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REPORT ON A PHASE 2 CONTAMINATION ASSESSMENT FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT GROBY LODGE FARM, SLATE PIT LANE, GROBY, LEICESTER, LE6 0GN

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1. INTRODUCTION AND OBJECTIVES

- 1.1 This report has been prepared on instructions given by the Client, John Barker (Groby Lodge Estate Limited, Groby, Leicester, LE6 0GN).

This report is to be submitted to Hinckley and Bosworth District Council to discharge condition 20 of planning permission reference 18/00329/FUL for "*Conversion of existing agricultural barns to form 10 dwellings, including alterations and small extensions, hard and soft landscaping including formation of parking spaces, ancillary works including the alteration to site access at Ratby Lane*". The application was approved on December 24th, 2025 and Condition 20 states -

20. Notwithstanding the recommendations contained within the Phase 1 Desk Study carried out by Murray Rix dated January 2018, no development shall commence until a scheme for potential land contamination has been submitted to and agreed in writing by the Local Planning Authority which shall include details of how any contamination on site shall be dealt with. Thereafter the approved scheme shall be implemented in accordance with the approved details and any remediation works shall be carried out prior to the first occupation of the development hereby approved. If during development any contamination not previously identified is found, all works on site shall stop until an addendum to the scheme of investigation is submitted to and approved in writing by the Local Planning Authority. Any remediation so approved shall be carried out before the dwelling is occupied.

Reason: To protect the public from the risks of contamination in accordance with policies DM7 and M10 of the adopted Site Allocations and Development Management Policies Development Plan Document (2016) and the National Planning Policy Framework (2024).

- 1.2 The site forms part of a collection of barns and buildings associated with Groby Lodge Farm located on the northern side of Slate Pit Lane to the north west of the village of Groby, Leicestershire as shown on Figure 1, Appendix (i). Groby lies around 9km to the north west of Leicester City Centre. As shown on Figure 2, Appendix (i), the site is irregular in shape and comprises a number of agricultural buildings to the north of the existing farmhouse. The site is at and around National Grid Reference 450450 307750 (Reference 1).



- 1.3 The site has been the subject of a previous desk study which was subsequently revised as referenced below.

- Murray Rix Geotechnical Report on a Preliminary Contamination Risk Assessment and Desk Study, Groby Lodge Farm, Slate Pit Lane, Leicester, LE6 0GN. Report reference Geojob/06-200R(B) dated July 2007.
- Murray Rix Limited Report on a Phase 1 Desk Study and Risk Assessment for a Proposed Residential Development at Groby Lodge Farm, Slate Pit Lane, Groby, Leicester, LE6 0GN. Report No: 17-2976r dated January 2018.

The desk studies identified possible risks to end users and recommended an intrusive investigation as a check on conditions.

- 1.4 Proposals are to convert and extend some of the existing barns and buildings at the site for residential use with private gardens and parking areas. A plan showing the proposed layout is presented as Figure 3, Appendix (i).

- 1.5 The aims of the intrusive investigation were to:

- Investigate the near surface ground and groundwater conditions in proposed garden and landscaping areas and recover samples of the ground.
- Undertake contamination testing of samples recovered from an intrusive investigation.
- Provide information for the assessment of contamination.
- Assess the nature, extent and severity of any contamination at the site
- Undertake risk assessments.
- Appraise remedial options.
- Present an interpretative report on the findings.

The scope of the works was approved by the Environmental Health Officer of Hinckley and Bosworth Borough Council.

- 1.6 The investigation, assessment and reporting have been carried out in general accordance with the following:

- BS 5930:2015+A1:2020. Code of Practice for Ground Investigations.
- BS EN ISO 14688-1:2018. Geotechnical investigation and testing – Identification and classification of a soil – Part 1: Identification and description.
- BS EN ISO 14688-2:2018. Geotechnical investigation and testing – Identification and classification of a soil – Part 2: Principles for a classification.
- BS EN ISO 22476-2:2005+A1:2011. Geotechnical investigation and testing – Field testing – Part 2: Dynamic Probing.
- BS EN ISO 22476-3:2005+A1:2011. Geotechnical investigation and testing – Field testing – Part 3: Standard Penetration Test.
- BS EN ISO 14688-1:2018. Geotechnical investigation and testing – Identification and classification of soil – Part 1: Identification and description.
- BS EN ISO 14688-2:2018. Geotechnical investigation and testing – Identification and classification of soil – Part 2: Principles for a classification.



- BS EN ISO 22475-1:2021. Geotechnical investigation and testing – Sampling methods and groundwater measurements – Part 1: Technical principles for execution.
- BS 1377-9:1990. Methods for test for soils for civil engineering purposes – Part 9 In-situ tests.
- BS EN 1997-1:2004+A1:2013 Eurocode 7: Geotechnical design – Part 1: General Rules.
- NA+A2:2022 to BS EN 1997-12004+A1:2013. UK National Annex to Eurocode 7: Geotechnical design – Part 1: General Rules.
- BS EN 1997-2:2007. Eurocode 7: Geotechnical design – Part 2: Ground investigation and testing.
- NA to BS EN 1997-2:2007. UK National Annex to Eurocode 7: Geotechnical design – Part 2: Ground investigation and testing.
- BS 10175:2011+A2:2026. Investigation of Potentially Contaminated Sites – Code of Practice.
- BS 8576:2013 Guidance on Investigations for ground gases – Permanent gases and Volatile Organic Compounds (VOCs).
- BS 8485:2015 + A1:2109. Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings.
- Environment Agency 2021 Land Contamination Risk Management.

2. FINDINGS OF THE DESK STUDY

- 2.1 The following is based on information contained in the reports of Section 1.3.
- 2.2 The desk study confirmed that a number of barns were present on site since at least 1886 with an orchard in the west. The barns and buildings were extended and added to over the years and the historical maps indicate that by the 1950s the layout of structures was similar to that currently on site. There are no records of animal burial pits at the site.
- 2.3 Published geological information suggests the site is underlain in part by superficial alluvial deposits in the south overlying solid deposits of the Edwalton Member with the Swithland Formation outcropping locally to the north.
- 2.4 The latest Environment Agency groundwater vulnerability maps class the site as medium to high in terms of groundwater vulnerability although the site is not in a groundwater source protection zone.
- 2.5 The desk study and walkover survey at the site had identified some potential sources of contamination associated with the use of the site as a farm with workshop and possible made ground, although the farm has not been active for around 25 to 30 years. Following discussion with the LPA's Environmental Health Officer an intrusive investigation was recommended along with preliminary check testing for general contaminants mainly in garden areas.



- 2.6 It is assumed that prior to demolition of the structures that an asbestos survey will be undertaken by a suitably qualified contractor and any asbestos is removed and disposed of in an appropriate and safe manner.

3. SITE RECONNAISSANCE

- 3.1 As shown on Figure 2, Appendix (i), the site comprises a number of barns, farm buildings and animal stalls and a small workshop with further barns off site to the west. The buildings and barns to be redeveloped were generally unused at the time of the current investigation.
- 3.2 The topography of the general area slopes up gently to the north.
- 3.3 No evidence of significant contamination was uncovered during the site walkover.

4. SITE WORK

- 4.1 Fifteen exploratory holes (TP1 to TP15) were dug in the proposed garden and landscaping areas using a tracked mini excavator to a maximum depth of 1.3m bgl. At least one trial pit was excavated in each of the proposed garden or landscaping areas.
- 4.2 Samples for contamination testing were recovered from all the exploratory holes, sealed into amber glass jars to prevent sample deterioration and placed in cool boxes for transport to the laboratory as quickly as possible. All contamination samples were taken in appropriately sized containers and where necessary headspace and storage times were minimized.
- 4.3 The site work was undertaken on 18th March 2026.
- 4.4 The investigation and sampling strategies were to obtain representative samples of any fill and near surface natural deposits for contamination analysis and appraisal. Laboratory testing was undertaken to determine levels and distribution of contaminants and the investigation was in general accordance with the documents of Section 1.6.
- 4.5 All of the samples were transported to the laboratory for detailed examination and selected samples were programmed for testing.
- 4.6 Details of the strata encountered in the exploratory holes are given on the trial pit logs presented in Appendix (ii) and the positions of the holes are shown on Figure 2, Appendix (i).



5. LABORATORY WORK

- 5.1 The following testing was undertaken on samples of the made ground and natural soils encountered to determine possible contamination at the site:

Table 5.2 Summary of Laboratory Contamination Tests

Contamination Test	Number of Tests Made Ground	Number of Tests Natural Soils
Suite of Heavy Metals	6	7
pH Value	6	7
Speciated PAH	6	4
TPH Banded (C8-C40)	5	1
Asbestos Screen	5	

- 5.2 The contamination test results are presented in Appendix (iii).
- 5.3 The laboratory testing was undertaken during the period 19th to 31st March 2026.
- 5.4 The testing was undertaken at a UKAS and MCERTS accredited laboratory.

6. GROUND AND GROUNDWATER CONDITIONS

6.1 Soil Profile

The surface conditions across the site were variable with asphalt and scalpings present in the north and west (TP1 to TP7), block paving (TP8), concrete (TP14) and topsoil in the east and south east (TP9 to TP13).

In the majority of the trial pits made ground was present below the surface materials. The made ground in TP1 to TP4 in the north and north east comprised mainly brick, concrete and slate rubble infilled with a clayey sand which was of limited depth extending to around 0.35 to 0.52m bgl. In TP5 to TP8 and TP15 in the central portion the made ground comprised brick and concrete rubble infilled with gravelly clay which extended to a maximum of 0.80m bgl. In the east of the site (TP9 and TP10) the made ground comprised a clay with occasional inclusions of brick and concrete extending to around 0.60 to 0.85m bgl. In the north west of the site (TP14) subsoil was present immediately below surface concrete.

Beneath the topsoil in the remaining trial pits in the east and south east (TP11, TP12 and TP13) and below the made ground elsewhere at the site, natural clays were present. These natural clays comprised a stiff reddish brown occasionally mottled grey green clay thought to represent the Edwalton Formation. Locally in the south east (TP12 and TP13) inclusions of gravel were noted in the upper clay which may suggest some reworking of materials in the geological past. The natural soils were proved to



extend to at least 1.30m bgl. Full details of the strata encountered are given on the trial pit logs of Appendix (ii).

6.2 Ground Contamination Observations

No visual or olfactory evidence of significant contamination was noted during the investigation. However, some made ground including asphalt scalplings was present notably in the north of the site.

6.3 Groundwater Conditions

No groundwater seepages were encountered within the depth of the current investigation. Although it is appreciated that the investigation was of limited depth.

It should be borne in mind that groundwater conditions can vary with seasonal and other effects and thus at times may be at variance with the conditions noted at the time of the site work.

7. CONTAMINATION ASSESSMENT

7.1 Assessing Contamination

The processes for assessing contamination should be based on the protection of human health, building materials and the environment using the SOURCE-PATHWAY-RECEPTOR concept. The sources, pathways and receptors relevant to the site are identified using a conceptual site model as outlined in Guidance for the Safe Development of Housing on Land Affected by Contamination (Reference 5). Reference is also made to the procedures in the Environment Agency Land Contamination Risk Management (Reference 6), BS 10175:2011+A2:2017 (Reference 4), and the DEFRA Contaminated Land Statutory Guidance (Reference 37). Reference should be made to the original desk study reports for full details of the conceptual model.

7.2 Discussion of Results

The results of the contamination testing are discussed in the following sections. Laboratory contamination testing has been carried out on samples of the made ground and natural soils encountered in the investigation as a check on conditions. The soils have been tested for a variety of contaminants and comments are made on the spatial distribution of the contaminants along with an indication of whether the results are elevated in relation to guideline values. In this instance, as an initial appraisal, the guideline values used are the critical concentrations for a residential end use with consumption of home grown vegetables. Reference should be made to Section 7.3 for a detailed explanation of critical concentrations.



7.2.1 Made Ground

The made ground was present across the site and some elevated levels of lead and PAHs were reported as indicated in Table 7.1 below.

Table 7.1 Elevated Results Made Ground

Determinand	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Critical Concentration (mg/kg)	Number of Samples Exceeding Critical Concentration
Lead	15	370	200	1/6
Benzo(b)fluoranthene	0.07	9.2	2.6	3/6
Benzo(a)Pyrene	0.06	8.6	2.2	3/6
Dibenzo(ah)Anthracene	< 0.05	0.81	0.24	3/6

Figures in bold are elevated

The elevated lead and PAHs in the made ground were mainly found in TP1 and TP2 in the north of the site probably associated with the asphalt scalpings present in this area (Plots 2 to 4). Elevated PAHs were also present in TP7 in the central section (Plot 5) but no asphalt scalpings were noted in this area.

The full test results for the made ground are discussed and presented in section 7.3.1.

7.2.2 Natural Soils

No elevated levels of contaminants were identified in the natural soils encountered at the site in the samples tested.

The full test results for the natural soils are discussed and presented in section 7.3.2.

7.3 Risk Estimation

Part IIa of the Environmental Protection Act 1990 provides the main regulatory regime for the identification and remediation of contaminated land. However, there is no single methodology covering all aspects of the assessment of potentially contaminated land and groundwater. Therefore, the approach adopted for this investigation is made up of a number of procedures designed to protect human health, building materials and the environment. All of the procedures are based on a risk assessment methodology centred on the identification and analysis of source-pathway-receptor linkages and take account of the procedures outlined in Guidance for the Safe Development of Housing on Land Affected by Contamination (Reference 5). Reference is also made to the procedures in the Environment Agency Land Contamination Risk Management (Reference 6) and the DEFRA Contaminated Land Statutory Guidance (Reference 37). The sources-pathways and receptors relevant to the site were identified in the desk study along with details of the initial conceptual site model.



To assess potential risks, samples from the site have been analysed for a range of general contaminants based on assessed recent and previous uses. Consideration has also been given to the requirements of Reference 36 for the selection of water supply pipes. However, it should be noted that the desk study and assessments have not highlighted potential sources for some of the contaminants contained in Reference 36. Testing has been carried out on samples from the made ground and natural soils. In accordance with current practice (Reference 5) where sufficient results are available they have been statistically analysed. Where only a few results are available they have been compared directly with published critical concentrations. The approach is based on the methodology set out in the CL:AIRE document Professional Guidance: Comparing Soil Contamination Data with a Critical Concentration (Reference 7). The guidance allows examination of the robustness of the data set, the identification of statistical outliers and the use of appropriate statistical techniques based on the distribution of the data set (whether normal or non-normal). The guidance can be used to determine:

- Whether land is suitable for a new use under the land use planning system (Planning Scenario).
- Or
- Whether land falls within the scope of Part 2A of the Environment Protection Act 1990 (Part 2A Scenario).

In this case the Planning Scenario is appropriate as the site is to be redeveloped.

The selection of appropriate critical concentrations of contaminants for the assessment of risks to human health is based on the CLEA guidance (References 8 to 10). This was updated in autumn 2008 and replaces all previous guidance. This most recent guidance allows derivation of Soil Guideline Values (SGVs) based on: generic assumptions about the fate and transport of chemicals in the environment; a generic conceptual model for site conditions and human behaviour to estimate exposure to soil contaminants for those living, working and/or playing on contaminated sites over a long period of time; and Health Criteria Values that represent a tolerable or minimal risk to health from chronic exposure.

The Environment Agency published SGVs for eleven contaminants (References 11 to 32), including mercury and nickel which have now been withdrawn, and was proposing to publish further SGVs during 2010 but has not done so to date. The former guidelines (Reference 33), the recent DEFRA Category 4 Screening Levels (Reference 34) and the recent LQM/CIEH S4ULs (Reference 35) have been used as initial screening values in the following assessments where no new SGVs have been published. The LQM/CIEH Suitable for Use Levels (S4ULs) also include criteria for the eleven contaminants covered by the SGVs but take into account more recent research on contamination. Site Specific Assessment Criteria (SSAC) and Generic Assessment Criteria (GACs) for individual contaminants can be derived using CLEA v1.07.1.



The published criteria relate to standard land uses for residential end use (both with and without uptake of vegetables), allotments, commercial/industrial use, and public open space including amenity areas within residential developments and public parks. The residential end use criteria are protective of the health of young children (0 to 6 years) and assume daily exposure to contaminants over a six year period. The commercial/industrial use relates to adults and is for exposure durations based on a standard working week. The proposed development is for a residential end use with consumption of home grown produce and the relevant guideline values have been used in the following assessments.

7.3.1 Human Health Risk Assessment – Made Ground

The assessment of possible risks to human health from the soils at the site is based on the 'suitability for use' as described in Section 7.3. Table 7.2 below summarises the outcome of the comparison of the results for heavy metals from the made ground soils. As six samples have been analysed the results have been compared directly with the critical concentrations. The critical concentrations relate to a residential end use with uptake of homegrown produce.

Table 7.2 Comparison of Data for Metals – Made Ground

Determinand	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Critical Concentration (mg/kg)
Arsenic	7.3	18	37
Cadmium	< 0.2	1.7	11
Chromium VI	< 1.8	< 1.8	6
Copper	12	140	2400
Lead	15	370	200
Mercury	< 0.3	0.4	1.2
Nickel	13	38	180
Selenium	< 1.0	< 1.0	250
Zinc	87	3200	3700
pH value	7.5	8.7	

Figures in bold are elevated

The results indicate elevated concentrations of lead in one location which may pose risks to end users.

Six samples of the made ground were screened for PAHs and the results are summarised in Table 7.3 below.



Table 7.3 Comparison of Data for PAHs – Made Ground

Determinand	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Critical Concentration (mg/kg)
Naphthalene	< 0.05	0.08	2.3
Acenaphthylene	< 0.05	0.14	170
Acenaphthene	< 0.05	0.86	210
Fluorene	< 0.05	0.37	170
Phenanthrene	< 0.05	6.9	95
Anthracene	< 0.05	1.2	2400
Fluoranthene	0.08	8.9	280
Pyrene	0.09	9.6	620
Benzo(a)Anthracene	< 0.05	5.6	7.2
Chrysene	< 0.05	5.8	15
Benzo(b)fluoranthene	0.07	9.2	2.6
Benzo(k)fluoranthene	< 0.05	4.3	77
Benzo(a)Pyrene	0.06	8.6	2.2
Indeno(123-cd)Pyrene	< 0.05	4.8	27
Dibenzo(ah)Anthracene	< 0.05	0.81	0.24
Benzo(ghi)Perylene	< 0.05	5.5	320

Figures in bold are elevated

The results for the PAHs indicate some elevated levels of a few of the individual congeners in the made ground, some of the results are slightly elevated and may pose risks to end users. The PAHs in TP1 and TP2 are thought to be associated with the asphalt scalpings present in this area (Plots 2 to 4), whereas the PAHs in TP7 (Plot 5) are not associated with asphalt as none was present in the trial pit.

Three samples of the made ground were screened for TPHs using banded analysis. The results are detailed in Table 7.4 below along with the relevant critical concentrations assuming worst case conditions of a soil organic matter content of 1%.

Table 7.4 Comparison of Data for TPHs – Made Ground

Determinand	TP2 0.00-0.40m mg/kg	TP5 0.10-0.30m mg/kg	TP6 0.10-0.70m mg/kg	Critical Concentration (mg/kg)
TPH (>EC8 - EC10)	< 0.02	< 0.02	< 0.02	
TPH (>EC10 - EC12)	8.5	< 2.0	< 2.0	74
TPH (>EC12 - EC16)	18	< 4.0	5.7	140
TPH (>EC16 - EC21)	37	18	58	260
TPH (>EC21 - EC35)	510	57	180	1100
TPH (>EC35 - EC40)	380	< 10	31	1100
Hazard Index (HI)	1.20	0.19	0.48	



Determinand	TP8 0.10-0.50m mg/kg	TP10 0.20-0.50m mg/kg	Critical Concentration (mg/kg)
TPH (>EC8 - EC10)	< 0.02	< 0.02	
TPH (>EC10 - EC12)	< 2.0	< 2.0	74
TPH (>EC12 - EC16)	< 4.0	< 4.0	140
TPH (>EC16 - EC21)	< 10	< 10	260
TPH (>EC21 - EC35)	< 10	< 10	1100
TPH (>EC35 - EC40)	< 10	< 10	1100
Hazard Index (HI)	0.11	0.11	

Figures in bold are elevated

The results from the made ground indicate the presence of some hydrocarbons in three of the samples tested. None of the results for the individual carbon bands exceed the critical concentrations. However, in line with good practice, consideration has been given to possible cumulative effects with calculation of the Hazard Index (HI) (Reference 38). Where the HI is less than one there are no potential cumulative effects however, in the sample from TP2 0.0-0.40m bgl the HI is in excess of one suggesting potential cumulative effects. The hydrocarbons present in TP2 are thought to be associated with the PAHs found in the same sample which included asphalt scalplings.

Five samples of made ground from were screened for asbestos but no asbestos was detected in the samples analysed and no asbestos was noted in any of the trial pits.

7.3.2 Human Health Risk Assessment – Natural Soils

The assessment of possible risks to human health from the soils at the site is based on the 'suitability for use' as described in Section 7.3. Table 7.5 below summarises the outcome of the comparison of the results for heavy metals from the natural ground. As seven samples have analysed the results have been compared directly with the critical concentrations.

Table 7.5 Comparison of Data for Metals – Natural Soils

Determinand	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Critical Concentration (mg/kg)
Arsenic	4.2	17	37
Cadmium	< 0.2	0.3	11
Chromium VI	< 1.8	< 1.8	6
Copper	11	24	2400
Lead	9.7	47	200
Mercury	< 0.3	< 0.3	1.2
Nickel	18	72	180
Selenium	< 1.0	2.7	250
Zinc	43	82	3700
pH value	7.1	8.4	



None of the individual results for the heavy metals are above the critical concentrations and no risks to end users have been highlighted.

Four samples of the natural soils have been screened for PAHs but only very low concentrations were reported as summarized in Table 7.6 below.

Table 7.6 Comparison of Data for PAHs – Natural Soils

Determinand	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Critical Concentration (mg/kg)
Naphthalene	< 0.05	< 0.05	2.3
Acenaphthylene	< 0.05	< 0.05	170
Acenaphthene	< 0.05	< 0.05	210
Fluorene	< 0.05	< 0.05	170
Phenanthrene	< 0.05	< 0.05	95
Anthracene	< 0.05	< 0.05	2400
Fluoranthene	< 0.05	< 0.05	280
Pyrene	< 0.05	0.06	620
Benzo(a)Anthracene	< 0.05	< 0.05	7.2
Chrysene	< 0.05	< 0.05	15
Benzo(b)fluoranthene	< 0.05	0.12	2.6
Benzo(k)fluoranthene	< 0.05	< 0.05	77
Benzo(a)Pyrene	< 0.05	0.09	2.2
Indeno(123-cd)Pyrene	< 0.05	0.07	27
Dibenzo(ah)Anthracene	< 0.05	< 0.05	0.24
Benzo(ghi)Perylene	< 0.05	0.07	320

The results for the individual PAH congeners do not exceed the critical concentrations and no risks to end users have been identified.

One sample of the natural soils were screened for TPHs using banded analysis but none were detected.

7.4 Risk Evaluation

The purpose of the risk evaluation is to assess whether there are any unacceptable risks to potential receptors from contamination at the site. The risk evaluation considers individually the receptors and pathways identified in the original conceptual model and represents a further refinement of the model. The updated conceptual model is discussed in Section 7.5. The preliminary contamination testing has not indicated any elevated levels of contamination in the natural soils, but some lead and PAHs are present locally in the made ground affecting Plots 2 to 4 and Plot 5 along with possible cumulative effects from TPH in Plot 2. No evidence of contamination was identified in any of the other plots.



Table 7.7 Risk Evaluation

Receptor	Risk Evaluation
Site Workers	Risks to site workers are considered to come through direct and indirect contact with contaminated soils either by direct skin contact, inhalation of dust/vapour or ingestion by hand to mouth transfer. In order to minimize risks and in accordance with good practice gloves, boots and overalls should be worn to reduce the risks of skin contact. A high standard of personal hygiene should be maintained on site to reduce risks of hand to mouth transfer.
End Users	Risks to end users usually come from direct contact with the ground, ingestion or inhalation of soil particles/vapour or indirect contact such as ingestion of plants or vegetables grown in contaminated soils. Where the site is to be covered by proposed buildings and other hard cover there is not deemed to be a viable pathway by which end users could come into contact with the underlying soils. However, in garden and soft landscaping areas there is the potential for end users to come into contact with soils. Potential risks to end users have been identified in the made ground at the site and remedial measures are considered necessary (see Section 7.5).
Building Materials	Guidance provided by Anglian Water (Reference 36) based on UKWIR 10/WM/03/21 Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites suggests extensive testing for a wide range of contaminants however, the desk study has not indicated sources for all of the contaminants. The soil testing has found concentrations of organic contaminants (PAH and TPH) in the made ground which may indicate the need for barrier pipe. However, the results should be forwarded to the water supply company for their comment.
Local Environment	Groundwater resources and surface water can be affected by the migration of contaminants. Information available on line indicates that the site is underlain by soils of medium to high vulnerability but the site is not within a groundwater source protection zone. While some contamination has been identified in the near surface made ground, there is no evidence of significant migration of contaminants into the underlying natural soils (low permeability clays) and thus risks to the Local Environment are considered minimal.



7.5 Updated Conceptual Site Model

The investigation carried out has identified the presence of limited contamination, including lead, PAH in the near surface made ground at the site affecting Plots 2 to 4 and Plot 5 and possible cumulative effects from TPH affecting Plot 2. No risks were identified in the natural soils at the site. The updated conceptual model of pollution linkages is detailed in Table 7.8 below.

Table 7.8 Updated Conceptual Model of Pollution Linkages

Sources Potentially Present	Receptors	Pathways	Qualitative Assessment of Risk
Lead and PAH in made ground (Plots 2 to 4 and Plot 5). Possible cumulative effects from TPH (Plot2).	End Users – On site	Contact with soils, ingestion, dust inhalation in garden and landscape areas. No vapour inhalation risk.	Low to moderate risk in garden/landscaped areas
	Controlled Waters	Migration	Low to Negligible risk
	Buildings/services	Ingress into water supply pipes	Negligible with appropriate selection of water supply pipes
	Construction workers	Contact with soils	Negligible with appropriate PPE and suppression of dust
	End Users – Off Site	Migration	Negligible Risk

7.6 Discussion and Remedial Works

The recommendations assume that any asphalt scalpings present at surface anywhere on site are removed as part of the site preparation works.

The presence of elevated levels of lead, PAHs and possible cumulative effects from TPH locally in the made ground will require further remedial action to safeguard the health of end users where present in the proposed garden/landscaping areas in the areas of Plots 2 to 4 and Plot 5. It would be considered appropriate to either remove the made ground or provide a minimum cover of 0.60m depth of clean inert soil to contaminated soils in these areas. This may entail removal of volumes of made ground depending on proposed finished ground levels.



Where the made ground is to be covered by buildings or other hard standing no remedial action is deemed necessary.

Prior to any remedial operations being undertaken a Remediation Method Statement should be drawn up. Any remedial measures undertaken will need to be independently checked and validated to the satisfaction of the Local Authority, NHBC and other statutory bodies. Any remedial works should be independently checked and verified by a suitably experienced Engineer and a validation report drawn up on completion of the work. The remedial works should be inspected and a photographic record made of the work. Any materials imported to site for use as clean cover should be checked and validated prior to use. Records should be kept of materials removed from site for disposal and details included in the validation report. The above investigation constitutes a preliminary investigation only and more severe or unexpected contamination may be present. If further contamination is uncovered during development works this should be reported immediately so appropriate action may be taken – a watching brief is thus recommended.

R. Foord BSc, MSc, MCSM, CGeol, FGS



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16. Environment Agency 2009 Soil Guideline Values for Xylene in Soil. Science Report SC050021/Xylene SGV.



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The report is provided for the sole use of the client and is confidential to them, their professional advisors, no responsibility whatsoever for the contents of the report will be accepted to any person other than the client.

New information, improved practices, changes in legislation, or changes in guidelines from Statutory Bodies may necessitate a re-interpretation of the report in whole or part after its original submission.

The report and/or opinion will be prepared and written for the specific purposes and/or development stated in the document and in relation to the nature and extent of proposals made available to us at the time of writing. The recommendations should not be used for other schemes on or adjacent to the site.

The report is based on the ground conditions encountered in the exploratory holes together with the results of field and laboratory testing in the context of the proposed development. Conditions between exploratory holes have been interpolated, however soil conditions are highly variable and may differ from the interpolation. There may be conditions, appertaining to the site, which may not be revealed by the investigation, and which may not be taken into account in the report.

The accuracy of the results reported will depend on the technique of measurement, investigation and test used and these values should not be regarded necessarily as characteristic of the strata as a whole. Where such measurements are critical, the technique of the investigation will need to be reviewed and supplementary investigation undertaken in accordance with the advice of the company where necessary.

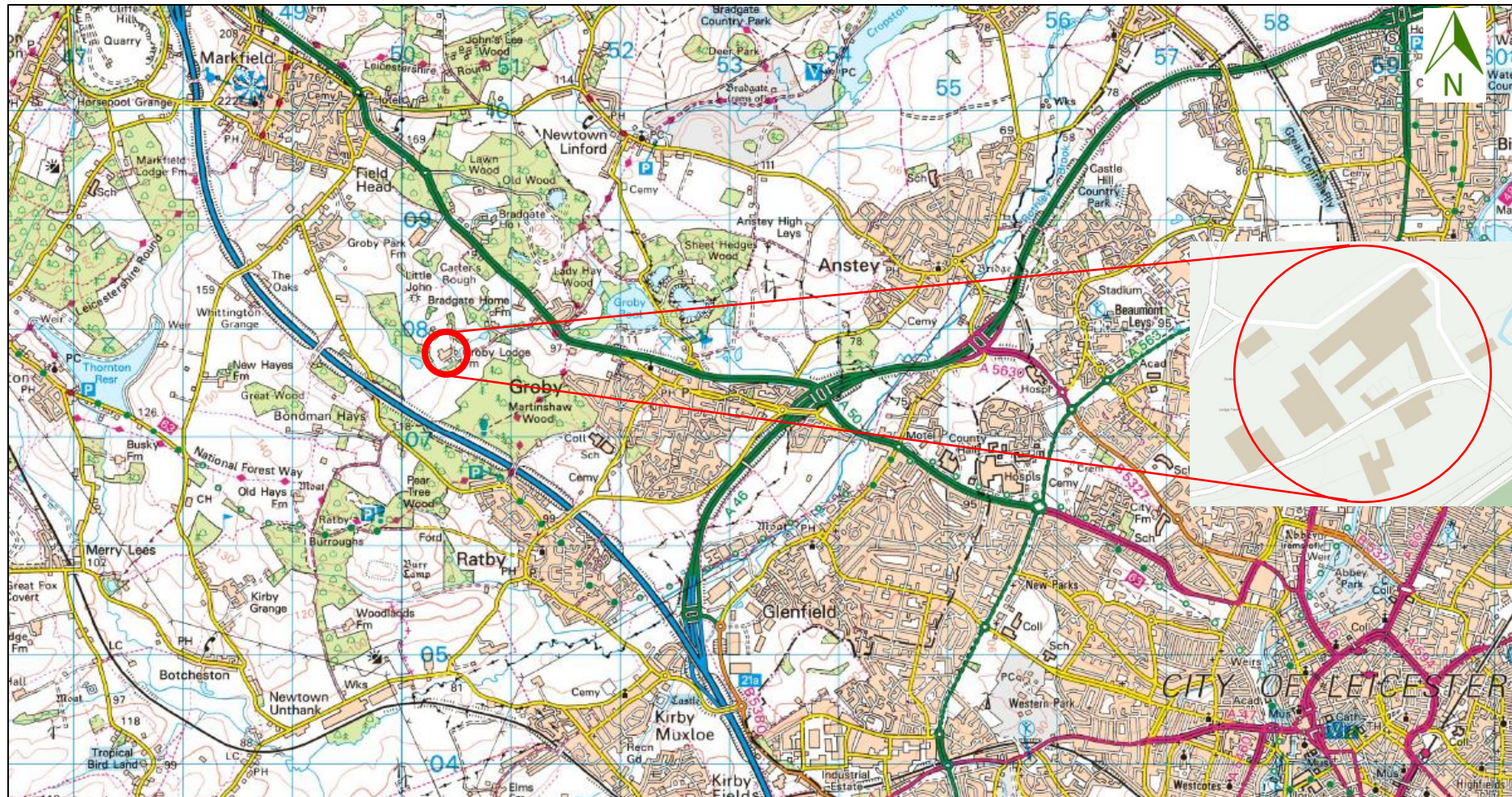
The economic viability of the proposal referred to in the report, or of the solutions put forward to any problems encountered, will depend on very many factors in addition to the geotechnical considerations hence its evaluation will be outside the scope of the report.

Where any data supplied by the Client or from other sources, including previous site investigations, have been used it has been assumed that the information is correct. No responsibility can be accepted by Compass Geotechnical Limited for inaccuracies in the data supplied by any other party.

The investigation does not include the identification of Japanese Knotweed. Any such survey should be undertaken by a specialist.



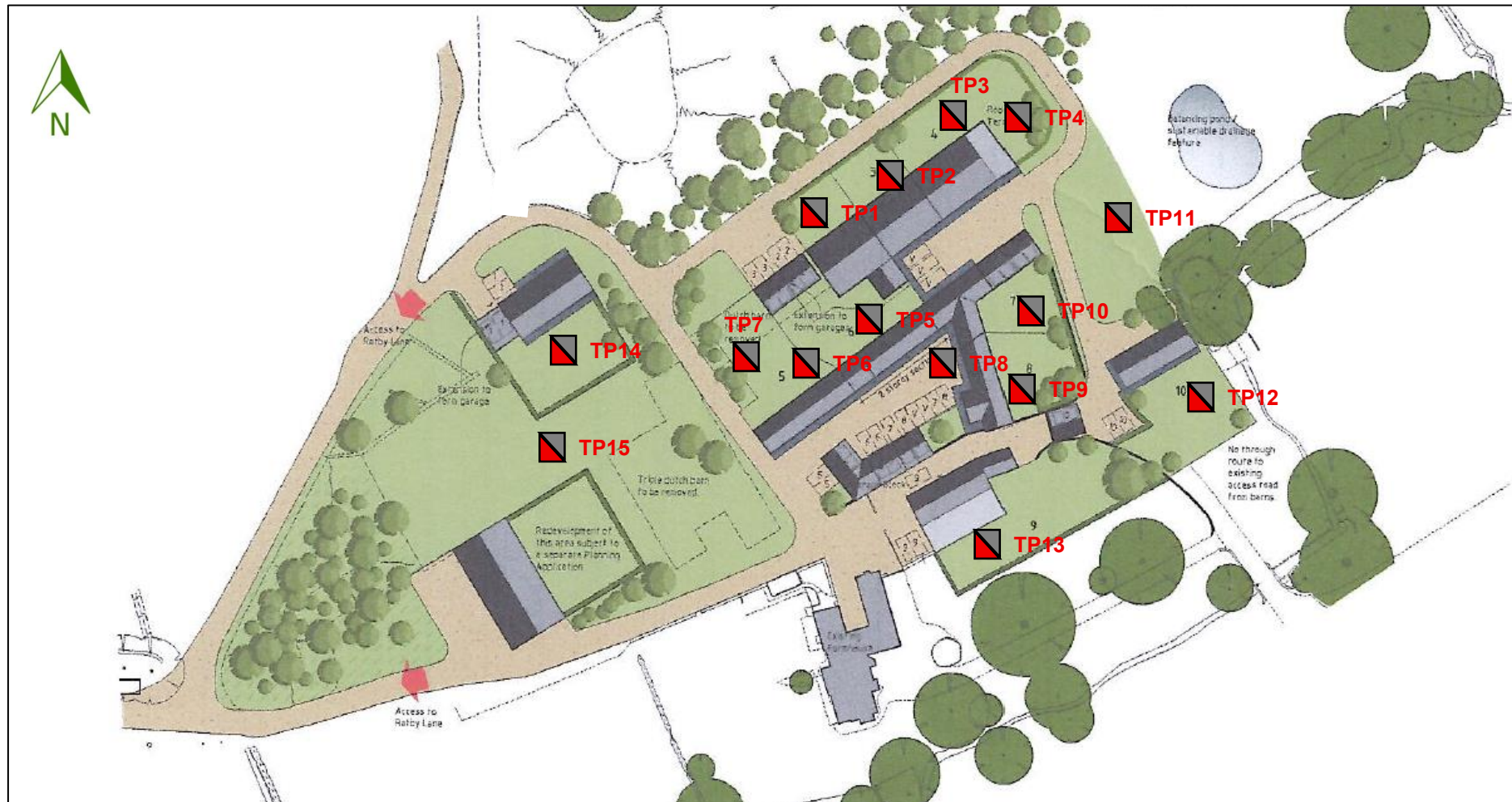
Appendix (i)
Figures



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Figure 1	Site Location Plan
Date	April 2026
Not to Scale	

Report on a Phase 2 Contamination Assessment for a
Proposed Residential Development at Groby Lodge Farm,
Slate Pit Lane, Groby, Leicester, LE6 0GN



Extract from Urban Designs Site Layout Plan Drawing Number 2015-427-22K dated November 2016

Figure 2	Proposed Layout Plan with Trial Pits
Date	April 2026
Not to Scale	



Appendix (ii)
Trial Pit Logs



Introduction

All sampling and in-situ test methods are carried out in accordance with the relevant British and European standards as referenced below.

Abbreviations Used

Exploratory hole records are presented in graphical format with the use of standard abbreviations as outlined below.

Sampling Method

BH	Borehole
TP	Trial Pit
WS	Windowless Sample Hole
CC	Concrete Cored Hole

Sample Types

D	Disturbed Sample
B	Bulk Sample
ES	Environmental Sample
PID	Sample for total VOC screen
L	Liner Tube Sample
U	Undisturbed Sample
UT	Thin Wall Undisturbed Sample
NR	No Recovery
W	Water Sample
C	Rotary Core

In-Situ Tests

DP	Dynamic Probe Test
CPT	Cone Penetrometer Test
SPT	Standard Penetrometer Test
V	Hand Shear Vane Strength Determination (kPa) – manufacturer's calibration of 1.491 applied to direct reading
V*	Hand Shear Vane Strength Determination (kPa) on excavated block of material

References

BS 5930:2015 + A1:2020 Code of Practice for Ground Investigations

BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites – Code of Practice

BS EN ISO 14688-1:2018 Geotechnical Investigation and Testing – Identification and Classification of Soil: Part 1 Identification and description.

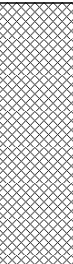
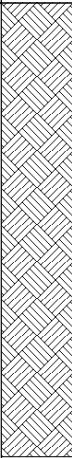
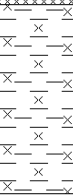
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BS EN ISO 22475-1:2006 Geotechnical Investigation and Testing – Sampling Methods and Groundwater measurements: Part 1 Technical Principles for Execution.

BS EN ISO 22476-2:2005+A1:2011 Field Testing Part 2: Dynamic Probing.

BS EN ISO 22476-3:2005 + A1:2011 Geotechnical Investigation and Testing – Field Testing: Part 3: Standard Penetration Test.

EUR 26227 EN, 2013 Eurocode 7 Chapter 5 Ground Investigation and Testing.

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk			Trial Pit Log				Project ID 252679		Trial Pit No. TP1 Sheet 1 of 1 Scale: 1:10					
Project Title: Groby Lodge Farm			Location: Slate Pit Lane, Groby, Leicester, LE6 0GN			Client: Groby Lodge Estate Limited			Date Excavated 18/03/2026					
Easting:			Northing:			Level (mAOD):			Logged: RF Checked:					
Samples & In Situ Testing			Strata Details									Groundwater		
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description				Depth (mBGL)	Water Strike	Backfill/ Installation		
0.10 - 0.30	ES			0.35		MADE GROUND: Asphalt scalplings over brick rubble with occasional fine to coarse gravel size grey slate, ceramic fragments, brown and white chert in an brown clayey sandy matrix. (0.35m)								
				0.60		Red brown mottled grey green silty CLAY.(0.25m)								
						Trial Pit Completed at 0.600m								
										1				
										2				
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations							
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks					
1.20	0.60	Stable	None						No groundwater seepages encountered					
Plant Used: Tracked mini excavator		Remarks:												



Compass Geotechnical
13 Willow Park, Stoke Golding
CV13 6EU
www.compassgeotechnical.co.uk

Trial Pit Log

Project ID
252679

Trial Pit No.
TP2

Sheet 1 of 1
Scale: 1:10

Project Title:

Groby Lodge Farm

Location:

Slate Pit Lane, Groby, Leicester, LE6 0GN

Client:

Groby Lodge Estate Limited

Date Excavated

18/03/2026

Logged:

RF

Checked:

Easting:

Northing:

Level (mAOD):

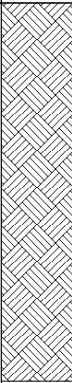
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Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description	Depth (mBGL)	Water Strike	Backfill/ Installation
0.00 - 0.40	ES			0.10		MADE GROUND: Asphalt scalplings of fine to coarse gravel size. (0.10m)			
						MADE GROUND: Brick, concrete and grey slate of fine to coarse gravel and cobble size in a red brown clayey fine to coarse sand matrix.(0.30m)			
				0.40		Red brown mottled grey green silty CLAY.(0.10m)			
				0.50		Trial Pit Completed at 0.500m			
							1		
							2		

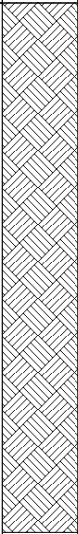
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Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks
1.20	0.60	Stable	None						No groundwater seepages encountered

Plant Used:

Tracked mini excavator

Remarks:

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk		Trial Pit Log				Project ID 252679		Trial Pit No. TP3	
Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Sheet 1 of 1			
						Scale: 1:10			
						Date Excavated 18/03/2026			
Easting:		Northing:		Level (mAOD):		Logged: RF			
Samples & In Situ Testing				Strata Details		Groundwater			
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description	Depth (mBGL)	Water Strike	Backfill/ Installation
				0.10		MADE GROUND: Asphalt scalplings of fine to coarse gravel size. (0.10m)			
						MADE GROUND: Brick, concrete and slate fragments of fine to coarse gravel and cobble size with rare plastic, wire and wood infilled with red brown mottled grey clay.(0.29m)			
				0.39		Red brown mottled grey green silty CLAY.(0.11m)			
				0.50		Trial Pit Completed at 0.500m			
							1		
							2		
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations		
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks
1.20	0.60	Stable	None						No groundwater seepages encountered
Plant Used: Tracked mini excavator		Remarks:							

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk			Trial Pit Log				Project ID 252679		Trial Pit No. TP4		
							Sheet 1 of 1				
							Scale: 1:10				
Project Title: Groby Lodge Farm			Location: Slate Pit Lane, Groby, Leicester, LE6 0GN			Client: Groby Lodge Estate Limited			Date Excavated 18/03/2026		
Easting:			Northing:			Level (mAOD):			Logged: RF		
Samples & In Situ Testing						Strata Details			Groundwater		
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description			Depth (mBGL)	Water Strike	Backfill/ Installation
0.20 - 0.40	ES			0.13		MADE GROUND: Asphalt scalplings of fine to coarse gravel size and fragments of asphalt.(0.13m)					
						MADE GROUND: Red brown sand with occasional whole and part bricks.(0.39m)					
				0.52		Stiff red brown occasionally mottled grey green CLAY.(0.18m)					
					0.70	Trial Pit Completed at 0.700m					
1											
2											
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations				
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks		
1.20	0.60	Stable	None						No groundwater seepages encountered		
Plant Used: Tracked mini excavator		Remarks:									



Project ID
252679

Trial Pit No.
TP5

Sheet 1 of 1

Scale:	1:10
---------------	------

Project Title:

Grobby Lodge Farm

Location:

Slate Pit Lane, Groby, Leicester, LE6 0GN

Client:

Grobby Lodge Estate Limited

Date Excavated

18/03/2026

Logged:

RF

Easting:

Northing:

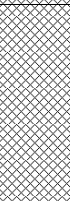
Level (mAOD):

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Samples & In Situ Testing

Strata Details

Groundwater

Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description	Depth (mBGL)	Water Strike	Backfill/ Installation
0.10 - 0.30	ES			0.08		MADE GROUND: Asphalt scalplings of fine to coarse gravel size. (0.08m)			
						MADE GROUND: Concrete and brick rubble infilled with grey brown sand.(0.27m)			
0.40 - 0.60	ES			0.35		Stiff red brown mottled grey green CLAY.(0.35m)			
									
				0.70		Trial Pit Completed at 0.700m			

Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations		
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks
1.20	0.60	Stable	None						No groundwater seepages encountered

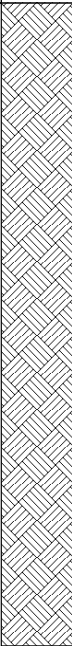
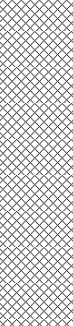
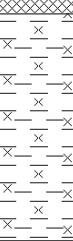
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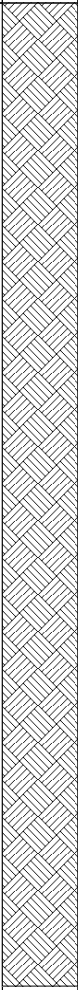
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Project Title: Groby Lodge Farm			Location: Slate Pit Lane, Groby, Leicester, LE6 0GN			Client: Groby Lodge Estate Limited			Scale: 1:10				
									Date Excavated 18/03/2026				
Easting:			Northing:			Level (mAOD):			Logged: RF				
Samples & In Situ Testing			Strata Details									Groundwater	
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description				Depth (mBGL)	Water Strike	Backfill/ Installation	
0.10 - 0.70	ES			0.08		MADE GROUND: Asphalt scalplings of fine to coarse gravel size. (0.08m)							
						MADE GROUND: Brick and slate of fine to coarse gravel and cobble size in a brown gravelly sandy clay matrix. Gravel is black brown white fine to coarse angular to sub rounded chert and brown and white fine to coarse sub rounded quartz.(0.72m)							
				0.80		Stiff red brown CLAY.(0.30m)							
					1.10	Trial Pit Completed at 1.100m							
										1			
										2			
Pit Dimensions			Pit Stability and Comments			Water Strikes			Observations				
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks		Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks			
1.20	0.60	Stable	None							No groundwater seepages encountered			
Plant Used: Tracked mini excavator			Remarks:										

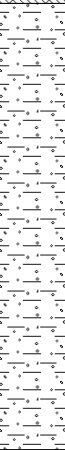
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Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Sheet 1 of 1				
Easting:		Northing:		Level (mAOD):		Scale: 1:10				
Samples & In Situ Testing				Strata Details		Logged: RF				
Checked:						Date Excavated 18/03/2026				
Groundwater										
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description		Depth (mBGL)	Water Strike	Backfill/ Installation
0.10 - 0.70	ES					MADE GROUND: Brick and slate of fine to coarse gravel, cobble and boulder size in a brown gravelly sandy clay matrix. Gravel is black brown white fine to coarse angular to sub rounded chert and brown and white fine to coarse sub rounded quartz.(0.80m)				
				0.80		Stiff red brown CLAY.(0.30m)				
				1.10		Trial Pit Completed at 1.100m				
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations			
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks	
1.20	0.60	Stable	None						No groundwater seepages encountered	
Plant Used: Tracked mini excavator		Remarks:								

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk		Trial Pit Log				Project ID 252679		Trial Pit No. TP8	
Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Sheet 1 of 1			
						Scale: 1:10			
						Date Excavated 18/03/2026			
Easting:		Northing:		Level (mAOD):		Logged: RF			
Samples & In Situ Testing				Strata Details		Checked:			
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description	Depth (mBGL)	Water Strike	Backfill/ Installation
0.10 - 0.50	ES			0.10		MADE GROUND: Concrete block paving.(0.10m)			
						MADE GROUND: Crushed brick and concrete of fine to coarse gravel and cobble size in a red brown and dark grey brown slightly gravelly clay matrix with occasional pockets of dark grey slightly organic clay.(0.45m)			
					0.55				
				0.85		Trial Pit Completed at 0.850m			
							1		
							2		
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations		
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks
1.20	0.60	Stable	None						No groundwater seepages encountered
Plant Used: Tracked mini excavator		Remarks:							

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk			Trial Pit Log				Project ID 252679		Trial Pit No. TP9		
Project Title: Groby Lodge Farm			Location: Slate Pit Lane, Groby, Leicester, LE6 0GN			Client: Groby Lodge Estate Limited		Sheet 1 of 1			
Easting:			Northing:			Level (mAOD):		Scale: 1:10			
Logged: RF			Checked:			Date Excavated 18/03/2026					
Samples & In Situ Testing			Strata Details							Groundwater	
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description			Depth (mBGL)	Water Strike	Backfill/ Installation
0.30 - 0.60	ES			0.25		Dark brown grey silty clayey Topsoil with roots.(0.25m)					
						MADE GROUND: Brown grey clay with occasional brick and grey slate cobbles and roots.(0.60m)					
0.90 - 1.00	ES			0.85		Stiff red brown occasionally mottled grey green silty CLAY.(0.25m)			1		
				1.10		Trial Pit Completed at 1.100m			2		
Pit Dimensions			Pit Stability and Comments			Water Strikes		Observations			
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks		Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks	
1.20	0.60	Stable	None							No groundwater seepages encountered	
Plant Used: Tracked mini excavator			Remarks:								

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk			Trial Pit Log				Project ID 252679		Trial Pit No. TP10 Sheet 1 of 1 Scale: 1:10					
Project Title: Groby Lodge Farm			Location: Slate Pit Lane, Groby, Leicester, LE6 0GN			Client: Groby Lodge Estate Limited			Date Excavated 18/03/2026					
Easting:			Northing:			Level (mAOD):			Logged: RF Checked:					
Samples & In Situ Testing			Strata Details									Groundwater		
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description				Depth (mBGL)	Water Strike	Backfill/ Installation		
0.20 - 0.50	ES			0.10		Pale grey sandy Topsoil.(0.10m)								
						MADE GROUND: Grey brown clay with occasional brick, slate, concrete paviour, pink granite and quartz gravel.(0.50m)								
				0.60		Stiff red brown mottled grey green CLAY.(0.70m)								
				1.30		Trial Pit Completed at 1.300m				2				
Pit Dimensions			Pit Stability and Comments			Water Strikes			Observations					
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks		Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks				
1.20	0.60	Stable	None							No groundwater seepages encountered				
Plant Used: Tracked mini excavator			Remarks:											

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk		Trial Pit Log				Project ID 252679		Trial Pit No. TP11	
Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Sheet 1 of 1			
						Scale: 1:10			
						Date Excavated 18/03/2026			
Easting:		Northing:		Level (mAOD):		Logged: RF			
Samples & In Situ Testing				Strata Details		Checked:			
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description	Depth (mBGL)	Water Strike	Backfill/ Installation
0.50 - 1.00	ES			0.25		Dark grey brown sandy Topsoil.(0.25m)			
						Stiff yellowish brown becoming red brown CLAY.(0.95m)			
				1.20		Trial Pit Completed at 1.200m			
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations		
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks
1.20	0.60	Stable	None						No groundwater seepages encountered
Plant Used: Tracked mini excavator		Remarks:							

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk		Trial Pit Log				Project ID 252679		Trial Pit No. TP12		
						Sheet 1 of 1				
Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Scale: 1:10		Date Excavated 18/03/2026		
Easting:		Northing:		Level (mAOD):		Logged: RF		Checked:		
Samples & In Situ Testing			Strata Details							
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description		Depth (mBGL)	Water Strike	Backfill/ Installation
0.40 - 0.80	ES			0.31		Turf over brown clayey Topsoil with occasional slate gravel.(0.31m)				
						Stiff red brown mottled grey green CLAY with black brown white fine to coarse sub angular to sub rounded chert, brown and white fine to coarse rounded quartz, brown fine to coarse angular sandstone and grey fine to coarse angular slate gravel.(0.59m)				
					Becoming less gravelly with depth					
				0.90		Trial Pit Completed at 0.900m				
1 2										
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations			
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks	
1.20	0.60	Stable	None						No groundwater seepages encountered	
Plant Used: Tracked mini excavator		Remarks:								



Compass Geotechnical
13 Willow Park, Stoke Golding
CV13 6EU
www.compassgeotechnical.co.uk

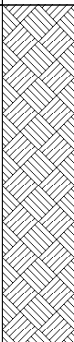
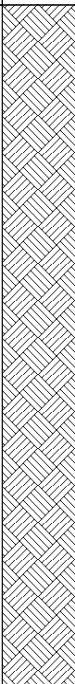
Trial Pit Log

Project ID
252679

Trial Pit No.
TP13
Sheet 1 of 1
Scale: 1:10

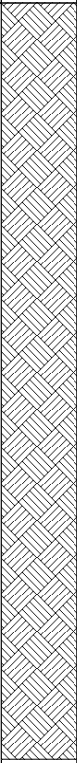
Project Title: Groby Lodge Farm
Location: Slate Pit Lane, Groby, Leicester, LE6 0GN
Client: Groby Lodge Estate Limited
Date Excavated: 18/03/2026

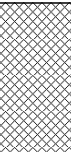
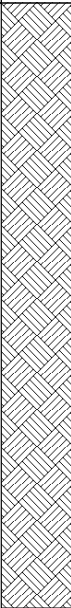
Easting:
Northing:
Level (mAOD):
Logged: RF
Checked:

Samples & In Situ Testing			Strata Details					Groundwater		
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description		Depth (mBGL)	Water Strike	Backfill/ Installation
0.45 - 0.90	ES			0.45		Turf over brown clayey Topsoil with occasional brick and slate fragments.(0.45m)				
						Stiff red brown mottled grey green CLAY with rare black brown white fine to coarse sub angular to sub rounded chert, brown and white fine to coarse rounded quartz, brown fine to coarse angular sandstone and grey fine to coarse angular slate gravel.(0.45m) <i>Becoming less gravelly with depth</i>				
				0.90	Trial Pit Completed at 0.900m					
								1		
								2		

Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations		
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks
1.20	0.60	Stable	None						No groundwater seepages encountered

Plant Used: Tracked mini excavator
Remarks:

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk		Trial Pit Log				Project ID 252679		Trial Pit No. TP14			
Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Sheet 1 of 1					
						Scale: 1:10					
						Date Excavated 18/03/2026					
Easting:		Northing:		Level (mAOD):		Logged: RF		Checked:			
Samples & In Situ Testing			Strata Details							Groundwater	
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description			Depth (mBGL)	Water Strike	Backfill/ Installation
0.20 - 0.50	ES			0.10		MADE GROUND: Concrete Slab.(0.10m)					
				0.20		Brown and grey sandy subsoil.(0.10m)					
						Yellow brown mottled red brown becoming red brown silty CLAY. (0.80m)					
											
											
											
											
											
											
											
			1.00		Trial Pit Completed at 1.000m			1			
									2		
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations				
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks		
1.20	0.60	Stable	None						No groundwater seepages encountered		
Plant Used: Tracked mini excavator		Remarks:									

 Compass Geotechnical 13 Willow Park, Stoke Golding CV13 6EU www.compassgeotechnical.co.uk		Trial Pit Log				Project ID 252679		Trial Pit No. TP15			
						Sheet 1 of 1					
Project Title: Groby Lodge Farm		Location: Slate Pit Lane, Groby, Leicester, LE6 0GN		Client: Groby Lodge Estate Limited		Scale: 1:10		Date Excavated 18/03/2026			
Easting:		Northing:		Level (mAOD):		Logged: RF		Checked:			
Samples & In Situ Testing			Strata Details							Groundwater	
Depth (mBGL)	Sample / Test ID	Test Result	Level (mAOD)	Depth (mBGL)	Legend	Strata Description			Depth (mBGL)	Water Strike	Backfill/ Installation
0.20 - 0.80	ES			0.20		MADE GROUND: Brick rubble with concrete, wire, ceramic and metal fragments in a brown clayey matrix.(0.20m)					
						Stiff red brown mottled grey green CLAY with rare mudstone lithorelicts of fine to coarse gravel size.(0.60m)					
					0.80	Trial Pit Completed at 0.800m					
									1		
									2		
Pit Dimensions		Pit Stability and Comments			Water Strikes		Observations				
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Remarks	Strike at (m)	Sealed at (m)	Time Mins	Rose to (m)	Remarks		
1.20	0.60	Stable	None						No groundwater seepages encountered		
Plant Used: Tracked mini excavator		Remarks:									



Appendix (iii)
Laboratory Test Results – Contamination

Compass Geotechnical Limited
13 Willow Park
Upton Lane
Stoke Golding
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CV13 6EU

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i2 Analytical Ltd.
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Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

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Analytical Report Number : 26-014558

Project / Site name:	Groby Lodge Farm	Samples received on:	19/03/2026
Your job number:	252679-1	Samples instructed on/ Analysis started on:	19/03/2026
Your order number:	252679-1	Analysis completed by:	30/03/2026
Report Issue Number:	1	Report issued on:	31/03/2026
Samples Analysed:	16 soil samples		



Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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

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

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

Analytical Report Number: 26-014558
Project / Site name: Groby Lodge Farm
Your Order No: 252679-1

Lab Sample Number	865509	865510	865511	865512	865513
Sample Reference	TP1	TP2	TP4	TP5	TP5
Sample Number	ES1	ES1	ES1	ES1	ES2
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10-0.30	0.00-0.40	0.20-0.40	0.10-0.30	0.40-0.60
Date Sampled	18/03/2026	18/03/2026	18/03/2026	18/03/2026	18/03/2026
Time Taken	0915	0920	0940	0955	1000
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Mass of stone >10mm	%	0.1	NONE	24.2	18.4	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9	3.7	13	14	15
Total mass of sample received	kg	0.1	NONE	1	0.9	0.7	0.7	0.9
Whole Sample Crushed	N/A	N/A	NONE	-	-	-	-	-

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	PDO	PDO	PDO	PDO	-
Analysis completed	N/A	N/A	N/A	28/03/2026	28/03/2026	28/03/2026	28/03/2026	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.4	-	8.2	8.7	8
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.08	< 0.05	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.14	< 0.05	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.86	0.09	< 0.05	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.37	0.06	< 0.05	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	6.9	0.61	< 0.05	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	1.2	0.24	< 0.05	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	8.9	1.7	0.08	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	8	1.8	0.09	-	0.06
Benzo(a)anthracene	mg/kg	0.05	MCERTS	3.8	1.3	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	3.4	1.1	0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	5.8	3.5	0.09	-	0.12
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	2.1	0.98	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	5	3	0.07	-	0.09
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.8	1.7	< 0.05	-	0.07
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.67	0.48	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.3	2.4	< 0.05	-	0.07

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	53.2	18.9	< 0.80	-	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.7	-	7.3	9.9	17
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.7	-	< 0.2	< 0.2	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	-	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	-	28	22	50
Copper (aqua regia extractable)	mg/kg	1	MCERTS	33	-	12	29	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	370	-	15	55	14
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	-	13	18	34
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	180	-	3200	130	65

Analytical Report Number: 26-014558
Project / Site name: Groby Lodge Farm
Your Order No: 252679-1

Lab Sample Number	865509	865510	865511	865512	865513
Sample Reference	TP1	TP2	TP4	TP5	TP5
Sample Number	ES1	ES1	ES1	ES1	ES2
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10-0.30	0.00-0.40	0.20-0.40	0.10-0.30	0.40-0.60
Date Sampled	18/03/2026	18/03/2026	18/03/2026	18/03/2026	18/03/2026
Time Taken	0915	0920	0940	0955	1000
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPH (>EC8 - EC10) HS_1D_TOTAL	mg/kg	0.02	MCERTS	-	< 0.02	-	< 0.02	-
TPH (>EC10 - EC12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	-	8.5	-	< 2.0	-
TPH (>EC12 - EC16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	-	18	-	< 4.0	-
TPH (>EC16 - EC21) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	37	-	18	-
TPH (>EC21 - EC35) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	510	-	57	-
TPH (>EC35 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	380	-	< 10	-
TPH Total >EC8 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	-	950	-	87	-
TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	950	-	87	-

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

Analytical Report Number: 26-014558
Project / Site name: Groby Lodge Farm
Your Order No: 252679-1

Lab Sample Number	865514	865515	865516	865517	865518
Sample Reference	TP6	TP7	TP8	TP9	TP9
Sample Number	ES1	ES1	ES1	ES1	ES2
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10-0.70	0.10-0.70	0.10-0.50	0.30-0.60	0.90-1.00
Date Sampled	18/03/2026	18/03/2026	18/03/2026	18/03/2026	18/03/2026
Time Taken	1010	1020	1030	1040	1045
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Mass of stone >10mm	%	0.1	NONE	< 0.1	< 0.1	< 0.1	51.6	< 0.1
Moisture Content	%	0.01	NONE	14	17	13	13	15
Total mass of sample received	kg	0.1	NONE	0.8	0.8	0.8	1.1	0.9
Whole Sample Crushed	N/A	N/A	NONE	-	-	-	Crushed	-

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	PDO	-	-	-	-
Analysis completed	N/A	N/A	N/A	28/03/2026	-	-	-	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	-	7.8	-	7.5	8.4
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	-	0.08	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	0.08	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	-	1.3	0.1	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	0.65	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	8.9	0.11	0.1	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	9.6	0.11	0.13	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	5.6	< 0.05	0.06	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	5.8	< 0.05	0.09	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	9.2	0.07	0.26	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	4.3	< 0.05	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	8.6	0.06	0.22	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	4.8	< 0.05	0.16	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	0.81	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	5.5	< 0.05	0.17	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-	65.2	< 0.80	1.29	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	18	-	8.7	8.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	< 0.2	-	< 0.2	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	< 1.8	-	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	28	-	27	64
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	140	-	39	13
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	170	-	53	30
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	0.4	-	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	38	-	21	55
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	-	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	210	-	120	65

Analytical Report Number: 26-014558
Project / Site name: Groby Lodge Farm
Your Order No: 252679-1

Lab Sample Number	865514	865515	865516	865517	865518
Sample Reference	TP6	TP7	TP8	TP9	TP9
Sample Number	ES1	ES1	ES1	ES1	ES2
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.10-0.70	0.10-0.70	0.10-0.50	0.30-0.60	0.90-1.00
Date Sampled	18/03/2026	18/03/2026	18/03/2026	18/03/2026	18/03/2026
Time Taken	1010	1020	1030	1040	1045
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPH (>EC8 - EC10) HS_1D_TOTAL	mg/kg	0.02	MCERTS	< 0.02	-	< 0.02	-	-
TPH (>EC10 - EC12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	< 2.0	-	< 2.0	-	-
TPH (>EC12 - EC16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	5.7	-	< 4.0	-	-
TPH (>EC16 - EC21) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	58	-	< 10 ^{##}	-	-
TPH (>EC21 - EC35) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	180	-	< 10 ^{##}	-	-
TPH (>EC35 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	31	-	< 10	-	-
TPH Total >EC8 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	270	-	< 10	-	-
TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	270	-	< 10	-	-

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

Analytical Report Number: 26-014558
Project / Site name: Groby Lodge Farm
Your Order No: 252679-1

Lab Sample Number	865519	865520	865521	865522	865523
Sample Reference	TP10	TP11	TP12	TP13	TP14
Sample Number	ES1	ES1	ES1	ES1	ES1
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.20-0.50	0.50-1.00	0.40-0.80	0.45-0.90	0.20-0.50
Date Sampled	18/03/2026	18/03/2026	18/03/2026	18/03/2026	18/03/2026
Time Taken	1050	1100	1110	1115	1200
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Mass of stone >10mm	%	0.1	NONE	< 0.1	6	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	14	15	20	18	35
Total mass of sample received	kg	0.1	NONE	0.9	0.8	0.9	1	1.1
Whole Sample Crushed	N/A	N/A	NONE	-	-	-	-	-

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	-	-	-	-	-
Analysis completed	N/A	N/A	N/A	-	-	-	-	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.8	7.1	7.6	7.9	7.8
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	-	< 0.05	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	-	< 0.05	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-	-	< 0.80	-	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.1	6.7	10	13	4.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	0.2	0.3	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	41	71	68	27
Copper (aqua regia extractable)	mg/kg	1	MCERTS	35	19	16	17	11
Lead (aqua regia extractable)	mg/kg	1	MCERTS	160	25	47	22	9.7
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	38	72	63	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.7	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	87	65	73	82	43

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Lab Sample Number	865519	865520	865521	865522	865523
Sample Reference	TP10	TP11	TP12	TP13	TP14
Sample Number	ES1	ES1	ES1	ES1	ES1
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.20-0.50	0.50-1.00	0.40-0.80	0.45-0.90	0.20-0.50
Date Sampled	18/03/2026	18/03/2026	18/03/2026	18/03/2026	18/03/2026
Time Taken	1050	1100	1110	1115	1200
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPH (>EC8 - EC10) HS_1D_TOTAL	mg/kg	0.02	MCERTS	< 0.02	< 0.02	-	-	-
TPH (>EC10 - EC12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	< 2.0	< 2.0	-	-	-
TPH (>EC12 - EC16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	< 4.0	< 4.0	-	-	-
TPH (>EC16 - EC21) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	-	-	-
TPH (>EC21 - EC35) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	-	-	-
TPH (>EC35 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	-	-	-
TPH Total >EC8 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	< 10	< 10	-	-	-
TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	-	-	-

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

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Your Order No: 252679-1

Lab Sample Number	865524			
Sample Reference	TP15			
Sample Number	ES1			
Water Matrix	N/A			
Depth (m)	0.20-0.80			
Date Sampled	18/03/2026			
Time Taken	1140			
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Mass of stone >10mm	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	16
Total mass of sample received	kg	0.1	NONE	1
Whole Sample Crushed	N/A	N/A	NONE	-

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	-
Asbestos Analyst ID	N/A	N/A	N/A	-
Analysis completed	N/A	N/A	N/A	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.7
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-
Acenaphthylene	mg/kg	0.05	MCERTS	-
Acenaphthene	mg/kg	0.05	MCERTS	-
Fluorene	mg/kg	0.05	MCERTS	-
Phenanthrene	mg/kg	0.05	MCERTS	-
Anthracene	mg/kg	0.05	MCERTS	-
Fluoranthene	mg/kg	0.05	MCERTS	-
Pyrene	mg/kg	0.05	MCERTS	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-
Chrysene	mg/kg	0.05	MCERTS	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	59
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	46
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	68
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.5
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	68

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Lab Sample Number	865524			
Sample Reference	TP15			
Sample Number	ES1			
Water Matrix	N/A			
Depth (m)	0.20-0.80			
Date Sampled	18/03/2026			
Time Taken	1140			
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Petroleum Hydrocarbons

TPH (>EC8 - EC10) HS_1D_TOTAL	mg/kg	0.02	MCERTS	-
TPH (>EC10 - EC12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	-
TPH (>EC12 - EC16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	-
TPH (>EC16 - EC21) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-
TPH (>EC21 - EC35) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-
TPH (>EC35 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-

TPH Total >EC8 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	-
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TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 26-014558

Project / Site name: Groby Lodge Farm

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
865509	TP1	ES1	0.10-0.30	Brown gravelly sand with stones
865510	TP2	ES1	0.00-0.40	Brown sand with gravel and stones
865511	TP4	ES1	0.20-0.40	Brown sand with gravel
865512	TP5	ES1	0.10-0.30	Brown sand with gravel and brick
865513	TP5	ES2	0.40-0.60	Brown clay and sand with gravel
865514	TP6	ES1	0.10-0.70	Brown clay and sand with gravel and brick
865515	TP7	ES1	0.10-0.70	Brown clay and sand with gravel
865516	TP8	ES1	0.10-0.50	Brown clay and sand with gravel
865517	TP9	ES1	0.30-0.60	Brown clay and sand with stones and vegetation
865518	TP9	ES2	0.90-1.00	Brown clay and sand
865519	TP10	ES1	0.20-0.50	Brown loam and clay with gravel and vegetation
865520	TP11	ES1	0.50-1.00	Brown clay and sand with gravel and stones
865521	TP12	ES1	0.40-0.80	Brown clay
865522	TP13	ES1	0.45-0.90	Brown clay and sand with gravel
865523	TP14	ES1	0.20-0.50	Brown clay and sand with gravel
865524	TP15	ES1	0.20-0.80	Brown clay and sand with gravel

Analytical Report Number : 26-014558

Project / Site name: Groby Lodge Farm

Water matrix abbreviations:

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

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons by HS-GC-MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS	In-house method	L088-PL	W	MCERTS
Whole Sample Crushed	Either: Client specific preparation instructions - sample(s) crushed whole prior to analysis OR Sample unsuitable for standard preparation and therefore crushed whole prior to analysis	In house method, applicable to dry samples only	L019B	D	NONE

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

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

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

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

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

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

The result for sum should be interpreted with caution

##- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.



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REMEDIATION METHOD STATEMENT FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT GROBY LODGE FARM, SLATE PIT LANE, GROBY, LEICESTER, LE6 0GN

Report No: 252679RMS

April 2026

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**REMEDIATION METHOD STATEMENT FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT
GROBY LODGE FARM, SLATE PIT LANE, GROBY, LEICESTER, LE6 0GN**

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1. Introduction and Objectives
2. Site Location and Setting
3. Findings of the Investigations and Assessments
4. Remediation Requirements
5. Environmental Protection
6. Certification of the Works

Appendices

Appendix (i) Figures

Appendix (ii) Topsoil Testing Suite and Acceptance Criteria



REMEDIATION METHOD STATEMENT FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT GROBY LODGE FARM, SLATE PIT LANE, GROBY, LEICESTER, LE6 0GN

1. INTRODUCTION AND OBJECTIVES

- 1.1 The purpose of this report is to provide a remediation strategy and to set down the sequential operations proposed to address the remediation of contamination during the conversion of existing barns and buildings into residential units at Groby Lodge Farm, Slate Pit Lane, Groby, Leicester, LE6 0GN. This report has been prepared on instructions given by the Client, John Barker (Groby Lodge Estate Limited, Groby, Leicester, LE6 0GN).
- 1.2 The site has been the subject of a previous desk study and investigation as referenced below.
- Murray Rix Geotechnical Report on a Preliminary Contamination Risk Assessment and Desk Study, Groby Lodge Farm, Slate Pit Lane, Leicester, LE6 0GN. Report reference Geojob/06-200R(B) dated July 2007.
 - Murray Rix Limited Report on a Phase 1 Desk Study and Risk Assessment for a Proposed Residential Development at Groby Lodge Farm, Slate Pit Lane, Groby, Leicester, LE6 0GN. Report No: 17-2976r dated January 2018.
 - Compass Geotechnical Limited Report on a Phase 2 Contamination Assessment for a Proposed Residential Development at Groby Lodge Farm, Slate Pit Lane, Groby, Leicester, LE6 0GN. Report No: 252679B-1 dated April 2026.
- 1.3 The remedial proposals presented in this report are to leave the site fit for its proposed residential end use comprising new dwellings with private gardens, associated parking and landscaping areas. A plan showing the proposed layout is presented as Figure 2, Appendix (i).

2. SITE LOCATION AND SETTING

- 2.1 The area under consideration forms part of a collection of barns and buildings associated with Groby Lodge Farm located on the northern side of Slate Pit Lane to the north west of the village of Groby, Leicestershire as shown on Figure 1, Appendix (i). The site is irregular in shape and is at and around National Grid Reference 450450 307750.
- 2.2 Historical information contained in the Phase 1 Desk confirmed that a number of barns were present on site since at least 1886 with an orchard in the west. The barns and buildings were extended and added to over the years and the historical maps indicate that by the 1950s the layout of structures was similar to that currently on site.



- 2.3 Published geological information suggests the site is underlain in part superficial alluvial deposits in the south overlying solid deposits of the Edwalton Member with the Swithland Formation outcropping locally to the north. The latest Environment Agency groundwater vulnerability maps class the site as medium to high in terms of groundwater vulnerability although the site is not in a groundwater source protection zone.

3. FINDINGS OF THE INVESTIGATIONS AND ASSESSMENTS

- 3.1 The investigations undertaken by Compass Geotechnical Limited confirmed variable surface conditions across the site with asphalt and scalplings present in the north and west (TP1 to TP7), block paving (TP8), concrete (TP14) and topsoil in the east and south east (TP9 to TP13).

In the majority of the trial pits made ground was present below the surface materials. The made ground in TP1 to TP4 in the north and north east comprised mainly brick, concrete and slate rubble infilled with a clayey sand which was of limited depth extending to around 0.35 to 0.52m bgl. In TP5 to TP8 and TP15 in the central portion the made ground comprised brick and concrete rubble infilled with gravelly clay which extended to a maximum of 0.80m bgl. In the east of the site (TP9 and TP10) the made ground comprised a clay with occasional inclusions of brick and concrete extending to around 0.60 to 0.85m bgl. In the north west of the site (TP14) subsoil was present immediately below surface concrete.

Beneath the topsoil in the remaining trial pits in the east and south east (TP11, TP12 and TP13) and below the made ground elsewhere at the site, natural clays were present. These natural clays comprised a stiff reddish brown occasionally mottled grey green clay thought to represent the Edwalton Formation. Locally in the south east (TP12 and TP13) inclusions of gravel were noted in the upper clay which may suggest some reworking of materials in the geological past. The natural soils were proved to extend to at least 1.30m bgl.

The investigation included analysis of the made ground and natural soils for a range of contaminants including heavy metals, Polyaromatic Hydrocarbons (PAHs), asbestos and Total Petroleum Hydrocarbons (TPH). Reference should be made to the reports of section 1.2 for full details of the site, the investigations carried out and the available test results.

- 3.2 The investigation highlighted elevated levels of lead and PAHs (benzo(b)fluoranthene, benzo(a)pyrene and dibenz(ah)anthracene) present locally in the made ground affecting Plots 2 to 4 and Plot 5 along with possible cumulative effects from TPH in Plot 2. The PAHs in Plots 2 to 4 are thought to be associated with the asphalt scalplings present in this area (TP1 and TP2), whereas the PAHs in TP7 (Plot 5) are not associated with asphalt as none was present in the trial pit. No evidence of contamination was identified in any of the other plots.



4. REMEDIATION REQUIREMENTS

4.1 The risk assessments included in the reports of Section 1.2 have indicated potential risks to end users as detailed below:

- Elevated concentrations of PAHs (benzo(b)fluoranthene, benzo(a)pyrene and dibenz(ah)anthracene) in Plots 2 to 4 and Plot 5, and possible cumulative effects from TPH in Plot 2 in the made ground.

In achieving effective remediation of the development area it will be necessary to break the source-pathway-receptor pollution linkages. The pathways which have been identified as of concern to end users are most relevant in any gardens or areas of soft landscaping.

Where the contamination is present beneath roads and parking areas then risks to end users are reduced or negated and remedial action is not normally considered necessary to safeguard end users.

4.2 In order to remediate the site the following measures are currently proposed in Plots 2 to 4 and Plot 5. No remedial measures are deemed necessary elsewhere at the site.

- Where the made ground is of limited thickness all of the made ground should be excavated out and removed from garden areas and soft landscaping and replaced with clean imported soil/topsoil. (Plots 2 to 4).
- Where the made ground is deeper (Plot 5) provide a cover of clean inert soil 600mm thick in garden and soft landscaping areas. This may entail removal of volumes of made ground depending on finished ground levels.

4.3 Following completion of the remedial measures detailed in section 4.2 it may be acceptable to use plastic water supply pipes, however the advice of the water supply company should be sought.

4.4 Any materials excavated and removed from the site should be disposed of at a suitably licensed disposal facility. Copies of all conveyance and disposal notes should be retained for inclusion in the validation report.

4.5 Any topsoil or additional materials imported to site for use in gardens or soft landscaping areas will need to be independently sampled and tested to confirm they are uncontaminated and fit for purpose. Details of the recommended testing suite and acceptance criteria are included in Appendix (ii).

4.6 The remedial works will need to be checked and validated by an Independent Engineer and as in section 6.2 below, a validation report will need to be drawn up on completion of the work.



- 4.7 If any unexpected contamination is encountered during the works these will be reported to the Engineer and the Local Authority so that any additional works necessary can be agreed.
- 4.8 All remediation works will be carried out to the satisfaction of the Local Authority.

5. ENVIRONMENTAL PROTECTION

- 5.1 There are requirements for site works to comply with all relevant guidance and legislation. In particular, attention is drawn to the HSE Document 'Protection of workers and the general public during development of contaminated land'.
- 5.2 Reasonable steps should be taken to reduce the risk of raising dust caused by the excavation and movement of site materials during the works. This is to reduce the risk to site operatives and to reduce hazards and nuisance to neighbouring properties.
- 5.3 There is a standing requirement to ensure that all reasonable precautions are taken to prevent pollution arising from remedial and associated works. No potentially polluting materials or liquids are permitted to enter any controlled water. This includes groundwater and surface water. Works should be undertaken in such a manner as to prevent this occurring or to prevent any other pollution event. Excavated materials must be stockpiled on an impermeable surface to prevent contamination of underlying soils. Water draining from stockpiles must be prevented from entering excavations or contaminating surface soils.



6. CERTIFICATION OF WORKS

6.1 The remediation works will be inspected and overseen by a suitably qualified and experienced independent Engineer from Compass Geotechnical Limited to ensure all of the made ground has been excavated out and removed from any gardens and soft landscaping areas to Plots 2 to 4, and that a suitable thickness of clean topsoil has been placed over any remaining made ground in the garden and soft landscaping areas in Plot 5.

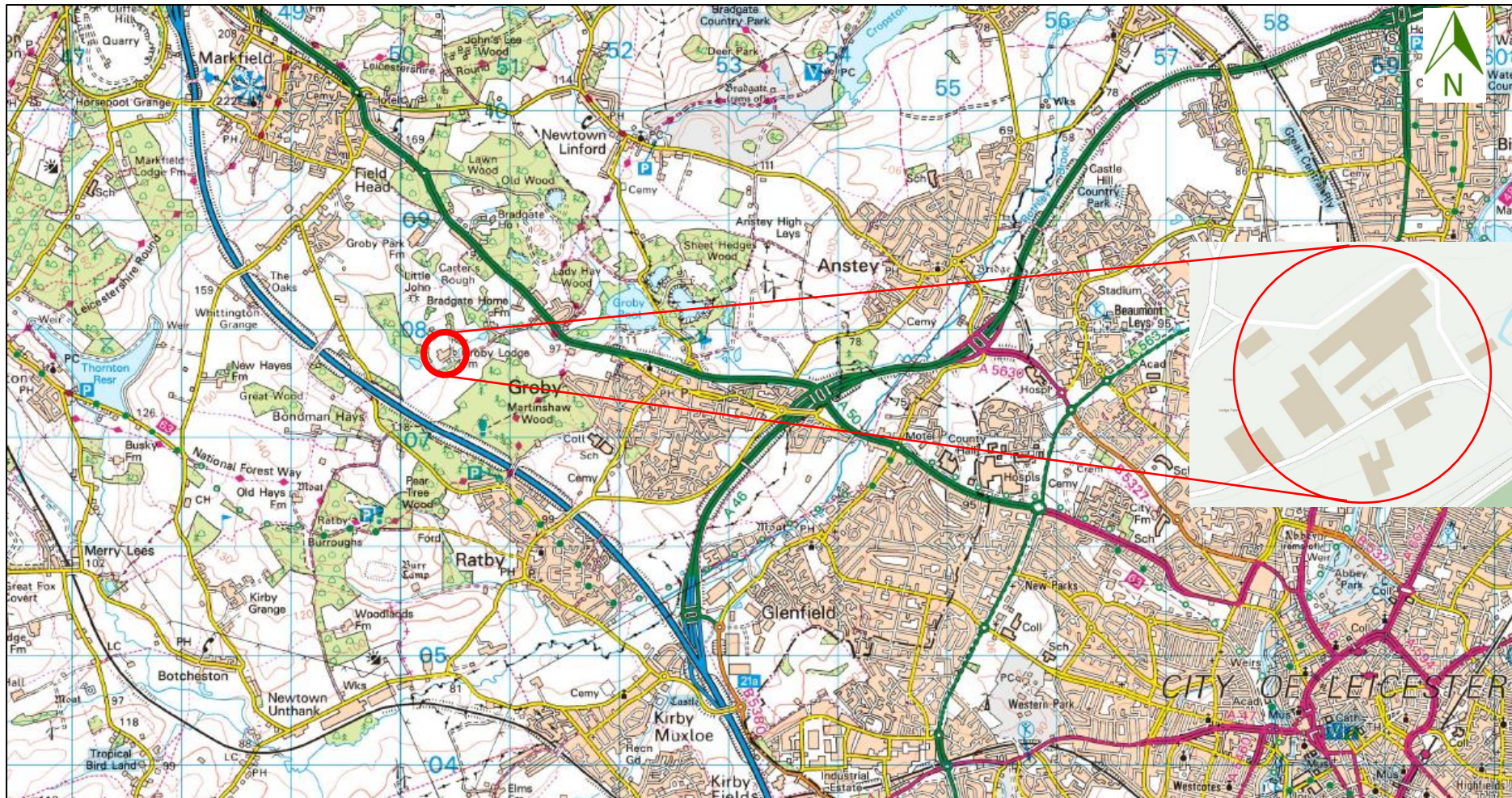
6.2 On completion of the works a validation report will be compiled by Compass Geotechnical Limited for submission to the local authority. The validation report should include the following information:

- The sequence of operations undertaken in remediation of the site.
- Records of inspections undertaken.
- Records of materials excavated, the location of the excavation(s) and any testing carried out.
- The destination and volumes of materials removed from site, together with details of the consignment and disposal notes. Copies of all conveyance notes should be provided to Compass Geotechnical Limited for inclusion in the validation report.
- The volume, source and independent chemical analysis of any materials imported to site. Copies of all import tickets and supplier certificates should be provided to Compass Geotechnical Limited for inclusion in the validation report.
- Photographic record.
- Details of all other matters that come to light during the works.
- A statement on the suitability of the site for end use and that the remediation has been carried out to the desired standard.
- The report should be compiled in general accordance with the requirements of the Environment Agency Land Contamination Risk Management (LCRM) and the EA Verification of Remediation of Land Contamination SC030114/R1.

R. Foord BSc, MSc, MCSM, CGeol, FGS



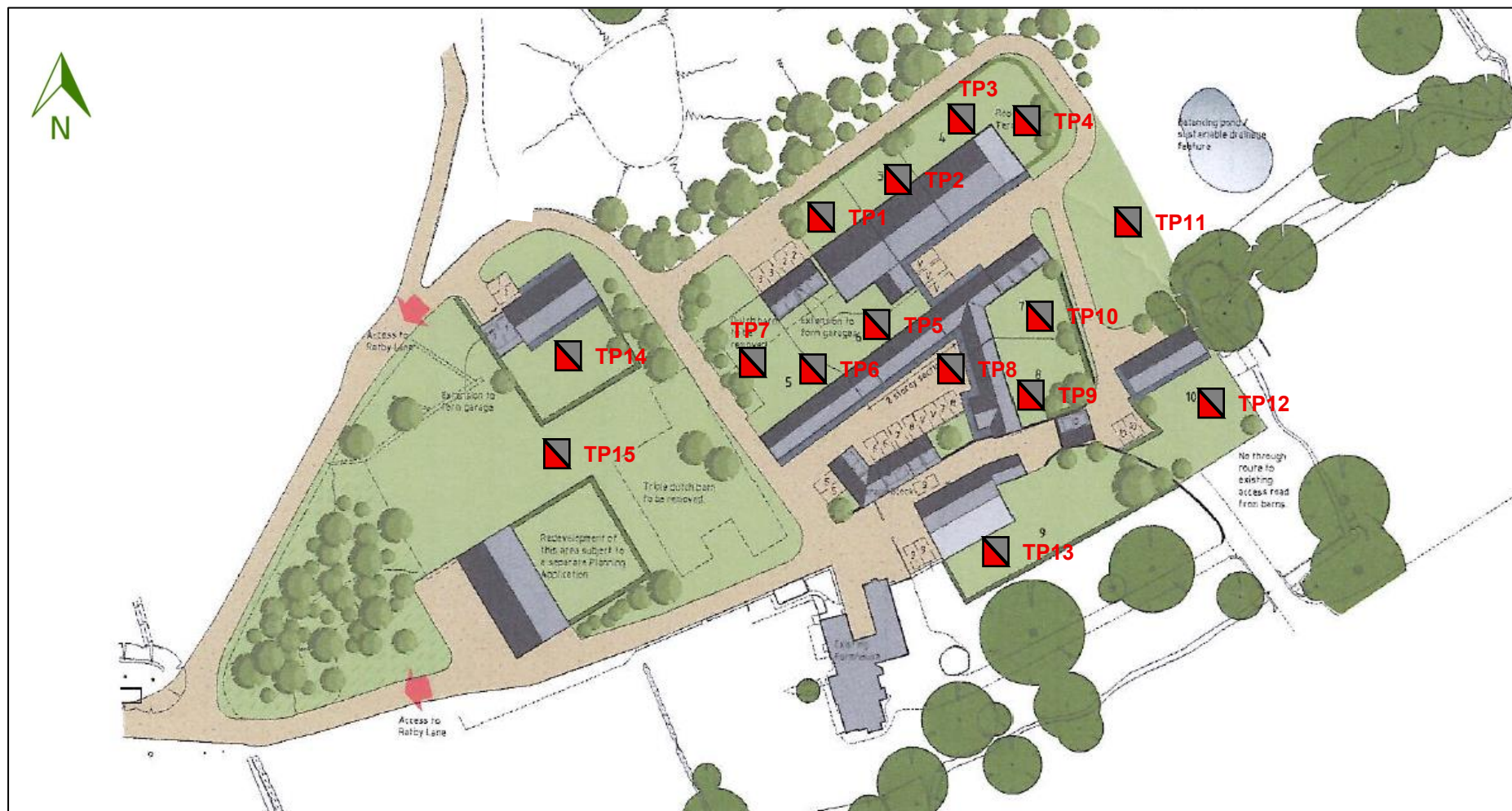
Appendix (i)
Figures



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Figure 1	Site Location Plan
Date	April 2026
Not to Scale	

Remediation Method Statement for a Proposed Residential Development at Groby Lodge Farm, Slate Pit Lane, Groby, Leicester, LE6 OGN



Extract from Urban Designs Site Layout Plan Drawing Number 2015-427-22K dated November 2016

Figure 2	Proposed Layout Plan with Trial Pits
Date	April 2026
Not to Scale	



Appendix (ii)
Topsoil Testing Suite and Acceptance Criteria



Details of Recommended Testing Suite for Imported Materials and Acceptance Criteria

Heavy Metals

Contaminant	Acceptance Criteria (mg/kg)
Arsenic	37
Cadmium	11
Chromium VI	6
Elemental Mercury	1.2
Lead	200
Selenium	250
Copper	2400
Nickel	180
Zinc	3700

Speciated PAH

Contaminant	Acceptance Criteria (mg/kg)
Acenaphthene	510
Acenaphthylene	420
Anthracene	5400
Benzo(a)Anthracene	11
Benzo(a)Pyrene	2.7
Benzo(b)Fluoranthene	3.3
Benzo(k)Fluoranthene	93
Benzo(ghi)Perylene	340
Chrysene	22
Dibenz(ah)Anthracene	0.28
Fluoranthene	560
Fluorene	400
Indeno(123cd)Pyrene	36
Naphthalene	5.6
Phenanthrene	220
Pyrene	1200

Asbestos

Contaminant	Acceptance Criteria
Asbestos	None Detected



TPH CWG Analysis

Contaminant	Acceptance Criteria (mg/kg)
TPH C5-6 aliphatic	78
TPH C6-8 aliphatic	230
TPH C8-10 aliphatic	65
TPH C10-12 aliphatic	330
TPH C12-16 aliphatic	2400
TPH C16-21 aliphatic	92000
TPH C21-35 aliphatic	92000
TPH C6-7 aromatic	140
TPH C7-8 aromatic	290
TPH C8-10 aromatic	83
TPH C10-12 aromatic	180
TPH C12-16 aromatic	330
TPH C16-21 aromatic	540
TPH C21-35 aromatic	1500

The acceptance criteria assume a soil organic matter content of 2.5% and are based on the most stringent criteria for a residential end use with uptake of homegrown vegetables. If a higher organic matter content is measured the acceptance criteria may be varied in line with the LQM/CIEH 2014 guidelines.

In the absence of TPH CWG Analysis the following criteria may be considered acceptable.

Banded TPH Analysis

Determinand	Acceptance Criteria (mg/kg)
TPH EC 10-12	180
TPH EC 12-16	330
TPH EC 16-21	540
TPH EC 21-35	1500
TPH EC 35-40	1500



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