APPENDIX J

2023 BOREHOLE LOGS

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	03/03/202

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.99	E 530 107. N 150 490.	1001

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				122.79	0.20	Very dark organic rich sandy CLAY with frequent rootlets and gravels (TOPSOIL)			
				122.09	(0.70) 0.90	Yellowish brown very gravelly very sandy CLAY with gravels consisting of red brick, grey sandstone and white chalk (MADE GROUND)			
1				121.79	(0.30) 1.20	Pale grey sandy CLAY with occasional gravels of grey sandstone (MADE GROUND)			
	1.20-1.65	SPT	N4	121.59	1.40	Large angular GRAVEL with medium cobble content consisting of well graded grey sandstone (MADE GROUND)			
				121.19	(0.40) 1.80	Soft greyish pale brown sandy CLAY with regular gravels of grey sandstone and frequent deposits of mottled grey and orange sand deposits (MADE GROUND)			
	1.80-2.50	C				Large reddish brown and grey angular COBBLES of sandstone. The reddish colour appears to be an iron stained coating and is not consistent for all cobbles (MADE GROUND)			
2	2.00-2.45	SPT	N4	120.69	(0.50) 2.30				
				120.24	(0.45) 2.75	Soft greyish brown sandy CLAY with regular gravels of grey sandstone and frequent deposits of mottled grey and orange sand deposits (MADE GROUND)			
				119.79	(0.45) 3.20	Orangish grey medium to coarse SAND with frequent large angular gravels and cobbles of grey sandstone (MADE GROUND)			
3	3.00-3.45	SPT	N5			Increasingly finer soft pale grey sandy CLAY with rare gravels of grey sandstone (MADE GROUND)			
	3.45-3.80	SPT		119.29	(0.50) 3.70				
				119.19	3.80	Grey well sorted sandstone (SANDGATE FORMATION)			
						END OF BOREHOLE			
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
03/02/02	3.80m	3.80	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 3.8mbgl and 0.8mbgl and plain HDPE pipe installed from 0.8mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.7mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	3.80

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	03/03/202

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.23	E 530 213. N 150 490.	1002

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				122.13	0.10	Darkish brown slightly sandy CLAY with frequent rootlets (TOPSOIL)			
					(0.50)	Soft to firm dark brown sandy CLAY with frequent gravels of grey sandstone and grey clayey silts (MADE GROUND)			
				121.63	0.60				
					(0.30)	Soft dark brown slightly sandy CLAY with frequent deposits of black organic material, mottled orange and grey sand and ironing staining and infrequent gravels of grey sandstone (MADE GROUND)			
				121.33	0.90				
1	1.20-1.40	C			(0.60)	Slightly firm blackish grey slightly sandy CLAY with frequent gravels of coal and occasional black organic streaking (MADE GROUND)			
	1.20-1.65	SPT	N8	120.73	1.50	0.90 - 1.50 Greenish hue			
					(0.85)	Firm pale grey sandy CLAY with regular deposits of orange sand and infrequent gravels of grey sandstone (MADE GROUND)			
2	2.00-2.45	SPT	N10						
	2.30-2.45	C		119.88	2.35				
				119.78	2.45	Very black slightly sandy CLAY with tar odour (MADE GROUND)			
						Firm pale brownish grey sandy CLAY with infrequent gravels and occasional deposit of orange medium grained sand (MADE GROUND)			
3	3.00-3.45	SPT	N7		(1.25)				
				118.53	3.70				
					(0.30)	Firm light greyish green very sandy CLAY with rare gravels of grey sandstone (MADE GROUND).			
				118.23	4.00				
4	4.00-4.43	SPT				END OF BOREHOLE			
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
03/02/02	3.70m	3.70	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 4mbgl and 0.7mbgl and plain HDPE pipe installed from 0.7mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.6mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	3.70

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	03/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.35	E 530 210. N 150 505.	1002A

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

SAMPLES & TESTS			STRATA					
Scale (m)	Depth	Type No	Test Result	Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				122.25	0.10	Darkish brown slightly sandy CLAY with frequent rootlets (TOPSOIL)			
					(0.35)	Soft firm dark brown sandy CLAY with frequent gravels and cobbles of grey sandstone and grey clayey silts (MADE GROUND)			
				121.90	0.45	Hand dug inspection pit could not continue past the cobbles of sandstone END OF BOREHOLE			
1									
2									
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed

REMARKS / INSTALLATIONS

Hand dug inspection pit that failed the be dug to 1.5mbgl and had to be abandonded. Back filled with araisings. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	03/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.43	E 530 213. N 150 505.	1002B

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				122.33	0.10	Darkish brown slightly sandy CLAY with frequent rootlets (TOPSOIL)			
					(0.35)	Soft firm dark brown sandy CLAY with frequent gravels and cobbles of grey sandstone and grey clayey silts (MADE GROUND)			
				121.98	0.45	Hand dug inspection pit could not continue past the cobbles of sandstone END OF BOREHOLE			
1									
2									
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
03/02/23	0.45m		m			

REMARKS / INSTALLATIONS

Hand dug inspection pit that failed the be dug to 1.5mbgl and had to be abandonded. Back filled with araisings. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Hand dug inspection pit	0.45

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	01/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	110.88	E 530 207. N 150 621.	1004

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				110.58	(0.30) 0.30	Soft brown slightly sandy CLAY (TOPSOIL)			
					(0.90)	Soft brown sandy CLAY with occasional gravels of grey sandstone. Sand particles get progressively coarser with depth (MADE GROUND)			
1				109.68	1.20				
	1.20-1.65	SPT	N14	109.48	1.40	Light brown slightly clayey SAND with frequent gravels of grey sandstone (MADE GROUND)			
				109.08	(0.40) 1.80	Soft pale brown fairly sandy CLAY with regular gravels of grey sandstone and occasional possible iron staining (MADE GROUND)			
	1.80-2.00	C		108.88	2.00	Grey slightly sandy clayey GRAVELS. Gravels consist of large angular blocks of grey well graded medium grained standstone (MADE GROUND)			
2	2.00-2.44	SPT		108.58	(0.30) 2.30	Reddish brown slightly clayey coarse SAND with regular gravels of grey well graded sandstone (MADE GROUND)			
				108.43	2.45	Firm slightly cohesive pale grey clayey SILT (MADE GROUND)			
				108.38	2.50	Grey sandstone (SANDGATE FORMATION)			
						END OF BOREHOLE			
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
01/02/23	2.50m	2.50	2m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 2.5mbgl and 0.5mbgl and plain HDPE pipe installed from 0.5mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.4mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	2.50

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	02/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	117.34	E 530 109. N 150 606.	1005A

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				117.24	0.10	Soft brown slightly sandy CLAY (TOPSOIL)			
					(0.45)	Grey medium to coarse slightly clayey SAND with frequent gravels and cobbles of grey sandstone (MADE GROUND)			
				116.79	0.55	Hand dug inspection pit could not continue past the cobbles of sandstone END OF BOREHOLE			
1									
2									
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
02/03/23	0.55m		m			

REMARKS / INSTALLATIONS

Hand dug inspection pit that failed the be dug to 1.5mbgl and had to be abandonded. Back filled with araisings. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Hand dug inspection pit	0.55

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	02/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	117.36	E 530 108. N 150 606.	1005B

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				117.26	0.10	Soft brown slightly sandy CLAY (TOPSOIL)			
					(0.45)	Grey medium to coarse slightly clayey SAND with frequent gravels and cobbles of grey sandstone (MADE GROUND)			
				116.81	0.55	Hand dug inspection pit could not continue past the cobbles of sandstone			
						END OF BOREHOLE			
1									
2									
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
02/03/23	0.45m		m			

REMARKS / INSTALLATIONS

Hand dug inspection pit that failed the be dug to 1.5mbgl and had to be abandonded. Back filled with araisings. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Hand dug inspection pit	0.45

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	02/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	106.16	E 530 120. N 150 765.	1006

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				106.06	0.10	Dark brown organic CLAY with frequent rootlets (TOPSOIL)			
					(0.50)	Soft brown slightly sandy CLAY with occassional gravels of grey sandstone (MADE GROUD)			
				105.56	0.60				
1					(1.00)	Soft dark brown fairly sandy CLAY with occasional gravels of grey sandstone (MADE GROUND)			
	1.20-1.65	SPT	N20	104.56	1.60				
				104.36	1.80	Very soft wet mottled brown grey sandy CLAY with regular gravels of grey sandstone (MADE GROUND)			
2						1.70 - 1.80 Gravels and cobbles of coarse well graded grey sandstone			
	2.00-2.45	SPT	N41		(0.50)	Slightly firm pale brown slightly sandy CLAY with infrequent gravels of grey sandstone (MADE GROUND)			
				103.86	2.30				
				103.66	2.50	Light brown slightly clayey medium grained fairly well graded SAND with occasional gravels of grey sandstone (MADE GROUND)			
	2.60-2.80	C		103.51	2.65				
	2.70-2.79	SPT		103.41	2.75	Greyish brown medium grained well graded SAND with occasional gravels of grey sandstone that has a black outer surface. Increasingly lithified with depth (MADE GROUND)			
3						Greenish brown fairly lithified medium grained well graded SAND (PROBABLE SANDGATE FORMATION)			
						END OF BOREHOLE			
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
02/02/23	2.75m	2.75	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 2.75mbgl and 0.75mbgl and plain HDPE pipe installed from 0.75mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.6mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	2.70

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	02/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	101.18	E 530 185. N 150 780.	1007

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				101.08	0.10	Soft light brown sandy CLAY with frequent rootlets (TOPSOIL)			
				100.88	0.30	Soft mottled light brown grey slightly sandy CLAY with regular black organic deposits and orange sand deposits with iron staining (MADE GROUND)			
					(0.90)	Very soft grey slighlty sandy CLAY with frequent deposits of orange sand (MADE GROUND)			
1				99.98	1.20				
	1.20-1.65	SPT	N8	99.83	1.35	Light brown slightly clayey coarsed grained well graded SAND with occasional gravels of grey sandstone and orange sand (MADE GROUND)			
					(0.40)	Soft grey slightly sandy CLAY with frequent gravels if grey sandstoe (MADE GROUND)			
				99.43	1.75	Firm mottled orange grey sandy CLAY with frequent gravels of grey sandstone with dark red iron coating and deposits of orange sand (MADE GROUND)			
2				99.18	2.00				
	2.00-2.45	SPT	N10			Light brownish orange slightly sandy CLAY. Sand content increases with depth (MADE GROUND)			
					(0.80)				
				98.38	2.80				
	2.80-3.00	C		98.33	2.85	Large well graded angular COBBLES of grey sandstone (MADE GROUND)			
3	3.00-3.45	SPT	N19	98.08	3.10	Light brown slightly clayey medium grained well graded SAND (MADE GROUND)			
					(0.40)	Firm light brown sandy CLAY with frequent gravels of grey sandstone (MADE GROUND)			
	3.45-3.60			97.68	3.50	Grey well graded SANDSTONE (SANDGATE FORMATION)			
				97.58	3.60	END OF BOREHOLE			
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
02/02/23	3.60m	3.60	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 3.6mbgl and 0.6mbgl and plain HDPE pipe installed from 0.6mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.5mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	3.60

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	02/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	110.09	E 530 099. N 150 691.	1008

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				109.99	0.10	Dark organic CLAY with frequent rootlets (TOPSOIL)			
					(0.50)	Soft brown slightly sandy CLAY with occassional gravels of grey sandstone (MADE GROUND)			
				109.49	0.60				
					(0.60)	Soft dark brown fairly sandy CLAY with occasional gravels of grey sandstone (MADE GROUND)			
1				108.89	1.20				
	1.20-1.65	SPT	N12		(1.00)	Soft light brown fairly sandy CLAY with frequent gravels of grey sandstone and orange sand deposits. Frequency of sand increases with depth (MADE GROUND)			
2	2.00-2.45	SPT	N12	107.89	2.20				
					(1.20)	Firm slightly cohesive pale grey clayey SILT with occasional gravels of grey sandstone (MADE GROUND)			
3	3.00-3.45	SPT	N15						
	3.19	W		106.69	3.40				
						Very soft light brown organic CLAY (MADE GROUND)			
				106.59	3.50	Firm slightly cohesive pale grey clayey SILT with occasional gravels of grey sandstone (MADE GROUND)			
				106.49	3.60	Firm slightly cohesive pale grey clayey SILT with occasional gravels of grey sandstone and frequent orange sand deposits (MADE GROUND)			
4	4.00-4.50	C							
	4.00-4.45	SPT	N15		(1.30)				
				105.19	4.90				
5	5.00-5.45	SPT	N16	105.09	5.00	Darkish grey well sorted medium grained sandstone (SANDGATE FORMATION)			
						END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
02/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	03/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	108.32	E 530 098. N 150 738.	1009

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				108.22	0.10	Orangish brown slightly sandy CLAY with frequent rootlets (TOPSOIL)			
					(0.50)	Soft orangey brown slightly sandy CLAY with frequent rootlets and occasional soft pale grey clay deposit (MADE GROUND)			
				107.72	0.60				
1					(0.70)	Very soft pale greysih brown slightly sandy slightly gravelly organic CLAY with regular orange deposits of sand (MADE GROUND)			
	1.20-1.65	SPT	N25	107.02	1.30				
					(0.40)	Slightly firm brownish orange sandy organic CLAY with occasional gravels of grey sandstone (MADE GROUND)			
	1.60-1.70	C		106.62	1.70				
	1.80-1.98	SPT		106.52	1.80	Grey medium grained well graded SAND that is increasily lithifed with depth (PROBABLE SANDGATE FORMATION)			
2						Grey medium grained well graded SANDSTONE (SANDGATE FORMATION) END OF BOREHOLE			
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
02/02/23	1.80m	1.80	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 1.8mbgl and 0.8mbgl and plain HDPE pipe installed from 0.8mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.7mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	1.80

MJCA
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Facsimile: 01827 718507

BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	28/02/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	120.89	E 530 580. N 150 848.	1010

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				120.79	0.10	Soft brown sandy silty CLAY with frequent rootlets (TOPSOIL)			
					(0.50)	Soft light brown very sandy organinc CLAY with frequent gravels of grey sandstone (MADE GROUND)			
				120.29	0.60				
					(0.40)	Soft greyish brown slightly sandy CLAY with frequent gravels and cobbles of grey sandstone (MADE GROUND)			
1				119.89	1.00				
	1.20-1.65	SPT	N0		(0.45)	Black very coarse slightly clayey SAND with black ash and frequent gravels of red sandstone, clinker, flint and coals. (MADE GROUND)			
				119.44	1.45				
	1.50-1.70	C	N0			Orange very stiff slightly clayey SILT with black ash (MADE GROUND)			
2	2.00-2.45	SPT	N0			2.00 - 5.00 Occasional gravels of clinker			
					(1.55)				
				117.89	3.00				
3	3.00-3.45	SPT	N0			Orange very stiff slightly clayey SILT (MADE GROUND)			
4	4.00-4.45	SPT	N1		(2.00)				
				115.89	5.00				
5	5.00-5.45	SPT	N1			END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
28/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	01/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	119.74	E 530 386. N 150 685.	1011

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				119.64	0.10	Very loose dusty organic soil (TOPSOIL)			
						Orange very stiff slightly clayey SILT with occasional organic deposits (MADE GROUND)			
1					(1.90)				
	1.20-1.65	SPT	N0						
				117.74	2.00				
2	2.00-2.45	SPT	N6		(0.40)	Soft light brown slightly sandy CLAY with occasional gravels of grey sandstone, black coals and white chalky material (MADE GROUND)			
				117.34	2.40				
	2.50-3.00	C			(0.80)	Firm light brown slightly sandy slightly organic CLAY with very frequent gravels of clinker, grey sandstone and black shiny coals. Occasional desposit of vibrant orange silt with black ash (MADE GROUND) 2.80 - 3.00 Purplish hue			
3	3.00-3.45	SPT	N28						
				116.54	3.20				
				116.34	3.40	Orange fine to medium grained well graded SAND with large gravels of grey sandstone (MADE GROUND)			
						Grey very stiff slightly clayey SILT with occasional iron banding (MADE GROUND)			
4	4.00-4.45	SPT	N10		(1.60)				
						4.50 - 4.60 large grey gravel/cobble of grey sandstone at			
				114.74	5.00				
5	5.00-5.45	SPT	N11			END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
01/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	01/03/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	118.17	E 530 296. N 150 643.	1012

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				118.07	0.10	Dark brown organic rich CLAY (TOPSOIL)			
					(1.10)	Slightly firm light brown sandy CLAY with regular deposits of vibrant orange material and gravels of grey sandstone (MADE GROUND)			
1				116.97	1.20				
	1.20-1.65	SPT	N13		(0.80)	Mottled light brown grey firm sandy organic CLAY with regular deposits of orange material and numerous gravels of grey sandstone and white chalk (MADE GROUND) 1.20 - 2.00 Sand sized coal particles			
2				116.17	2.00				
	2.00-2.45	SPT	N9			Greyish green firm slightly sandy CLAY with gravels of grey sandstone and deposits of orange material with iron staining (MADE GROUND)			
	2.30-2.50	C			(0.70)	2.00 - 2.70 Black streeking			
				115.47	2.70				
3	3.00-3.45	SPT	N12		(1.10)	Firm light brown fairly sandy CLAY with frequent gravels of grey sandstone and white chalk like material (MADE GROUND)			
				114.37	3.80	3.70 - 3.80 Deposit of organge coarse slightly clayey sand			
4	4.00-4.45	SPT	N19		(0.70)	Firm pale grey fairly sandy CLAY with regular gravels of grey sandstone (MADE GROUND) 4.10 - 4.30 Slight sheen from where the plastic screen of the window sample crumpled under pressure			
				113.67	4.50				
					(0.50)	Orange slightly clayey medium to coarse grained poorly graded SAND with occasional gravels of grey sandstone (MADE GROUND)			
5				113.17	5.00				
	5.00-5.45	SPT	N50			END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
01/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	28/02/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.06	E 530 519. N 150 749.	1013

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				121.96	0.10	Soft dark brown organic CLAY (TOPSOIL)			
					(0.80)	Soft light brown slightly sandy CLAY with regular gravels of grey sandstone, yellow sandstone and flint (MADE GROUND) 0.10 - 0.30 Frequent deposits of firm very sandy clays 0.30 - 0.90 Iron staining			
				121.16	0.90				
1				120.86	(0.30) 1.20	Soft light greyish orange slightly sandy CLAY with frequent gravels of grey sandstone with red iron staining (MADE GROUND)			
	1.20-1.65	SPT	N7			Firm light brown slightly sandy CLAY with regular gravels of grey sandstone with red iron staining (MADE GROUND) 1.70 - 2.00 Grey well graded gravels and cobbles			
2	2.00-2.45	SPT	N3		(1.80)				
				119.06	3.00				
3	3.00-3.45	SPT	N8			Light grey fine to medium well graded SAND with occcasional gravels of grey standstone (MADE GROUND) 3.60 - 3.90 Deposits of soft orangey brown clays			
4	4.00-4.50	C			(1.90)				
	4.00-4.45	SPT	N18			4.40 - 4.50 Thin layer of soft light brown clay			
				117.16	4.90				
5	5.00-5.45	SPT	N19	117.06	5.00	Light grey fine to medium well graded slightly lithified SAND (PROBABLE SANDGATE FORMATION)			
						END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
28/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survey NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	28/02/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.06	E 530 502.6 N 150 734.5	1013A

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				121.96	0.10	Soft dark brown organic CLAY (TOPSOIL)			
					(0.50)	Soft light brown slightly sandy CLAY with regular gravels of grey sandstone, flint and white chalk like material (MADE GROUND) 0.40 - 0.60 Very sandy			
				121.46	0.60				
					(0.30)	Orange fine to medium slightly clayey SAND with frequent gravels and cobbles of grey sandstone and fragments of concrete. Occasional gravels of clinker (MADE GROUND)			
				121.16	0.90				
1					(0.80)	Grey medium to coarse slightly clayey SAND with very frequent gravel of sandstone and flint. Possbile abestos fragment found at the base of the pit (MADE GROUND)			
				120.36	1.70				
2						Concrete Hardstanding (MADE GROUND) END OF BOREHOLE			
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
28/02/23	1.70m		m			

REMARKS / INSTALLATIONS

Hand Dug inspection pit to a depth of 1.5mbgl, drilling commenced after 1.5mbgl. At 1.7mbgl a concrete base was encoutner that the drill could not penetrate. Back filled with araisings. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Hand dug inspection pit	1.70

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	27/02/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	136.68	E 530 704. N 150 726.	1014

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				136.58	0.10	Soft brown slightly gravelly CLAY wih frequent rootlets (TOPSOIL)			
					(0.80)	Yellow soft slightly sandy silty CLAY with occasional gravels. Sand content increases with depth (MADE GROUND)			
				135.78	0.90				
1					(0.30)	Yellowish orange soft slightly sandy CLAY with occasional gravels of sandstone and black coals (MADE GROUND)			
				135.48	1.20				
	1.20-1.65	SPT	N0		(0.70)	Slighly firm yellowy sandy CLAY with gravels of black shale and cobbles of grey sandstone (MADE GROUND) 1.45 - 1.55 Cobble of chert			
				134.78	1.90				
2	2.00-2.45	SPT	N15		(1.00)	Soft yellowish brown sandy CLAY with gravels of sandstone and white chalk (MADE GROUND)			
				133.78	2.90				
3	3.00-3.45 3.10-3.30	SPT C	N1		(2.10)	Orange very stiff slightly clayey SILT with gravels of black shiny coals and deposits of soft brown clay (MADE GROUND)			
4	4.00-4.45	SPT	N0			4.00 - 4.25 Orangish yellow soft clayey SILT possibly Fullers earth (MADE GROUND)			
				131.68	5.00				
5	5.00-5.45	SPT	N6			END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
27/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	27/02/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	133.31	E 530 841. N 150 748.	1015

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				133.11	0.20	Soft brown slighty gravelly CLAY wih frequent rootlets (TOPSOIL)			
					(0.60)	Brown medium to coarse grained slightly clayey SAND with frequent gravels and cobbles of flint, sandstone and coals (MADE GROUND)			
				132.51	0.80				
1					(0.50)	Soft mottled yellow grey slightly sandy CLAY with occasional despoits of orange silt and frequent gravels of sandstone, coal and clinker (MADE GROUND)			
	1.20-1.65	SPT	N0	132.01	1.30				
				131.81	1.50	Soft light brown slightly sandy organic CLAY with occasional deposits of orange silt and gravels of sandstone and clinker (MADE GROUND)			
2	2.00-2.45	SPT	N0		(1.40)	Stiff orange slightly clayey SILT with gravels of sandstone and coal (MADE GROUND) 1.90 - 2.00 Black medium grained coals			
				130.41	2.90	2.80 - 2.90 Grey clay with very frequent sand sized coal particles			
3	2.90-3.40 3.00-3.45	C SPT	N4		(1.30)	Soft light brown slighty sandy CLAY with iron staining and deposits of orange silt and coals (MADE GROUND) 3.20 - 3.80 Gravels of flint			
4	4.00-4.45	SPT	N3	129.11	4.20				
					(0.70)	Light brownish grey slightly clayey medium to coarse SAND with occasional gravels of sandstone with red iron staining (MADE GROUND)			
				128.41	4.90				
5	5.00-5.45	SPT	N2	128.31	5.00	Soft light brownish grey very sandy clay with occasional gravels of sandstone surronded by red iron stained leaching (MADE GROUND)			
						END OF BOREHOLE			

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
27/02/23	5.00m	5.00	m			

REMARKS / INSTALLATIONS

Slotted HDPE pipe installed between 5mbgl and 1mbgl and plain HDPE pipe installed from 1mbgl to approximately 0.2m above ground level. Borehole annulus backfilled with gravel to 0.9mbgl and bentonite pellets to ground level. Standpipe covered by raised headworks to approximately 0.5m above ground level. Standpipe fitted with a removable gas tight cap with gas tap. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Percussion 117mm	5.00

MJCA
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BOREHOLE LOG

Project	Client	Date Completed
Nutfield Site Investigation	HGH consulting	28/02/2023

Project No.	Ground Level (mAOD)	Co-ordinates ()	Borehole No.
HGH/NU/JRC/20064/01	122.20	E 530 503.35 N 150 716.69	1016

Contractor	Location	Sheet
CC Groud Investigation	Nutfield	1 of 1

Scale (m)	SAMPLES & TESTS: Depth	Type No	Test Result	STRATA: Reduced Level (mAOD)	Depth (Thick-ness)	DESCRIPTION	Legend	Water	Instrument/ Backfill
				122.10	0.10	Soft dark brown organic CLAY (TOPSOIL)			
					(0.55)	Soft light brown slightly sandy CLAY with regular gravels of grey sandstone, yellow sandstone and flint (MADE GROUND)			
				121.55	0.65	Hardstanding (MADE GROUND) END OF BOREHOLE			
1									
2									
3									
4									
5									

GROUNDWATER

Date	Depth of hole	Depth of casing	Depth to water	Depth struck	Depth after 20 mins	Depth sealed
28/02/23	0.65m		m			

REMARKS / INSTALLATIONS

Hand dug inspection pit that failed the be dug to 1.5mbgl and had to be abandonded. Back filled with araisings. Ground level approximated from 24/08/2020 topographical survery NGP/NU/12-20/22157.

LOGGED BY: KW

DRILLING

Plant: Terrier Drill

Crew: [redacted]

Type and Diameter	Depth m
Hand dug inspection pit	0.65

APPENDIX K

GEOTECHNICAL LABORATORY TESTING RESULTS

GEOLABS Limited
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email: admin@geolabs.co.uk
web: www.geolabs.co.uk

MJCA
Baddesley Colliery Offices
Main Road
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Warwickshire
CV9 2LE

For the attention of Mr [redacted]

20 March 2023
Report No : GEO/37584/01

Date samples received	07/03/2023
Date written instructions received	07/03/2023
Date testing commenced	08/03/2023
Date of sample disposal	**17/04/2023**

Our ref **GEO / 37584**
Your Ref **HGH/NU/JRC/20064/01**

Project **NUTFIELD**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	~	Liquid & Plastic Limits Summary
~	13	Water Content
2	13	Liquid & Plastic Limits

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully

[redacted]

[redacted]
Senior Technician

BS EN ISO 17892-12 : 2018

SUMMARY OF LIQUID AND PLASTIC LIMIT TESTS

Location	Depth m	Sample Ref	Sample Type	Description	Water Content BS EN ISO 17892-1 : 2014 %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Percentage Passing 425µm %	Atterberg Classification	Test Type	Sample Condition
BH1001	3.50-3.70		D	Greyish brown very sandy CLAY.	28.6	41	18	23	100	CI	2	1
BH1002	1.80-2.00		D	Greyish brown mottled grey and brown sandy CLAY.	27.9	51	17	34	100	CH	2	1
BH1004	1.20-1.40		D	Greyish brown mottled brown slightly clayey SAND with some fine to coarse gravel.	25.9	~	NP		68	~	3	3
BH1006	1.30-1.40		D	Orangish brown mottled reddish brown and brownish grey sandy CLAY.	27.9	49	22	27	100	CI	2	1
BH1007	2.20-2.35		D	Brown mottled brownish grey and dark brown sandy CLAY with rare fine to medium gravel.	44.9	55	24	31	97	CH	2	1
BH1008	1.50-1.60		D	Multicoloured sandy CLAY with rare fine to medium gravel.	27.3	49	22	27	99	CI	2	1
BH1009	1.20-1.35		D	Multicoloured sandy CLAY with rare fine to medium gravel.	48.3	61	25	36	99	CH	2	1
BH1010	0.60-0.90		D	Brown and greyish brown mottled slightly sandy CLAY with some fine to coarse gravel.	35.0	80	34	46	83	CV	2	3
BH1011	2.10-2.30		D	Multicoloured sandy CLAY with rare fine to coarse gravel.	31.3	47	19	28	97	CI	2	1
BH1012	1.75-1.90		D	Multicoloured sandy CLAY with some fine to coarse gravel.	19.1	44	19	25	78	CI	2	3
BH1013	2.30-2.45		D	Yellowish brown mottled grey and dark brown very sandy CLAY.	18.5	35	16	19	100	CL	2	1
BH1014	1.60-1.70		D	Multicoloured sandy CLAY with rare fine to medium gravel.	42.7	56	20	36	99	CH	2	1
BH1015	3.50-3.60		D	Greyish brown mottled reddish brown and orange sandy CLAY with rare fine to medium gravel.	24.5	48	19	29	99	CI	2	1

Test Type:
1 - 1 point 80g / 30° fall cone method.
2 - 4 point 80g / 30° fall cone method.
3 - Non plastic determination.

Sample condition:
1 - As Received
2 - Air Dried
3 - Washed & Air Dried

Checked and Approved by:
[redacted]
[redacted] - Senior Technician
20/03/2023

Project Number:
GEO / 37584

Project Name:
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LIQUID AND PLASTIC LIMITS

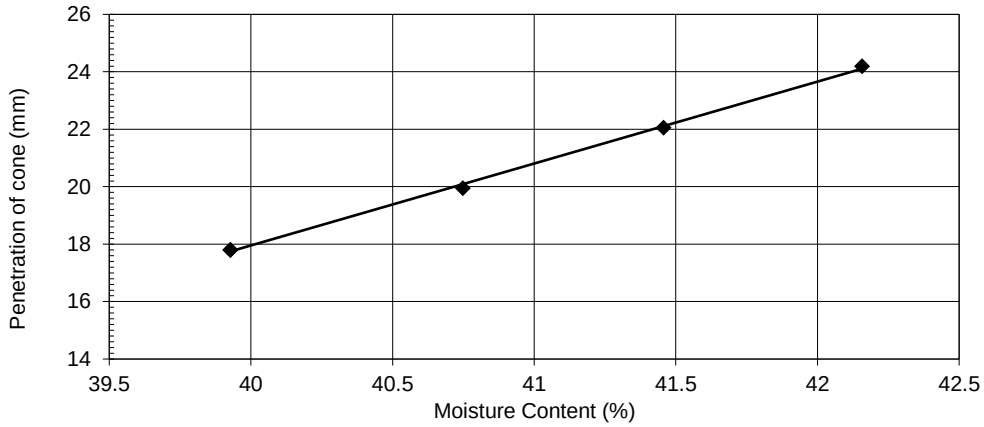
Location	BH1001
Depth (m)	3.50
Sample Type	D

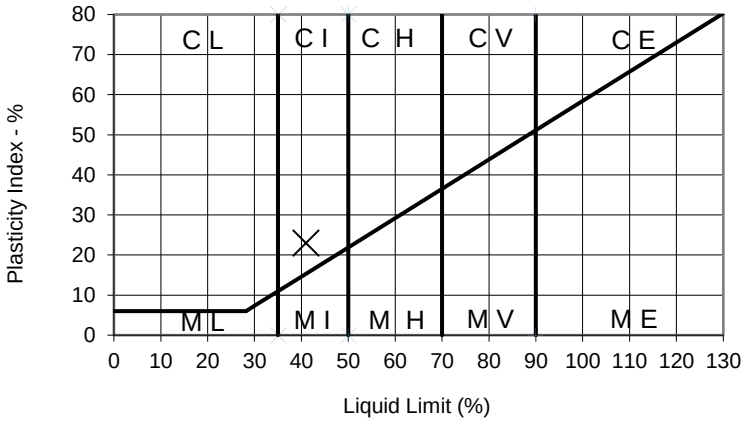
Description:

Greyish brown very sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014)	28.6	%
Estimated percentage passing 425µm sieve :	100	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	41	%
Plastic Limit :	18	%
Plasticity Index :	23	%
Equivalent Water Content of material passing 425µm sieve :	28.6	%
Liquidity Index :	0.46	





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Checked and Approved by

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20/03/2023

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LIQUID AND PLASTIC LIMITS

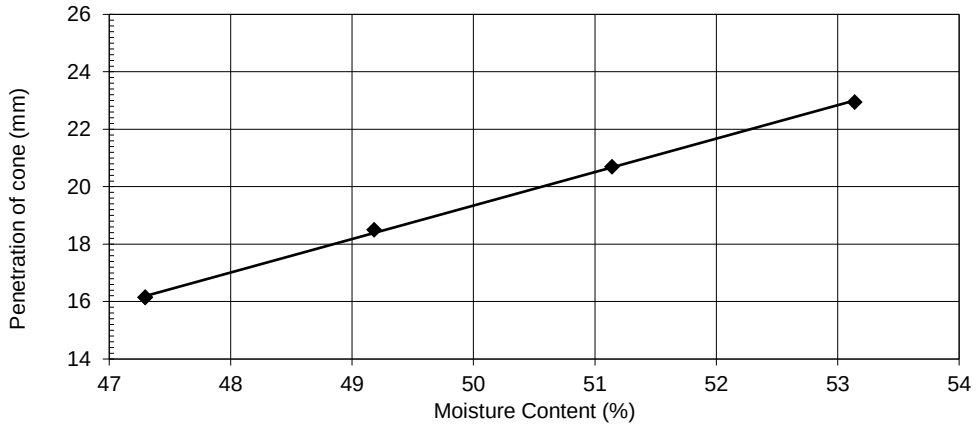
Location	BH1002
Depth (m)	1.80
Sample Type	D

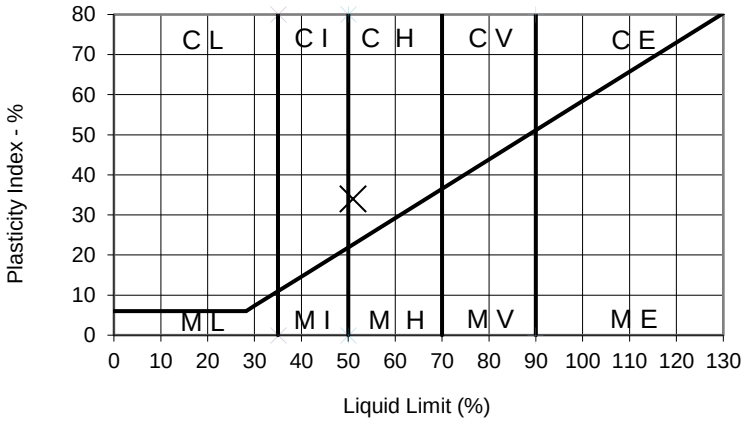
Description:

Greyish brown mottled grey and brown sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014)	27.9	%
Estimated percentage passing 425µm sieve :	100	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	51	%
Plastic Limit :	17	%
Plasticity Index :	34	%
Equivalent Water Content of material passing 425µm sieve :	27.9	%
Liquidity Index :	0.32	





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LIQUID AND PLASTIC LIMITS

Location	BH1004
Depth (m)	1.20
Sample Type	D

Description:

Greyish brown mottled brown slightly clayey SAND with some fine to coarse gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014)	25.9 %
Measured percentage passing 425µm sieve :	68 %
Liquid Limit - Fall Cone Method (cone angle 30°) :	Not Determined
Plastic Limit :	Non-Plastic

Equivalent Water Content of material passing 425µm sieve : 38 %

Sample was determined to be Non-Plastic after preparation

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[redacted] - Senior Technician
20/03/2023

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LIQUID AND PLASTIC LIMITS

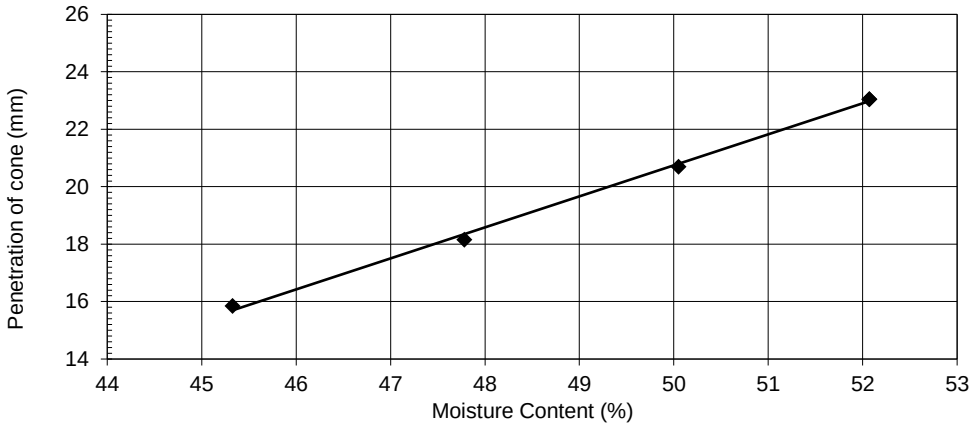
Location	BH1006
Depth (m)	1.30
Sample Type	D

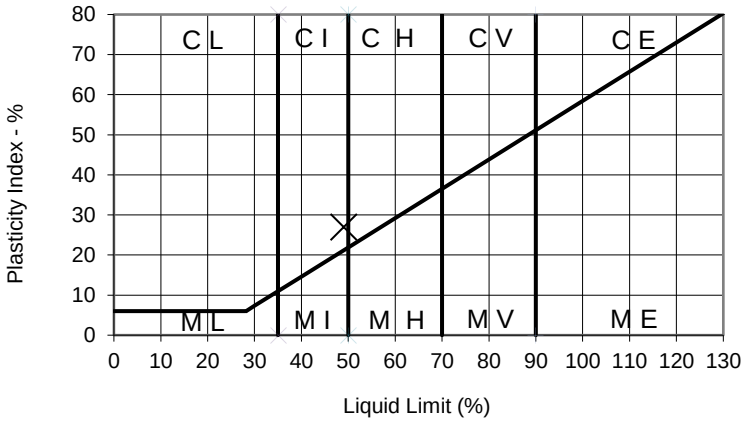
Description:

Orangish brown mottled reddish brown and brownish grey sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014)	27.9	%
Estimated percentage passing 425µm sieve :	100	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with increasing water content :	49	%
Plastic Limit :	22	%
Plasticity Index :	27	%
Equivalent Water Content of material passing 425µm sieve :	27.9	%
Liquidity Index :	0.22	





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Checked and Approved by

[redacted] - Senior Technician
20/03/2023

Project Number:

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LIQUID AND PLASTIC LIMITS

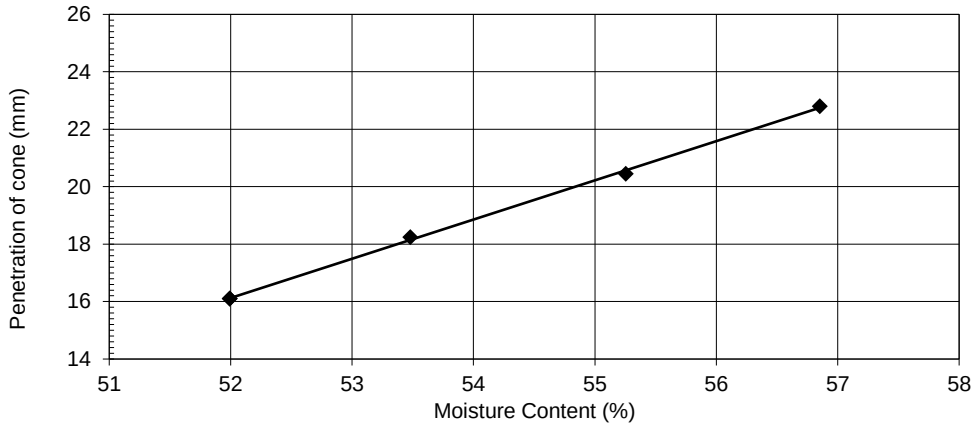
Location	BH1007
Depth (m)	2.20
Sample Type	D

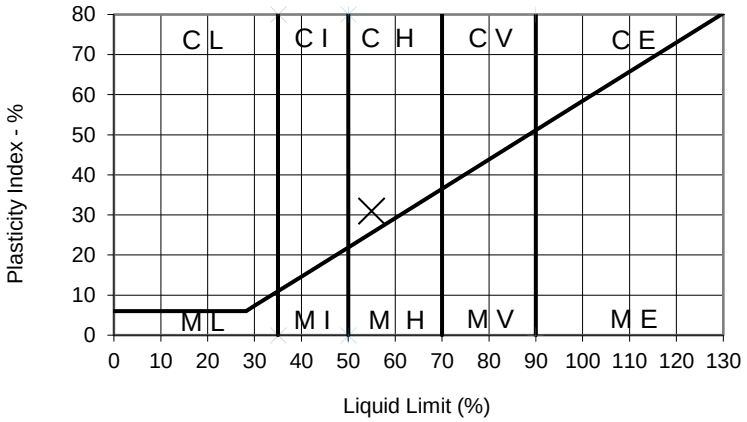
Description:

Brown mottled brownish grey and dark brown sandy CLAY with rare fine to medium gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014)	44.9 %
Estimated percentage passing 425µm sieve :	97 %
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	55 %
Plastic Limit :	24 %
Plasticity Index :	31 %
Equivalent Water Content of material passing 425µm sieve :	46.2 %
Liquidity Index :	0.72





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Checked and Approved by [redacted]

[redacted] - Senior Technician
20/03/2023

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LIQUID AND PLASTIC LIMITS

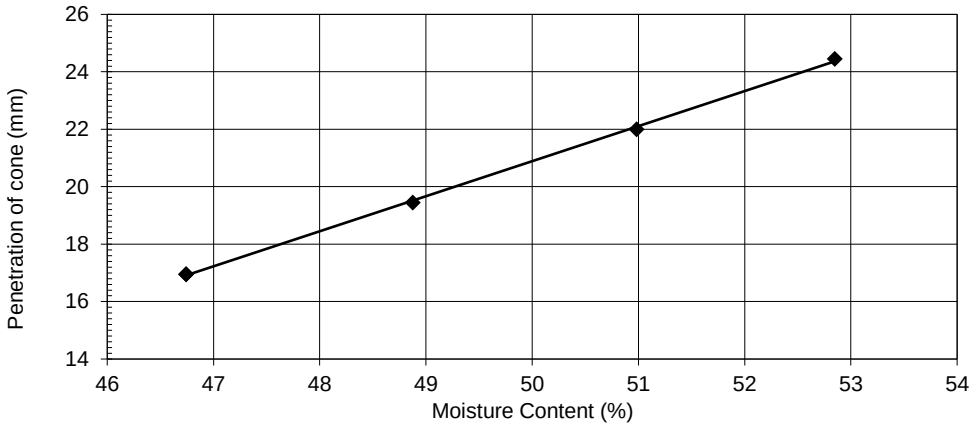
Location	BH1008
Depth (m)	1.50
Sample Type	D

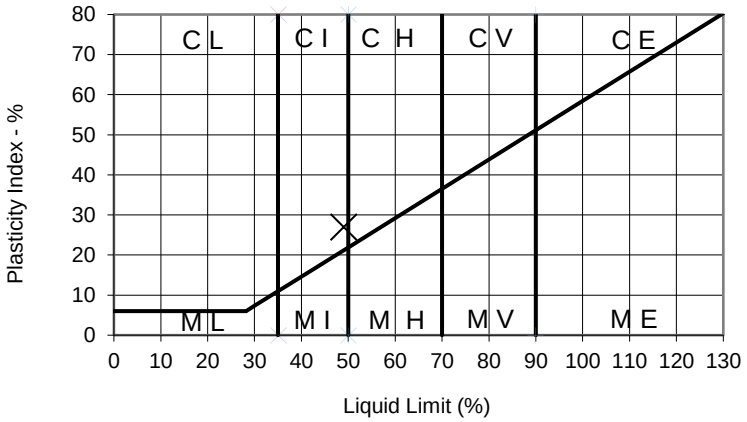
Description:

Multicoloured sandy CLAY with rare fine to medium gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014)	27.3 %
Estimated percentage passing 425µm sieve :	99 %
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	49 %
Plastic Limit :	22 %
Plasticity Index :	27 %
Equivalent Water Content of material passing 425µm sieve :	27.7 %
Liquidity Index :	0.21





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LIQUID AND PLASTIC LIMITS

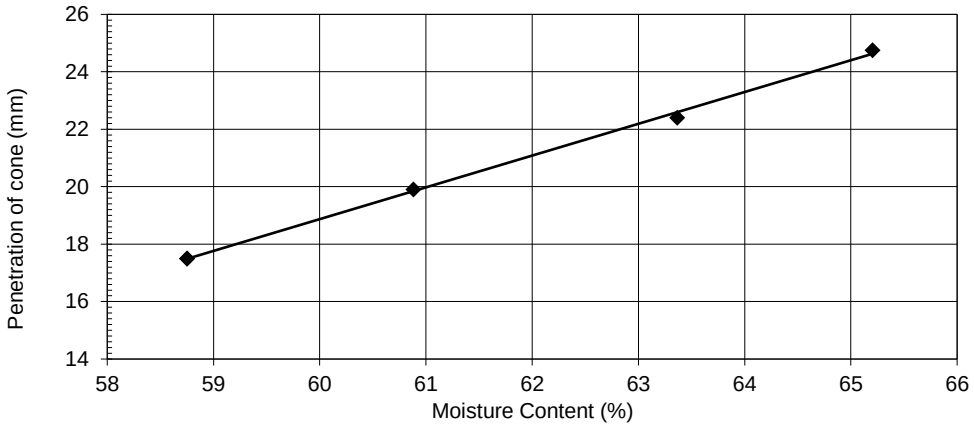
Location	BH1009
Depth (m)	1.20
Sample Type	D

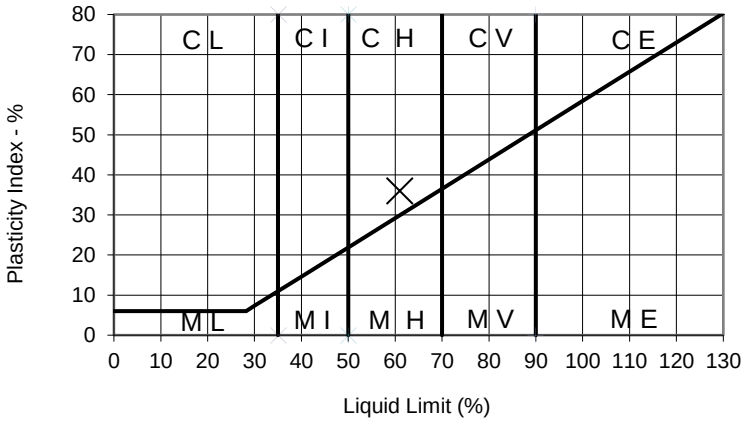
Description:

Multicoloured sandy CLAY with rare fine to medium gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014)	48.3 %
Estimated percentage passing 425µm sieve :	99 %
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	61 %
Plastic Limit :	25 %
Plasticity Index :	36 %
Equivalent Water Content of material passing 425µm sieve :	49.0 %
Liquidity Index :	0.67





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LIQUID AND PLASTIC LIMITS

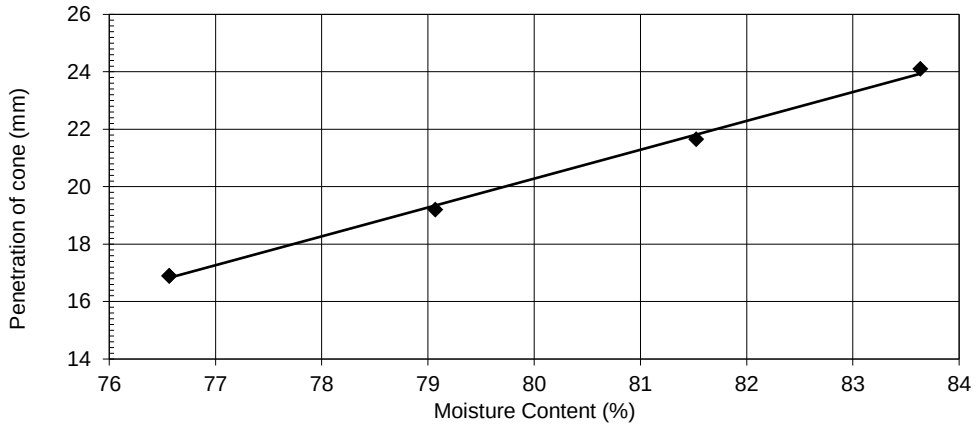
Location	BH1010
Depth (m)	0.60
Sample Type	D

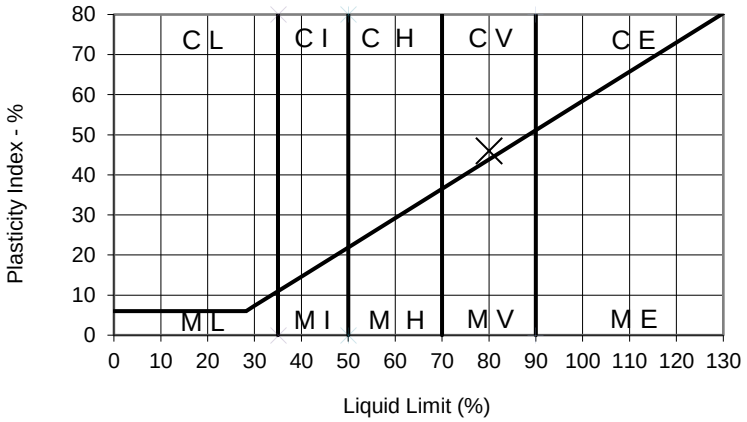
Description:

Brown and greyish brown mottled slightly sandy CLAY with some fine to coarse gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014)	35.0	%
Measured percentage passing 425µm sieve :	83	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	80	%
Plastic Limit :	34	%
Plasticity Index :	46	%
Equivalent Water Content of material passing 425µm sieve :	42.3	%
Liquidity Index :	0.18	





Tested by AD
Checked and Approved by [redacted]

[redacted] - Senior Technician
20/03/2023

Project Number:

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LIQUID AND PLASTIC LIMITS

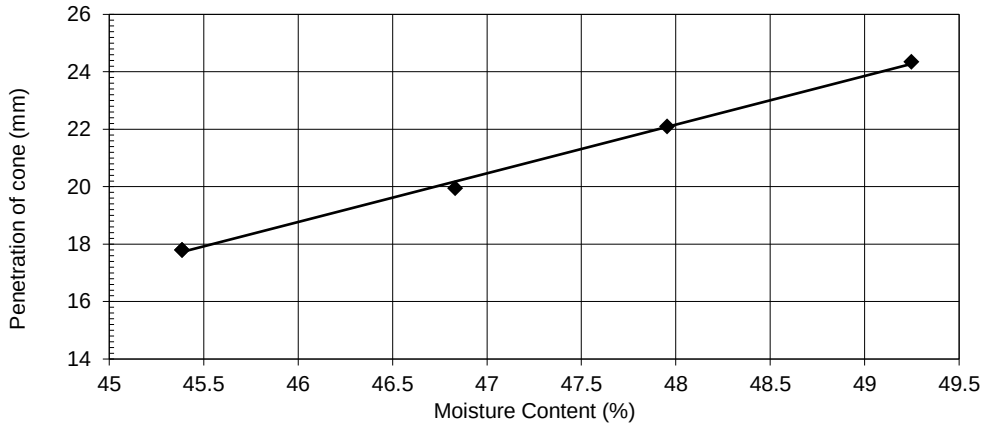
Location	BH1011
Depth (m)	2.10
Sample Type	D

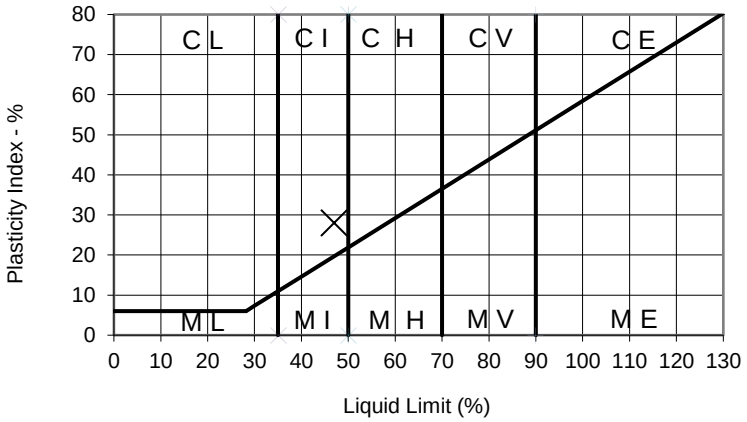
Description:

Multicoloured sandy CLAY with rare fine to coarse gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014)	31.3	%
Estimated percentage passing 425µm sieve :	97	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	47	%
Plastic Limit :	19	%
Plasticity Index :	28	%
Equivalent Water Content of material passing 425µm sieve :	32.1	%
Liquidity Index :	0.47	





Tested by AD
Checked and Approved by

[redacted] - Senior Technician
20/03/2023

Project Number:

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LIQUID AND PLASTIC LIMITS

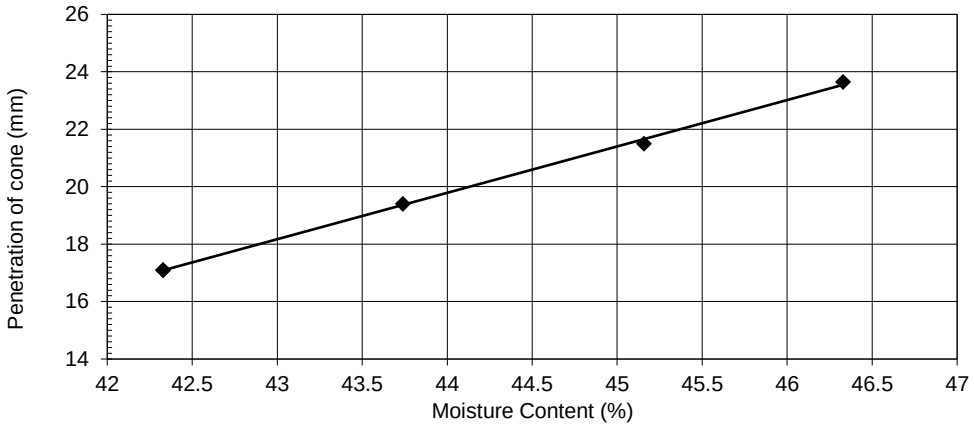
Location	BH1012
Depth (m)	1.75
Sample Type	D

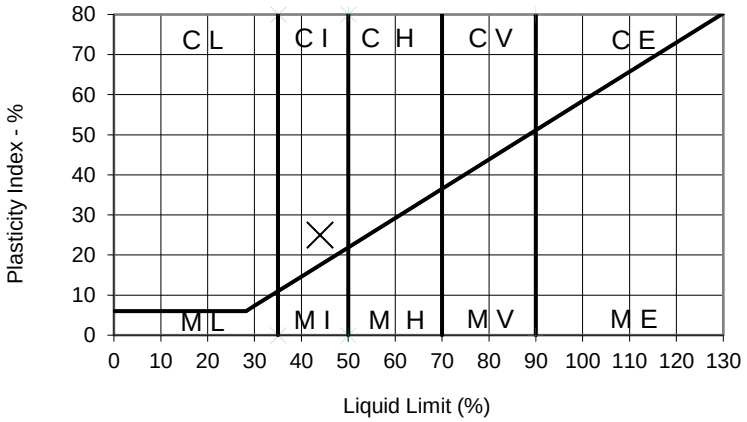
Description:

Multicoloured sandy CLAY with some fine to coarse gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014)	19.1	%
Measured percentage passing 425µm sieve :	78	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	44	%
Plastic Limit :	19	%
Plasticity Index :	25	%
Equivalent Water Content of material passing 425µm sieve :	24.4	%
Liquidity Index :	0.22	





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[redacted] - Senior Technician
20/03/2023

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LIQUID AND PLASTIC LIMITS

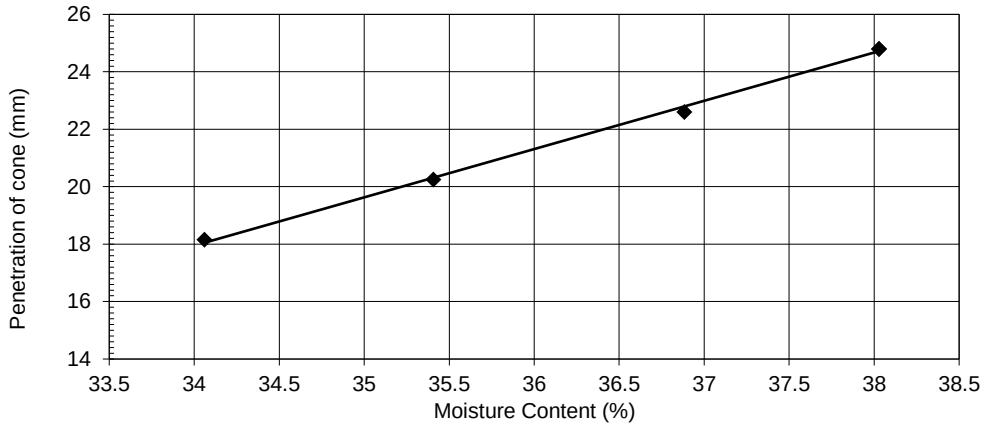
Location	BH1013
Depth (m)	2.30
Sample Type	D

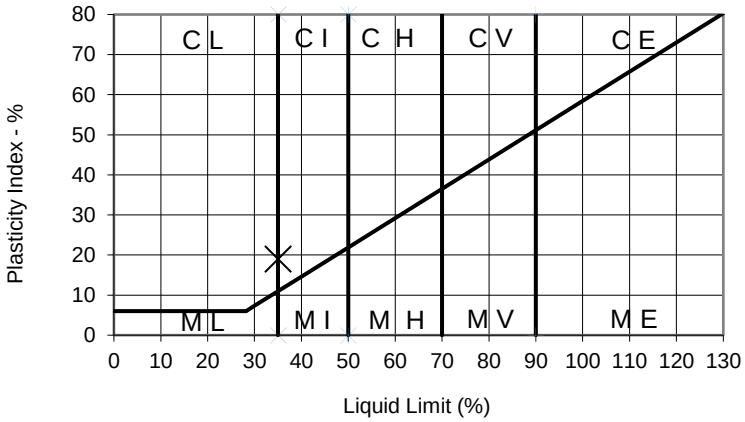
Description:

Yellowish brown mottled grey and dark brown very sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014)	18.5	%
Estimated percentage passing 425µm sieve :	100	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with increasing water content :	35	%
Plastic Limit :	16	%
Plasticity Index :	19	%
Equivalent Water Content of material passing 425µm sieve :	18.5	%
Liquidity Index :	0.13	





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20/03/2023

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LIQUID AND PLASTIC LIMITS

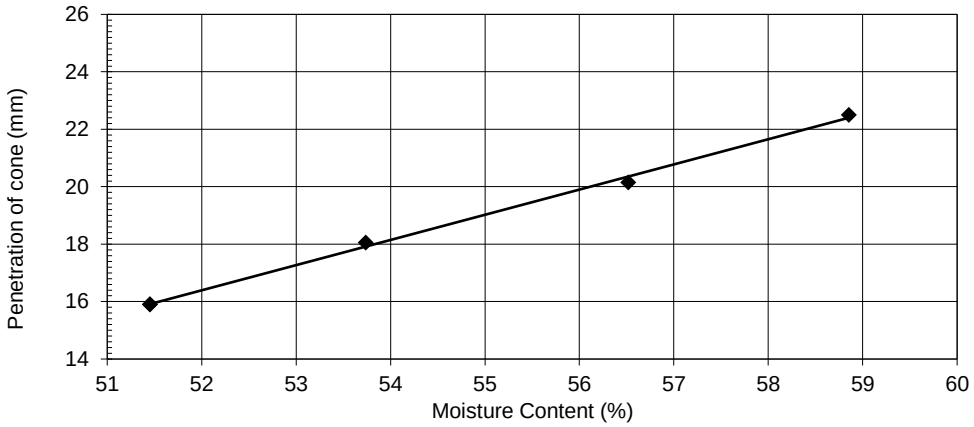
Location	BH1014
Depth (m)	1.60
Sample Type	D

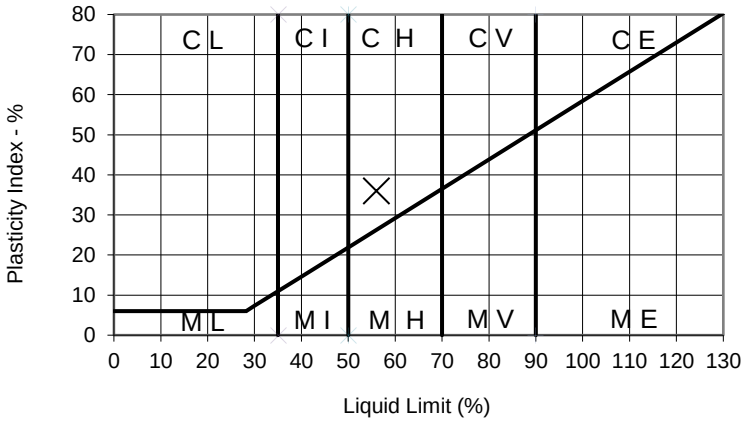
Description:

Multicoloured sandy CLAY with rare fine to medium gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014)	42.7	%
Estimated percentage passing 425µm sieve :	99	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	56	%
Plastic Limit :	20	%
Plasticity Index :	36	%
Equivalent Water Content of material passing 425µm sieve :	43.3	%
Liquidity Index :	0.65	





Tested by AD
Checked and Approved by [redacted]

[redacted] - Senior Technician
20/03/2023

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LIQUID AND PLASTIC LIMITS

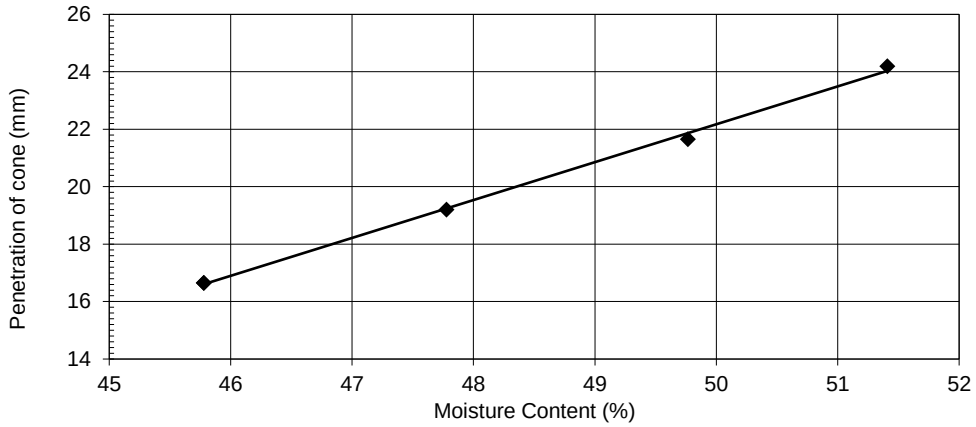
Location	BH1015
Depth (m)	3.50
Sample Type	D

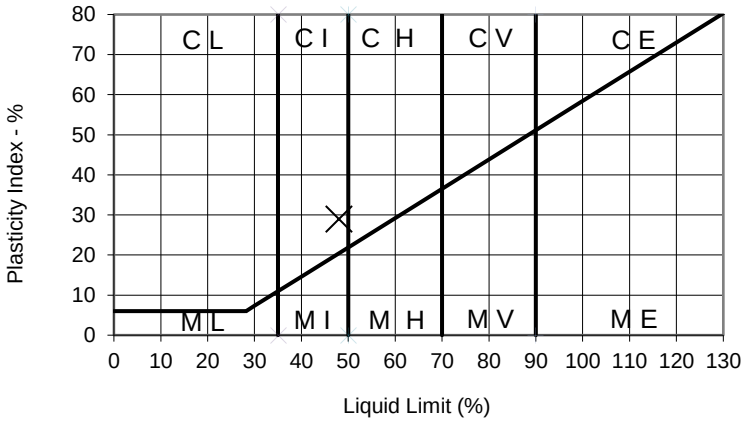
Description:

Greyish brown mottled reddish brown and orange sandy CLAY with rare fine to medium gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014)	24.5	%
Estimated percentage passing 425µm sieve :	99	%
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with decreasing water content :	48	%
Plastic Limit :	19	%
Plasticity Index :	29	%
Equivalent Water Content of material passing 425µm sieve :	24.8	%
Liquidity Index :	0.20	





Tested by AD
Checked and Approved by [redacted]

[redacted] - Senior Technician
20/03/2023

Project Number:

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APPENDIX L

CHEMICAL ANALYSES OF SOIL AND GROUNDWATER SAMPLES FROM THE 2023 SITE INVESTIGATION

Element Materials Technology
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Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

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F: +44 (0) 1244 833781
W: www.element.com

MJCA
Baddesley Colliery Offices
Main Road
Baxterley
Atherstone
CV9 2LE

Attention :	[redacted]
Date :	20th March, 2023
Your reference :	HGH/NU
Our reference :	Test Report 23/3347 Batch 1
Location :	Nutfield
Date samples received :	2nd March, 2023
Status :	Final Report
Issue :	1

Nine samples were received for analysis on 2nd March, 2023 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

[redacted] **BSc**
Senior Project Manager

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27		LOD/LOR	Units	Method No.
Sample ID	BH1014	BH1015	TP110	TP109	TP109	BH1010	BH1013	TP107	TP111				
Depth	3.10-3.30	2.90-3.40	0.88-1.36	2.25-2.50	3.00-4.10	1.50-1.70	4.50-4.70	1.43-1.82	1.47-3.40				
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B				
Sample Date	27/02/2023	27/02/2023	27/02/2023	27/02/2023	27/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023				
Arsenic #	16.6	45.8	48.0	31.5	26.2	17.2	41.9	28.7	23.1		<0.5	mg/kg	TM30/PM15
Barium #	69	68	260	207	54	122	138	384	64		<1	mg/kg	TM30/PM15
Beryllium	4.7	4.0	2.4	2.7	6.0	3.5	2.1	2.7	7.1		<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Chromium #	11.5	84.4	84.1	64.9	32.5	45.5	64.3	49.8	24.3		<0.5	mg/kg	TM30/PM15
Copper #	71	7	5	30	62	22	5	58	58		<1	mg/kg	TM30/PM15
Lead #	78	19	21	13	73	26	12	15	56		<5	mg/kg	TM30/PM15
Mercury #	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Nickel #	24.8	48.2	55.8	45.5	34.1	44.1	39.3	50.7	30.4		<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	2	1	<1	<1	<1	<1	<1		<1	mg/kg	TM30/PM15
Vanadium	16	86	101	67	29	57	65	67	36		<1	mg/kg	TM30/PM15
Water Soluble Boron #	1.4	0.6	1.1	1.4	2.0	1.3	0.7	0.9	1.8		<0.1	mg/kg	TM74/PM32
Zinc #	371	114	68	40	295	101	54	37	279		<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.18	<0.03	<0.03	0.14	<0.03	0.09	<0.03	0.04	<0.03		<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.38	<0.03	0.07	0.06	<0.03	0.08	0.20	0.05	<0.03		<0.03	mg/kg	TM4/PM8
Pyrene #	0.29	<0.03	0.06	0.06	<0.03	0.09	0.17	0.04	<0.03		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.32	<0.06	<0.06	<0.06	<0.06	<0.06	0.16	<0.06	<0.06		<0.06	mg/kg	TM4/PM8
Chrysene #	0.23	<0.02	0.05	0.07	<0.02	0.08	0.12	0.04	<0.02		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.43	<0.07	0.08	<0.07	<0.07	0.11	0.25	<0.07	<0.07		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.20	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.18	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.16	<0.04	<0.04	<0.04	<0.04	0.06	0.07	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.4	<0.6	<0.6	<0.6	<0.6	<0.6	1.1	<0.6	<0.6		<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.31	<0.05	0.06	<0.05	<0.05	0.08	0.18	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.12	<0.02	0.02	<0.02	<0.02	0.03	0.07	<0.02	<0.02		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	92	90	90	87	88	84	87	84	87		<0	%	TM4/PM8
VOC TICs	-	ND	-	ND	-	-	-	-	ND			None	TM15/PM10
SVOC TICs	-	ND	-	ND	-	-	-	-	ND			None	TM16/PM8
EPH (C8-C40) #	<30	<30	39	<30	<30	<30	<30	<30	<30		<30	mg/kg	TM5/PM8
PCB 28 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 52 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 101 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27		LOD/LOR	Units	Method No.
Sample ID	BH1014	BH1015	TP110	TP109	TP109	BH1010	BH1013	TP107	TP111				
Depth	3.10-3.30	2.90-3.40	0.88-1.36	2.25-2.50	3.00-4.10	1.50-1.70	4.50-4.70	1.43-1.82	1.47-3.40				
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B				
Sample Date	27/02/2023	27/02/2023	27/02/2023	27/02/2023	27/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023				
PCB 118 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 138 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 153 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 180 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<35	-	<35	-	-	-	-	<35		<35	ug/kg	TM17/PM8
Resorcinol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Catechol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Phenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
m/p-cresol #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	mg/kg	TM26/PM21B
o-cresol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Total cresols #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM26/PM21B
Xylenols #	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06		<0.06	mg/kg	TM26/PM21B
1-naphthol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
2,3,5-trimethyl phenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
2-isopropylphenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Total Speciated Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15		<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	126.2	43.2	20.5	23.2	270.6	50.8	24.4	18.7	154.7		<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	1.5719	1.5961	0.0766	0.1219	2.5238	1.5812	0.0340	0.2233	1.6812		<0.0015	g/l	TM38/PM20
Chromium III	11.5	84.4	84.1	64.9	32.5	45.5	64.3	49.8	24.3		<0.5	mg/kg	NONE/NONE
Total Cyanide #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	3.43	0.22	1.07	12.81	0.39	6.52	0.64	24.84	0.45		<0.02	%	TM21/PM24
Sulphide	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	mg/kg	TM107/PM45
pH #	7.26	7.50	7.74	7.44	7.63	7.48	8.17	8.12	7.34		<0.01	pH units	TM73/PM11
Asbestos Type*	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD			None	Subcontracted

Please see attached notes for all abbreviations and acronyms

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

SVOC Report : **Solid**

EMT Sample No.	4-6	10-12	25-27									
Sample ID	BH1015	TP109	TP111									
Depth	2.90-3.40	2.25-2.50	1.47-3.40									
COC No / misc												
Containers	V J B	V J B	V J B									
Sample Date	27/02/2023	27/02/2023	28/02/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	02/03/2023	02/03/2023	02/03/2023									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	22	<10								<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100								<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10								<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10								<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10								<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10								<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10								<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	119	108	108								<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	113	102	102								<0	%	TM16/PM8

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

VOC Report : **Solid**

EMT Sample No.	4-6	10-12	25-27									
Sample ID	BH1015	TP109	TP111									
Depth	2.90-3.40	2.25-2.50	1.47-3.40									
COC No / misc												
Containers	V J B	V J B	V J B									
Sample Date	27/02/2023	27/02/2023	28/02/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	02/03/2023	02/03/2023	02/03/2023									

Please see attached notes for all abbreviations and acronyms

VOC MS													
Dichlorodifluoromethane	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2 SV	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1 SV	<1								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6 SV	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	10 SV	<7								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Benzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6 SV	<6								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Toluene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5 SV	<5								<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Styrene	<3	<3 SV	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5 SV	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6 SV	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7 SV	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27 SV	<27								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7 SV	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	94	72 SV	96								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	86	32 SV	85								<0	%	TM15/PM10

Client Name: MJCA

Reference: HGH/NU

Location: Nutfield

Contact: [redacted]

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/3347	1	BH1014	3.10-3.30	1-3	No interpretation possible
23/3347	1	BH1015	2.90-3.40	4-6	No interpretation possible
23/3347	1	TP110	0.88-1.36	7-9	No interpretation possible
23/3347	1	TP109	2.25-2.50	10-12	No interpretation possible
23/3347	1	TP109	3.00-4.10	13-15	No interpretation possible
23/3347	1	BH1010	1.50-1.70	16-18	No interpretation possible
23/3347	1	BH1013	4.50-4.70	19-21	No interpretation possible
23/3347	1	TP107	1.43-1.82	22-24	No interpretation possible
23/3347	1	TP111	1.47-3.40	25-27	No interpretation possible

Element Materials Technology

Notification of Deviating Samples

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/3347						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/3347

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/3347

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes

EMT Job No: 23/3347

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes

EMT Job No: 23/3347

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

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MJCA
Baddesley Colliery Offices
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CV9 2LE

Attention :	[redacted]
Date :	20th March, 2023
Your reference :	HGH/NU
Our reference :	Test Report 23/3347 Batch 1
Location :	Nutfield
Date samples received :	2nd March, 2023
Status :	Final Report
Issue :	1

Nine samples were received for analysis on 2nd March, 2023 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

[redacted] **BSc**
Senior Project Manager

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27		LOD/LOR	Units	Method No.
Sample ID	BH1014	BH1015	TP110	TP109	TP109	BH1010	BH1013	TP107	TP111				
Depth	3.10-3.30	2.90-3.40	0.88-1.36	2.25-2.50	3.00-4.10	1.50-1.70	4.50-4.70	1.43-1.82	1.47-3.40				
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B				
Sample Date	27/02/2023	27/02/2023	27/02/2023	27/02/2023	27/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023				
Arsenic #	16.6	45.8	48.0	31.5	26.2	17.2	41.9	28.7	23.1		<0.5	mg/kg	TM30/PM15
Barium #	69	68	260	207	54	122	138	384	64		<1	mg/kg	TM30/PM15
Beryllium	4.7	4.0	2.4	2.7	6.0	3.5	2.1	2.7	7.1		<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Chromium #	11.5	84.4	84.1	64.9	32.5	45.5	64.3	49.8	24.3		<0.5	mg/kg	TM30/PM15
Copper #	71	7	5	30	62	22	5	58	58		<1	mg/kg	TM30/PM15
Lead #	78	19	21	13	73	26	12	15	56		<5	mg/kg	TM30/PM15
Mercury #	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Nickel #	24.8	48.2	55.8	45.5	34.1	44.1	39.3	50.7	30.4		<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	2	1	<1	<1	<1	<1	<1		<1	mg/kg	TM30/PM15
Vanadium	16	86	101	67	29	57	65	67	36		<1	mg/kg	TM30/PM15
Water Soluble Boron #	1.4	0.6	1.1	1.4	2.0	1.3	0.7	0.9	1.8		<0.1	mg/kg	TM74/PM32
Zinc #	371	114	68	40	295	101	54	37	279		<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.18	<0.03	<0.03	0.14	<0.03	0.09	<0.03	0.04	<0.03		<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.38	<0.03	0.07	0.06	<0.03	0.08	0.20	0.05	<0.03		<0.03	mg/kg	TM4/PM8
Pyrene #	0.29	<0.03	0.06	0.06	<0.03	0.09	0.17	0.04	<0.03		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.32	<0.06	<0.06	<0.06	<0.06	<0.06	0.16	<0.06	<0.06		<0.06	mg/kg	TM4/PM8
Chrysene #	0.23	<0.02	0.05	0.07	<0.02	0.08	0.12	0.04	<0.02		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.43	<0.07	0.08	<0.07	<0.07	0.11	0.25	<0.07	<0.07		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.20	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.18	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.16	<0.04	<0.04	<0.04	<0.04	0.06	0.07	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.4	<0.6	<0.6	<0.6	<0.6	<0.6	1.1	<0.6	<0.6		<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.31	<0.05	0.06	<0.05	<0.05	0.08	0.18	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.12	<0.02	0.02	<0.02	<0.02	0.03	0.07	<0.02	<0.02		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	92	90	90	87	88	84	87	84	87		<0	%	TM4/PM8
VOC TICs	-	ND	-	ND	-	-	-	-	ND			None	TM15/PM10
SVOC TICs	-	ND	-	ND	-	-	-	-	ND			None	TM16/PM8
EPH (C8-C40) #	<30	<30	39	<30	<30	<30	<30	<30	<30		<30	mg/kg	TM5/PM8
PCB 28 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 52 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 101 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27		LOD/LOR	Units	Method No.
Sample ID	BH1014	BH1015	TP110	TP109	TP109	BH1010	BH1013	TP107	TP111				
Depth	3.10-3.30	2.90-3.40	0.88-1.36	2.25-2.50	3.00-4.10	1.50-1.70	4.50-4.70	1.43-1.82	1.47-3.40				
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B				
Sample Date	27/02/2023	27/02/2023	27/02/2023	27/02/2023	27/02/2023	28/02/2023	28/02/2023	28/02/2023	28/02/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023	02/03/2023				
PCB 118 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 138 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 153 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 180 #	-	<5	-	<5	-	-	-	-	<5		<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<35	-	<35	-	-	-	-	<35		<35	ug/kg	TM17/PM8
Resorcinol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Catechol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Phenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
m/p-cresol #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	mg/kg	TM26/PM21B
o-cresol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Total cresols #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM26/PM21B
Xylenols #	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06		<0.06	mg/kg	TM26/PM21B
1-naphthol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
2,3,5-trimethyl phenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
2-isopropylphenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/kg	TM26/PM21B
Total Speciated Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15		<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	126.2	43.2	20.5	23.2	270.6	50.8	24.4	18.7	154.7		<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	1.5719	1.5961	0.0766	0.1219	2.5238	1.5812	0.0340	0.2233	1.6812		<0.0015	g/l	TM38/PM20
Chromium III	11.5	84.4	84.1	64.9	32.5	45.5	64.3	49.8	24.3		<0.5	mg/kg	NONE/NONE
Total Cyanide #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	3.43	0.22	1.07	12.81	0.39	6.52	0.64	24.84	0.45		<0.02	%	TM21/PM24
Sulphide	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	mg/kg	TM107/PM45
pH #	7.26	7.50	7.74	7.44	7.63	7.48	8.17	8.12	7.34		<0.01	pH units	TM73/PM11
Asbestos Type*	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD			None	Subcontracted

Please see attached notes for all abbreviations and acronyms

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

SVOC Report : **Solid**

EMT Sample No.	4-6	10-12	25-27									
Sample ID	BH1015	TP109	TP111									
Depth	2.90-3.40	2.25-2.50	1.47-3.40									
COC No / misc												
Containers	V J B	V J B	V J B									
Sample Date	27/02/2023	27/02/2023	28/02/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	02/03/2023	02/03/2023	02/03/2023									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	22	<10								<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100								<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10								<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10								<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10								<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10								<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10								<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	119	108	108								<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	113	102	102								<0	%	TM16/PM8

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3347

VOC Report : **Solid**

EMT Sample No.	4-6	10-12	25-27									
Sample ID	BH1015	TP109	TP111									
Depth	2.90-3.40	2.25-2.50	1.47-3.40									
COC No / misc												
Containers	V J B	V J B	V J B									
Sample Date	27/02/2023	27/02/2023	28/02/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	02/03/2023	02/03/2023	02/03/2023									

Please see attached notes for all abbreviations and acronyms

VOC MS													
Dichlorodifluoromethane	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2 SV	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1 SV	<1								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6 SV	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	10 SV	<7								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Benzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6 SV	<6								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Toluene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5 SV	<5								<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Styrene	<3	<3 SV	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2 SV	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3 SV	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5 SV	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6 SV	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7 SV	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4 SV	<4								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27 SV	<27								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7 SV	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	94	72 SV	96								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	86	32 SV	85								<0	%	TM15/PM10

Client Name: MJCA

Reference: HGH/NU

Location: Nutfield

Contact: [redacted]

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/3347	1	BH1014	3.10-3.30	1-3	No interpretation possible
23/3347	1	BH1015	2.90-3.40	4-6	No interpretation possible
23/3347	1	TP110	0.88-1.36	7-9	No interpretation possible
23/3347	1	TP109	2.25-2.50	10-12	No interpretation possible
23/3347	1	TP109	3.00-4.10	13-15	No interpretation possible
23/3347	1	BH1010	1.50-1.70	16-18	No interpretation possible
23/3347	1	BH1013	4.50-4.70	19-21	No interpretation possible
23/3347	1	TP107	1.43-1.82	22-24	No interpretation possible
23/3347	1	TP111	1.47-3.40	25-27	No interpretation possible

Element Materials Technology

Notification of Deviating Samples

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/3347						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/3347

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/3347

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes

EMT Job No: 23/3347

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes

EMT Job No: 23/3347

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

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Attention :	[redacted]
Date :	21st March, 2023
Your reference :	HGH/NU
Our reference :	Test Report 23/3475 Batch 1
Location :	Nutfield
Date samples received :	4th March, 2023
Status :	Final Report
Issue :	1

Fourteen samples were received for analysis on 4th March, 2023 of which fourteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

[redacted]

[redacted] **BSc**
Senior Project Manager

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 3rd Floor Davidson Building, 5 Southampton Street, London WC2E 7HA
Company Registration No: 11371415

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3475

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	TP101	TP106	TP105	BH1012	BH1007	BH1004	BH1008	BH1006	BH1011	TP100			
Depth	0.89-2.65	0.34-0.71	1.82-2.30	2.30-2.50	2.80-3.00	1.80-2.00	4.50-5.00	2.60-2.80	2.50-3.00	0.60-1.55			
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B			
Sample Date	01/03/2023	01/03/2023	01/03/2023	01/03/2023	02/03/2023	01/03/2023	02/03/2023	02/03/2023	01/03/2023	02/03/2023			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023			
Arsenic #	25.7	28.7	8.6	53.9	50.8	7.9	23.6	20.3	62.1	28.8	<0.5	mg/kg	TM30/PM15
Barium #	503	309	113	137	248	97	342	130	832	173	<1	mg/kg	TM30/PM15
Beryllium	2.4	2.3	1.2	3.3	2.2	1.0	3.0	1.8	4.4	2.2	<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Chromium #	33.1	53.4	40.5	60.4	42.5	47.7	4.3	49.2	34.6	48.7	<0.5	mg/kg	TM30/PM15
Copper #	6	3	7	3	9	4	2	2	56	6	<1	mg/kg	TM30/PM15
Lead #	18	20	8	15	7	5	19	10	36	11	<5	mg/kg	TM30/PM15
Mercury #	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Nickel #	25.1	30.4	23.9	95.0	50.0	18.1	6.8	23.6	45.5	31.2	<0.7	mg/kg	TM30/PM15
Selenium #	<1	2	<1	2	<1	<1	<1	1	1	<1	<1	mg/kg	TM30/PM15
Vanadium	31	60	31	61	33	45	6	43	78	44	<1	mg/kg	TM30/PM15
Water Soluble Boron #	0.4	1.0	0.3	0.7	0.5	0.2	0.2	0.6	3.1	0.3	<0.1	mg/kg	TM74/PM32
Zinc #	58	80	25	135	41	20	149	32	96	45	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.07	0.06	<0.03	0.08	<0.03	<0.03	<0.03	<0.03	0.19	<0.03	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.22	0.08	<0.03	0.22	<0.03	<0.03	<0.03	<0.03	0.19	0.07	<0.03	mg/kg	TM4/PM8
Pyrene #	0.19	0.07	<0.03	0.45	<0.03	<0.03	<0.03	<0.03	0.15	0.06	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.17	<0.06	<0.06	0.15	<0.06	<0.06	<0.06	<0.06	0.11	0.07	<0.06	mg/kg	TM4/PM8
Chrysene #	0.14	0.06	<0.02	0.13	<0.02	<0.02	<0.02	<0.02	0.08	0.05	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.26	<0.07	<0.07	0.19	<0.07	<0.07	<0.07	<0.07	0.14	0.11	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.14	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.11	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	0.06	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.09	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.4	<0.6	<0.6	1.6	<0.6	<0.6	<0.6	<0.6	0.9	<0.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.19	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	0.10	0.08	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.07	<0.02	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	0.04	0.03	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	100	100	96	96	91	93	99	95	86	99	<0	%	TM4/PM8
VOC TICs	-	-	-	-	-	-	-	-	ND	ND		None	TM15/PM10
SVOC TICs	-	-	-	-	-	-	-	-	ND	ND		None	TM16/PM8
EPH (C8-C40) #	<30	<30	<30	<30	<30	<30	<30	<30	303	<30	<30	mg/kg	TM5/PM8
PCB 28 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3475

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	TP101	TP106	TP105	BH1012	BH1007	BH1004	BH1008	BH1006	BH1011	TP100			
Depth	0.89-2.65	0.34-0.71	1.82-2.30	2.30-2.50	2.80-3.00	1.80-2.00	4.50-5.00	2.60-2.80	2.50-3.00	0.60-1.55			
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B			
Sample Date	01/03/2023	01/03/2023	01/03/2023	01/03/2023	02/03/2023	01/03/2023	02/03/2023	02/03/2023	01/03/2023	02/03/2023			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023	04/03/2023			
PCB 118 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	-	-	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	-	-	<35	<35	<35	ug/kg	TM17/PM8
Resorcinol	<0.01	0.41	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
Catechol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
Phenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
m/p-cresol #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM26/PM21B
o-cresol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
Total cresols #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM26/PM21B
Xylenols #	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	TM26/PM21B
1-naphthol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
2,3,5-trimethyl phenol #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
2-isopropylphenol #	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21B
Total Speciated Phenols HPLC	<0.15	0.44	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	24.9	37.5	24.2	20.9	29.8	13.7	47.6	27.8	38.2	23.3	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0136	0.0461	0.0414	0.0135	0.0290	0.0141	NDP	0.0185	1.5138	0.0223	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	0.0579	-	-	-	<0.0015	g/l	TM38/PM60
Chromium III	33.1	53.4	40.5	60.4	42.5	47.7	4.3	49.2	34.6	48.7	<0.5	mg/kg	NONE/NONE
Total Cyanide #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	0.31	1.46	0.14	0.46	0.18	0.12	0.12	0.30	5.62	0.31	<0.02	%	TM21/PM24
Sulphide	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM107/PM45
pH #	8.18	6.20	7.04	6.87	5.99	6.99	7.69	6.70	6.22	8.21	<0.01	pH units	TM73/PM11
Asbestos Type*	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD		None	Subcontracted

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3475

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	31-33	34-36	37-39	40-42							LOD/LOR	Units	Method No.
Sample ID	TP100	TP104	TP102	TP103									
Depth	1.55-1.86	1.05-1.91	1.00-3.80	1.54-3.75									
COC No / misc													
Containers	V J B	V J B	V J B	V J B									
Sample Date	02/03/2023	02/03/2023	02/03/2023	02/03/2023									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	04/03/2023	04/03/2023	04/03/2023	04/03/2023									
Arsenic #	22.0	6.3	23.8	29.8							<0.5	mg/kg	TM30/PM15
Barium #	249	70	268	277							<1	mg/kg	TM30/PM15
Beryllium	1.7	1.3	1.9	2.0							<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1							<0.1	mg/kg	TM30/PM15
Chromium #	40.6	48.8	31.9	60.5							<0.5	mg/kg	TM30/PM15
Copper #	10	7	5	10							<1	mg/kg	TM30/PM15
Lead #	29	10	9	44							<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	<0.1	0.2							<0.1	mg/kg	TM30/PM15
Nickel #	19.3	23.0	23.2	26.8							<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	<1	<1							<1	mg/kg	TM30/PM15
Vanadium	44	42	30	64							<1	mg/kg	TM30/PM15
Water Soluble Boron #	0.9	0.4	0.3	1.2							<0.1	mg/kg	TM74/PM32
Zinc #	68	26	44	73							<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03							<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.26	<0.03	<0.03	0.09							<0.03	mg/kg	TM4/PM8
Anthracene #	0.06	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.48	<0.03	<0.03	0.21							<0.03	mg/kg	TM4/PM8
Pyrene #	0.37	<0.03	<0.03	0.17							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.23	<0.06	<0.06	0.14							<0.06	mg/kg	TM4/PM8
Chrysene #	0.24	<0.02	<0.02	0.11							<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.40	<0.07	<0.07	0.21							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.21	<0.04	<0.04	0.11							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.15	<0.04	<0.04	0.10							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.12	<0.04	<0.04	0.09							<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.5	<0.6	<0.6	1.2							<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.29	<0.05	<0.05	0.15							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.11	<0.02	<0.02	0.06							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	100	99	105	102							<0	%	TM4/PM8
VOC TICs	-	-	-	ND								None	TM15/PM10
SVOC TICs	-	-	-	See Attached								None	TM16/PM8
EPH (C8-C40) #	149	<30	<30	166 SV							<30	mg/kg	TM5/PM8
PCB 28 #	-	-	-	<5							<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	<5							<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	<5							<5	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3475

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	31-33	34-36	37-39	40-42							LOD/LOR	Units	Method No.
Sample ID	TP100	TP104	TP102	TP103									
Depth	1.55-1.86	1.05-1.91	1.00-3.80	1.54-3.75									
COC No / misc													
Containers	V J B	V J B	V J B	V J B									
Sample Date	02/03/2023	02/03/2023	02/03/2023	02/03/2023									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	04/03/2023	04/03/2023	04/03/2023	04/03/2023									
PCB 118 #	-	-	-	<5							<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	<5							<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	<5							<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	<5							<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	<35							<35	ug/kg	TM17/PM8
Resorcinol	0.01	<0.01	<0.01	0.09							<0.01	mg/kg	TM26/PM21B
Catechol	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21B
Phenol #	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21B
m/p-cresol #	<0.02	<0.02	<0.02	<0.02							<0.02	mg/kg	TM26/PM21B
o-cresol #	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21B
Total cresols #	<0.03	<0.03	<0.03	<0.03							<0.03	mg/kg	TM26/PM21B
Xylenols #	<0.06	<0.06	<0.06	<0.06							<0.06	mg/kg	TM26/PM21B
1-naphthol	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21B
2,3,5-trimethyl phenol #	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21B
2-isopropylphenol #	<0.01	<0.01	<0.01	<0.01							<0.01	mg/kg	TM26/PM21B
Total Speciated Phenols HPLC	<0.15	<0.15	<0.15	<0.15							<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	28.7	21.0	26.2	42.1							<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3							<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0118	0.0114	0.4214	1.7721							<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-							<0.0015	g/l	TM38/PM60
Chromium III	40.6	48.8	31.9	60.5							<0.5	mg/kg	NONE/NONE
Total Cyanide #	<0.5	<0.5	<0.5	0.9							<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	2.41	0.15	0.27	2.38							<0.02	%	TM21/PM24
Sulphide	17	<10	<10	<100 AA							<10	mg/kg	TM107/PM45
pH #	7.56	6.96	8.24	7.61							<0.01	pH units	TM73/PM11
Asbestos Type*	NAD	NAD	NAD	NAD								None	Subcontracted

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3475

SVOC Report : **Solid**

EMT Sample No.	25-27	28-30	40-42									
Sample ID	BH1011	TP100	TP103									
Depth	2.50-3.00	0.60-1.55	1.54-3.75									
COC No / misc												
Containers	V J B	V J B	V J B									
Sample Date	01/03/2023	02/03/2023	02/03/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	04/03/2023	04/03/2023	04/03/2023									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10								<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10								<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100								<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100								<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10								<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10								<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10								<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10								<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10								<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	106	110	114								<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	104	109	125								<0	%	TM16/PM8

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3475

VOC Report : **Solid**

EMT Sample No.	25-27	28-30	40-42									
Sample ID	BH1011	TP100	TP103									
Depth	2.50-3.00	0.60-1.55	1.54-3.75									
COC No / misc												
Containers	V J B	V J B	V J B									
Sample Date	01/03/2023	02/03/2023	02/03/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	04/03/2023	04/03/2023	04/03/2023									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2								<2	ug/kg	TM15/PM10
Chloromethane #	<3	4	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4								<4	ug/kg	TM15/PM10
Benzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4								<4	ug/kg	TM15/PM10
Toluene #	<3	<3	<3								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5	<5								<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3								<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	81	68	94								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	76	85	85								<0	%	TM15/PM10

All solid results are expressed on a dry weight basis unless stated otherwise.

Job number: 23/3475
Sample number: 41
Sample identity: TP103
Sample depth: 1.54-3.75
Sample Type: Soil
Units: ug/kg

Method: SVOC
Matrix: Solid

Note: Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
13798-23-7	Hexathiane	8.927	94	17218
10544-50-0	Cyclic octaatomic sulfur	11.466 - 11.518	93,98	385534

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: MJCA

Reference: HGH/NU

Location: Nutfield

Contact: [redacted]

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/3475	1	TP101	0.89-2.65	1-3	No interpretation possible
23/3475	1	TP106	0.34-0.71	4-6	No interpretation possible
23/3475	1	TP105	1.82-2.30	7-9	No interpretation possible
23/3475	1	BH1012	2.30-2.50	10-12	No interpretation possible
23/3475	1	BH1007	2.80-3.00	13-15	No interpretation possible
23/3475	1	BH1004	1.80-2.00	16-18	No interpretation possible
23/3475	1	BH1008	4.50-5.00	19-21	No interpretation possible
23/3475	1	BH1006	2.60-2.80	22-24	No interpretation possible
23/3475	1	BH1011	2.50-3.00	25-27	Possible lubricating oil
23/3475	1	TP100	0.60-1.55	28-30	No interpretation possible
23/3475	1	TP100	1.55-1.86	31-33	Naturally occurring compounds
23/3475	1	TP104	1.05-1.91	34-36	No interpretation possible
23/3475	1	TP102	1.00-3.80	37-39	No interpretation possible
23/3475	1	TP103	1.54-3.75	40-42	Naturally occurring compounds

Client Name: MJCA

Reference: HGH/NU

Location: Nutfield

Contact: [redacted]

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Method No.	NDP Reason
23/3475	1	BH1008	4.50-5.00	19-21	TM38/PM20	Sample too absorbent for this test

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/3475						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

EMT Job No.: 23/3475

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution

EMT Job No: 23/3475

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes

EMT Job No: 23/3475

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes

EMT Job No: 23/3475

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	23-07652-1
Initial Date of Issue:	19-Mar-2023
Client	Element
Client Address:	3rd Floor Davidson Building Southampton Street London NC2E 71A
Contact(s):	Project Managers
Project	3347

Quotation No.:		**Date Received:**	07-Mar-2023
Order No.:		**Date Instructed:**	07-Mar-2023
No. of Samples:	9		
Turnaround (Wkdays):	10	**Results Due:**	20-Mar-2023
Date Approved:	19-Mar-2023		

Approved By:

[redacted]

Details: [redacted], Technical Manager

Results - Soil

Project: 3347

Client: Element		**Chemtest Job No.:**			23-07652	23-07652	23-07652	23-07652	23-07652	23-07652	23-07652	23-07652	23-07652
Quotation No.:		**Chemtest Sample ID.:**			1602627	1602628	1602629	1602630	1602631	1602632	1602633	1602634	1602635
		Client Sample ID.:			3347 - 3	3347 - 6	3347 - 9	3347 - 12	3347 - 15	3347 - 18	3347 - 21	3347 - 24	3347 - 27
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			27-Feb-2023	27-Feb-2023	27-Feb-2023	27-Feb-2023	27-Feb-2023	28-Feb-2023	28-Feb-2023	28-Feb-2023	28-Feb-2023
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Test Methods

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

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

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

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

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

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	23-07866-1
Initial Date of Issue:	21-Mar-2023
Client	Element
Client Address:	3rd Floor Davidson Building Southampton Street London NC2E 71A
Contact(s):	Project Managers
Project	3475

Quotation No.:		**Date Received:**	08-Mar-2023
Order No.:	E208N23000368	**Date Instructed:**	08-Mar-2023
No. of Samples:	14		
Turnaround (Wkdays):	10	**Results Due:**	21-Mar-2023
Date Approved:	21-Mar-2023		

Approved By:

[redacted]

Details: [redacted], Technical Manager

Results - Soil

Project: 3475

Client: Element		**Chemtest Job No.:**			23-07866	23-07866	23-07866	23-07866	23-07866	23-07866	23-07866	23-07866	23-07866
Quotation No.:		**Chemtest Sample ID.:**			1603632	1603633	1603634	1603635	1603636	1603637	1603638	1603639	1603640
		Client Sample ID.:			3475-3	3475-6	3475-9	3475-12	3475-15	3475-18	3475-21	3475-24	3475-27
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results - Soil

Project: 3475

Client: Element				**Chemtest Job No.:**	23-07866	23-07866	23-07866	23-07866	23-07866
Quotation No.:				**Chemtest Sample ID.:**	1603641	1603642	1603643	1603644	1603645
				Client Sample ID.:	3475-30	3475-33	3475-36	3475-39	3475-42
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
				Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Test Methods

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

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

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

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

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

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Unit 3 Deeside Point
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W: www.element.com

MJCA
Baddesley Colliery Offices
Main Road
Baxterley
Atherstone
CV9 2LE

Attention :	[redacted]
Date :	20th March, 2023
Your reference :	HGH/NU
Our reference :	Test Report 23/3836 Batch 1
Location :	Nutfield
Date samples received :	10th March, 2023
Status :	Final Report
Issue :	1

Two samples were received for analysis on 10th March, 2023 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

[redacted]

[redacted]
Project Co-ordinator

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3836

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH28	BH1008											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HNUF N P G											
Sample Date	08/03/2023	08/03/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	10/03/2023	10/03/2023											
Dissolved Arsenic #	0.9	1.6									<0.9	ug/l	TM170/PM14
Dissolved Barium #	22.2	86.9									<1.8	ug/l	TM170/PM14
Dissolved Beryllium #	<0.5	<0.5									<0.5	ug/l	TM170/PM14
Dissolved Boron #	261	84									<12	ug/l	TM170/PM14
Dissolved Cadmium #	<0.03	0.16									<0.03	ug/l	TM170/PM14
Total Dissolved Chromium #	0.9	0.2									<0.2	ug/l	TM170/PM14
Dissolved Copper #	1	1									<1	ug/l	TM170/PM14
Dissolved Lead #	0.5	<0.4									<0.4	ug/l	TM170/PM14
Dissolved Mercury #	<0.5	<0.5									<0.5	ug/l	TM170/PM14
Dissolved Nickel #	2.1	6.6									<0.2	ug/l	TM170/PM14
Dissolved Selenium #	<1.2	<1.2									<1.2	ug/l	TM170/PM14
Dissolved Vanadium #	1.2	<0.6									<0.6	ug/l	TM170/PM14
Dissolved Zinc #	10.4	36.0									<1.5	ug/l	TM170/PM14
VOC TICs	ND	ND										None	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1									<0.1	ug/l	TM15/PM10
Benzene #	<0.5	<0.5									<0.5	ug/l	TM15/PM10
Toluene #	<5	<5									<5	ug/l	TM15/PM10
Ethylbenzene #	<1	<1									<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2									<2	ug/l	TM15/PM10
o-Xylene #	<1	<1									<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	131	133									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	119	118									<0	%	TM15/PM10
SVOC TICs	ND	ND										None	TM16/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10									<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10									<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10									<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5									<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	<10									<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	<10	<10									<10	ug/l	TM5/TM36/PM12/PM16/PM30

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3836

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH28	BH1008											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HNUF N P G											
Sample Date	08/03/2023	08/03/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	10/03/2023	10/03/2023											
TPH CWG													
Aromatics													
>C5-EC7 #	<10	<10									<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10									<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10									<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5									<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10									<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	<10	<10									<10	ug/l	TM5/TM36/PM12/PM16/PM30
Total aliphatics and aromatics(C5-35) #	<10	<10									<10	ug/l	TM5/TM36/PM12/PM16/PM30
PCB 28 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 52 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 101 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 118 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 138 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 153 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 180 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
Total 7 PCBs	<0.7	<0.7									<0.7	ug/l	TM17/PM30
Resorcinol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Catechol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Phenol #	<0.01	<0.01									<0.01	mg/l	TM26/PM0
m/p-cresol	<0.02	<0.02									<0.02	mg/l	TM26/PM0
o-cresol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Total cresols #	<0.03	<0.03									<0.03	mg/l	TM26/PM0
Xylenols #	<0.06	<0.06									<0.06	mg/l	TM26/PM0
1-naphthol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
2,3,5-trimethyl phenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
2-isopropylphenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Total Speciated Phenols HPLC	<0.1	<0.1									<0.1	mg/l	TM26/PM0
Sulphate as SO4 #	1644.0	197.1									<0.5	mg/l	TM38/PM0
Total Cyanide #	<0.01	<0.01									<0.01	mg/l	TM89/PM0
Ammoniacal Nitrogen as N #	0.33	<0.03									<0.03	mg/l	TM38/PM0
Hexavalent Chromium	<2	<2									<2	ug/l	TM38/PM0
Total Dissolved Chromium III	<2	<2									<2	ug/l	NONE/NONE
Sulphide	<0.01	<0.01									<0.01	mg/l	TM107/PM0
pH #	7.33	7.34									<0.01	pH units	TM73/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3836

SVOC Report : **Liquid**

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH28	BH1008											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HNUF N P G											
Sample Date	08/03/2023	08/03/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	10/03/2023	10/03/2023											
SVOC MS													
Phenols													
2-Chlorophenol #	<1	<1									<1	ug/l	TM16/PM30
2-Methylphenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	<1									<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1									<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1									<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10									<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1									<1	ug/l	TM16/PM30
Phenol	<1	<1									<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<1	<1									<1	ug/l	TM16/PM30
2-Methylnaphthalene #	<1	<1									<1	ug/l	TM16/PM30
Naphthalene #	<1	<1									<1	ug/l	TM16/PM30
Acenaphthylene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Acenaphthene #	<1	<1									<1	ug/l	TM16/PM30
Fluorene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Phenanthrene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Anthracene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Fluoranthene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Pyrene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Benzo(a)anthracene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Chrysene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene #	<1	<1									<1	ug/l	TM16/PM30
Benzo(a)pyrene	<1	<1									<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<1	<1									<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<5	<5									<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1									<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<1.5	<1.5									<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1									<1	ug/l	TM16/PM30
Diethyl phthalate #	<1	<1									<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1									<1	ug/l	TM16/PM30

Please see attached notes for all abbreviations and acronyms

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3836

SVOC Report : **Liquid**

EMT Sample No.	1-7	8-14											
Sample ID	BH28	BH1008											
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V H HN N P G	V H HNUF N P G											
Sample Date	08/03/2023	08/03/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	10/03/2023	10/03/2023									LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1									<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1									<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1									<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1									<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1									<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	<1									<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1									<1	ug/l	TM16/PM30
Carbazole #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1									<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1									<1	ug/l	TM16/PM30
Hexachloroethane #	<1	<1									<1	ug/l	TM16/PM30
Isophorone #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1	<1									<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	133 SV	127									<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	139 SV	135 SV									<0	%	TM16/PM30

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/3836

VOC Report : **Liquid**

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH28	BH1008											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HNUF N P G											
Sample Date	08/03/2023	08/03/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	10/03/2023	10/03/2023											
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1									<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3									<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1									<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1									<1	ug/l	TM15/PM10
Chloroethane #	<3	<3									<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3									<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3									<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3									<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1									<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2									<2	ug/l	TM15/PM10
Chloroform #	<2	<2									<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2									<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2									<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2									<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5									<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2									<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2									<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2									<2	ug/l	TM15/PM10
Toluene #	<5	<5									<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2									<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2									<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2									<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2									<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2									<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2									<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2									<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1									<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2									<2	ug/l	TM15/PM10
o-Xylene #	<1	<1									<1	ug/l	TM15/PM10
Styrene	<2	<2									<2	ug/l	TM15/PM10
Bromoform #	<2	<2									<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3									<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4									<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2									<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3									<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3									<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3									<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3									<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3									<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3									<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	<3									<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3									<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3									<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3									<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3									<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3									<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3									<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2									<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3									<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3									<3	ug/l	TM15/PM10
Naphthalene	<2	<2									<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3									<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	131	133									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	119	118									<0	%	TM15/PM10

All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Notification of Deviating Samples

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]

Matrix : Liquid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
23/3836	1	BH1008		8-14	Be MS	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/3836

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/3836

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	Yes			
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.	Yes			

EMT Job No: 23/3836

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes			
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM0	No preparation is required.				
TM170	Determination of Trace Metals by ICP-MS (Inductively Coupled Plasma – Mass Spectrometry): Modified USEPA Method 200.8, Rev. 5.4, 1994; Modified EPA Method 6020A, Rev.1, Feb 2007; Modified BS EN ISO 17294-2:2016	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified	Yes			
NONE	No Method Code	NONE	No Method Code				

Element Materials Technology
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MJCA
Baddesley Colliery Offices
Main Road
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Atherstone
United Kingdom
CV9 2LE

Attention :	[redacted]
Date :	19th May, 2023
Your reference :	HGH/NU
Our reference :	Test Report 23/6880 Batch 1
Location :	Nutfield
Date samples received :	29th April, 2023
Status :	Final Report
Issue :	1

Two samples were received for analysis on 29th April, 2023 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

[redacted]

[redacted]
Project Co-ordinator

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/6880

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH1009	BH1002											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HN N P G											
Sample Date	27/04/2023	27/04/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	29/04/2023	29/04/2023											
Dissolved Arsenic #	<2.5	<2.5									<2.5	ug/l	TM30/PM14
Dissolved Barium #	71	207									<3	ug/l	TM30/PM14
Dissolved Beryllium	<0.5	<0.5									<0.5	ug/l	TM30/PM14
Dissolved Boron	38	36									<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5	<0.5									<0.5	ug/l	TM30/PM14
Total Dissolved Chromium #	2.5	<1.5									<1.5	ug/l	TM30/PM14
Dissolved Copper #	<7	<7									<7	ug/l	TM30/PM14
Dissolved Lead #	<5	<5									<5	ug/l	TM30/PM14
Dissolved Mercury #	<1	<1									<1	ug/l	TM30/PM14
Dissolved Nickel #	5	4									<2	ug/l	TM30/PM14
Dissolved Selenium #	<3	<3									<3	ug/l	TM30/PM14
Dissolved Vanadium #	2.9	<1.5									<1.5	ug/l	TM30/PM14
Dissolved Zinc #	8	<3									<3	ug/l	TM30/PM14
VOC TICs	ND	ND										None	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1									<0.1	ug/l	TM15/PM10
Benzene #	<0.5	<0.5									<0.5	ug/l	TM15/PM10
Toluene #	<5	<5									<5	ug/l	TM15/PM10
Ethylbenzene #	<1	<1									<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2									<2	ug/l	TM15/PM10
o-Xylene #	<1	<1									<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	108	114									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	104	108									<0	%	TM15/PM10
SVOC TICs	ND	ND										None	TM16/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10									<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10									<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10									<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5									<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	<10									<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	<10	<10									<10	ug/l	TM5/TM36/PM12/PM16/PM30

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/6880

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH1009	BH1002											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HN N P G											
Sample Date	27/04/2023	27/04/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	29/04/2023	29/04/2023											
TPH CWG													
Aromatics													
>C5-EC7 #	<10	<10									<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10									<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10									<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5									<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10									<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10									<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	<10	<10									<10	ug/l	TM5/TM36/PM12/PM16/PM30
Total aliphatics and aromatics(C5-35) #	<10	<10									<10	ug/l	TM5/TM36/PM12/PM16/PM30
PCB 28 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 52 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 101 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 118 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 138 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 153 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
PCB 180 #	<0.1	<0.1									<0.1	ug/l	TM17/PM30
Total 7 PCBs	<0.7	<0.7									<0.7	ug/l	TM17/PM30
Resorcinol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Catechol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Phenol #	<0.01	<0.01									<0.01	mg/l	TM26/PM0
m/p-cresol	<0.02	<0.02									<0.02	mg/l	TM26/PM0
o-cresol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Total cresols #	<0.03	<0.03									<0.03	mg/l	TM26/PM0
Xylenols #	<0.06	<0.06									<0.06	mg/l	TM26/PM0
1-naphthol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
2,3,5-trimethyl phenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
2-isopropylphenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Total Speciated Phenols HPLC	<0.1	<0.1									<0.1	mg/l	TM26/PM0
Sulphate as SO4 #	28.0	25.2									<0.5	mg/l	TM38/PM0
Total Cyanide #	<0.01	<0.01									<0.01	mg/l	TM89/PM0
Ammoniacal Nitrogen as N #	0.12	2.85									<0.03	mg/l	TM38/PM0
Hexavalent Chromium	<6	<6									<6	ug/l	TM38/PM0
Total Dissolved Chromium III	<6	<6									<6	ug/l	TM0/PM0
Sulphide	<0.01	<0.01									<0.01	mg/l	TM107/PM0
pH #	6.64	7.33									<0.01	pH units	TM73/PM0

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/6880

SVOC Report : **Liquid**

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH1009	BH1002											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HN N P G											
Sample Date	27/04/2023	27/04/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	29/04/2023	29/04/2023											
SVOC MS													
Phenols													
2-Chlorophenol #	<1	<1									<1	ug/l	TM16/PM30
2-Methylphenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	<1									<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1									<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1									<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10									<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1									<1	ug/l	TM16/PM30
Phenol	<1	<1									<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<1	<1									<1	ug/l	TM16/PM30
2-Methylnaphthalene #	<1	<1									<1	ug/l	TM16/PM30
Naphthalene #	<1	<1									<1	ug/l	TM16/PM30
Acenaphthylene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Acenaphthene #	<1	<1									<1	ug/l	TM16/PM30
Fluorene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Phenanthrene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Anthracene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Fluoranthene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Pyrene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Benzo(a)anthracene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Chrysene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene #	<1	<1									<1	ug/l	TM16/PM30
Benzo(a)pyrene	<1	<1									<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<1	<1									<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<5	<5									<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1									<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<1.5	<1.5									<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1									<1	ug/l	TM16/PM30
Diethyl phthalate #	<1	<1									<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1									<1	ug/l	TM16/PM30

Please see attached notes for all abbreviations and acronyms

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/6880

SVOC Report : **Liquid**

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-7	8-14									LOD/LOR	Units	Method No.
Sample ID	BH1009	BH1002											
Depth													
COC No / misc													
Containers	V H HN N P G	V H HN N P G											
Sample Date	27/04/2023	27/04/2023											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	29/04/2023	29/04/2023											
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1									<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1									<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1									<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1									<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1									<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	<1									<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1									<1	ug/l	TM16/PM30
Carbazole #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1									<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1									<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1									<1	ug/l	TM16/PM30
Hexachloroethane #	<1	<1									<1	ug/l	TM16/PM30
Isophorone #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	<0.5									<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1	<1									<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	133 SV	99									<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	142 SV	129									<0	%	TM16/PM30

Client Name: MJCA
Reference: HGH/NU
Location: Nutfield
Contact: [redacted]
EMT Job No: 23/6880

VOC Report : **Liquid**

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-7	8-14										
Sample ID	BH1009	BH1002										
Depth												
COC No / misc												
Containers	V H HN N P G	V H HN N P G										
Sample Date	27/04/2023	27/04/2023										
Sample Type	Ground Water	Ground Water										
Batch Number	1	1										
Date of Receipt	29/04/2023	29/04/2023										
											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1									<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3									<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1									<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1									<1	ug/l	TM15/PM10
Chloroethane #	<3	<3									<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3									<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3									<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3									<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1									<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2									<2	ug/l	TM15/PM10
Chloroform #	<2	<2									<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2									<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2									<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2									<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5									<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2									<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2									<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2									<2	ug/l	TM15/PM10
Toluene #	<5	<5									<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2									<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2									<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2									<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2									<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2									<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2									<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2									<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1									<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2									<2	ug/l	TM15/PM10
o-Xylene #	<1	<1									<1	ug/l	TM15/PM10
Styrene	<2	<2									<2	ug/l	TM15/PM10
Bromoform #	<2	<2									<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3									<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4									<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2									<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3									<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3									<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3									<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3									<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3									<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3									<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	<3									<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3									<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3									<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3									<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3									<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3									<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3									<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2									<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3									<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3									<3	ug/l	TM15/PM10
Naphthalene	<2	<2									<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3									<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	108	114									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	104	108									<0	%	TM15/PM10

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: MJCA

Reference: HGH/NU

Location: Nutfield

Contact: [redacted]

Matrix : Liquid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
23/6880	1	BH1009		1-7	Mercury	Sample holding time exceeded
23/6880	1	BH1002		8-14	Mercury	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/6880

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/6880

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM0	Not available	PM0	No preparation is required.				
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	Yes			
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				

EMT Job No: 23/6880

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.	Yes			
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified				
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified	Yes			
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes			
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM0	No preparation is required.				