

Trial Pit Photographs



Project
Sperberry Hill Solar and BESS

Client:
Brockwell Energy

Project No:
C57/2338

Staff Member(s)
MS

Photo Date
23/02/2026

Report reference
C57-2338-AYE-ENV-R-003



TP11 - Excavation



TP11 - Arisings



TP12 - Excavation



TP12 - Arisings

Trial Pit Photographs



Project name:
Sperberry Hill Solar and BESS

Client:
Brockwell Energy

Project No:
C57/2338

Staff Member(s)
MS

Photo Date
23/02/2026

Report reference
C57-2338-AYE-ENV-R-002



TP13 - Excavation



TP13 - Arisings



TP14 - Excavation



TP14 - Arisings

Project name
Sperberry Hill Solar and BESS
Client:
Brockwell Energy

Project No:
C57/2338
Staff Member(s)
MS

Photo Date
23/02/2026
Report reference
C57-2338-AYE-ENV-R-002



TP16 - Excavation



TP16 - Arisings

Appendix E – Gas and Groundwater Monitoring

C57/2338

Brockwell Energy - Sperberry Hill Solar and BESS

Gas Monitoring

VISIT 1													
Date of visit:	04/03/2026		Weather:	Foggy, brisk			Engineer:	Thomas Wheeler					
SAMPLING	Gas monitoring									Dip monitoring			
Boreholes	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO (ppm)	H ₂ S (ppm)	Flow (l/hr)	Rel. P / DP (mbar)	Atmos. Pressure (mbar)	Notes	Dip to water (m)	Dip to base (m)		
WS01	0.0	1.9	18.7	0.0	0.0	0.0	0.0	1012		DRY	4.76		
WS02	0.0	0.8	20.0	0.0	0.0	0.0	0.0	1012		DRY	4.94		
WS03	0.0	0.6	20.7	0.0	0.0	0.0	0.0	1011		DRY	3.03		
WS04	0.0	0.6	19.8	0.0	0.0	0.0	0.0	1011		DRY	3.01		
WS05	0.0	0.1	20.3	0.0	0.0	0.0	0.0	1011		DRY	3.05		
WS06	0.0	1.4	19.2	0.0	0.0	0.0	0.0	1011		DRY	4.95		
WS07	0.0	1.3	17.8	0.0	0.0	0.0	0.0	1011		DRY	2.67		
WS08	0.0	0.2	19.5	0.0	0.0	0.0	0.0	1011		DRY	2.70		

VISIT 2												
Date of visit:	27/03/2026		Weather:	Overcast, drizzle, mild			Engineer:	Georgia Illsley				
SAMPLING	Gas monitoring									Dip monitoring		
Boreholes	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO (ppm)	H ₂ S (ppm)	Flow (l/hr)	Rel. P / DP (mbar)	Atmos. Pressure (mbar)	Notes	Dip to water (m)	Dip to base (m)	
WS01	0.0	1.8	17.9	0.0	0.0	0.0	0.0	1005		DRY	4.78	
WS02	0.0	1.0	18.0	0.0	0.0	0.0	0.0	1006		DRY	5.02	
WS03	0.0	0.1	18.7	0.0	0.0	0.0	0.0	1004		DRY	3.03	
WS04	0.0	0.9	18.5	0.0	0.0	0.0	0.0	1004		DRY	2.97	
WS05	0.0	0.4	18.2	0.0	0.0	0.0	0.0	1003		2.43	3.09	
WS06	0.0	1.9	17.9	0.0	0.0	0.0	0.0	1004		DRY	5.02	
WS07	0.0	1.4	18.0	0.0	0.0	0.0	0.0	1004		DRY	2.64	
WS08	0.0	0.4	18.9	0.0	0.0	0.0	0.0	1004		DRY	2.69	

VISIT 3											
Date of visit:	14/04/2026		Weather:	Sunny, clear			Engineer:	Thomas Wheeler			
SAMPLING	Gas monitoring									Dip monitoring	
Boreholes	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO (ppm)	H ₂ S (ppm)	Flow (l/hr)	Rel. P / DP (mbar)	Atmos. Pressure (mbar)	Notes	Dip to water (m)	Dip to base (m)
WS01	0.0	1.0	18.2	0.0	0.0	0.0	0.0	1005		DRY	4.94
WS02	0.0	1.0	17.8	0.0	0.0	0.0	0.0	1005		DRY	4.90
WS03	0.0	0.5	18.6	0.0	0.0	0.0	0.0	1003		DRY	3.03
WS04	0.0	1.6	17.1	0.0	0.0	0.0	0.0	1004		DRY	2.97
WS05	0.0	0.3	18.1	0.0	0.0	0.0	0.0	1004		2.47	3.01
WS06	0.0	1.2	18.0	0.0	0.0	0.0	0.0	1004		DRY	5.00
WS07	0.0	1.6	18.3	0.0	0.0	0.0	0.0	1004		DRY	2.30
WS08	0.0	0.4	18.8	0.0	0.0	0.0	0.0	1004		DRY	2.61

VISIT 4											
Date of visit:	28/04/2026		Weather:	Sunny, Clear			Engineer:	Thomas Wheeler			
SAMPLING	Gas monitoring									Dip monitoring	
Boreholes	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO (ppm)	H ₂ S (ppm)	Flow (l/hr)	Rel. P / DP (Pa)	Atmos. Pressure (mbar)	Notes	Dip to water (m)	Dip to base (m)
WS01	0.0	1.3	19.4	0.0	0.0	0.0	0.0	1012		DRY	4.95
WS02	0.0	1.0	19.6	0.0	0.0	0.0	0.0	1012		DRY	5.02
WS03	0.0	0.6	19.6	0.0	0.0	0.0	0.0	1011		DRY	3.03
WS04	0.0	1.6	18.4	0.0	0.0	0.0	0.0	1011		DRY	3.00
WS05	0.0	0.2	18.5	0.0	0.0	0.0	0.0	1014		2.47	2.97
WS06	0.0	1.7	18.5	0.0	0.0	0.8/0.0*	0.0	1014	Positive flow returned to 0.0 l/hr after a few seconds	DRY	5.01
WS07	0.0	0.6	20.1	0.0	0.0	0.0	0.0	1014		DRY	2.30
WS08	0.0	0.4	20.1	0.0	0.0	0.0	0.0	1014		DRY	2.60

Brockwell Energy - Sperberry Hill Solar and BESS

Ayesa Gas Screening Value Assessment (worst case conditions)

Worst case gas concentration data per bore per monitoring date
Worst case gas flow monitoring data per bore per monitoring date

Installation	Flow (l/h)	CH ₄ (% v/v)	GSV - CH ₄ (l/hr)	Characteristic Situation	CH ₄ Risk Classification	CO ₂ (% v/v)	GSV - CO ₂ (l/hr)	Characteristic Situation	CO ₂ Risk Classification
WS01	0.1	0.0	0.0000	1	Very Low	1.90	0.0019	1	Very Low
WS01	0.1	0.0	0.0000	1	Very Low	1.80	0.0018	1	Very Low
WS01	0.1	0.0	0.0000	1	Very Low	1.00	0.0010	1	Very Low
WS01	0.1	0.0	0.0000	1	Very Low	1.30	0.0013	1	Very Low
WS02	0.1	0.0	0.0000	1	Very Low	0.80	0.0008	1	Very Low
WS02	0.1	0.0	0.0000	1	Very Low	1.00	0.0010	1	Very Low
WS02	0.1	0.0	0.0000	1	Very Low	1.00	0.0010	1	Very Low
WS02	0.1	0.0	0.0000	1	Very Low	1.00	0.0010	1	Very Low
WS03	0.1	0.0	0.0000	1	Very Low	0.60	0.0006	1	Very Low
WS03	0.1	0.0	0.0000	1	Very Low	0.10	0.0001	1	Very Low
WS03	0.1	0.0	0.0000	1	Very Low	0.50	0.0005	1	Very Low
WS03	0.1	0.0	0.0000	1	Very Low	0.60	0.0006	1	Very Low
WS04	0.1	0.0	0.0000	1	Very Low	0.60	0.0006	1	Very Low
WS04	0.1	0.0	0.0000	1	Very Low	0.90	0.0009	1	Very Low
WS04	0.1	0.0	0.0000	1	Very Low	1.60	0.0016	1	Very Low
WS04	0.1	0.0	0.0000	1	Very Low	1.60	0.0016	1	Very Low
WS05	0.1	0.0	0.0000	1	Very Low	0.10	0.0001	1	Very Low
WS05	0.1	0.0	0.0000	1	Very Low	0.40	0.0004	1	Very Low
WS05	0.1	0.0	0.0000	1	Very Low	0.30	0.0003	1	Very Low
WS05	0.1	0.0	0.0000	1	Very Low	0.20	0.0002	1	Very Low
WS06	0.1	0.0	0.0000	1	Very Low	1.40	0.0014	1	Very Low
WS06	0.1	0.0	0.0000	1	Very Low	1.90	0.0019	1	Very Low
WS06	0.1	0.0	0.0000	1	Very Low	1.20	0.0012	1	Very Low
WS06	0.1	0	0.0000	1	Very Low	1.70	0.0017	1	Very Low
WS07	0.1	0.0	0.0000	1	Very Low	1.30	0.0013	1	Very Low
WS07	0.1	0.0	0.0000	1	Very Low	1.40	0.0014	1	Very Low
WS07	0.1	0.0	0.0000	1	Very Low	1.60	0.0016	1	Very Low
WS07	0.1	0.0	0.0000	1	Very Low	0.60	0.0006	1	Very Low
WS08	0.1	0.0	0.0000	1	Very Low	0.20	0.0002	1	Very Low
WS08	0.1	0.0	0.0000	1	Very Low	0.40	0.0004	1	Very Low
WS08	0.1	0.0	0.0000	1	Very Low	0.40	0.0004	1	Very Low
WS08	0.1	0.0	0.0000	1	Very Low	0.40	0.0004	1	Very Low

GSV (l/hr) = [gas well gas concentration (%v/v)] x [gas well flow rate (l/hr)]

100

Notes:
Characteristic situations and risk classification assessed in accordance with Table 8.5 of CIRIA guide C665
For methane concentrations >1% and carbon dioxide concentrations >5% increase to CS2 or above
< Instrument Limit of Detection

Upper Threshold	Characteristic Situation	Risk Classification
0.07	1	Very Low
0.7	2	Low
3.5	3	Moderate
15	4	Moderate to high
70	5	High
>70	6	Very high

Appendix F – Laboratory Chemical Testing Results

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Analytical Report Number : 26-010614

Project / Site name:	Sperberry Hill	Samples received on:	25/02/2026
Your job number:	C57 2338	Samples instructed on/ Analysis started on:	02/03/2026
Your order number:		Analysis completed by:	12/03/2026
Report Issue Number:	1	Report issued on:	12/03/2026
Samples Analysed:	15 soil samples		

Signed:

Anna Goc
PL Head of Reporting Team
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
air	- once the analysis is complete

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

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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: 26-010614

Project / Site name: Sperberry Hill

Lab Sample Number	846142	846143	846144	846145	846146
Sample Reference	TP01 ES1	TP02 ES1	TP03 ES1	TP04 ES1	TP05 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.20	0.10	0.10	0.10	0.10
Date Sampled	24/02/2026	24/02/2026	24/02/2026	23/02/2026	23/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	11	13	14	12
Total mass of sample received	kg	0.1	NONE	0.9	0.8	0.8	0.8	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KMC	KMC	KMC	KMC	KMC
Analysis completed	N/A	N/A	N/A	11/03/2026	11/03/2026	11/03/2026	11/03/2026	11/03/2026

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.1	6.6	7.1	7	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	400	440	460	490	550
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	11	17	13	11	13
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	5.36	8.39	6.66	5.46	6.51
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	0.8	1.6	0.6	0.8	0.6
Organic Matter (automated)	%	0.1	MCERTS	2.9	1.9	2.9	2.5	2
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.7	1.1	1.7	1.4	1.2

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.09	0.07	0.12	0.2	0.08
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.2	0.15	0.27	0.37	0.19
Pyrene	mg/kg	0.05	MCERTS	0.19	0.14	0.21	0.3	0.16
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.11	0.09	0.14	0.16	0.11
Chrysene	mg/kg	0.05	MCERTS	0.13	0.11	0.16	0.18	0.12
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.16	0.13	0.2	0.21	0.14
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.07	0.07	0.06
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.12	0.1	0.14	0.15	0.12
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.08	< 0.05	0.09	0.08	0.07
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.09	0.09	0.11	0.1	0.09
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	1.17	0.89	1.5	1.81	1.14
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Analytical Report Number: 26-010614
Project / Site name: Sperberry Hill

Lab Sample Number	846142	846143	846144	846145	846146
Sample Reference	TP01 ES1	TP02 ES1	TP03 ES1	TP04 ES1	TP05 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.20	0.10	0.10	0.10	0.10
Date Sampled	24/02/2026	24/02/2026	24/02/2026	23/02/2026	23/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	30	33	52	35	32
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	0.4	0.4	0.5	0.4
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	U/S ^{U/S} g	< 1.8	< 1.8
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	< 1.80	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	24	24	30	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	22	27	30	23
Lead (aqua regia extractable)	mg/kg	1	MCERTS	51	42	51	43	39
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	30	31	39	37	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	92	93	110	120	110

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC40 EH_CU_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH (>EC5 - EC10) HS_1D_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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TPH Total >EC5 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
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TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 26-010614

Project / Site name: Sperberry Hill

Lab Sample Number	846147	846148	846149	846150	846151
Sample Reference	TP06 ES1	TP07 ES1	TP08 ES1	TP09 ES1	TP10 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.20	0.10	0.10	0.20	0.20
Date Sampled	23/02/2026	23/02/2026	23/02/2026	23/02/2026	25/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	10	11	14	12
Total mass of sample received	kg	0.1	NONE	0.9	0.9	0.9	0.9	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JSW	JSW	JSW	JSW	JSW
Analysis completed	N/A	N/A	N/A	11/03/2026	11/03/2026	11/03/2026	11/03/2026	11/03/2026

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.3	7.1	6.9	6.5	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	500	350	380	590	470
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	13	9.7	22	52	25
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	6.32	4.83	10.8	25.9	12.5
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	< 0.5	1	0.9	1.2	1.1
Organic Matter (automated)	%	0.1	MCERTS	2.3	1.5	1.7	2.4	2.8
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.4	0.8	1	1.4	1.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.8	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.1	0.07	0.15	0.05	0.08
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.23	0.15	0.3	0.1	0.14
Pyrene	mg/kg	0.05	MCERTS	0.2	0.14	0.26	0.1	0.14
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.13	0.08	0.16	0.08	0.09
Chrysene	mg/kg	0.05	MCERTS	0.14	0.1	0.14	0.08	0.08
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.17	0.11	0.2	0.08	0.12
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.07	< 0.05	0.08	0.06	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.14	0.08	0.15	0.07	0.08
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.08	0.08	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.09	0.06	0.09	0.09	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	1.27	< 0.85	1.61	2.55	< 0.85
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Analytical Report Number: 26-010614

Project / Site name: Sperberry Hill

Lab Sample Number	846147	846148	846149	846150	846151
Sample Reference	TP06 ES1	TP07 ES1	TP08 ES1	TP09 ES1	TP10 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.20	0.10	0.10	0.20	0.20
Date Sampled	23/02/2026	23/02/2026	23/02/2026	23/02/2026	25/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	55	42	53	63	57
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	0.5	0.7	0.7	0.8
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	U/S **U/S g
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	-	-	< 1.80
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	32	30	36	41	37
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	26	34	55	31
Lead (aqua regia extractable)	mg/kg	1	MCERTS	41	35	43	48	51
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	47	37	48	56	54
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	150	130	160	180	190

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC40 EH_CU_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH (>EC5 - EC10) HS_1D_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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TPH Total >EC5 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
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TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 26-010614

Project / Site name: Sperberry Hill

Lab Sample Number	846152	846153	846154	846155	846156
Sample Reference	TP11 ES1	TP12 ES1	TP13 ES1	TP14 ES1	TP16 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10	0.10	0.20	0.10	0.10
Date Sampled	25/02/2026	25/02/2026	24/02/2026	24/02/2026	24/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	14	12	14	16
Total mass of sample received	kg	0.1	NONE	0.8	1	0.9	0.8	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MUA	MUA	MUA	MUA	MUA
Analysis completed	N/A	N/A	N/A	11/03/2026	11/03/2026	11/03/2026	11/03/2026	11/03/2026

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.9	7.1	7.7	7.2	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	550	710	520	1600	690
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	43	110	100	1000	93
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	21.4	53.5	51.3	515	46.5
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	0.6	1.5	0.7	16	1
Organic Matter (automated)	%	0.1	MCERTS	3.2	2.6	1.7	2.3	3.2
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.8	1.5	1	1.3	1.9

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	1.2	< 0.05	1.2	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.09	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.06	0.13	0.62	0.2	0.28
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.22	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.15	0.28	0.8	0.35	0.62
Pyrene	mg/kg	0.05	MCERTS	0.13	0.27	0.61	0.29	0.56
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.08	0.18	0.37	0.21	0.28
Chrysene	mg/kg	0.05	MCERTS	0.1	0.2	0.38	0.2	0.34
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.11	0.23	0.32	0.21	0.42
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.08	0.24	0.12	0.16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.08	0.18	0.3	0.17	0.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.1	0.17	0.13	0.18
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.06	0.07	0.18	0.12	0.1
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	< 0.85	2.91	4.29	3.21	3.24
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Analytical Report Number: 26-010614
Project / Site name: Sperberry Hill

Lab Sample Number	846152	846153	846154	846155	846156
Sample Reference	TP11 ES1	TP12 ES1	TP13 ES1	TP14 ES1	TP16 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10	0.10	0.20	0.10	0.10
Date Sampled	25/02/2026	25/02/2026	24/02/2026	24/02/2026	24/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	53	47	42	24	53
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	0.6	0.4	0.3	0.4
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	U/S ^{U/S} g
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	-	-	< 1.80
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36	33	28	31	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	30	46	29	43	40
Lead (aqua regia extractable)	mg/kg	1	MCERTS	41	43	48	56	150
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	52	43	38	28	46
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	1.1
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	160	150	120	90	140

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC40 EH_CU_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH (>EC5 - EC10) HS_1D_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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TPH Total >EC5 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
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TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 26-010614

Project / Site name: Sperberry Hill

* 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 *
846142	TP01 ES1	None Supplied	0.2	Brown sandy clay with gravel and vegetation
846143	TP02 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846144	TP03 ES1	None Supplied	0.1	Brown sandy clay with vegetation
846145	TP04 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846146	TP05 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846147	TP06 ES1	None Supplied	0.2	Brown sandy clay with gravel and vegetation
846148	TP07 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846149	TP08 ES1	None Supplied	0.1	Brown sandy clay with vegetation
846150	TP09 ES1	None Supplied	0.2	Brown sandy clay with gravel and vegetation
846151	TP10 ES1	None Supplied	0.2	Brown sandy clay with gravel and vegetation
846152	TP11 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846153	TP12 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846154	TP13 ES1	None Supplied	0.2	Brown sandy clay with gravel and vegetation
846155	TP14 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation
846156	TP16 ES1	None Supplied	0.1	Brown sandy clay with gravel and vegetation

Analytical Report Number : 26-010614

Project / Site name: Sperberry Hill

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	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.	L019B	D	NONE
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	L038B	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS (Summed Bands).	Calculation	L076B/L088-PL	D/W	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
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
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	L080-PL	W	MCERTS

Analytical Report Number : 26-010614

Project / Site name: Sperberry Hill

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
Total petroleum hydrocarbons by HS-GC-MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS	In-house method	L088-PL	W	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
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Hexavalent chromium in soil by Ion Chromatography	Determination of hexavalent chromium in alkaline soil extract by use of ion chromatography with spectrophotometric detection	In-house method	L130B	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.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

*U/S g- Unsuitable for analysis due to high colour intensity.

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Analytical Report Number : 26-010887

Project / Site name:	Sperberry Hill	Samples received on:	02/03/2026
Your job number:	C57 2338	Samples instructed on/ Analysis started on:	03/03/2026
Your order number:		Analysis completed by:	13/03/2026
Report Issue Number:	1	Report issued on:	13/03/2026
Samples Analysed:	10 soil samples		

Signed: _____

Caterina Bentley
Customer service Advisor
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
air	- once the analysis is complete

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

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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: 26-010887
Project / Site name: Sperberry Hill

Lab Sample Number	847716	847717	847718	847719	847720
Sample Reference	WS01 ES1	WS02 ES2	WS03 ES1	WS04 ES1	WS05 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10	1.20	0.10	0.10	0.10
Date Sampled	27/02/2026	27/02/2026	27/02/2026	26/02/2026	26/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	22	16	14	22
Total mass of sample received	kg	0.1	NONE	1.2	0.6	1.1	1.2	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	CZJ	CZJ	CZJ	CZJ	PKU
Analysis completed	N/A	N/A	N/A	12/03/2026	12/03/2026	12/03/2026	12/03/2026	12/03/2026

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	6.6	8.2	7.1	7	7.2
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	350	520	450	480	740
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	14	10	16	20	27
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	7.22	5.02	8.01	10.1	13.5
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.5	0.6	0.8	1.2	2.6
Organic Matter (automated)	%	0.1	MCERTS	1.5	0.2	3	2	5.6
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.9	0.1	1.7	1.2	3.2

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.06
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.06	0.15	0.37
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.12
Fluoranthene	mg/kg	0.05	MCERTS	0.07	< 0.05	0.11	0.29	1.2
Pyrene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.1	0.27	1.2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	0.13	0.59
Chrysene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.08	0.18	0.85
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.06	< 0.05	0.08	0.22	0.83
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.06	0.35
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.06	0.16	0.52
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.09	0.25
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.07
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.19
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	< 0.85	< 0.85	< 0.85	1.54	6.58
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Analytical Report Number: 26-010887
Project / Site name: Sperberry Hill

Lab Sample Number	847716	847717	847718	847719	847720
Sample Reference	WS01 ES1	WS02 ES2	WS03 ES1	WS04 ES1	WS05 ES1
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10	1.20	0.10	0.10	0.10
Date Sampled	27/02/2026	27/02/2026	27/02/2026	26/02/2026	26/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	40	1.2	33	67	39
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	< 0.2	0.4	0.3	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	U/S ^{u/s g}
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	-	-	< 1.80
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	2.9	27	33	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	22	4.9	34	35	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	37	1.2	40	43	52
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	39	3.4	39	62	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	15	130	210	180

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_ID_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS_ID_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS_ID_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_ID_AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_ID_AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_ID_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_ID_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0

TPHCWG - Aromatic >EC5 - EC7 _{HS_ID_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS_ID_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS_ID_AR}	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_ID_AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_ID_AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_ID_AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_ID_AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	18
TPHCWG - Aromatic >EC35 - EC40 _{EH_CU_ID_AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH (>EC5 - EC10) _{HS_ID_TOTAL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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TPH Total >EC5 - EC40 _{EH_CU+HS_ID_TOTAL}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	27
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TPH (EC10 - EC40) _{EH_CU_ID_TOTAL}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	27
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 26-010887
Project / Site name: Sperberry Hill

Lab Sample Number	847721	847722	847723	847724	847725
Sample Reference	WS06 ES1	WS06 ES2	WS07 ES1	WS08 ES1	WS08 ES2
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10	1.00	0.10	0.40	1.20
Date Sampled	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	14	12	21	22
Total mass of sample received	kg	0.1	NONE	0.7	1.2	0.8	1	1

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	PKU	PKU	OGR	OGR	OGR
Analysis completed	N/A	N/A	N/A	12/03/2026	12/03/2026	12/03/2026	12/03/2026	12/03/2026

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.3	7.6	6.7	8.3	8.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	450	210	1400	470	410
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	27	62	1200	14	6.6
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	13.3	31.1	577	6.85	3.31
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	0.9	1.2	8	3.9	1.1
Organic Matter (automated)	%	0.1	MCERTS	2.3	0.7	2.2	0.2	0.3
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.3	0.4	1.3	0.1	0.1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.09	< 0.05	0.1	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.23	< 0.05	0.2	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.22	< 0.05	0.19	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.15	< 0.05	0.09	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.16	< 0.05	0.12	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.21	< 0.05	0.15	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.1	< 0.05	0.09	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.17	< 0.05	0.13	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.1	< 0.05	0.08	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	1.43	< 0.85	1.2	< 0.85	< 0.85
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Analytical Report Number: 26-010887
Project / Site name: Sperberry Hill

Lab Sample Number	847721	847722	847723	847724	847725
Sample Reference	WS06 ES1	WS06 ES2	WS07 ES1	WS08 ES1	WS08 ES2
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10	1.00	0.10	0.40	1.20
Date Sampled	26/02/2026	26/02/2026	26/02/2026	26/02/2026	26/02/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	47	46	22	< 1.0	< 1.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	0.7	0.3	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	29	30	24	2.2	2.5
Copper (aqua regia extractable)	mg/kg	1	MCERTS	26	23	29	4.9	4
Lead (aqua regia extractable)	mg/kg	1	MCERTS	49	18	46	< 1.0	< 1.0
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	37	52	29	2.4	2.5
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	180	95	12	13

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_ID_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS_ID_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS_ID_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_ID_AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_ID_AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_ID_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_ID_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0

TPHCWG - Aromatic >EC5 - EC7 _{HS_ID_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS_ID_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS_ID_AR}	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_ID_AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_ID_AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_ID_AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_ID_AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC40 _{EH_CU_ID_AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH (>EC5 - EC10) _{HS_ID_TOTAL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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TPH Total >EC5 - EC40 _{EH_CU+HS_ID_TOTAL}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
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TPH (EC10 - EC40) _{EH_CU_ID_TOTAL}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 26-010887

Project / Site name: Sperberry Hill

* 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 *
847716	WS01 ES1	None Supplied	0.1	Brown clay and sand with gravel
847717	WS02 ES2	None Supplied	1.2	Beige clay and sand with gravel
847718	WS03 ES1	None Supplied	0.1	Brown clay and sand with gravel
847719	WS04 ES1	None Supplied	0.1	Brown clay and sand with gravel
847720	WS05 ES1	None Supplied	0.1	Brown clay and loam with gravel and vegetation
847721	WS06 ES1	None Supplied	0.1	Brown clay and sand with gravel
847722	WS06 ES2	None Supplied	1	Brown clay and sand with gravel
847723	WS07 ES1	None Supplied	0.1	Brown clay and loam with gravel
847724	WS08 ES1	None Supplied	0.4	Beige clay and sand with gravel
847725	WS08 ES2	None Supplied	1.2	Beige clay and sand with gravel

Analytical Report Number : 26-010887

Project / Site name: Sperberry Hill

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	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.	L019B	D	NONE
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	L038B	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS (Summed Bands).	Calculation	L076B/L088-PL	D/W	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
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
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	L080-PL	W	MCERTS

Analytical Report Number : 26-010887

Project / Site name: Sperberry Hill

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
Total petroleum hydrocarbons by HS-GC-MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS	In-house method	L088-PL	W	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
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Hexavalent chromium in soil by Ion Chromatography	Determination of hexavalent chromium in alkaline soil extract by use of ion chromatography with spectrophotometric detection	In-house method	L130B	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 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.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

*U/S g- Unsuitable for analysis due to high colour intensity.

Appendix G – Summary of Chemical Analysis of Soils

Site: Sperberry Hill Solar and BESS

CHEMICAL STATISTICAL ANALYSIS - based on CLEA v1.06 (Sandy Loam 1% SOM)

Job No: C57/2338 **Report No: C57-2338-AYE-ENV-R-002**

Analyte	Limit of Detection (LOD)	LOD Units	Ayasa TP01 ES1	Ayasa TP02 ES1	Ayasa TP03 ES1	Ayasa TP04 ES1	Ayasa TP05 ES1	Ayasa TP06 ES1	Ayasa TP07 ES1	Ayasa TP08 ES1	Ayasa TP09 ES1	Ayasa TP10 ES1	Ayasa TP11 ES1	Ayasa TP12 ES1	Ayasa TP13 ES1	Ayasa TP14 ES1	Ayasa TP16 ES1	Ayasa WS01 ES1	Ayasa WS02 ES2	Ayasa WS03 ES1	Ayasa WS04 ES1	Ayasa WS05 ES1	Ayasa WS06 ES1	Ayasa WS06 ES2	Ayasa WS07 ES1	Ayasa WS08 ES1	Ayasa WS08 ES2	n	Standard Deviation	Minimum	Average	Maximum	Mean	Screening Criteria		Criteria Source		Screening Criteria		Criteria Source																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			0.30	0.10	0.10	0.10	0.10	0.20	0.10	0.10	0.20	0.10	0.10	0.20	0.10	0.10	1.20	0.10	0.10	0.10	0.10	1.00	0.10	0.40	1.20	Commercial	Pass / Fail							Source of Screening Criteria	Source of Toxicological Data	Commercial	Pass / Fail	Source of Screening Criteria	Source of Toxicological Data																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	Below Detection Limits.
	Exceeded pC4SL / S4ULs
	Assessment criteria for pH, Sulphide and Sulphate are not based on human health. Sulphate criteria assumes DS-1 ACCEC classification for concrete

Notes

2. Results lower than detection limit are shaded in grey.

3. When the test result is recorded as being less than the detection limit, the result used for the analysis is the detection limit.

4. Cyanide (total)*, in the absence of a GQAC based on current CLEA 1.06 Model, the Atrisk Soil Value for Cyanide (free) has been used.

5. For metals, where an SGV has been published, this value has been used. Note that the published SGVs do not include the residential without plant uptake scenario. CLEA v1.06 has therefore been used to derive GACs for this scenario. For organics, CLEA v1.06 has been used (as the SGV assumes 6% SOM).

6. pC4SL based on adjusted toxicology and exposure assumptions

7. pC4SL for benzene assumes 6% SOM

Appendix H – Current Guidance for Ground Gas Risk Assessment

Current Guidance for Ground Gas Risk Assessment

Origin of Ground and Landfill Gases

When carrying out a ground gas risk assessment for permanent ground gases (e.g., methane and carbon dioxide), the origin or source of the gases is important as potential risks will vary depending on the source. This Appendix relates to the risk of the two main ground gases of concern: methane and carbon dioxide and does not apply to other ground gases (e.g., radon or vapours from hydrocarbon spills). Methane and carbon dioxide are major constituents of landfill gas but can also occur from a variety of anthropogenic and natural sources, as summarised in Table G1 below:

Table G1. Potential Sources of Ground Gases

Gas	Source	Comments
Landfill Gas	Anaerobic decomposition of degradable waste within landfill sites. Typically, 60% methane and 40% carbon dioxide during methanogenic phase.	Composition varies over time, particularly in early stages. Contains a range of minor constituents (particularly carbon monoxide and hydrogen sulphide).
Landfill Associated Gases	- Anaerobic degradation of leachate external to the site; - Degassing of dissolved gases in groundwater; - Evolution of gases following interaction between leachate and groundwater	Can result in secondary (external) production of methane or carbon dioxide.
Made Ground	Anaerobic degradation of organic components	Very variable depending on source
Sewer Gas, Cess Pits	Anaerobic degradation of organic components of sewage producing methane and carbon dioxide.	Often characterised by hydrogen sulphide odour.
Mains Gas	Leakage from underground pipework or storage tanks. Mainly methane but often contains higher alkanes.	An odouriser is added to permit detection of leaks. Typically, 90% CH ₄ , but 1 to 27% C ₂ -C ₄ alkanes, May also contain other trace gases e.g., CO, helium and CO ₂ (from degradation of CH ₄ in the ground).
Other Anthropogenic Sources	- Degradation of leaked or spilled hydrocarbons or other industrial chemicals; - Anaerobic degradation of organic contaminants in groundwaters (e.g., silage liquor); - Reactions between monitoring well construction components and environment; - Burial grounds/cemeteries.	Hydrocarbon spillages often have an 'oily' odour. Fuel spillages common – Petrol or Diesel and can contain a wide range of VOC's. Can degrade to produce methane / carbon dioxide.

Alluvium / Marsh / Peat Gas	Anaerobic microbial degradation of organic material (usually waterlogged vegetation / peat). Often associated with the presence of alluvial deposits or dredgings.	
Geogenic Gas	Natural seepages of carbon dioxide and hydrocarbon gases derived from geologic sources such as coal seams and deep oil / gas source formations. Can be present in solution in groundwaters.	Methane most common but can contain carbon dioxide and higher alkanes.
Mine Gases	Various types. Most common is “fire damp” with high methane, produced by the desorption of gas trapped in coal. “Black damp” (Stythe gas) with high carbon dioxide and denser than air. “White damp” is high in carbon monoxide.	Methane most common. Can contain higher alkanes, carbon dioxide and carbon monoxide. Often low in oxygen.
Natural Shallow Ground Gas	Various types - high carbon dioxide formed by subsurface aerobic activity leading to depleted oxygen and elevated carbon dioxide; - chemical degradation of rocks (e.g., carbonates) producing carbon dioxide; - carbon dioxide production in root zone of soils by plants.	Gases can be emitted from ground under falling barometric pressure conditions.

This Appendix concentrates on the assessment of risk from methane and carbon dioxide. This Appendix does not provide guidance for the assessment of risk when other gases are present due to ‘Other Sources’ from the above table (particularly organic compounds such as BTEX and VOC’s or for the risk from radon or hydrogen sulphide).

To determine the origin of the gas a range of factors must be considered together, including;

1. Proximity of likely sources;
2. Ground conditions (geology, hydrogeology, anthropogenic pathways etc);
3. Properties of gases present including:
 - a. Chemical composition;
 - b. Physical properties;
 - c. Ratios of components e.g., methane : carbon dioxide.
4. Timeframe of activities such as infilling periods, capping works, installation of gas control systems etc.

Identification of the originating source may be problematic given that there may be more than one source present and trace gas analysis may be required. Identification of the sources of the gases encountered during monitoring is usually carried out through a process of eliminating the most unlikely potential sources (given the site setting) and selecting those which are the more likely candidates.