Certificate of Analysis

Certificate Number 25-04749 *Issued:* 12-Mar-25

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 25-04749

Client Reference ~ 9222

Order No ~ 13235

Contract Title ~ Sandfields Young Business Park

Description 1 Soil sample.

Date Received 04-Mar-25

Date Started 04-Mar-25

Date Completed 12-Mar-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 25-04749
Client Ref ~ 9222
Contract Title ~ Sandfields Young Business Park

Lab No	2473331
Sample ID ~	CP101
Depth ~	0.30
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	25/02/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	11
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.6
Chromium	DETSC 2301#	0.15	mg/kg	17
Copper	DETSC 2301#	0.2	mg/kg	19
Lead	DETSC 2301#	0.3	mg/kg	77
Mercury	DETSC 2325#	0.05	mg/kg	0.07
Nickel	DETSC 2301#	1	mg/kg	14
Zinc	DETSC 2301#	1	mg/kg	160
Inorganics				
pH	DETSC 2008#		pH	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Organic matter	DETSC 2002#	0.1	%	1.5
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076*	0.001	%	0.014
Petroleum Hydrocarbons				
EPH (C10-C40)	DETSC 3311#	10	mg/kg	340
PAHs				
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.05
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3

Summary of Asbestos Analysis
Soil Samples

Our Ref 25-04749
Client Ref ~ 9222
Contract Title ~ Sandfields Young Business Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2473331	CP101 0.30	SOIL	NAD	none	Ben Rose

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 25-04749
Client Ref ~ 9222
Contract ~ Sandfields Young Business Park

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2473331	CP101 0.30 SOIL	25/02/25	GJ 250ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-05183 *Issued:* 21-Mar-25

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 25-05183

Client Reference ~ 9222

Order No ~ 13246

Contract Title ~ Sandfields Young Business Park.

Description 8 Soil samples.

Date Received 10-Mar-25

Date Started 10-Mar-25

Date Completed 21-Mar-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 25-05183
Client Ref ~ 9222
Contract Title ~ Sandfields Young Business Park.

			Lab No	2475864	2475865	2475866	2475867	2475868	2475869
			Sample ID ~	CP101A	CP101A	CP101A	TP101	WS101	WS102
			Depth ~	2.00	4.00	15.00	0.60	0.60	0.30
			Other ID ~						
			Sample Type ~	D	D	D	ES	ES	ES
			Sampling Date ~	04/03/2025	04/03/2025	04/03/2025	04/03/2025	05/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg				8.7	3.1	3.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg				0.7	4.6	3.7
Cadmium	DETSC 2301#	0.1	mg/kg				0.2	0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg				17	9.7	15
Copper	DETSC 2301#	0.2	mg/kg				25	9.2	8.9
Lead	DETSC 2301#	0.3	mg/kg				21	3.6	5.0
Mercury	DETSC 2325#	0.05	mg/kg				< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg				6.8	2.1	2.2
Zinc	DETSC 2301#	1	mg/kg				66	18	25
Inorganics									
pH	DETSC 2008#		pH	8.7	7.3	8.2	8.9	7.9	8.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg				0.2	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%				2.6	2.6	1.7
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076*	0.001	%				0.020	0.025	0.039
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	24	25	180			
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	0.01	0.10			
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.02	0.03	0.06			
Petroleum Hydrocarbons									
EPH (C10-C40): EH_1D_Total	DETSC 3311#	10	mg/kg				< 10	1100	900
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg				< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg				< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg				< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg				0.05	0.06	0.07
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg				0.04	0.07	0.08
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg				0.07	0.11	0.12
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg				0.03	0.07	0.06
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg				< 0.03	< 0.03	0.03
Chrysene	DETSC 3303	0.03	mg/kg				0.05	0.07	0.07
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg				< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg				0.10	0.08	0.10
Fluorene	DETSC 3303	0.03	mg/kg				< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg				< 0.03	0.04	0.04
Naphthalene	DETSC 3303#	0.03	mg/kg				< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg				0.04	0.04	0.04
Pyrene	DETSC 3303#	0.03	mg/kg				0.08	0.09	0.12
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg				0.42	0.61	0.73
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg				0.4	< 0.3	< 0.3

Summary of Chemical Analysis
Soil Samples

Our Ref 25-05183
Client Ref ~ 9222
Contract Title ~ Sandfields Young Business Park.

			Lab No	2475870	2475871
			Sample ID ~	WS102	WS103
			Depth ~	1.00	0.60
			Other ID ~		
			Sample Type ~	D	ES
			Sampling Date ~	05/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg		4.6
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		2.7
Cadmium	DETSC 2301#	0.1	mg/kg		0.2
Chromium	DETSC 2301#	0.15	mg/kg		18
Copper	DETSC 2301#	0.2	mg/kg		8.2
Lead	DETSC 2301#	0.3	mg/kg		5.2
Mercury	DETSC 2325#	0.05	mg/kg		< 0.05
Nickel	DETSC 2301#	1	mg/kg		3.7
Zinc	DETSC 2301#	1	mg/kg		31
Inorganics					
pH	DETSC 2008#		pH	7.8	7.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg		< 0.1
Organic matter	DETSC 2002#	0.1	%		2.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076*	0.001	%		0.036
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	400	
Sulphur as S, Total	DETSC 2320	0.01	%	0.30	
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.48	
Petroleum Hydrocarbons					
EPH (C10-C40): EH_1D_Total	DETSC 3311#	10	mg/kg		< 10
PAHs					
Acenaphthene	DETSC 3303#	0.03	mg/kg		< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03
Anthracene	DETSC 3303	0.03	mg/kg		< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.04
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.04
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.06
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03
Chrysene	DETSC 3303	0.03	mg/kg		0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.07
Fluorene	DETSC 3303	0.03	mg/kg		< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg		< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg		0.06
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		0.30
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3

Summary of Asbestos Analysis
Soil Samples

Our Ref 25-05183
Client Ref ~ 9222
Contract Title ~ Sandfields Young Business Park.

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2475867	TP101 0.60	SOIL	NAD	none	Lee Kerridge
2475868	WS101 0.60	SOIL	NAD	none	Lee Kerridge
2475869	WS102 0.30	SOIL	NAD	none	Lee Kerridge
2475871	WS103 0.60	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 25-05183
Client Ref ~ 9222
Contract ~ Sandfields Young Business Park.

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2475864	CP101A 2.00 SOIL	04/03/25	PT 1L		
2475865	CP101A 4.00 SOIL	04/03/25	PT 1L		
2475866	CP101A 15.00 SOIL	04/03/25	PT 1L		
2475867	TP101 0.60 SOIL	04/03/25	GJ 250ml, PT 1L		
2475868	WS101 0.60 SOIL	05/03/25	GJ 250ml, PT 1L		
2475869	WS102 0.30 SOIL	05/03/25	GJ 250ml, PT 1L		
2475870	WS102 1.00 SOIL	05/03/25	PT 1L		
2475871	WS103 0.60 SOIL	05/03/25	GJ 250ml, PT 1L		

Key: P-Plastic T-Tub G-Glass J-Jar

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
EPH (C10-C40)	EH_1D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-05700 *Issued:* 24-Mar-25

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 25-05700

Client Reference ~ 9222

Order No ~ 13274

Contract Title ~ Sandsfield Young Business Park

Description 9 Soil samples.

Date Received 14-Mar-25

Date Started 14-Mar-25

Date Completed 24-Mar-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Louise Cook
Contracts Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 25-05700
Client Ref ~ 9222
Contract Title ~ Sandsfield Young Business Park

			Lab No	2479009	2479010	2479011	2479012	2479013	2479014	2479015
			Sample ID ~	CP103	CP103	CP103	CP102	CP102	CP103	TP102
			Depth ~	1.20	4.00	19.00	2.00	8.00	0.60	0.60
			Other ID ~							
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	10/03/2025	11/03/2025	11/03/2025	13/03/2025	13/03/2025	10/03/2025	12/03/2025
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg						1.5	1.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg						6.4	0.9
Cadmium	DETSC 2301#	0.1	mg/kg						< 0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg						5.3	5.2
Copper	DETSC 2301#	0.2	mg/kg						3.7	5.5
Lead	DETSC 2301#	0.3	mg/kg						0.8	1.7
Mercury	DETSC 2325#	0.05	mg/kg						< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg						< 1.0	3.6
Zinc	DETSC 2301#	1	mg/kg						15	11
Inorganics										
pH	DETSC 2008#		pH	6.8	8.7	8.9	9.6	8.0	11.3	10.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg						0.1	0.4
Organic matter	DETSC 2002#	0.1	%						0.7	3.9
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076*	0.001	%						0.034	0.004
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	13	< 10	< 10	< 10	< 10		
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	< 0.01	0.02	< 0.01	< 0.01		
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.02	0.02	0.03	0.02	0.02		
Petroleum Hydrocarbons										
EPH (C10-C40): EH_1D_Total	DETSC 3311#	10	mg/kg						< 200.0	4600
PAHs										
Acenaphthene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Acenaphthylene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Anthracene	DETSC 3303	0.03	mg/kg						< 0.03	< 0.60
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						0.06	< 0.60
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						0.04	< 0.60
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Chrysene	DETSC 3303	0.03	mg/kg						0.04	< 0.60
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Fluoranthene	DETSC 3303#	0.03	mg/kg						0.04	< 0.60
Fluorene	DETSC 3303	0.03	mg/kg						< 0.03	< 0.60
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Naphthalene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Phenanthrene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.60
Pyrene	DETSC 3303#	0.03	mg/kg						0.07	< 0.60
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg						0.25	< 0.10
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						< 0.3	0.4

Summary of Chemical Analysis
Soil Samples

Our Ref 25-05700
Client Ref ~ 9222
Contract Title ~ Sandsfield Young Business Park

			Lab No	2479016	2479017
			Sample ID ~	CP102	WS101
			Depth ~	0.60	1.40
			Other ID ~		
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	07/03/2025	07/03/2025
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	4.7	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	4.5	
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	
Chromium	DETSC 2301#	0.15	mg/kg	26	
Copper	DETSC 2301#	0.2	mg/kg	7.1	
Lead	DETSC 2301#	0.3	mg/kg	5.4	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	
Nickel	DETSC 2301#	1	mg/kg	2.4	
Zinc	DETSC 2301#	1	mg/kg	20	
Inorganics					
pH	DETSC 2008#		pH	10.7	7.0
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	
Organic matter	DETSC 2002#	0.1	%	1.3	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076*	0.001	%	0.022	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		60
Sulphur as S, Total	DETSC 2320	0.01	%		0.02
Sulphate as SO4, Total	DETSC 2321#	0.01	%		0.04
Petroleum Hydrocarbons					
EPH (C10-C40): EH_1D_Total	DETSC 3311#	10	mg/kg	1300	
PAHs					
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.05	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.05	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.08	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	
Chrysene	DETSC 3303	0.03	mg/kg	0.07	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.09	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.06	
Pyrene	DETSC 3303#	0.03	mg/kg	0.08	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.52	
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	

Summary of Asbestos Analysis
Soil Samples

Our Ref 25-05700
Client Ref ~ 9222
Contract Title ~ Sandsfield Young Business Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2479014	CP103 0.60	SOIL	NAD	none	Ben Rose
2479015	TP102 0.60	SOIL	NAD	none	Ben Rose
2479016	CP102 0.60	SOIL	NAD	none	Ben Rose

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 25-05700
Client Ref ~ 9222
Contract ~ Sandsfield Young Business Park

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2479009	CP103 1.20 SOIL	10/03/25	PT 1L		
2479010	CP103 4.00 SOIL	11/03/25	PT 1L		
2479011	CP103 19.00 SOIL	11/03/25	PT 1L		
2479012	CP102 2.00 SOIL	13/03/25	PT 1L		
2479013	CP102 8.00 SOIL	13/03/25	PT 1L		
2479014	CP103 0.60 SOIL	10/03/25	GJ 250ml, PT 1L		
2479015	TP102 0.60 SOIL	12/03/25	GJ 250ml, PT 1L		
2479016	CP102 0.60 SOIL	07/03/25	GJ 250ml, PT 1L		
2479017	WS101 1.40 SOIL	07/03/25	PT 1L		

Key: P-Plastic T-Tub G-Glass J-Jar

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
EPH (C10-C40)	EH_1D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-07193 *Issued:* 10-Apr-25

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 25-07193

Client Reference ~ 9222

Order No ~ 13289

Contract Title ~ Sandfields

Description 3 Soil samples, 3 Leachate prepared by DETS samples.

Date Received 02-Apr-25

Date Started 02-Apr-25

Date Completed 10-Apr-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 25-07193
Client Ref ~ 9222
Contract Title ~ Sandfields

				Deviating	Deviating	Deviating
			Lab No	2488167	2488168	2488169
			Sample ID ~	CP103	TP102	CP102
			Depth ~	0.30	0.30	1.00
			Other ID ~			
			Sample Type ~	SOIL	SOIL	SOIL
			Sampling Date ~	12/03/2025	12/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Preparation						
Moisture Content	DETSC 1004	0.1	%	3.8	0.78	21

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Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info@dets.co.uk • normecdets.com

WASTE ACCEPTANCE CRITERIA TESTING
v20.25.02.03

Our Ref 25-07193
Client Ref 9222
Contract Title Sandfields
Sample Id CP103 0.30

Sample Numbers 2488167 2488170
Date Analysed 09/04/2025

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	< 0.5	3	5	6
DETSC 2003# Loss On Ignition	%	2.8	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	42.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	11.2	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached mg/kg LS10	WAC Limit Values Limit values for LS10 Leachate Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.18	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	120	1.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.87	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.5	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.29	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	1.8	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	18	0.18	4	50	200
DETSC 2055 Chloride as Cl	560	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	170	1.7	10	150	500
DETSC 2055 Sulphate as SO4	35000	350	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	120000	1200	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2600	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	10.1
DETSC 2009 Conductivity uS/cm	165.0
* Temperature*	17.0

Mass of Sample Kg	0.094
Mass of dry Sample Kg	0.090

Stage 1

Volume of Leachant L2	0.896
Volume of Eluate VE1	0.85

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

V.2.07

Symbol key at end of report

WASTE ACCEPTANCE CRITERIA TESTING
v20.25.02.03

Our Ref 25-07193
Client Ref 9222
Contract Title Sandfields
Sample Id TP102 0.30

Sample Numbers 2488168 2488171
Date Analysed 10/04/2025

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	5.8	3	5	6
DETSC 2003# Loss On Ignition	%	3.0	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	1100.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	10.4	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	3.5	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached mg/kg LS10	WAC Limit Values Limit values for LS10 Leachate Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.32	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	120	1.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.73	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.15	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.47	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	9.4	0.09	4	50	200
DETSC 2055 Chloride as Cl	730	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	2600	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	31000	310	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2300	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	9.1
DETSC 2009 Conductivity uS/cm	44.2
* Temperature*	17.0

Mass of Sample Kg	0.091
Mass of dry Sample Kg	0.090

Stage 1

Volume of Leachant L2	0.899
Volume of Eluate VE1	0.83

Disclaimer: *The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.07

WASTE ACCEPTANCE CRITERIA TESTING
v20.25.02.03

Our Ref 25-07193
Client Ref 9222
Contract Title Sandfields
Sample Id CP102 1.00

Sample Numbers 2488169 2488172
Date Analysed 09/04/2025

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.8	3	5	6
DETSC 2003# Loss On Ignition	%	3.5	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	130.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	10.5	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached mg/kg LS10	WAC Limit Values Limit values for LS10 Leachate Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.47	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	140	1.4	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.2	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.11	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	3.2	0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	9.5	0.1	4	50	200
DETSC 2055 Chloride as Cl	640	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	520	5.2	10	150	500
DETSC 2055 Sulphate as SO4	17000	170	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	99000	990	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2700	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	9.7
DETSC 2009 Conductivity uS/cm	142.0
* Temperature*	16.0

Mass of Sample Kg	0.114
Mass of dry Sample Kg	0.090

Stage 1

Volume of Leachant L2	0.876
Volume of Eluate VE1	0.81

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

V.2.07

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-07193
Client Ref ~ 9222
Contract ~ Sandfields

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2488167	CP103 0.30 SOIL	12/03/25	GJ 250ml, PT 1L		
2488168	TP102 0.30 SOIL	12/03/25	GJ 250ml, PT 1L		
2488169	CP102 1.00 SOIL	05/03/25	PT 1L		
2488170	CP103 0.30 LEACHATE	12/03/25	GJ 250ml, PT 1L		
2488171	TP102 0.30 LEACHATE	12/03/25	GJ 250ml, PT 1L		
2488172	CP102 1.00 LEACHATE	05/03/25	PT 1L		

Lab No	Sample ID	Comments

Key: G-Glass P-Plastic J-Jar T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Normec DETS Limited
Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info@dets.co.uk • normecdets.com

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
Mineral Oil >C10-C40 + Clean Up	EH_CU_2D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Normec DETS Limited
Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info@dets.co.uk • normecdets.com