodichloromethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Toluene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Dibromochloromethane	µg/kg	1	NONE	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-	-	-	-
Chlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Ethylbenzene	µg/kg	1	NONE	-	-	-	-	-
p & m-Xylene	µg/kg	1	NONE	-	-	-	-	-
Styrene	µg/kg	1	NONE	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	NONE	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-	-	-	-
Bromobenzene	µg/kg	1	NONE	-	-	-	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Butylbenzene	µg/kg	1	NONE	-	-	-	-	-

Analytical Report Number: 22-94834
 Project / Site name: Coed Darcy
 Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
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Analytical Report Number: 22-94834
Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	NONE	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	NONE	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	NONE	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Naphthalene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	NONE	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Carbazole	mg/kg	0.3	NONE	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-	-
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-	-

Analytical Report Number: 22-94834

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2488787	2488788	2488789	2488790	2488791
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-1
Sample Number				S1	S2	S3	S4	S5
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	0.002	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	0.002	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 180	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-94834

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.1	6.3	8.6	5.4	9.7
Total mass of sample received	kg	0.001	NONE	0.8	0.8	0.8	0.8	0.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DSA	DSA	DSA	DSA	DSA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	9	9.2	9.3	9.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	70	14	12	26	32
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.035	0.0068	0.0062	0.013	0.016
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	34.8	6.8	6.2	13.1	15.8
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	7.4	5.3	6.9	11	10
Elemental Sulphur	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonium - Exchangeable as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Loss on Ignition @ 450oC	%	0.2	MCERTS	2.3	4.5	3.1	5	5.8

Phenols by HPLC

Catechol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Resorcinol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Cresols (o-, m-, p-)	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Total Naphthols (sum of 1- and 2- Naphthol)	mg/kg	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2-Isopropylphenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenol	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Trimethylphenol (2,3,5-)	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Xylenols and Ethylphenols	mg/kg	0.3	NONE	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Total Phenols

Total Phenols (HPLC)	mg/kg	1.3	NONE	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
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Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	1.5	2.8	3.1	2.4	< 1.0
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	1	0.5	0.6	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	0.7	0.5	1.4	0.5
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	7.8	18	13	18	8.3
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	1.4	2.6	2.6	2.2	1
Copper (aqua regia extractable)	mg/kg	1	MCERTS	21	68	32	68	24
Germanium (aqua regia extractable)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Lead (aqua regia extractable)	mg/kg	1	MCERTS	20	88	70	73	32
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.3	0.5	0.5	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1	1.5	0.96	1.9	0.86
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	7.6	18	9.8	19	6.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	5.6	5.2	6.2	7.2	2.5
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	170	470	230	1700	230

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	110	64	23	51	77
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	110	64	23	51	80
TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	18	< 10	14	< 10	16
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	20	< 10	15	< 10	17

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Your Order No: 83764

Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Bromomethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trichloromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Benzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Tetrachloromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Dibromomethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Bromodichloromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Dibromochloromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Chlorobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
p & m-Xylene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Styrene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
o-Xylene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Isopropylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Bromobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
n-Propylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
2-Chlorotoluene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
4-Chlorotoluene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
tert-Butylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
sec-Butylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Butylbenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0

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Project / Site name: Coed Darcy

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Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	NONE	< 1.0	-	< 1.0	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	ND	-	ND	-	ND
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Project / Site name: Coed Darcy
Your Order No: 83764

Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCS								
Aniline	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
Phenol	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
2-Methylphenol	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Hexachloroethane	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Nitrobenzene	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
Isophorone	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Naphthalene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
Dimethylphthalate	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1	-	< 0.1	-	< 0.1
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
Dibenzofuran	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Diethyl phthalate	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
Fluorene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Azobenzene	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Phenanthrene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Carbazole	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2	-	< 0.2	-	< 0.2
Anthraquinone	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Fluoranthene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Pyrene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3	-	< 0.3	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05

Analytical Report Number: 22-94834

Project / Site name: Coed Darcy

Your Order No: 83764

Lab Sample Number				2488792	2488793	2488794	2488795	2488796
Sample Reference				SP-GT-1	SP-GT-1	SP-GT-1	SP-GT-3	SP-GT-3
Sample Number				S6	S7	S8	S1	S2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	-	< 0.05	-	< 0.05

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	ND	-	ND
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 101	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 138	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 153	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 180	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	NONE	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-94834

Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2488787	SP-GT-1	S1	None Supplied	Grey rubble with vegetation and glass.**
2488788	SP-GT-1	S2	None Supplied	Grey rubble with vegetation and glass.**
2488789	SP-GT-1	S3	None Supplied	Brown rubble with glass.**
2488790	SP-GT-1	S4	None Supplied	Brown rubble with glass.**
2488791	SP-GT-1	S5	None Supplied	Brown rubble with glass.**
2488792	SP-GT-1	S6	None Supplied	Brown rubble with glass.**
2488793	SP-GT-1	S7	None Supplied	Brown rubble with glass.**
2488794	SP-GT-1	S8	None Supplied	Brown rubble with glass and vegetation.**
2488795	SP-GT-3	S1	None Supplied	Brown sand with glass and metal.
2488796	SP-GT-3	S2	None Supplied	Brown sand with glass and metal.

**Non MCERTS Matrix

Analytical Report Number : 22-94834

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Phenols, speciated, in soil, by HPLC	Determination of speciated phenols by HPLC.	In house method based on Blue Book Method.	L030-PL	W	NONE
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Complex Cyanide in soil	Determination of complex cyanide by calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in acetonitrile followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in water followed by acidification followed by addition of ferric nitrate followed by discrete analyser (spectrophotometer).	In-house method	L082-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE

Analytical Report Number : 22-94834

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Tentatively identified compounds (VOC) in soil	Determination of volatile organic compounds total ion count in soil by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Exchangeable Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
Exotic Metals Aqua Regia Extractable	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Analytical Report Number : 22-94834

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Sample Deviation Report



Analytical Report Number : 22-94834

Project / Site name: Coed Darcy

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP-GT-1	S1	S	2488787	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S2	S	2488788	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S3	S	2488789	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S4	S	2488790	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S5	S	2488791	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S6	S	2488792	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S7	S	2488793	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S8	S	2488794	a	None Supplied	None Supplied	None Supplied
SP-GT-3	S1	S	2488795	a	None Supplied	None Supplied	None Supplied
SP-GT-3	S2	S	2488796	a	None Supplied	None Supplied	None Supplied



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e: kirsty.sweeny@englobecorp.com

Analytical Report Number : 22-94840

Project / Site name:	Coed Darcy	Samples received on:	07/11/2022
Your job number:	C1870	Samples instructed on/ Analysis started on:	07/11/2022
Your order number:	83764	Analysis completed by:	20/11/2022
Report Issue Number:	1	Report issued on:	21/11/2022
Samples Analysed:	8 10:1 WAC Samples		

Signed:

Dominika Warjan
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results									
Report No:		22-94840							
						Client: ENGLOBE			
Location		Coed Darcy							
Lab Reference (Sample Number)		2488819 / 2488820				Landfill Waste Acceptance Criteria			
						Limits			
Sampling Date						Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID		SP-GT-1 S1							
Depth (m)									
Solid Waste Analysis									
TOC (%)**		4.8				3%	5%	6%	
Loss on Ignition (%) **		-				--	--	10%	
BTEX (µg/kg)		< 10				6000	--	--	
Sum of PCBs (mg/kg)		< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL		200				500	--	--	
Total PAH (WAC-17) (mg/kg)		< 0.85				100	--	--	
pH (units)**		-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)		-				--	To be evaluated	To be evaluated	
Eluate Analysis		10:1			10:1	Limit values for compliance leaching test			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)		mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *		< 0.0010			< 0.0100	0.5	2	25	
Barium *		0.0144			0.137	20	100	300	
Cadmium *		< 0.0001			< 0.0008	0.04	1	5	
Chromium *		0.0018			0.017	0.5	10	70	
Copper *		0.022			0.21	2	50	100	
Mercury *		< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *		< 0.0004			< 0.0040	0.5	10	30	
Nickel *		0.0020			0.019	0.4	10	40	
Lead *		0.0045			0.043	0.5	10	50	
Antimony *		< 0.0017			< 0.017	0.06	0.7	5	
Selenium *		< 0.0040			< 0.040	0.1	0.5	7	
Zinc *		0.046			0.43	4	50	200	
Chloride *		0.56			5.3	800	15000	25000	
Fluoride*		0.075			0.71	10	150	500	
Sulphate *		1.1			10	1000	20000	50000	
TDS*		28			270	4000	60000	100000	
Phenol Index (Monohydric Phenols) *		< 0.010			< 0.10	1	-	-	
DOC		6.71			63.9	500	800	1000	
Leach Test Information									
Stone Content (%)		< 0.1							
Sample Mass (kg)		1.2							
Dry Matter (%)		94							
Moisture (%)		6.0							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.						** = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation						** = MCERTS accredited			

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results								
Report No:	22-94840							
					Client: ENGLOBE			
Location	Coed Darcy							
Lab Reference (Sample Number)	2488821 / 2488822				Landfill Waste Acceptance Criteria			
Sampling Date					Limits			
Sample ID	SP-GT-1 S3				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)								
Solid Waste Analysis								
TOC (%)**	3.0				3%	5%	6%	
Loss on Ignition (%) **	-				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL	190				500	--	--	
Total PAH (WAC-17) (mg/kg)	49.1				100	--	--	
pH (units)**	-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated	
Eluate Analysis								
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test			
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *	0.0027			0.0219	0.5	2	25	
Barium *	0.0238			0.192	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	0.0005			< 0.0040	0.5	10	70	
Copper *	0.016			0.13	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30	
Nickel *	0.0018			0.014	0.4	10	40	
Lead *	0.0020			0.016	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.032			0.26	4	50	200	
Chloride *	0.84			6.8	800	15000	25000	
Fluoride*	0.12			0.98	10	150	500	
Sulphate *	1.7			13	1000	20000	50000	
TDS*	43			340	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	6.69			53.9	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.80							
Dry Matter (%)	87							
Moisture (%)	13							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					** = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited			

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
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Waste Acceptance Criteria Analytical Results									
Report No:		22-94840							
						Client: ENGLOBE			
Location		Coed Darcy							
Lab Reference (Sample Number)		2488823 / 2488824				Landfill Waste Acceptance Criteria			
						Limits			
Sampling Date						Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID		SP-GT-1 S4							
Depth (m)									
Solid Waste Analysis									
TOC (%)**		3.7				3%	5%	6%	
Loss on Ignition (%) **		-				--	--	10%	
BTEX (µg/kg)		< 10				6000	--	--	
Sum of PCBs (mg/kg)		< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL		110				500	--	--	
Total PAH (WAC-17) (mg/kg)		< 0.85				100	--	--	
pH (units)**		-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)		-				--	To be evaluated	To be evaluated	
Eluate Analysis		10:1			10:1	Limit values for compliance leaching test			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)		mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *		< 0.0010			< 0.0100	0.5	2	25	
Barium *		0.0188			0.156	20	100	300	
Cadmium *		< 0.0001			< 0.0008	0.04	1	5	
Chromium *		0.0010			0.0081	0.5	10	70	
Copper *		0.024			0.20	2	50	100	
Mercury *		< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *		< 0.0004			< 0.0040	0.5	10	30	
Nickel *		0.0047			0.039	0.4	10	40	
Lead *		0.0090			0.075	0.5	10	50	
Antimony *		< 0.0017			< 0.017	0.06	0.7	5	
Selenium *		< 0.0040			< 0.040	0.1	0.5	7	
Zinc *		0.085			0.71	4	50	200	
Chloride *		0.96			8.0	800	15000	25000	
Fluoride*		0.080			0.66	10	150	500	
Sulphate *		1.4			12	1000	20000	50000	
TDS*		49			400	4000	60000	100000	
Phenol Index (Monohydric Phenols) *		< 0.010			< 0.10	1	-	-	
DOC		9.42			78.4	500	800	1000	
Leach Test Information									
Stone Content (%)		< 0.1							
Sample Mass (kg)		0.80							
Dry Matter (%)		86							
Moisture (%)		14							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.						** = UKAS accredited (liquid eluate analysis only)			
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Waste Acceptance Criteria Analytical Results								
Report No:	22-94840							
					Client: ENGLOBE			
Location	Coed Darcy							
Lab Reference (Sample Number)	2488825 / 2488826				Landfill Waste Acceptance Criteria			
					Limits			
Sampling Date					Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	SP-GT-1 S6							
Depth (m)								
Solid Waste Analysis								
TOC (%)**	2.1				3%	5%	6%	
Loss on Ignition (%) **	-				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL	110				500	--	--	
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--	
pH (units)**	-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated	
Eluate Analysis								
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test			
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *	< 0.0010			< 0.0100	0.5	2	25	
Barium *	0.0152			0.144	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	0.0011			0.010	0.5	10	70	
Copper *	0.016			0.15	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	0.0008			0.0076	0.5	10	30	
Nickel *	0.0015			0.014	0.4	10	40	
Lead *	0.0049			0.047	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.049			0.46	4	50	200	
Chloride *	0.60			5.6	800	15000	25000	
Fluoride*	0.074			0.69	10	150	500	
Sulphate *	6.4			60	1000	20000	50000	
TDS*	45			420	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	5.35			50.4	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.80							
Dry Matter (%)	93							
Moisture (%)	7.1							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					** = UKAS accredited (liquid eluate analysis only)			
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Waste Acceptance Criteria Analytical Results								
Report No:	22-94840							
					Client: ENGLOBE			
Location	Coed Darcy							
Lab Reference (Sample Number)	2488827 / 2488828				Landfill Waste Acceptance Criteria			
Sampling Date					Limits			
Sample ID	SP-GT-1 S7				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)								
Solid Waste Analysis								
TOC (%)**	1.8				3%	5%	6%	
Loss on Ignition (%) **	-				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH_ID_CU_AL	21				500	--	--	
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--	
pH (units)**	-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated	
Eluate Analysis								
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test			
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *	< 0.0010			< 0.0100	0.5	2	25	
Barium *	0.0159			0.151	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	0.0034			0.032	0.5	10	70	
Copper *	0.018			0.17	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30	
Nickel *	0.0030			0.029	0.4	10	40	
Lead *	0.011			0.10	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.097			0.93	4	50	200	
Chloride *	1.1			10	800	15000	25000	
Fluoride*	0.056			0.54	10	150	500	
Sulphate *	4.9			47	1000	20000	50000	
TDS*	29			280	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	7.36			70.2	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.80							
Dry Matter (%)	94							
Moisture (%)	6.3							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					** = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited			

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Waste Acceptance Criteria Analytical Results								
Report No:	22-94840							
					Client: ENGLOBE			
Location	Coed Darcy							
Lab Reference (Sample Number)	2488829 / 2488830				Landfill Waste Acceptance Criteria			
					Limits			
Sampling Date					Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	SP-GT-1 S8							
Depth (m)								
Solid Waste Analysis								
TOC (%)**	1.4				3%	5%	6%	
Loss on Ignition (%) **	-				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL	25				500	--	--	
Total PAH (WAC-17) (mg/kg)	2.47				100	--	--	
pH (units)**	-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated	
Eluate Analysis								
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test			
					using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
	mg/l			mg/kg				
Arsenic *	< 0.0010			< 0.0100	0.5	2	25	
Barium *	0.0145			0.132	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	0.0014			0.012	0.5	10	70	
Copper *	0.020			0.18	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30	
Nickel *	0.0024			0.022	0.4	10	40	
Lead *	0.0078			0.071	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.038			0.34	4	50	200	
Chloride *	1.4			13	800	15000	25000	
Fluoride*	0.086			0.78	10	150	500	
Sulphate *	7.7			70	1000	20000	50000	
TDS*	38			350	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	8.79			80.2	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.80							
Dry Matter (%)	91							
Moisture (%)	8.6							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					*= UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited			

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Waste Acceptance Criteria Analytical Results									
Report No:		22-94840							
						Client: ENGLOBE			
Location		Coed Darcy							
Lab Reference (Sample Number)		2488831 / 2488832				Landfill Waste Acceptance Criteria			
Sampling Date						Limits			
Sample ID		SP-GT-3 S1				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)									
Solid Waste Analysis									
TOC (%)**		2.5				3%	5%	6%	
Loss on Ignition (%) **		-				--	--	10%	
BTEX (µg/kg)		< 10				6000	--	--	
Sum of PCBs (mg/kg)		< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL		32				500	--	--	
Total PAH (WAC-17) (mg/kg)		< 0.85				100	--	--	
pH (units)**		-				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)		-				--	To be evaluated	To be evaluated	
Eluate Analysis		10:1			10:1	Limit values for compliance leaching test			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)		mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *		< 0.0010			< 0.0100	0.5	2	25	
Barium *		0.0138			0.132	20	100	300	
Cadmium *		< 0.0001			< 0.0008	0.04	1	5	
Chromium *		0.0013			0.012	0.5	10	70	
Copper *		0.020			0.19	2	50	100	
Mercury *		< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *		< 0.0004			< 0.0040	0.5	10	30	
Nickel *		0.0028			0.027	0.4	10	40	
Lead *		0.015			0.14	0.5	10	50	
Antimony *		< 0.0017			< 0.017	0.06	0.7	5	
Selenium *		< 0.0040			< 0.040	0.1	0.5	7	
Zinc *		0.087			0.83	4	50	200	
Chloride *		0.44			4.2	800	15000	25000	
Fluoride*		0.092			0.88	10	150	500	
Sulphate *		0.85			8.1	1000	20000	50000	
TDS*		28			270	4000	60000	100000	
Phenol Index (Monohydric Phenols) *		< 0.010			< 0.10	1	-	-	
DOC		5.32			50.9	500	800	1000	
Leach Test Information									
Stone Content (%)		< 0.1							
Sample Mass (kg)		0.80							
Dry Matter (%)		95							
Moisture (%)		5.4							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.						* = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation						** = MCFRTS accredited			

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Waste Acceptance Criteria Analytical Results							
Report No:	22-94840						
					Client: ENGLOBE		
Location	Coed Darcy						
Lab Reference (Sample Number)	2488833 / 2488834				Landfill Waste Acceptance Criteria		
Sampling Date					Limits		
Sample ID	SP-GT-3 S2				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)							
Solid Waste Analysis							
TOC (%)**	2.6				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, ID, CU, AL	83				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0010			< 0.0100	0.5	2	25
Barium *	0.0147			0.139	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0027			0.026	0.5	10	70
Copper *	0.023			0.22	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30
Nickel *	0.0025			0.024	0.4	10	40
Lead *	0.0083			0.079	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.072			0.68	4	50	200
Chloride *	0.49			4.7	800	15000	25000
Fluoride*	0.057			0.54	10	150	500
Sulphate *	0.56			5.3	1000	20000	50000
TDS*	28			260	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.32			59.9	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.80						
Dry Matter (%)	90						
Moisture (%)	9.7						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					** = UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited		

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Analytical Report Number : 22-94840

Project / Site name: Coed Darcy

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2488819	SP-GT-1	S1	None Supplied	Grey rubble with vegetation and glass**
2488821	SP-GT-1	S3	None Supplied	Brown rubble with glass.**
2488823	SP-GT-1	S4	None Supplied	Brown rubble with glass.**
2488825	SP-GT-1	S6	None Supplied	Brown rubble with glass.**
2488827	SP-GT-1	S7	None Supplied	Brown rubble with glass.**
2488829	SP-GT-1	S8	None Supplied	Brown rubble with glass and vegetation.**
2488831	SP-GT-3	S1	None Supplied	Brown sand with glass and metal.
2488833	SP-GT-3	S2	None Supplied	Brown sand with glass and metal.

**NON MCERTS MATRIX

Analytical Report Number : 22-94840

Project / Site name: Coed Darcy

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025

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Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Sample Deviation Report



Analytical Report Number : 22-94840

Project / Site name: Coed Darcy

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP-GT-1	S1	L	2488820	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S1	S	2488819	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S3	L	2488822	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S3	S	2488821	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S4	L	2488824	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S4	S	2488823	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S6	L	2488826	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S6	S	2488825	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S7	L	2488828	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S7	S	2488827	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S8	L	2488830	a	None Supplied	None Supplied	None Supplied
SP-GT-1	S8	S	2488829	a	None Supplied	None Supplied	None Supplied
SP-GT-3	S1	L	2488832	a	None Supplied	None Supplied	None Supplied
SP-GT-3	S1	S	2488831	a	None Supplied	None Supplied	None Supplied
SP-GT-3	S2	L	2488834	a	None Supplied	None Supplied	None Supplied
SP-GT-3	S2	S	2488833	a	None Supplied	None Supplied	None Supplied



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