

Land off Kirton's Farm Road, Reading

Indigenous Material Sampling Report

30280066-AUK-XX-ZZ-TR-ZZ-0027-P003-Indigenous Material Sampling Report

August 2025

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1 Introduction

1.1 Background

- 1.1.1 Arcadis Consulting (UK) Limited (“Arcadis”) has been commissioned by M&G Real Estate (M&G) acting on behalf of Prudential Assurance Company Ltd (“the Client”) to carry out soil sampling to characterise historically stored indigenous materials in support of a Town and Country Planning Act (TCPA) application for the removal of soils and subsequent restoration of a site for future agricultural use (the Proposed Development), for a parcel of land off Kirton’s Farm Road, near Reading, Berkshire.
- 1.1.2 The Site is currently vacant with scrub and vegetation growth present. A quantity of natural soils generated as a result of forming a development platform for an adjacent historical development in the area were located to part of the Site under agreement with Englefield Estate Trust Corporation Limited (the ‘Freeholders’) and have been present at the Site for over 20 years.
- 1.1.3 This report relates to the Indigenous Material in the western area of the Site as Arcadis’ review of historical planning documents has provided greater evidence of the Site history and that the source of the soil in the west is indeed the Indigenous Material that was relocated prior to the import of the previously imported soils now present in the east. Separate soil characterisation has been undertaken for the previously imported soils in the eastern area of Site to provide relevant information to determine suitable management options for that soil (Ref. 1).
- 1.1.4 The purpose of this report is to detail the results of soil sampling completed to characterise the Indigenous Material. See Figure 1-1 below for approximate extents of the Indigenous Material and the previously imported soils.

1.2 Aim

- 1.2.1 The key aim of the assessment was to collect soil samples and undertake appropriate analytical testing, to provide relevant information that can be used to characterise the soils in the west of the Site to aid confirmation that these represent the Indigenous Material that was relocated prior to the import of the previously imported soils now present in the east. This will be used to support a proposed strategy of re-spreading of the Indigenous Materials once the previously imported soils historically placed under agreement with the landowner in the eastern portion of the Site are removed off-Site.

1.3 Site Description

- 1.3.1 Currently the Site is vacant scrub land with stored soil across the majority of its eastern footprint, and Indigenous Material (soil formerly covering the whole Site) present in the west. The vacant Site consists primarily of a mosaic of bramble scrub, tall ruderal vegetation and grassland, which is regularly cut to ground level. The Site is bordered by an infrequently flowing ditch, lined with willow scrub to the south, a line of trees and mixed scrub to the north and east, and a line of scrub along a railway to the west.



Figure 1-1 Approximate Extents of Indigenous Materials and previously imported Soils (in Yellow)

1.4 Reliability of Information / Limitations

- 1.4.1 This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report and previous work. Reference should be made to the full Study Limitations presented in Appendix A.
- 1.4.2 Arcadis' liability, pursuant to the terms of the appointment of Arcadis by M&G, is strictly limited to the work undertaken and the matters contained and specifically referred to in this report.
- 1.4.3 Ground investigations by nature only reveal a small percentage of the ground conditions present beneath the Site. The possibility of significant variation in ground conditions existing between sampling locations cannot be discounted. Reported ground conditions are based on observations made at the time of the ground investigation. Levels are based on depths below ground (surface) level at the time of the investigation
- 1.4.4 The following should be noted:
- The GI was limited to a maximum exploratory depth of 1.0 mbgl (shallow hand dug pits as per proposal);
 - The GI locations were only advanced within the western portion of Site where the Indigenous Material soils were placed; and
 - Point sampling only was conducted.

1.5 Reliance

- 1.5.1 It is understood that the current report will be prepared for the use of M&G. The contents of this report may not be used or relied upon by any person other than this party without the express written consent and authorisation of Arcadis.

2 Ground Investigation and Findings

2.1 Scope of Ground Investigation

2.1.1 The aim of the GI was to collect samples from the Indigenous Material in the west of Site to characterise the materials.

2.1.2 A summary of the completed GI works is presented as follows:

- Completion of H&S documentation including an Arcadis permit to dig procedure at ten locations prior to breaking ground;
- Cable Avoidance Tool (CAT) scan of 10 locations to check for presence of buried utilities in-line with Arcadis H&S memorandum of change documentation;
- Completion of 10 hand excavated shallow inspection pits advanced to 1.0 mbgl on 29 May 2025;
- Logging of all locations in general accordance with BS5930:2015+A1:2020 (Ref. 2);
- Collection of soil samples (discrete point samples) from each location;
- Chemical testing of the 10 collected soil samples by an MCERTS/ UKAS accredited laboratory; and
- Topsoil testing of 5 out of 10 of the shallow soil samples in general accordance with the BS3882:2015 *Specification for Topsoil*.

2.1.3 Figure 3 shows the location of the hand-pits (KEVA-HP11 to KEVA-HP20).

2.2 Laboratory Testing

2.2.1 The suite of chemical testing selected was based on the testing completed for the samples of previously imported soils in the east of the Site and by Ramboll, the rationale for which is presented in the Ramboll reporting (L1620011452-035_01.docx01) (Ref. 3). In summary, the testing schedule was based on a general suite of determinands together with pesticides given the probable agricultural origin of the soils as previously identified by Ramboll. The Arcadis testing suite is presented in Table 2-1 below, with all 10 samples scheduled for the testing with the exception of Waste Acceptance Criteria testing which was scheduled on 3 samples only and topsoil testing which was scheduled on 5 samples only.

Table 2-1 Laboratory Testing Suite

Testing Suite	Comment
Metals – Arsenic, Barium, Beryllium, Cadmium, Chromium, Hexavalent Chromium, Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc	General metals suite
Speciated Polycyclic aromatic hydrocarbons (PAHs)	General PAH suite, total of 16 or 17 depending on whether WAC suite was tested

Testing Suite	Comment
Pesticides – organochlorine, organophosphorus, acid herbicides	Scheduled due to the agricultural origin of soils (i.e. the Site)
Total Petroleum Hydrocarbons – Criteria Working Group (TPH CWG) – aliphatic / aromatic C5-C35	-
Benzene, toluene, ethylbenzene, xylene (BTEX) and methyl-tertiary-butyl-ether (MTBE)	-
Asbestos screen	Asbestos screen
Total cyanide	-
Sulphate as SO ₄	-
Soil Organic Matter / Total Organic Carbon	To provide information on natural organic content of sampled soils
Loss on Ignition	To provide information on natural organic content of sampled soils
WAC Testing	To inform potential routes for the management of soils
Polychlorinated biphenyls (PCBs)	Included as part of the WAC testing suite
BS3882:2015 Topsoil testing	To characterise Indigenous Material and determine the suitability for re-spreading for use as a growing medium

2.3 Ground Conditions

2.3.1 The ground conditions encountered are summarised in Table 2-2 below. Full exploratory hole logs are presented in Appendix B and Site photographs are presented in Appendix C.

Table 2-2 Encountered Ground Conditions

Stratum	Depth Encountered (m)	Encountered Thickness Range (m)
Indigenous Material – surficial layer	0.00	0.10 – 0.15
Indigenous Material – subsurface layer	0.10 – 0.50	0.30 – 0.80
Natural – superficial deposits	0.40 – 0.90	0.10 – 0.70

2.4 Indigenous Material – Surficial Layer

- 2.4.1 Encountered at all locations and typically described as a slightly sandy to sandy silt with frequent roots and rootlets. Occasional gravel and wood fragments, plant stems or twigs were also present in this layer at several locations.
- 2.4.2 The surficial layer is thin <0.15m and has frequent organic content in the form of vegetation growth and roots and rootlets (that have developed in the 20 years since the soils were placed). Gravels within the surficial layer are fine to medium subangular flint, which is consistent with the underlying regional geology.

2.5 Indigenous Material – Subsurface Layer

- 2.5.1 Encountered at all locations and typically described as a brown sandy gravelly silt or a brown silty gravelly sand with occasional or rare rootlets.
- 2.5.2 The subsurface layer is of variable thickness and has occasional organic content in the form of rootlets and rare roots. Gravels within the surficial layer are medium to coarse angular to subrounded flint, which is consistent with the underlying regional geology. Rare anthropogenic inclusions were encountered within this subsurface layer at 3 of the 10 locations consisting of fragments of brick, tile or wood, consistent with that which might be encountered in topsoils on agricultural land.

2.6 Natural – Superficial Deposits

- 2.6.1 Believed to be encountered at all locations, very variable in composition and colour. This is in contrast with the Indigenous Material; although the Indigenous Material on the east of the Site maintains some variability, is more consistent in colour and composition across the Site.
- 2.6.2 One location had more than 50% gravel, all other locations had frequent medium to coarse angular to subrounded flint gravel, some had visible pockets or nodules of brownish grey clay and cream silt and a few samples had rare organic material (rootlets). This is consistent with the expected regional geological setting.

2.7 Visual and Olfactory Evidence of Contamination

- 2.7.1 Visual and olfactory evidence of contamination was not encountered during the GI. Photo-ionisation detector (PID) screening of samples did not record detectable concentrations of volatile organic compound concentrations (i.e. all results below the instrument limit of detection <0.1 ppmV).

3 Laboratory Testing Results

3.1.1 Ten samples were collected from the Indigenous Material - subsurface layer at depths between 0.3 and 0.85 mbgl and were analysed for a range of determinands (refer Table 2 above) by Element laboratory. Topsoil testing was subcontracted by Element to NRM Labs. Element is accredited under the United Kingdom Accreditation Service (UKAS) and Monitoring Certification Scheme (MCertS) (for selected chemical analysis) laboratory and an Arcadis approved supplier.

3.2 Summary of Chemical Results

3.2.1 Table 3 below summarises the results of the laboratory analysis completed by Arcadis and where available the anticipated background concentration for soils based on the underlying geology as provided in the Groundsure report (Ref. 4). Laboratory certificates for the GI are provided in Appendix D.

Table 3-1 Summary Table - Range of Determinand Concentrations

Determinand	Range mg/kg ¹ (min – max)	Background Concentration ²
Metals		
Arsenic	4.0 – 7.4	15 – 25
Barium	34 – 119	
Beryllium	<0.5 – 0.8	
Cadmium	<LOD ³	1.8
Chromium	59.7 – 95.5	60 – 90
Hexavalent Chromium	<LOD ³	-
Copper	4 – 8	-
Lead	6 – 20	100
Mercury	<LOD ³	-
Nickel	9.4 – 18.7	15 – 30
Selenium	<1 – 2	-
Vanadium	19 – 45	
Zinc	18 – 58	-
PAHs - Sum of 17	<0.64 – 0.83	-
PAHs - Sum of 16	<0.64 – 0.8	-
PCBs - Sum of 7 (µg / kg)	<LOD ³	-
Pesticides	<LOD ³	-

Determinand	Range mg/kg ¹ (min – max)	Background Concentration ²
TPH Total (C ⁵ -C ³⁵)	<LOD ³	-
BTEX / MTBE (µg / kg)	<LOD ³	-
Total Cyanide	<LOD ³	-
Sulphate as SO ₄	<0.0015 – 0.372	-
pH (pH unit)	6.72 – 8.30	-
Total Organic Carbon (%)	0.30 – 1.34	-
Soil Organic Matter (%)	0.5 – 2.3	-
Loss on Ignition (%)	2.8 – 6.5	-
Phenol	<LOD ³	-
Asbestos	No asbestos detected	-

1 – mg/kg unless otherwise stated.

2 – Background concentrations are BGS estimated values from rural topsoil data collected at a sample density of approximately 1 per 2 km² taken from the Groundsure Report (Ref. 4).

3 – <LOD = below laboratory limit of detection.

3.3 Non-Detect Results

- 3.3.1 As presented in Table 3 above pesticides, asbestos, BTEX / MTBE, hexavalent chromium, PCBs, TPH, phenol, total cyanide, cadmium, and mercury were all reported as below the laboratory limit of detection in all samples

3.4 Classification Tests

3.5 Waste Acceptance Criteria

- 3.5.1 Three samples were scheduled for WAC testing, the results of which indicate that the samples analysed meet the inert landfill criteria for disposal.

3.6 Topsoil Test

- 3.6.1 Five samples were scheduled for BS 3882:2015 *Specification for topsoil testing*. It should be noted that the samples submitted for testing were point samples from a single depth in a single hand pit location, rather than a full-depth composite sample as required for fully BS 3882:2015 compliant testing. This sample methodology is considered to be sufficient for preliminary testing per the objectives of this report.

- Four samples failed the BS3882 classification.

- One sample (KEVA-HP15) was classified as Specific Purpose: Low Fertility topsoil.

3.6.2 Textural analysis classified two samples as clay loam, two samples as sandy loam and one as sandy clay loam. One soil sample is within parameters for low-fertility topsoil, however soils of this classification are typically used for the creation of habitats and biodiverse planting schemes (e.g. wildflower meadows) and may not be suitable for general planting. Compared to target use as a multi-purpose topsoil (Table 4) no samples contained sufficient organic matter, or nutrients within the specified ranges.

Table 3-2: Sampled soils compared to target specification of multi-purpose topsoil

Location number	HP11	HP13	HP15	HP16	HP20
Texture	Pass	Pass	Pass	Pass	Pass
Organic Matter	Fail (total; fragment)	Fail (coarse; fragment; content)	Fail (total)	Fail (coarse; fragment)	Fail (total; coarse; fragment)
Nutrients	Fail (Phosphorous; Potassium)	Fail (Phosphorous; Potassium)	Fail (Phosphorous; Potassium)	Fail (Potassium; Magnesium)	Fail (Phosphorous; Potassium)
Contaminants and other analyses	Pass	Pass	Pass	Pass	Pass

4 Discussion

4.1 Ground Investigation

- 4.1.1 The ground conditions observed during the Arcadis GI are consistent with the reported Site history. A thin surficial layer containing frequent rootlets and roots present due to vegetation growth is present on top of the Indigenous Material. Underlying the surficial layer is a brown sandy gravelly silt or a brown silty gravelly sand with occasional or rare rootlets and frequent flint gravel and small fragments of man-made materials (brick and tile). The presence of flint gravels is consistent with the expected regional geology (Beenham Grange Gravel Member) (Ref. 5). Below this subsurface layer is a much more variable layer – assumed to be the natural superficial deposits. This is consistent with a local source of the soils as detailed in the Arcadis Desk Study Report (Ref. 6).
- 4.1.2 Based on the laboratory results the concentration of metals recorded in the soils are low, within background concentration ranges and consistent with a local source. Chemical and physical soil classification testing do not indicate contamination sources. The concentrations of potential contaminants are low with non-detects for most sets of determinands with the exception of some PAH compounds, which were recorded at very low concentrations in 7 samples (most commonly fluoranthene, and pyrene). Low detections of PAH and other constituents, such as metals, is expected in soils derived from agricultural fields.
- 4.1.3 Waste acceptance criteria testing completed on three samples from the Arcadis GI and based on the results the soils would likely be suitable for acceptance at an inert landfill. However, given that this material appears to be geologically indigenous and not contaminated Arcadis sees no reason not to treat this as a soil suitable for restoration purposes on Site.

4.2 On-Site Restoration Use

- 4.2.1 Soils are naturally variable in their physical and chemical characteristics, and this variability occurs both laterally (i.e. spatially across a Site or landscape) and vertically (i.e. with depth below ground surface). The British Standard, however, provides a useful set of criteria against which to broadly assess soils in relation to their re-use. It should be noted, however, that the British standard is not intended to preclude the use of topsoil that is already on Site and suitable for its intended purpose. As such, the failures noted in section 3.2 of this report should not be inferred to mean the soils cannot be restored on Site.
- 4.2.2 The physical descriptions recoded in the logs seem to indicate that soil has been placed on top of the in-situ soil profile and, over the last 20 years, plant establishment and growth in the Indigenous Material has resulted in the build-up of a litter and topsoil layer. This would be expected in undisturbed material which has not been managed significantly through cutting and the removal of arisings.

- 4.2.3 The chemical data summarised in Table 4 provides an initial indication, based on point samples, of the nature of the material and of the potential for re-use. The data shows that the material fails the criteria for multipurpose topsoil in relation to soil organic matter and plant available nutrients. However, in relation to plant available nutrients, all but one sample would meet the criteria for low fertility topsoil. As the history of the Indigenous Material is unclear, including its characteristics prior to relocation, it is not possible to state how well the soils match the pre-relocation characteristics. The variability in some characteristics, such as pH and plant available nutrients, may suggest that some subsoil was also relocated with the topsoil, diluting nutrient levels and soil organic matter content. However, overall, the available data, along with the topographical information and anecdotal evidence support the conclusion that this material is the Indigenous Material which was partially re-located to enable the placement of previously imported soils some 20 years ago.
- 4.2.4 In terms of restoration use, the key will be ensuring the soils can support establishment and growth of any proposed vegetation. It is generally considered that Phosphorous is the key limiting factor. Across the five samples available Phosphorous varies from 6.2 – 29.9 mg/l. The lower limit for available Phosphorous for multipurpose topsoil is 16 mg/l; as such it could be that a blended mix of the Indigenous Material would achieve an available Phosphorous level of >16 mg/l. The testing undertaken also excluded material from the litter/topsoil layer formed in the Indigenous Material which, from the description, is likely to have a higher content of soil organic matter. As above, mixing of the soil material prior to re-spreading is likely to result in the material having a sufficiently high level of soil organic matter.
- 4.2.5 As such, it is considered that Indigenous Material can be restored as topsoil to reinstate the land. As part of the Site restoration planning, it was recommended that further sampling and testing is undertaken. This has been carried and is included within the Soils Technical Note in Appendix E.

5 References

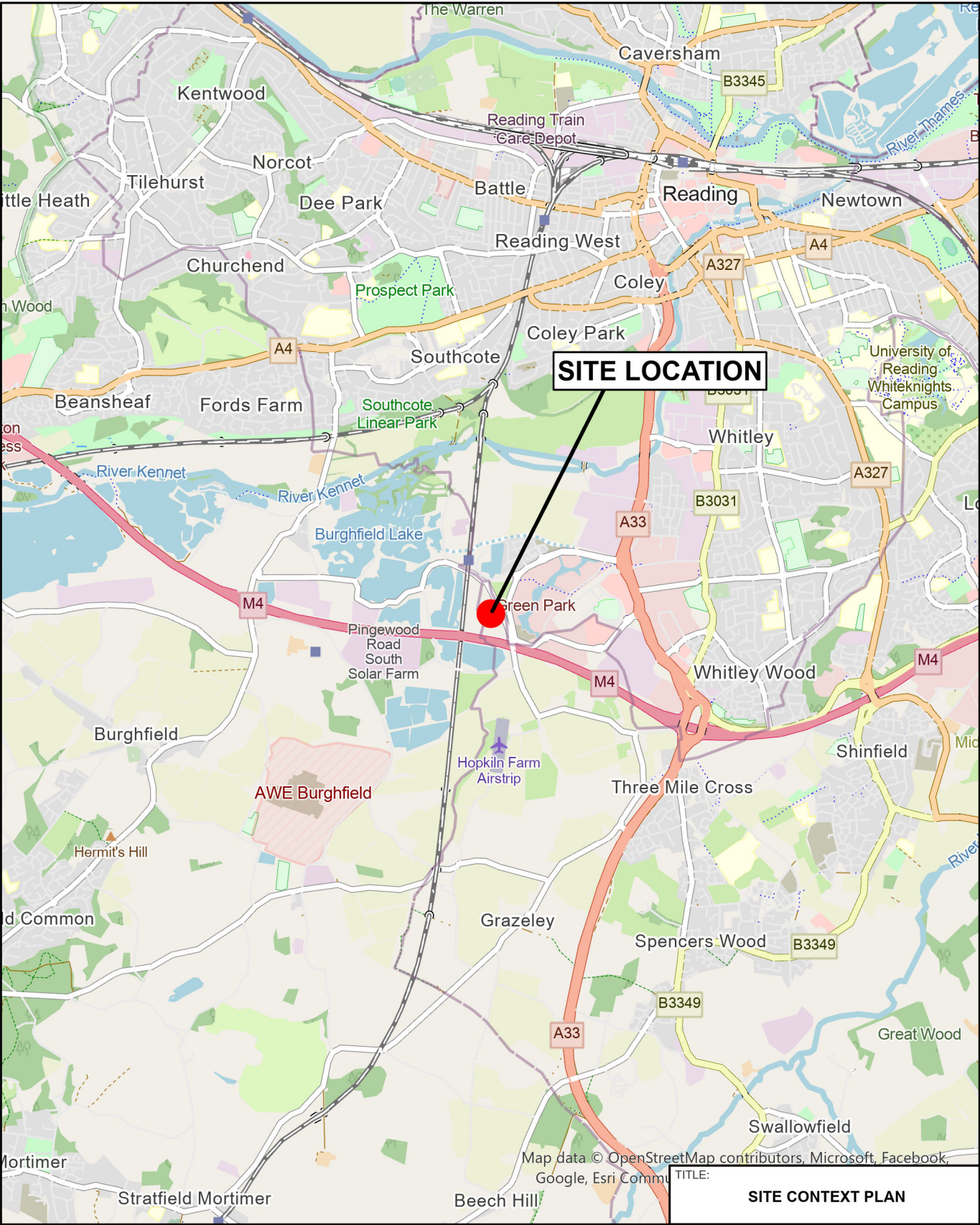
1. Arcadis Consulting (UK) Ltd (2025). Soil Characterisation Report, Reference 30250853-AUK-XX-ZZ-TR-ZZ-004-P003.
2. British Standards Institution (2020). BS 5930:2015 (+A1:2020). Code of Practice for ground investigations.
3. Ramboll UK Ltd (2021). Green Park: Assessment of Stockpiled Materials (Ref.no. L1620011452-035_01.docx01), 2021.
4. Groundsure (2024). Green Park, Reading. GS-DOD-DRT-WHU-LPH, 2024.
5. British Geological Survey. BGS GeoIndex (Onshore) Map Viewer [Online], available: <https://mapapps2.bgs.ac.uk/geoindex/home.html>
6. Arcadis Consulting (UK) Ltd (2025). Land off Kirton's Farm Road, Reading Phase 1 Preliminary Risk Assessment Report, Reference: 30250853-AUK-XX-ZZ-TR-ZZ-0004-P004.
7. Defra (2009). Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, 2009.

FIGURES

Figure 1 – Site Context Plan

Figure 2 – Site Location Plan

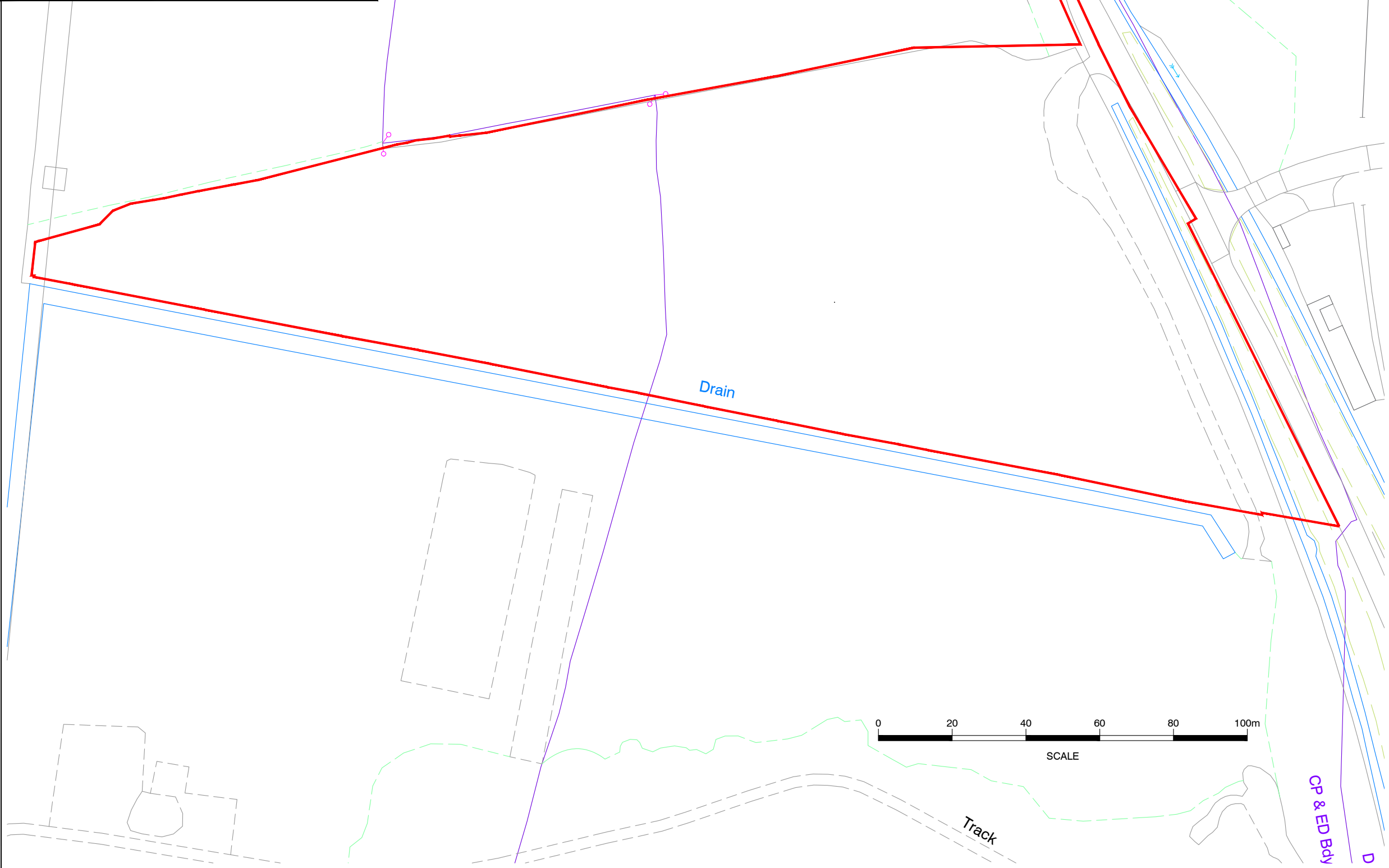
Figure 3 – Exploratory Hole Location Plan



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CONTACT ARCADIS UK IN CASE ANY QUERY

LEGEND	NOTES
SITE LOCATION	

TITLE: SITE CONTEXT PLAN	
SITE: LAND OFF KIRTON'S FARM ROAD, READING	
CLIENT: M&G REAL ESTATE	
PROJECT: 30280066	FIGURE 1
DATE: 03/08/26	DRAWN BY: BNB
DRG No.: 30280066-AUK-XX-ZZ-DR-ZZ-0055-P001	
SCALE: 1:50,000	PRINT: A4
ARCADIS	



Shelter

LEGEND:

- RED LINE BOUNDARY
- LOCAL AUTHORITY BOUNDARY

NOTES:

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All entities shown on this drawing are to be regarded as approximate and are indicative only. No measurements taken from this drawing should be used for the location of intrusive investigation works on site. Symbols for boreholes, trial pits and other specific features are representations of location only and unless otherwise specified, do not represent the true size of the feature. Contact ARCADIS UK in case of any query.

2	31/07/2026	SITE BOUNDARY REVISED	BNB		
1	10/07/2026	FIRST ISSUED	BNB		
Rev	Date	Description	Drawn	Check	Approv

PROJECT:
LAND OFF KIRTON'S FARM ROAD, READING

Site
LAND OFF KIRTON'S FARM ROAD
READING

Client
M&G REAL ESTATE
10 FENCHURCH AVENUE
LONDON
EC3M 5AG

Registered office: 80Fen, 80 Fenchurch Street, London EC3M 4BY

Coordinating office: Office 107, WeiWork, 50-60 Station Road, Cambridge CB1 2JH

www.arcadis.com

TITLE:

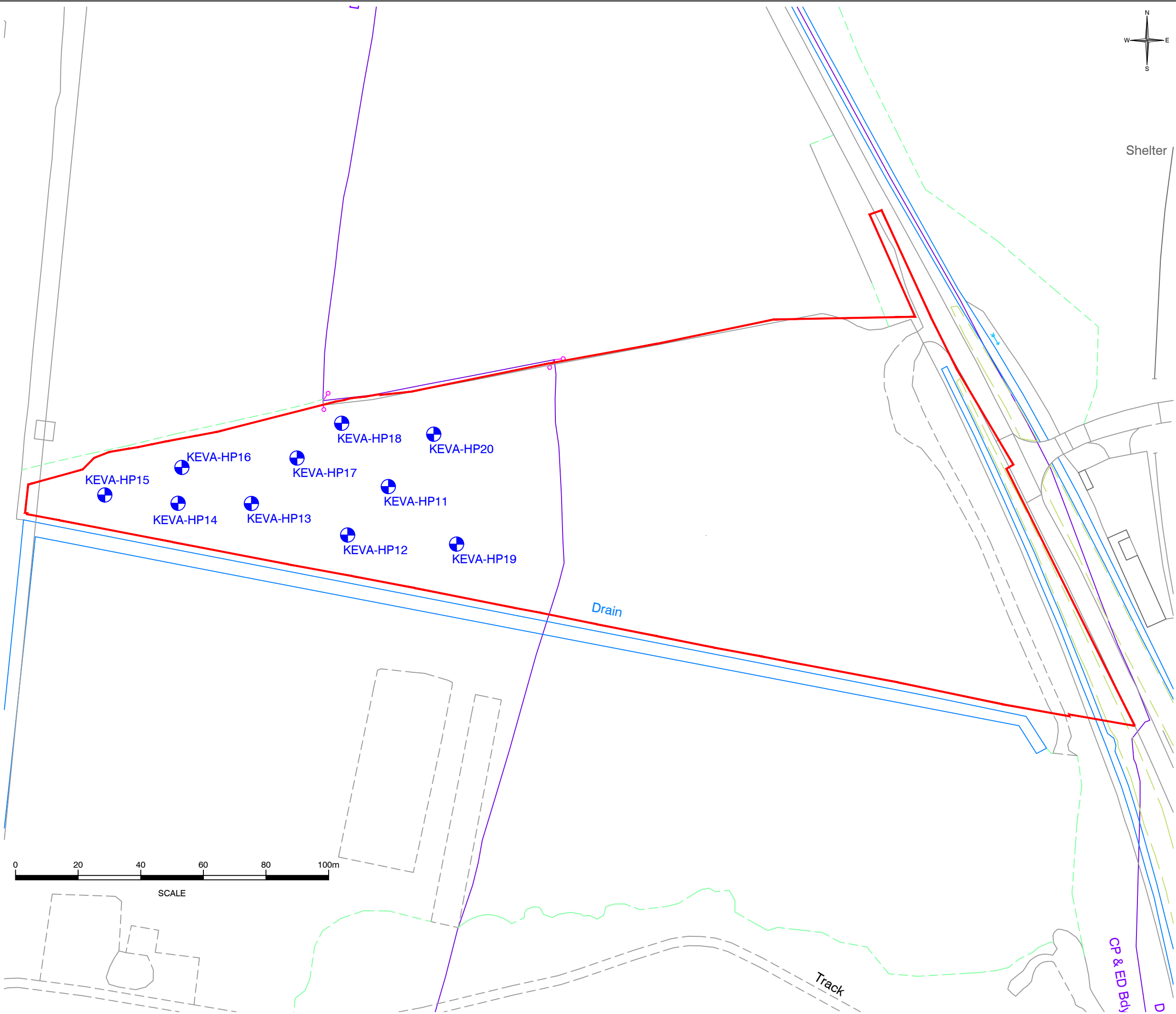
SITE LOCATION PLAN

Designed		Date	Signed
Drawn	B. Brinkman	Date 31/07/2026	Signed
Checked		Date	Signed
Approved		Date	Signed
Scale:		Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	30280066

Suitability Description:

For Information

Drawing Number:	Revision:
30280066-AUK-XX-ZZ-DR-ZZ-0057-P002	2



LEGEND:

— RED LINE BOUNDARY

⊕ HAND PIT LOCATION

NOTES:

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1	10/07/2026	FIRST ISSUED	AP		
Rev	Date	Description	Drawn	Check	Approv

PROJECT:

LAND OFF KIRTON'S FARM ROAD, READING

Site
LAND OFF KIRTON'S FARM ROAD
READING

Client
MAG REAL ESTATE
10 FENCHURCH AVENUE
LONDON
EC3M 5AG

Registered office:
80Fen
80 Fenchurch Street
London
EC3M 4BY

Coordinating office:
Office 107, WeWork
50-60 Station Road
Cambridge
CB1 2JH

www.arcadis.com

TITLE:

Exploratory Hole Location Plan (indigenous soils)

Designed		Date	Signed
Drawn	A.Petric	Date 10/08/2026	Signed
Checked		Date	Signed
Approved		Date	Signed
Scale:		Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	30280066

Suitability Description:

For Information

Drawing Number: 30280066-AUK-XX-ZZ-DR-ZZ-0089-P002	Revision: 2
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Appendix A

Study Limitations

This appendix should be read before reliance is placed on any of the information, opinions, advice, recommendations or conclusions contained in this report.

1. This report has been prepared by Arcadis (UK) Limited ('Arcadis'), with all reasonable skill, care and diligence within the terms of the Appointment and with the resources and manpower agreed with M&G Real Estate Limited (the 'Client'). Arcadis does not accept responsibility for any matters outside the agreed scope.
2. This report has been prepared for the sole benefit of the Client unless agreed otherwise in writing. The contents of this report may not be used or relied upon by any person other than this party without the express written consent and authorisation of Arcadis.
3. Unless stated otherwise, no consultations with authorities or funders or other interested third parties have been carried out. Arcadis is unable to give categorical assurance that the findings will be accepted by these third parties as such bodies may have unpublished, more stringent objectives. Further work may be required by these parties.
4. All work carried out in preparing this report has used, and is based on, Arcadis' professional knowledge and understanding of current relevant legislation. Changes in legislation or regulatory guidance may cause the opinion or advice contained in this report to become inappropriate or incorrect. In giving opinions and advice, pending changes in legislation, of which Arcadis is aware, have been considered. Following delivery of the report, Arcadis has no obligation to advise the Client or any other party of such changes or their repercussions.
5. This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report.
6. Whilst this report and the opinions made are correct to the best of Arcadis' belief, Arcadis cannot guarantee the accuracy or completeness of any information provided by third parties. Arcadis has taken reasonable steps to ensure that the information sources used for this assessment provided accurate information and has therefore assumed this to be the case.
7. This report has been prepared based on the information reasonably available during the project programme. All information relevant to the scope may not have been received.
8. This report refers, within the limitations stated, to the condition of the Site at the time of the inspection. No warranty is given as to the possibility of changes in the condition of the Site since the time of the investigation.
9. The content of this report represents the professional opinion of experienced environmental consultants. Arcadis does not provide specialist legal or other professional advice. The advice of other professionals may be required.
10. Where intrusive investigation techniques have been employed, they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. In some cases, the investigation is further limited by Site operations, underground obstructions and above ground structures. Unless otherwise stated, areas beyond the boundary of the Site have not been investigated.

Appendix B

Ground Investigation Logs

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469626.72

Ground Level (mAOD)

Northing (OS mN)
169714.67

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:20
Sheet 1 of 1

SAMPLES	TESTS	STRATA		Spike	Depth (Thick)	Level	Install/Backfill
Depth - Type	Type - Depth (m) - Result	Description	Legend				
(1) 0.30	PID 0.30m <1ppm	Grass over dark brown slightly sandy SILT with frequent roots and roots.	X X X X		(0.15)		III III III
		Light brown slightly sandy SILT with gravel. Gravel is fine to medium (2 mm to 15 mm), angular to subangular flint	X X X X		0.15		III III III
		Light brown sandy SILT with frequent gravel and occasional brick fragments. Gravel is fine to coarse (5 mm to 30 mm) subangular flint	X X X X		(0.15)		III III III
			X X X X		0.30		III III III
		Yellowish brown very silty CLAY with frequent gravel and occasional rootlets . Gravel is fine to coarse (5 mm to 50 mm), subangular flint	X X X X		(0.25)		III III III
			X X X X		0.55		III III III
			X X X X		(0.35)		III III III
			X X X X		0.90		III III III

PLAN DETAILS



Shoring / Support:
Stability:
Long Axis Orientation:

WATER OBSERVATIONS

Date/Time	Strike	Rest	Mins	Remarks

NO MONITORING INSTRUMENTS INSTALLED

Name	Type	m AGL

REMARKS

Backfilled with arisings

Unless otherwise stated:
Depth (m bgl), Diameter (mm), From/To (m bgl),
Level (m AOD/ASD), Thickness (m), Time (hhmm),
Height Above Ground Level (m AGL)

Equipment Used
Insulated hand tools

Termination Depth
0.90m

Logged By
JH
Checked By
LD

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469613.73

Ground Level (mAOD)

Northing (OS mN)
169699.21

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Strike	Depth (Thick)	Level	Install/ Backfill
Depth - Type	Type - Depth (m) - Result	Description		Legend					
	PID 0.50m <1ppm	Grass over dark brown sandy SILT with frequent roots and wood. Wood is 5-30mm thick twigs and occasional wood chippings.		X X X X			(0.10)		
		Dark brown SILT with frequent gravel and occasional rootlets, wood and red brick fragments. Gravel is fine to medium (5 mm to 10mm) angular flint and medium to coarse (10mm to 30mm), subangular to subrounded flint		X X X X			0.10		
				X X X X			(0.40)		
				X X X X					
		Dark brown clayey SILT with frequent gravel and occasional wood fragments . Gravel is medium to coarse (10mm to 30mm), subangular to subrounded flint		X X X X			0.50		
				X X X X			(0.25)		
				X X X X					
		Dark brown clayey SILT with frequent gravel and occasional pockets of yellowish brown silty clay. Gravel is medium to coarse (10mm to 30mm) subangular to subrounded flint		X X X X			0.75		
				X X X X			(0.10)		
		Brown slightly silty CLAY with frequent gravel and occasional pockets of yellowish brown slightly sandy clay and occasional fragments of organic material. Gravel is fine to coarse (5 mm to 50 mm), subangular flint		X X X X			0.85		
				X		(0.15)			
						1.00			

PLAN DETAILS				WATER OBSERVATIONS				NO MONITORING INSTRUMENTS INSTALLED		
				Date/Time	Strike	Rest	Mins	Remarks	Name	Type
 Shoring / Support: Stability: Long Axis Orientation:										
				REMARKS						
				Backfilled with arisings						

Unless otherwise stated:
Depth (m bgl), Diameter (mm), From/To (m bgl),
Level (m AOD/ASD), Thickness (m), Time (hhmm),
Height Above Ground Level (m AGL)

Equipment Used
Insulated hand tools

Termination Depth
1.00m

Logged By
JH
Checked By
LD

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469582.98

Ground Level (mAOD)

Northing (OS mN)
169709.28

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:20
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Strike	Depth (Thick)	Level	Install/ Backfill
Depth - Type	Type - Depth (m) - Result	Description		Legend					
(1) 0.35-0.70 (2) 0.35-0.70	PID 0.50m <1ppm	Grass over dark brown sandy SILT with frequent rootlets and occasional gravel. Gravel is fine to medium (5mm to 15mm) angular to subangular flint					(0.10)		
		Brown sandy gravelly SILT with frequent rootlets. Gravel is fine to coarse (2mm to 30mm), subangular to subrounded flint.					0.10		
							(0.25)		
		Light brown slightly sandy SILT with gravel. Gravel is fine to medium (2mm to 15mm) angular to subangular flint					0.35		
							(0.35)		
		Dark brown slightly clayey gravelly SAND. Gravel is fine to coarse (2mm to 40mm), angular to subangular flint					0.70		
				(0.30)					
				1.00					
									
									

PLAN DETAILS		WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL		
REMARKS									
Backfilled with arisings									

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469559.58

Ground Level (mAOD)

Northing (OS mN)
169709.34

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:51
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Strike	Depth (Thick)	Level	Install/ Backfill
Depth - Type	Type - Depth (m) - Result	Description		Legend					
(B1) 0.40-0.85	PID 0.50m <1ppm	Grass over dark brown sandy SILT with frequent roots and wood. Wood is 5-30mm, twigs.				(0.10) (0.10) (0.30) 0.40 (0.45) 0.85 (0.25) 1.10	                                                                        		
		Brown silty gravelly SAND with occasional clay pockets. Gravel is fine to coarse (5mm to 40mm) angular to subangular flint							
		Brown slightly silty SAND with gravel. Gravel is fine to coarse (5mm to 25mm), subangular to subrounded flint							
		Yellowish brown gravelly SAND. Gravel is fine to coarse (5mm to 50mm) subangular to subrounded flint							

PLAN DETAILS		WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL		
					REMARKS				
					Backfilled with arisings				

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469536.17

Ground Level (mAOD)

Northing (OS mN)
169711.99

Start Date
28/05/2025
End Date
29/05/2025

Scale
1:20
Sheet 1 of 1

SAMPLES	TESTS	STRATA		Depth	Level	Install/Backfill
Depth - Type	Type - Depth (m) - Result	Description	Legend	Depth (Thick)		
(ES1) 0.40	PID 0.40m <1ppm	Grass over dark brownish sandy gravelly SILT with frequent rootlets. Gravel is fine to medium, subangular flint.		(0.10)		
		Light brown sandy gravelly SILT with minor rootlets. Gravel is fine to coarse, angular to subangular flint.		0.10		
				(0.60)		
		Brown clayey sandy GRAVEL with minor silt. Gravel is fine to coarse, angular to subangular flint.		0.70		
				(0.30)		
				1.00		

PLAN DETAILS		WATER OBSERVATIONS				NO MONITORING INSTRUMENTS INSTALLED		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
REMARKS								
Backfilled with arisings								

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469560.79

Ground Level (mAOD)
Northing (OS mN)
169720.78

Start Date
28/05/2025
End Date
29/05/2025

Scale
1:51

Sheet 1 of 1

SAMPLES	TESTS		STRATA		Strike	Depth (Thick)	Level	Install/Backfill		
Depth - Type	Type - Depth (m) - Result		Description	Legend						
(1) 0.10-0.40	PID	0.40m	<1ppm	Grass over dark brown sandy gravelly SILT Gravel is fine to medium, subangular flint. Frequent roots and rootlets.		(0.10)	                                              			

PLAN DETAILS		WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED		
		Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL
 Shoring / Support: Stability: Long Axis Orientation:									
		REMARKS							
		Backfilled with arisings							

Unless otherwise stated:
Depth (m bgl), Diameter (mm), From/To (m bgl),
Level (m AOD/ASD), Thickness (m), Time (hhmm),
Height Above Ground Level (m AGL)

Insulated hand tools

Termination Depth
1.10m

Logged By	Checked By
JH	LD

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469597.57

Ground Level (mAOD)

Northing (OS mN)
169723.78

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:51
Sheet 1 of 1

SAMPLES		TESTS	STRATA		Spike	Depth (Thick)	Level	Install/Backfill
Depth - Type	Type - Depth (m) - Result		Description	Legend				
(1) 0.30	PID 0.30m <1ppm		Grass over dark brown slightly sandy SILT with frequent rootlets and occasional wood fragments. Wood is 5 to 20 mm plant stems.			(0.10)		
			Dark brown very silty SAND with frequent gravel and occasional rootlets and brick fragments. Gravel is fine to medium (2mm to 10mm) very angular flint and medium to coarse (20-40mm) subangular to subrounded flint. Rare light yellowish cream silt pockets.			0.10		
			Brown silty SAND with frequent gravel and occasional clay pockets. Gravel is fine to coarse (5mm to 50mm) subangular flint. Clay pockets are dark brownish grey with brownish orange staining.			(0.65)		
						0.75		
						(0.25)		
						1.00		

PLAN DETAILS		WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL		
REMARKS									
Backfilled with arisings									

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469611.83

Ground Level (mAOD)

Northing (OS mN)
169734.87

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:20
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Strike	Depth (Thick)	Level	Install/ Backfill
Depth - Type	Type - Depth (m) - Result	Description		Legend					
(1) 0.30	PID 0.30m <1ppm	Grass over dark brown slightly sandy SILT with frequent rootlets and occasional gravel. Gravel is fine to medium (5mm to 15mm) subangular to subrounded flint				(0.10)	0.10		
		Light brown slightly clayey SILT with frequent gravel and occasional rootlets. Gravel is fine to coarse (5mm to 60mm) subangular to subrounded flint							
		Brown slightly silty gravelly CLAY with occasional pockets of greyish brown clay. Gravel is fine to (5mm to 40mm) subangular flint.				(0.30)	0.50		
									

PLAN DETAILS		WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL		
REMARKS									
Backfilled with arisings									

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469648.53

Ground Level (mAOD)

Northing (OS mN)
169696.31

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:20
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Strike	Depth (Thick)	Level	Install/ Backfill
Depth - Type	Type - Depth (m) - Result	Description		Legend					
(1) 0.70	PID 0.70m <1ppm	Grass over dark brown slightly sandy SILT with frequent rootlets, roots and gravel. Gravel is fine to medium (5mm to 15mm) subangular to subrounded flint		X X X X			(0.10)		
		Light brown slightly sandy SILT with frequent gravel and wood. Gravel is fine to coarse (5mm to 50mm), subangular to subrounded flint. Wood is twigs and rootlets.		X X X X			0.10		
				X X X X			(0.35)		
		Dark brown clayey SILT with frequent gravel and occasional rootlets and red brick fragments. Gravel is fine to coarse (5mm to 30mm), angular to subangular flint.		X X X X			0.45		
				X X X X			(0.45)		
		Dark brown silty CLAY with frequent gravel and occasional rootlets. Gravel is fine to coarse, subangular flint. Rare pockets of light yellowish cream silt and nodules of dark brownish grey silty clay		X X X X			0.90		
				X X X X			(0.10)		
				X X X X			1.00		

PLAN DETAILS				WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED			
Shoring / Support: Stability: Long Axis Orientation:				Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
				REMARKS								
				Backfilled with arisings								

Unless otherwise stated:
Depth (m bgl), Diameter (mm), From/To (m bgl),
Level (m AOD/ASD), Thickness (m), Time (hhmm),
Height Above Ground Level (m AGL)

Equipment Used
Insulated hand tools

Termination Depth
1.00m

Logged By
JH
Checked By
LD

Project
Land at Kirtons Farm Road, Reading
Client
M&G

Project No.
30280066
Easting (OS mE)
469641.23

Ground Level (mAOD)

Northing (OS mN)
169731.39

Start Date
29/05/2025
End Date
29/05/2025

Scale
1:20
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Strike	Depth (Thick)	Level	Install/ Backfill
Depth - Type	Type - Depth (m) - Result	Description		Legend					
(1) 0.20	PID 0.20m <1ppm	Light brown slightly sandy SILT with frequent gravel and rootlets. Gravel is fine to coarse (5mm to 30mm) subangular to subrounded flint.			(0.10)				
		Light yellowish brown sandy gravelly SILT Gravel is fine to coarse (5mm to 60mm), angular to subangular flint.			0.10				
		Dark brown sandy SILT with clay pockets and occasional gravel. Gravel is fine to coarse, subangular flint.			(0.25)				
		Dark brown clayey SILT with occasional gravel .Gravel is medium to coarse (15mm to 60mm), angular to subangular flint.			0.35				
					(0.25)				
					0.60				
					(0.20)				
					0.80				
		</							

PLAN DETAILS				WATER OBSERVATIONS					NO MONITORING INSTRUMENTS INSTALLED			
Shoring / Support: Stability: Long Axis Orientation:				Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
				REMARKS								
				Backfilled with arisings								

Unless otherwise stated:
Depth (m bgl), Diameter (mm), From/To (m bgl),
Level (m AOD/ASD), Thickness (m), Time (hhmm),
Height Above Ground Level (m AGL)

Equipment Used
Insulated hand tools

Termination Depth
0.80m

Logged By
JH
Checked By
LD

Appendix C

Photograph Log



KEVA – HP11 arisings. 0.0m at left



KEVA – HP12 arisings. 0.0m at left



KEVA – HP13. 0.0m at left



KEVA – HP11 indigenous material	KEVA – HP12 indigenous material	KEVA – HP13 indigenous material
		
KEVA – HP14 arisings. 0.0m at left	KEVA – HP15 arisings. 0.0m at left	KEVA – HP16 arisings. 0.0m at left



KEVA – HP14 indigenous material

KEVA – HP15 indigenous material

KEVA – HP16 indigenous material

KEVA – HP17 arisings. 0.0m at left	KEVA – HP18 arisings. 0.0m at left	KEVA – HP19 arisings. 0.0m at left
		
KEVA – HP17 indigenous material	KEVA – HP18 indigenous material	KEVA – HP19 indigenous material

		
KEVA – HP20 arisings. 0.0m at left	KEVA – HP15 gravel rich natural material	KEVA – HP14 gravelly sand natural material
		
KEVA – HP20 indigenous material	KEVA – HP17 silty sand natural material	KEVA – HP19 silty clay with silt pockets and clay nodules natural material

Appendix D

Laboratory Results from Arcadis GI

Arcadis
1 Whitehall Riverside
Leeds
United Kingdom
LS1 4BN



4225



Attention : Sarah Cork
Date : 11th June, 2025
Your reference : 30280066
Our reference : Test Report 25/8875 Batch 1 Schedule A
Location : Kennet Valley
Date samples received : 31st May, 2025
Status : Final Report
Issue : 202506111452

Ten samples were received for analysis on 31st May, 2025 of which ten 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 47.06 kg of CO2

Scope 1&2&3 emissions - 111.215 kg of CO2

Authorised By:



Simon Gomery BSc

Senior Technical Account Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Arcadis
Reference: 30280066
Location: Kennet Valley
Contact: Sarah Cork
EMT Job No: 25/8875

Report : Solid

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

EMT Sample No.	1-4	5-7	8-11	12-14	15-20	21-25	26-28	29-31	32-34	35-39	Please see attached notes for all abbreviations and acronyms		
Sample ID	01KEVA-HP11290525S O0.3	02KEVA-HP12290525S O0.5	03KEVA-HP13290525S O0.5-0.6	04KEVA-HP14290525S O0.4-0.85	05KEVA-HP15280525S O0.4	06KEVA-HP16290525S O0.4	07KEVA-HP17290525S O0.3	08KEVA-HP18290525S O0.3	09KEVA-HP19290525S O0.6-0.7	10KEVA-HP20290525S O0.2-0.3			
Depth	0.30	0.50	0.50-0.60	0.40-.85	0.40	0.40	0.30	0.30	0.60-0.70	0.20-0.30			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/05/2025	29/05/2025	29/05/2025	29/05/2025	28/05/2025	29/05/2025	29/05/2025	29/05/2025	29/05/2025	29/05/2025			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025			
Arsenic #	7.2	7.1	7.4	5.8	7.2	4.0	6.3	5.9	7.0	4.1	<0.5	mg/kg	TM30/PM15
Barium #	97	119	50	38	67	34	61	85	66	44	<1	mg/kg	TM30/PM15
Beryllium	0.7	0.8	0.5	0.6	0.7	<0.5	0.7	0.8	0.7	<0.5	<0.5	mg/kg	TM30/PM15
Cadmium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM30/PM15
Chromium #	63.7	82.2	88.2	95.5	72.3	81.1	65.9	59.7	81.7	69.8	<0.5	mg/kg	TM30/PM15
Copper #	6	8	6	6	7	7	8	8	8	4	<1	mg/kg	TM30/PM15
Lead #	10	20	15	15	18	18	17	18	19	6	<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 #	18.7	16.7	12.0	12.5	14.7	9.4	14.5	15.4	14.8	10.9	<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	1	<1	<1	<1	<1	<1	2	<1	<1	mg/kg	TM30/PM15
Vanadium	32	45	27	32	34	24	35	40	44	19	<1	mg/kg	TM30/PM15
Zinc #	29	38	40	26	58	27	47	42	39	18	<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	<0.03	<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	<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 #	<0.03	<0.03	<0.03	<0.03	<0.03	0.08	0.04	<0.03	<0.03	<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 #	<0.03	<0.03	0.08	0.03	0.08	0.18	0.13	0.06	0.04	<0.03	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	0.07	<0.03	0.08	0.15	0.12	0.05	0.04	<0.03	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	0.06	<0.06	<0.06	0.10	0.08	<0.06	<0.06	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	0.05	<0.02	0.05	0.10	0.08	0.03	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(k)fluoranthene #	<0.07	<0.07	0.09	<0.07	0.09	0.13	0.13	<0.07	<0.07	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<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
Indeno(123cd)pyrene #	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	0.06	<0.04	<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	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<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
Coronene	-	-	-	-	<0.04	<0.04	-	-	-	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	<0.6	<0.6	<0.6	<0.6	0.8	0.7	<0.6	<0.6	<0.6	<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-	-	<0.64	0.83	-	-	-	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	0.06	<0.05	0.06	0.09	0.09	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	0.03	<0.02	0.03	0.04	0.04	<0.02	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	106	106	110	109	110	109	110	111	109	110	<0	%	TM4/PM8

Client Name:	Arcadis	Report :	Solid
Reference:	30280066		
Location:	Kennet Valley	Solids:	V=60g VOC jar, J=250g glass jar, T=plastic tub
Contact:	Sarah Cork		
EMT Job No:	25/8875		

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Arcadis
Reference: 30280066
Location: Kennet Valley
Contact: Sarah Cork
EMT Job No: 25/8875

Report : Solid

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

EMT Sample No.	1-4	5-7	8-11	12-14	15-20	21-25	26-28	29-31	32-34	35-39	Please see attached notes for all abbreviations and acronyms		
Sample ID	01KEVA-HP11290525S O0.3	02KEVA-HP12290525S O0.5	03KEVA-HP13290525S O0.5-0.6	04KEVA-HP14290525S O0.4-0.85	05KEVA-HP15280525S O0.4	06KEVA-HP16290525S O0.4	07KEVA-HP17290525S O0.3	08KEVA-HP18290525S O0.3	09KEVA-HP19290525S O0.6-0.7	10KEVA-HP20290525S O0.2-0.3			
Depth	0.30	0.50	0.50-0.60	0.40-.85	0.40	0.40	0.30	0.30	0.60-0.70	0.20-0.30			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/05/2025	29/05/2025	29/05/2025	29/05/2025	28/05/2025	29/05/2025	29/05/2025	29/05/2025	29/05/2025	29/05/2025			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025			
Acid Herbicides													
2,3,6-TBA	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
2,4-D	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
2,4-DB	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
2,4,5-T	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
4-CPA	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Benazolin	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Bentazone	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Bromoxynil	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Clopyralid	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Dicamba	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Dichloroprop	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Diclofop	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Fenoprop	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Flamprop	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Flamprop-isopropyl	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Ioxynil	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
MCPA	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
MCPB	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Mecoprop	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Pentachlorophenol	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Picloram	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Triclopyr	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	mg/kg	TM42/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	-	-	-	-	<30	<30	-	-	-	<30	<30	mg/kg	TM5/PM8/PM16
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/PM8/PM16

Element Materials Technology

Client Name: Arcadis
Reference: 30280066
Location: Kennet Valley
Contact: Sarah Cork
EMT Job No: 25/8875

Report : Solid

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

EMT Sample No.	1-4	5-7	8-11	12-14	15-20	21-25	26-28	29-31	32-34	35-39	Please see attached notes for all abbreviations and acronyms		
Sample ID	01KEVA-HP11290525S O0.3	02KEVA-HP12290525S O0.5	03KEVA-HP13290525S O0.5-0.6	04KEVA-HP14290525S O0.4-0.85	05KEVA-HP15280525S O0.4	06KEVA-HP16290525S O0.4	07KEVA-HP17290525S O0.3	08KEVA-HP18290525S O0.3	09KEVA-HP19290525S O0.6-0.7	10KEVA-HP20290525S O0.2-0.3			
Depth	0.30	0.50	0.50-0.60	0.40-.85	0.40	0.40	0.30	0.30	0.60-0.70	0.20-0.30			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/05/2025	29/05/2025	29/05/2025	29/05/2025	28/05/2025	29/05/2025	29/05/2025	29/05/2025	29/05/2025	29/05/2025			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025	31/05/2025			
TPH CWG													
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR) #	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/PM8/PM16/PM12/PM18
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	<38	<38	<38	<38	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/PM8/PM16/PM12/PM18
MTBE #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Benzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
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
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
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
Natural Moisture Content	7.8	12.7	5.0	7.4	9.5	7.9	10.1	12.7	12.3	4.5	<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) #	0.0112	0.372	0.0069	0.678	<0.0015	0.0095	0.162	<0.0015	0.0172	0.0094	<0.0015	g/l	TM38/PM20
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 #	0.52	0.91	0.71	0.49	1.05	0.62	1.34	1.22	0.97	0.30	<0.02	%	TM21/PM24
Organic Matter	0.9	1.6	1.2	0.8	1.8	1.1	2.3	2.1	1.7	0.5	<0.2	%	TM21/PM24
ANC at pH4	-	-	-	-	0.09	<0.03	-	-	-	1.13	<0.03	mol/kg	TM77/PM0
ANC at pH7	-	-	-	-	<0.03	NDP	-	-	-	<0.03	<0.03	mol/kg	TM77/PM0
Loss on Ignition #	4.0	5.2	3.3	3.4	5.2	3.1	6.4	6.5	5.6	2.8	<1.0	%	TM22/PM0
pH #	8.21	7.66	6.72	7.81	7.98	6.86	7.98	8.30	6.91	8.12	<0.01	pH units	TM73/PM11

Client Name: Arcadis
Reference: 30280066
Location: Kennet Valley
Contact: Sarah Cork
EMT Job No: 25/8875

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

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg)	0.101	Moisture Content Ratio (%) =	12.8
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	88.7
Particle Size <4mm =	>95%		
EMT Job No	25/8875	Landfill Waste Acceptance Criteria Limits	
Sample No	18		
Client Sample No	05KEVA-HP15280525SO0.4		
Depth/Other	0.40		
Sample Date	28/05/2025		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	1.05	3	5
Loss on Ignition (%)	5.2	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg) (EH_CU_1D_AL)	<30	500	-
PAH Sum of 17(mg/kg)	<0.64	100	-
pH (pH Units)	7.98	-	>6
ANC to pH 7 (mol/kg)	<0.03	-	to be evaluated
ANC to pH 4 (mol/kg)	0.09	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	0.008	0.08	2
Cadmium	<0.0005	<0.005	100
Chromium	<0.0015	<0.015	0.04
Copper	<0.007	<0.07	1
Mercury	<0.001	<0.01	5
Molybdenum	<0.002	<0.02	0.5
Nickel	<0.002	<0.02	10
Lead	<0.005	<0.05	0.4
Antimony	<0.002	<0.02	10
Selenium	<0.003	<0.03	0.5
Zinc	0.004	0.04	10
Chloride	<0.3	<3	0.06
Fluoride	0.8	8	0.7
Sulphate as SO ₄	<0.5	<5	0.1
Total Dissolved Solids	72	720	0.5
Phenol	<0.01	<0.1	4
Dissolved Organic Carbon	5	50	50
			800
			1000

Mass of sample taken (kg)	0.1001	Moisture Content Ratio (%) =	10.6
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	90.4
Particle Size <4mm =	>95%		
EMT Job No	25/8875	Landfill Waste Acceptance Criteria Limits	
Sample No	24		
Client Sample No	06KEVA-HP16290525SO0.4		
Depth/Other	0.40		
Sample Date	29/05/2025		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	0.62	3	5
Loss on Ignition (%)	3.1	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg) (EH_CU_1D_AL)	<30	500	-
PAH Sum of 17(mg/kg)	0.83	100	-
pH (pH Units)	6.86	-	>6
ANC to pH 7 (mol/kg)	NDP	-	to be evaluated
ANC to pH 4 (mol/kg)	<0.03	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	<0.003	<0.03	20
Cadmium	<0.0005	<0.005	0.04
Chromium	<0.0015	<0.015	0.5
Copper	<0.007	<0.07	2
Mercury	<0.001	<0.01	0.01
Molybdenum	<0.002	<0.02	0.5
Nickel	0.002	<0.02	0.4
Lead	<0.005	<0.05	0.5
Antimony	<0.002	<0.02	0.06
Selenium	<0.003	<0.03	0.1
Zinc	0.005	0.05	4
Chloride	<0.3	<3	800
Fluoride	0.5	5	10
Sulphate as SO ₄	<0.5	<5	1000
Total Dissolved Solids	<35	<350	4000
Phenol	<0.01	<0.1	1
Dissolved Organic Carbon	5	50	500

Mass of sample taken (kg)	0.0997	Moisture Content Ratio (%) =	10.6
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	90.4
Particle Size <4mm =	>95%		
EMT Job No	25/8875	Landfill Waste Acceptance Criteria Limits	
Sample No	38		
Client Sample No	10KEVA-HP20290525SO0.2-0.3		
Depth/Other	0.20-0.30		
Sample Date	29/05/2025		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	0.30	3	5
Loss on Ignition (%)	2.8	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg) (EH_CU_1D_AL)	<30	500	-
PAH Sum of 17(mg/kg)	<0.64	100	-
pH (pH Units)	8.12	-	>6
ANC to pH 7 (mol/kg)	<0.03	-	to be evaluated
ANC to pH 4 (mol/kg)	1.13	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	0.005	0.05	2
Cadmium	<0.0005	<0.005	100
Chromium	<0.0015	<0.015	0.04
Copper	<0.007	<0.07	1
Mercury	<0.001	<0.01	5
Molybdenum	<0.002	<0.02	0.5
Nickel	<0.002	<0.02	10
Lead	<0.005	<0.05	0.4
Antimony	<0.002	<0.02	10
Selenium	<0.003	<0.03	0.5
Zinc	0.004	0.04	10
Chloride	<0.3	<3	0.06
Fluoride	0.9	9	0.7
Sulphate as SO ₄	<0.5	<5	0.1
Total Dissolved Solids	54	540	0.5
Phenol	<0.01	<0.1	4
Dissolved Organic Carbon	4	40	50
			800
			1000

Matrix : Solid

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Client Name: Arcadis
Reference: 30280066
Location: Kennet Valley
Contact: Sarah Cork

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
25/8875	1	01KEVA-HP11290525SO0.3	0.30	3	Charlotte Taylor	05/06/2025	General Description (Bulk Analysis)	brown soil/stones
					Charlotte Taylor	05/06/2025	Asbestos Fibres	NAD
					Charlotte Taylor	05/06/2025	Asbestos ACM	NAD
					Charlotte Taylor	05/06/2025	Asbestos Type	NAD
25/8875	1	02KEVA-HP12290525SO0.5	0.50	7	Catherine Coles	04/06/2025	General Description (Bulk Analysis)	brownsoil,stone
					Catherine Coles	04/06/2025	Asbestos Fibres	NAD
					Catherine Coles	04/06/2025	Asbestos ACM	NAD
					Catherine Coles	04/06/2025	Asbestos Type	NAD
25/8875	1	03KEVA-HP13290525SO0.5-0.6	0.50-0.60	10	Tomasz Pawlikowski	04/06/2025	General Description (Bulk Analysis)	Brown soil, stones
					Tomasz Pawlikowski	04/06/2025	Asbestos Fibres	NAD
					Tomasz Pawlikowski	04/06/2025	Asbestos ACM	NAD
					Tomasz Pawlikowski	04/06/2025	Asbestos Type	NAD
25/8875	1	04KEVA-HP14290525SO0.4-0.85	0.40-.85	14	Mathew Day	04/06/2025	General Description (Bulk Analysis)	Brown soil
					Mathew Day	04/06/2025	Asbestos Fibres	NAD
					Mathew Day	04/06/2025	Asbestos ACM	NAD
					Mathew Day	04/06/2025	Asbestos Type	NAD
25/8875	1	05KEVA-HP15290525SO0.4	0.40	17	Simon Postlewhite	04/06/2025	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	04/06/2025	Asbestos Fibres	NAD
					Simon Postlewhite	04/06/2025	Asbestos ACM	NAD
					Simon Postlewhite	04/06/2025	Asbestos Type	NAD
25/8875	1	06KEVA-HP16290525SO0.4	0.40	23	Mathew Day	04/06/2025	General Description (Bulk Analysis)	Brown soil
					Mathew Day	04/06/2025	Asbestos Fibres	NAD
					Mathew Day	04/06/2025	Asbestos ACM	NAD
					Mathew Day	04/06/2025	Asbestos Type	NAD
25/8875	1	07KEVA-HP17290525SO0.3	0.30	28	Mathew Day	04/06/2025	General Description (Bulk Analysis)	Brown sandy soil
					Mathew Day	04/06/2025	Asbestos Fibres	NAD
					Mathew Day	04/06/2025	Asbestos ACM	NAD
					Mathew Day	04/06/2025	Asbestos Type	NAD
25/8875	1	08KEVA-HP18290525SO0.3	0.30	31	Tomasz Pawlikowski	04/06/2025	General Description (Bulk Analysis)	Brown soil, stones
					Tomasz Pawlikowski	04/06/2025	Asbestos Fibres	NAD
					Tomasz Pawlikowski	04/06/2025	Asbestos ACM	NAD
					Tomasz Pawlikowski	04/06/2025	Asbestos Type	NAD

Arcadis
30280066
Kennet Valley
Sarah Cork

[illegible]

Matrix : Solid

QF-PM 3.1.7 v10 Please include all sections of this report if it is reproduced 13 of 22

Client Name: Arcadis
Reference: 30280066
Location: Kennet Valley
Contact: Sarah Cork

[illegible]

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.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 25/8875

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 35°C ±5°C.

Where Mineral Oil 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 overestimate 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 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.

Age of Diesel

The age of release estimation is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).

Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitatively, with a matrix specific limit of detection.

Note, other compounds may be present but are not reported.

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.
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

HWOL ACRONYMS AND OPERATORS USED

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

EMT Job No: 25/8875

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	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 degrees Celsius or 105 degrees Celsius. 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.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
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/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			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/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	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
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	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 CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
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 CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM22	Modified BS1377-3:1990 Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (35C-440C). On request modified ASTM D2974-00 LOI (105C-440C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			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 degrees Celsius. 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 degrees Celsius. Samples containing asbestos are not dried and ground.	Yes		AD	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 GC/FID 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.			AR	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 GC/FID 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		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), NH ₄ ⁺ 350.1 (Rev.2 1993) - All anions comparable to BS ISO 15923-1: 2013	PM0	No preparation is required.	Yes		AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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: 2013	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: 2013	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
TM42	Modified US EPA method 8270D v5:2014. Pesticides and herbicides by GC-MS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
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
TM77	Modified DDCE/TN method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
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
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		AR	Yes
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35 degrees Celsius or 105 degrees Celsius. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	