

HINCKLEY INVESTMENTS LIMITED

HAMMONDS WAY, HINCKLEY

SITE INVESTIGATION REPORT

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1. INTRODUCTION

A commercial development is proposed at Hammonds Way, Hinckley. The site is currently occupied by a former recreational ground and a small temporary depot area. The proposed development comprises a commercial/light industrial unit with an integrated two-storey office area, together with vehicle parking and a yard area.

Crossfield Consulting Limited prepared a Desk Study Appraisal, as listed in the References, in March 2025 for the proposed development. Subsequent ground investigation work has been designed on the basis of the preliminary assessment provided in the Desk Study Appraisal.

Crossfield Consulting Limited has been commissioned to undertake a development-specific ground investigation of the site to identify potential constraints to development relating to the ground conditions and including a risk-based environmental assessment and recommendations for remediation works, recommendations regarding ground stability/support, and recommendations for foundations, road pavement design and general construction advice in the context of the above development proposals.

This report presents the information obtained from a ground investigation. Sections 2 to 5 of the report, together with the associated Figures and Appendices, provides a Ground Investigation Report (GIR), as defined in BS EN 1997-1:2004 and BS EN 1997-2:2007. This report should be read in conjunction with the Desk Study Appraisal.

A risk-based assessment of potential contamination is included in Section 7 of the report. This assessment makes reference to the desk study, ground investigation information and a Conceptual Site Model. It is considered that the report complies with National Planning Policy Framework, and is in general accordance with guidance published by the Environment Agency. The ground investigation to inform the risk assessment of potential contamination is a detailed investigation, as defined in Environment Agency Land Contamination Risk Management (LCRM) (2023) and BS 10175:2011+A2:2017.

The report also includes a geotechnical assessment and the salient information, assessments and recommendations are presented in Sections 9 to 15 of the report, together with the associated Figures and Appendices.

The report has been prepared under the direction and supervision of a Chartered Geologist and Registered Specialist in Land Condition (SiLC). It is considered that the report is suitable for submission in support of a planning application and the report is appropriate to assist in an appraisal of development solutions and costs, together with the preparation of engineering designs for the development. The report also complies with the published guidance relating to the requirements of a Building Control authority.

2. THE SITE

2.1 Location

The site is located on the southwestern edge of Hinckley to the north of the A5 trunk road, as shown on Figure 1. The National Grid Reference for the site is SP 4105 9267.

The site is bounded by Nutts Lane to the north and west, Nutts Lane and Hammonds Way to the south and a manufacturing facility to the east, as shown on Figure 2. Sketchley Brook is present approximately 40 m to the south.

2.2 Site Description

The following description is based on information obtained during a site walkover undertaken by Crossfield Consulting Limited in March 2025 and a topographical survey, which is presented as Figures 3 and 4, covering the northern and southern halves of the site respectively.

The site is irregular in shape with an area of approximately 1.9 ha. It comprises a generally flat grass field with 1.5 m high raised bunds along the northern and southern edge of the former recreational ground. The site is secured by a 1.8 m high palisade fence, except for the east side of the site which is unfenced. There is a small, asphalt and concrete surfaced yard area on the western side of the site, separated from the recreational field by fencing running approximately north to south. The fenced off yard area is occupied by a utilities company and includes temporary cabins, storage containers, waste skips and materials storage areas. Trees are present along the western boundary bordering Nutts Lane and clusters of trees are present in the northwest and southwest corners of the site. Two conifer trees are present on the eastern edge, a cherry tree is located in the northeast of the site and a silver birch is present in the south.

A strip of dense, low vegetation is present on the western edge of the former recreational ground adjacent to the fencing separating the area occupied by the utilities company.

2.3 Site History

A detailed history of the site, including historical map extracts and other pertinent information, is provided in the Desk Study Appraisal Report by Crossfield Consulting Limited. A summary of pertinent historical development at the site and in the surrounding area is provided below.

The earliest available map edition, dated 1887, indicates that the site and a large portion of the surrounding area comprised agricultural land to the east of Nutts Lane. A railway line on an embankment was present approximately 50 m north of the site.

By 1924, a pair of adjoining structures had been constructed along the western edge of the site and fronted on to Nutts Lane. An electric power station had been developed to the north of the site.

A pavilion is shown on the 1950 map close to the southern boundary of the site. Additional buildings were constructed next to the power station to the northeast and power lines appear to cross the eastern part of the site.

The 1964 National Grid map reveals that the adjoining building present on the west of the site had been demolished, and two new buildings were constructed. The site is marked as a Sports Ground, and a tennis court is shown straddling the site's boundary to the south. The power station to the north of the site appears to have been replaced with industrial buildings associated with a Works, which extended to the east of the site.

Some of the industrial buildings east of the site had been extended and others replaced by 1977. The buildings present on the western side of the site were removed by 1988.

The 2001 National Grid map shows the expansion of the manufacturing facility east of the site.

By 2010, the road layout around the site had changed with Nutts Lane being extended around the southern edge of the site with the road then referred to as Hammonds Way. The pavilion and tennis courts located along the southern boundary of the site were removed in order to facilitate the new road layout.

3. PUBLISHED GEOLOGY

Geological map data, published by the British Geological Survey (BGS), online and in print, on the 1:50,000 scale Sheet No. 169 (Coventry), and on the 1:10,000 scale Sheet No. SP49SW, indicate that the superficial deposits present at the site comprise Alluvium, described as sand with clay and gravel. BGS borehole records indicate that the Alluvium deposits are underlain by Glacial Clay deposits (possibly belonging to the Bosworth Clay Member). Made Ground is shown immediately north, east and southeast of the site on the 1:10,000 scale geological map. The solid geology underlying the site consists of the Mercia Mudstone Group, which is described as mudstone.

4. DESK STUDY ENQUIRIES

Detailed desk study information is presented in the Desk Study Appraisal by Crossfield Consulting. A summary of relevant information is provided below.

There are no active or historical landfills within 250 m of site. Neither the site nor land in close proximity are designated as contaminated land under part 2a of the Environmental Protection Act (1990).

Hydrogeological information indicates that the bedrock strata underlying the site as 'Secondary B' aquifer and the superficial strata are classified as 'Secondary A' Aquifer. The site is not located within a source protection zone and there is one historical groundwater abstraction well within 1 km of site. There are no potable ground water abstraction wells within 1 km of site.

Hydrological information indicates that areas of the site lie within a designated Zone 2 floodplain, as defined by the Environment Agency. A Zone 3 floodplain is located approximately 10 m to the south of the site.

Natural ground subsidence geohazards, as classified by the BGS, indicates that there is a 'moderate' hazard beneath the site associated with compressible deposits. Other geohazards have a negligible to low hazard rating.

There are no natural cavities, such as solution features, or mining cavities recorded within 500 m of the site.

The Groundsure report (based on UK Health Security Agency and British Geological Survey data, updated December 2022) indicates that the site is within an area where radon precautions are not required in new buildings.

5. GROUND CONDITIONS AND GEOLOGICAL MODEL

5.1 Ground Investigation

Details of the rationale and scope of the ground investigation and laboratory testing, together with exploratory hole logs, monitoring, in situ and laboratory test results, are given in Appendix I. The investigation has identified the presence of the following, below the site.

5.2 Buried Foundations and Services

No underground foundations or services were encountered during the investigation.

5.3 Strata Encountered

Made Ground

Made Ground has been identified within the western yard area, currently used by the utilities company, to depths of between 0.5 m and 1.4 m. A concrete surfacing layer overlying coarse grained subbase is present to depths of between 0.3 m and 0.4 m. Beneath the surfacing layer, the Made Ground typically consists of soft consistency sandy slightly gravelly clay with rare brick fragments.

Trial pits, TP5 & TP9, were excavated into the approximately 1.8 m high bunds present on the northern edge of the site. The bund materials also typically comprise soft consistency sandy slightly gravelly clay with some brick and concrete fragments. Made Ground is also present to depths of up to 1.2 m beneath the bunds. These materials comprise soft to firm through to firm consistency sandy slightly gravelly clay with brick fragments.

Made Ground has not been identified elsewhere on site.

Topsoil

Outside of the western yard and bund areas, the site is covered with a layer of topsoil to depths of between 0.3 m and 0.4 m. Generally, the topsoil consists of black slightly clayey slightly gravelly fine to medium sand, or a very sandy slightly gravelly clay with rootlets.

Alluvium

Beneath the Made Ground and topsoil across the site, strata considered to be Alluvium have been encountered. Typically, these strata consist of soft through to firm consistency slightly sandy, slightly gravelly clay with local bands of medium dense sands and gravels and have been proven to depths of between 1.2 m and to in excess of 4.0 m.

The Alluvium is generally thicker in the northern part of the site, but has also been identified locally at greater thicknesses in other areas of the site.

Hand vane testing has indicated undrained shear strengths in the range of 20 kN/m² to 70 kN/m² within the fine-grained Alluvium, with the low strength materials (undrained shear strength of 40 kN/m² or less) typically encountered in the top 1.5 m.

Glacial Deposits

Beneath the Alluvium across the site, strata considered to be Glacial Deposits have been encountered. Typically, these strata consist of a firm, becoming stiff consistency with depth, slightly sandy clay to the maximum depth of this investigation of 15.0 m.

Hand vane testing has indicated undrained shear strengths typically in the range of 60 kN/m² to 100 kN/m² within the upper 2 m of the fine-grained Glacial Deposits.

Standard Penetration Tests (SPTs) undertaken within the Glacial Clay recorded 'N' values typically in the range of 10 to 30, with 'N' values typically increasing with depth.

5.4 Groundwater

Perched water was identified locally within trial pits at the base of the Alluvium and within coarse-grained bands.

Groundwater was not observed during the drilling of the 15 m deep boreholes. Subsequent monitoring of the standpipes installed within the boreholes has identified standing water at depths of 0.81 m, 7.28 m and 9.5 m.

The groundwater conditions are based on observations made at the time of the fieldwork. It should be noted that groundwater levels may vary due to seasonal and other effects.

6. PROPOSED DEVELOPMENT

It is understood that the proposed development will comprise a warehouse/distribution centre and office space, together with vehicle parking and a yard area. A plan of the proposed development is shown on Figure 5.

7. ASSESSMENT OF POTENTIAL CONTAMINATION AND GROUND GASES

7.1 Assessment Criteria

Assessment of potential contamination and ground gases has been undertaken using a risk assessment-based approach, as recommended within the Environmental Protection Act (1990) (and subsequent amendments), Environment Agency LCRM (2023), CLEA Model (2004-2009), BS 10175:2011+A2:2017 and CIRIA C552 (2001). This approach considers the likely source of contamination, given the history and location of the site, and the possible migration pathways by which these potentially hazardous substances may reach likely receptors, such as end users of the site, controlled waters or the wider environment, in the context of the proposed development.

Part IIA of the Environmental Protection Act (1990) states that

‘Contaminated Land is any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

- (a) significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) significant pollution of controlled waters is being caused or there is significant possibility of such pollution being caused;’

All risk assessments carried out as part of this investigation have been carried out with respect to the definition of ‘contaminated land’ within Part IIA of the Environmental Protection Act (1990) and have considered the site both before and on completion of the development. The basis of the risk assessment is the Conceptual Site Model, which is derived from the desk study and initial information and identifies potential contaminant linkages that could affect receptors relevant to the site and the wider environment. The Conceptual Site Model is presented in Table 1.

Based on the model, a ground investigation was designed to obtain relevant information to assess further the identified contaminant linkages. Where relevant, this included the recovery of representative samples and subsequent analytical laboratory testing. The rationale for the sampling and testing is set out in Appendix I. The results of the analytical testing are presented in Appendix I and summarised in Table 2. On the basis of the conceptual site model and the results of the analytical laboratory, an assessment of the identified contaminant linkages is presented in Table 3.

7.2 Potential Sources of Contamination

Based on the available information, the site has not been associated with past industrial or waste disposal activities and has primarily been associated with agricultural land and then a sports ground.

Made Ground appears to have been imported to site to form the hardstanding associated with the western yard area. Bunded materials are also present in the northern part of the site. Depending on the provenance, there may be materials derived from local industrial processes, such as ash and clinker, which may be associated with toxic/phytotoxic metals and polyaromatic hydrocarbons (PAHs) and/or demolition rubble, which could contain asbestos containing materials (ACMs).

Based on the available information, representative shallow soil samples were recovered from beneath the site and tested for the potential contaminants identified above. The test results are summarised in Table 2 and are presented against generic assessment criteria (GAC) and Category 4 Screening Levels (C4SL), relevant to the protection of human health for a commercial end use. As can be seen from Table 2, all of the potential contaminant concentrations are recorded below the GAC (negligible risk to human health) and C4SL (low but acceptable risk to human health) and, therefore, do not represent an unacceptable risk to end users. Risks to construction workers, human health of end-users of the site and neighbours during earthworks and other ground-related works are assessed in Section 7.3.1.

Based on appropriate laboratory test data, risks to construction materials are assessed in Section 7.3.2.

No significant concentrations of potentially phytotoxic chemicals have been recorded. are present at the site, further comments with respect to soft landscaped areas are presented in Section 7.3.3.

As indicated in the Conceptual Site Model, no valid contaminant linkage has been identified in respect of controlled waters. On the basis of the ground conditions encountered and the analytical laboratory test data, which indicates no significant concentrations of potentially mobile contaminants, it is considered that the Conceptual Site Model is valid and that there are no unacceptable risks to controlled waters receptors.

No putrescible material has been identified at the site and no significant thicknesses of Made Ground have been recorded. There are no recorded landfills within influencing distance and the site is not within an area where precautions against the ingress of radon gas are required in new buildings. Therefore, it is considered that there are no sources of hazardous ground gases at the site and ground gas protection should not be required for the proposed development.

7.3 Contaminant Linkages – Solids and Liquids

Based on the Conceptual Site Model, consideration is given below to identified contaminant linkages and a risk evaluation is undertaken of each possible source-pathway-receptor linkage that may occur at the site. The risk evaluation considers the potential consequences and probability of occurrence in accordance with CIRIA C552 (2001). Where risks are identified as ‘negligible’, then by implication such risks are within normally accepted levels for the proposed development, and the further reduction of such risks by remediation works is considered unnecessary. Where risks are identified that are ‘low’ as defined in CIRIA C552 (2001), or worse, then consideration is given to the management of the identified risks, with appropriate recommended actions that may include engineering solutions/remediation works as described in the following sections.

7.3.1 Human Health

No significant concentrations of potential contaminants have been identified in the shallow ground and there was no evidence of potentially volatile compounds. The proposed development will provide an effective barrier in the form of a new building and hardstanding such that there should be no end-user exposure to the existing ground on completion of the proposed development. No further construction controls, mitigation or remedial works are considered to be necessary in respect of end users.

Notwithstanding this, to minimise the soils becoming airborne it is recommended that appropriate soil dampening equipment be maintained on site during dry periods to minimise dust generation. This will also negate potential nuisance to school users outside the development area and to off-site receptors such as neighbours and the general public.

7.3.2 Durability of Buried Structures and Services

In view of the low soluble sulphate content and slightly alkaline soil conditions, there are no special precautions required for the protection of good quality buried shallow foundation concrete. Based on guidance within *BRE Special Digest 1* (2005), the specified DC Class of concrete for buried structures and foundations should be suitable for an ACEC site classification of AC-1. Due to an increase in soluble sulphate concentrations with depth, any requirement for concrete for buried structures or foundations deeper than 3 m should consider an ACEC site classification of AC-2.

The site has not been associated with past fuel and/or chemical storage and there are no such storage facilities in close proximity. Therefore, the site would not be considered to be 'brownfield' under the definition provided by UKWIR (2010) with respect to the assessment of ground for water supply pipes. Based on the guidance provided by UKWIR, it is considered that conventional plastic materials can be used for potable water supply pipes without any requirements for specific testing.

It should be noted that individual water companies may have in-house requirements for the assessment of ground conditions for potable water supply pipes and these requirements may be in addition to, or may contradict, the guidance provided by UKWIR. Therefore, it is recommended that the relevant water supply company be consulted prior to finalising the potable water supply design.

7.3.3 Landscape Areas

As noted, no significant concentrations of potentially phytotoxic chemicals have been recorded in the Made Ground below the site. Existing topsoil on site should be suitable for reuse. As a capping layer is not required in soft landscaping areas to protect end user health, the required thickness of topsoil (and, if applicable, subsoil) will be dependent on the nature of proposed plantings and the development's landscaping designer should advise further in this regard.

If imported topsoil materials is required, it should be of appropriate quality. Topsoil sourced from a brownfield site or from a topsoil recycling facility should be the subject of appropriate analytical testing to confirm that the imported soils do not themselves represent a risk to end users of the development or to the wider environment. In compliance with published procedures (including any local planning authority requirements), details of topsoil to be imported should be received and confirmed prior to soil import. Imported materials should be confirmed/documented as not waste materials.

7.4 Recommended Remedial Works

On the basis of the foregoing information and risk assessment, it is evident that there are no valid contaminant linkages such that remediation works are not required for the proposed development.

7.5 Construction Management/Best Practice

In compliance with normal construction good practice, consideration should be given to the following:

- Soils should be kept damp during groundworks undertaken in dry weather to minimise the potential of aerial migration of dust to neighbouring properties and public areas.

- Imported topsoil (and other imported soil materials, if required) should be accompanied by appropriate documentation to confirm that they are suitable for use and that they are compatible with the contaminated land risk assessment (in the context of human health protection and also with due consideration to controlled waters and the wider environment). It should also be confirmed that imported soils are not a waste material.

7.6 Potential Liabilities

Based on the available data and risk assessment, it is considered that there should be no significant environmental liabilities associated with the ground conditions and site ownership.

8. ASSESSMENT OF MINING, QUARRYING AND OVERALL GROUND STABILITY

The site is not within an area of recorded underground mining or mineral extraction and there are no quarries recorded at, or in close proximity to, the site. Therefore, the proposed development should not be constrained by ground stability issues relating to mining or quarrying activities.

9. ASSESSMENT OF EARTHWORKS

The site is relatively flat and level but there may be a requirement to undertake some minor earthworks to permit development. It is presumed that typically less than 1 m of cut and 1 m of fill placement will be required. The following sections contain general earthworks advice.

The earthworks specification used should be designed to reflect the proposed future levels and the proposed engineering solution beneath the building and the external areas.

9.1 Assessment of Fill Materials

Any topsoil or desiccated materials at the site should not be used as fill materials and, where possible, should be re-used in landscaped areas.

It is likely that low to medium strength silty sandy gravelly clays of Made Ground and Alluvium will form the majority of any earthworks material. Based on laboratory testing and soil descriptions, it is considered that these materials are likely to be classified as Class 2C and locally Class 2A materials, as defined in the *Specification for Highway Works*. Preliminary geotechnical laboratory testing indicates that these materials are likely to be too wet to be used “as dug” as an earthworks material.

Some sands and gravels layers could be encountered and these materials are likely to be classified as Class 1A and locally Class 2C materials, as defined in the *Specification for Highway Works*. Where Class 2C materials are encountered, these materials may be too wet for re-use as-dug.

On the basis of the low sulphate contents recorded within both the Made Ground and Alluvium, it is considered the materials should be suitable for lime and/or cement modification and/or stabilisation.

10. GEOTECHNICAL ASSESSMENT

10.1 Assessment of Foundation Solutions

It is understood that the proposed development includes a commercial/light industrial unit with an integrated two-storey office area.

On the basis of the available ground investigation information, shallow ground conditions beneath the proposed building footprint are likely to be variable with up to 1.4 m depth of fine-grained Made Ground present along the northern elevation and low strength Alluvium present locally to typical depths of up to 2.0 m. The clays (Alluvium or Glacial Deposits) beneath these depths are generally assessed as firm consistency with undrained shear strengths typically around 60 kN/m² or greater indicating medium to high strength. Localised perched water seepages have been encountered from depths of 1.2 m. Groundwater (the phreatic surface) is unlikely to be present at shallow depth.

It is considered that the medium to high strength Alluvium and/or Glacial Deposits should be appropriate to support pad footings (or strip/trench fill, as appropriate). The foundations should extend through Made Ground/disturbed ground and any lower strength soils. Foundation depths of typically between 1.5 m and 2.5 m are anticipated. Groundwater seepages may be encountered within foundation excavations.

As outlined in Section 10.3, the Made Ground/low strength near-surface Alluvium is considered not suitable to support a ground bearing floor slab for a commercial/light industrial unit and some form of ground treatment is likely to be required. It is likely to be cost effective to also treat the ground beneath the proposed foundations, resulting in shallower and, possibly, less-wide, foundations.

A ground treatment foundation solution using vibro-replacement techniques may be feasible, subject to confirmation from specialist contractors that these techniques would be suitable for the ground conditions identified.

Alternatively, the use of controlled modulus columns (CMCs)/ rigid inclusions taken down into the competent Glacial Deposits strata could be considered. Digging out and replacing materials could also be considered, with excavated materials re-placed in accordance with a suitable End Product specification. If this option was used, the excavated materials would require to be dried out (probably using lime). Perched groundwater would also need to be considered. These factors (and programme) may make ground treatment more suitable for this site.

If a ground treatment solution (vibro or CMC) is adopted, additional ground investigation using Cone Penetration Testing (CPTs) may be required to enable design.

10.2 Recommended Foundation Design Parameters

10.2.1 Strip/Trench Fill/Pad Foundations

On the basis of the foregoing assessment, it is considered that strip/trench fill or pad foundations placed within the medium to high strength Alluvium and/or Glacial Deposits, typically present at depths of between 1.5 m and 2.5 m, should provide a foundation solution that should be compatible with the proposed structure. On the basis of the ground conditions and structures described in the report, the recommended parameters for the foundation design are as follows:

<i>Foundation Strata:</i>	Medium to high strength Alluvium and/or Glacial Deposits
<i>Foundation Depth:</i>	Minimum 1.0 m, deepened within influence of trees, through Made Ground and through lower strength/lower density materials at subcrop, as required. Foundation depths of between 1.5 m and 2.5 m anticipated
<i>Nett Allowable Bearing Pressure:</i>	125 kN/m ²

It is considered that total settlement of foundations designed on the above basis should be less than the normal serviceability limit state for this development (i.e. total settlements of 25 mm).

Laboratory testing results indicate the clayey horizons at the site comprise 'medium to high' volume change potential soils, as defined in NHBC Standards (2025). Within the influence zones of existing or proposed trees, suitable foundation precautions should be adopted, as outlined in NHBC Standards (2025).

Based on guidance published within BRE Special Digest 1 (2005), the specified DC Class of concrete for buried structures and foundations should be suitable for an ACEC site classification of AC-1.

10.3 Floor Slab Recommendations

Based on the expected floor slab loads and due to the presence of shallow, low strength, compressible strata beneath the site, the existing ground is considered unsuitable to support a ground bearing floor slab. On this basis, ground treatment methods (as described in Section 10.1) should be used beneath a ground-bearing floor slab. Consideration should also be given to extending the ground treatment to transition zones around the building and to any external areas where higher loads are anticipated, such as material storage.

If desiccated materials are present beneath the building footprints, there will be a requirement to dig out and replace these materials.

10.4 General Construction Advice

All formations should be cleaned and subsequently inspected by a suitably qualified engineer prior to placing concrete. Should any soft, compressible or otherwise unsuitable materials be encountered they should be removed and replaced by blinding concrete.

Foundation concrete, or alternatively, a blinding layer of concrete, should be placed immediately after excavation and inspection in order to protect the formation against softening and disturbance.

Generally, all formations should be placed wholly within the same material type, unless specific geotechnical inspection and assessment have been undertaken.

Care should be taken to ensure that any field drains encountered are carefully and satisfactorily blocked to prevent water seeping through the drains and into any excavations.

The locations of any trial pits undertaken (by others) as part of this investigation should be accurately surveyed in order that their precise locations are known and that appropriate precautions can be taken when building over or near to these locations.

11. TEMPORARY WORKS

Conventional plant is considered appropriate for excavation works at this site.

Shallow excavations may remain stable in the short term. However, instability may occur in excavations left open for an extended period of time, particularly during poor weather conditions. Support should be provided, or the sides battered back, in any excavations requiring man entry and an appropriate risk assessment should be in place.

Groundwater is, based on current data, unlikely to be encountered at shallow depth. However, perched water may locally be encountered. If perched water does enter excavations this should be controllable using conventional sump pumping techniques.

12. ASSESSMENT OF SOAKAWAY DRAINAGE

Soakaway tests have been attempted in two trial pits (TP06s and TP01s). Testing was undertaken in accordance with BRE DG365 (2016). However, due to the negligible rate of water outflow from the test pits, only one test fill was undertaken at each trial pit location. It is noted that there was insufficient water outflow such that none of the tests is considered to be 'full depth', as defined in BRE DG 365 (2016). Both test locations were monitored for at least 4 hours.

None of the tests provided a sufficient drop in water level required for a BRE DG365 compliant calculation of soil infiltration rate. Due to the lack of soil infiltration, a meaningful infiltration rate extrapolation cannot be calculated.

As a result, it is evident that the natural strata do not appear to support a soakaway drainage solution. On this basis, it is considered that soakaways are likely to be effectively precluded for the proposed development and it will be necessary to identify an alternative drainage solution for the proposed development.

13. ROAD PAVEMENTS

If new road pavements are proposed then, based on the nature of the shallow soils beneath the site, a preliminary design equilibrium CBR of 3% may be considered for the design of road pavements. It would be prudent to assume that shallow natural strata beneath the site area are frost susceptible.

14. ASSESSMENT OF MATERIALS FOR WASTE DISPOSAL

There is no requirement to remove soils from site and, therefore, development levels should be set such that soils can be retained and reused on site where possible. Providing development levels are set to accommodate soil arisings (for example, from foundation excavations), such materials would not be classified as waste if retained and re-used on site. However, if materials are excess to requirements, they should be taken to an appropriately permitted (licensed) waste facility.

If material is identified for removal to a waste facility, it will be necessary to provide a description of the material and laboratory test data to the receiving facility. This information is included in Appendix I. The available analytical laboratory test data have been used to provide preliminary waste disposal advice. It should be noted that these test results may not specifically relate to materials that are, or will be, scheduled for removal from site. However, the results are appropriate for preliminary guidance and costing purposes. It should be noted

that additional testing, either for classification purposes or for waste acceptance criteria (WAC) testing may be requested by landfills or other waste facilities.

A preliminary assessment of potential waste classification for materials on site has been undertaken in accordance with the Environment Agency's document Guidance on the Classification and Assessment of Waste WM3 (2021). The assessment indicates that the following preliminary waste classification advice would be appropriate.

- Topsoil is likely to be classified as 'non-hazardous' waste if taken to a landfill due to the organic content of such materials. Alternatively, these materials could be taken to a recycling facility.
- Based on the test data to date, the Made Ground materials are likely to be classified as 'non-hazardous' waste for disposal at landfill.
- Natural strata should be accepted at an 'inert' landfill without any requirement for laboratory testing.

Waste requires pre-treatment prior to disposal at landfill and this may take the form of physical or chemical treatment to reduce hazards and/or waste volumes. The segregation and screening of waste soils into separate, and appropriately classified, waste streams would satisfy the pre-treatment criteria by ensuring that volumes of each waste category are minimised. Segregation of waste streams is also important to prevent materials being classified within a worse-case category and, therefore, incurring higher disposal costs. Mixing of different waste streams to dilute hazardous properties is not permitted.

It should be noted that the above assessment is provided in accordance with current waste disposal and environmental permitting legislation and guidance documents. However, individual landfills and other waste disposal facilities may have variances in their permit [licence] that differs from standard guidance. Waste facilities may also make decisions with respect to accepting waste on a commercial basis. Therefore, landfills or other waste facilities should be approached to confirm that they will accept waste materials prior to finalising waste disposal proposals.

15. RECOMMENDED SUPERVISION AND MONITORING

In compliance with the requirements in BS EN 1997-1:2004 and BE EN 1997-2:2007, construction and workmanship of the engineering solutions recommended in this report shall be supervised. In particular, issues listed in Section 10.5 General Construction Advice shall be considered in the implementation of the works and design of any necessary temporary works set out in Section 11.

In relation to the foundation solution(s) and ground floor slab recommendations in Section 10, the following supervision and monitoring is recommended.

- Verification testing required (earthworks/in situ testing following ground treatment)
- Inspection of excavations for strip/trench fill or pad foundations

16. SUMMARY

A commercial development is proposed at Hammonds Way, Hinckley. The site is currently occupied by a former recreational ground and a small temporary depot area. The proposed development comprises a commercial/light industrial unit with an integrated two-storey office area, together with vehicle parking and a yard area.

Made Ground has been identified within the western yard area, currently used by the utilities company, to depths of between 0.5 m and 1.4 m. Other than some banded materials on the northern edge of the site, Made Ground has not been identified elsewhere. Beneath the Made Ground and topsoil elsewhere on site, strata considered to be Alluvium have been encountered. Typically, these strata typically consist of soft through to firm consistency slightly sandy, slightly gravelly clay with local bands of medium dense sands and gravels have been proven to depths of between 1.2 m and to in excess of 4.0 m. Underlying the Alluvium, strata considered to be Glacial Deposits have been encountered. Typically, these strata consist of a firm, becoming stiff consistency with depth, slightly sandy clay to the maximum depth of investigation of 15.0 m. Perched water was identified locally within trial pits at the base of the Alluvium and with coarse-grained bands. Groundwater was not observed during the drilling of the 15 m deep boreholes. Subsequent monitoring of the standpipes installed within the boreholes has identified standing water at depths of 0.81 m, 7.28 m and 9.5 m.

Based on historical maps and information from regulatory authorities, a conceptual site model has been developed and has not identified valid potential contaminant linkages in relation to soil or groundwater contaminant sources. The ground investigation has confirmed that there are no valid contaminant linkages relating to end users, construction workers or neighbours/the public. No unacceptable risks to controlled waters have been identified. It is considered that no ground gas protection is required to be installed in the proposed development.

The site is relatively flat and level but there may be a requirement to undertake some minor earthworks to permit development. The earthworks specification used should be designed to reflect the proposed future levels and the proposed engineering solution beneath the building and the external areas. Preliminary geotechnical laboratory testing indicates that the majority of the near-surface materials are likely to be too wet to be used "as dug" as an earthworks material. On the basis of the low sulphate contents recorded within the near-surface materials, it is considered the materials should be suitable for lime modification/cement stabilisation.

On the basis of the available ground investigation information, shallow ground conditions beneath the proposed building footprint are likely to be variable with up to 1.4 m depth of fine-grained Made Ground present along the northern elevation and low strength Alluvium present locally to typically depth of up to 2.0 m. Beneath this the clays (Alluvium or Glacial Deposits) are generally assessed as firm consistency with undrained shear strengths typically 60 kN/m² or greater indicating medium to high strength. Localised groundwater seepages have been encountered from depths of 1.2 m. It is considered that strip/trench fill or pad foundations placed within the medium to high strength Alluvium and/or Glacial Deposits, typically present at depths of between 1.5 m and 2.5 m, should provide a foundation solution that should be compatible with the proposed structure.

The Made Ground/low strength near-surface Alluvium is considered not to be suitable to support a ground bearing floor slab for a commercial/light industrial unit and some form of ground treatment is likely to be required. It is likely to be cost effective to also treat the ground treatment beneath the proposed foundations, resulting in shallower and possibly, less-wide, foundations. A ground treatment foundation solution using vibro-replacement techniques may be feasible, subject to confirmation from specialist contractors that such techniques would be suitable for the ground conditions identified. Alternatively, the use of controlled modulus columns (CMCs)/ rigid inclusions taken down into the competent Glacial Deposits strata could be considered. Digging out and replacing materials could also be considered, with excavated materials re-placed in accordance

with a suitable End Product specification. If this option was used, the excavated materials would require to be dried out (probably using lime). Perched groundwater would also need to be considered. These factors (and programme) may make ground treatment more suitable for this site.

Due to the presence of clay dominated strata beneath the site together with relatively shallow perched water, the use of soakaways is considered not to be suitable for the proposed development.

REFERENCES

Site Specific References

Crossfield Consulting Limited (March 2025) *Hammonds Way, Hinckley, Desk Study Appraisal Report* No. CCL03854.CW06

Technical References

BRE (2005) *Special Digest 1 – Concrete in aggressive ground*, CRC Ltd

BRE (2023) *BR211 – Radon: Guidance on protective measures for new buildings (sixth edition with minor revisions)* BRE Press

BRE (2016) *DG365 – Soakaway Design* IHS

BSI (2020) *BS 5930:2015+A1:2020 Code of Practice for Ground Investigations* British Standards Institution

BSI (2017) *BS 10175:2011+A2:2017 Code of Practice for Investigation of Potentially Contaminated Sites* British Standards Institution

BSI (2004) *BS EN1997-1:2004 Eurocode 7: Geotechnical Design – Part 1: General Rules* British Standards Institution

BSI (2007) *BS EN1997-2:2007 Eurocode 7: Geotechnical Design – Part 2: Ground Investigation and Testing* British Standards Institution

CIRIA (2001) *CIRIA C552 – Contaminated Land Risk Assessment: A Guide to Good Practice* Construction Industry Research Association

CL:AIRE (2010) *Soil Generic Assessment Criteria for Human Health Risk Assessment Contaminated Land: Applications in Real Environments*

DEFRA (2013) *SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Final Project Report* Contaminated Land: Applications in Real Environments

DEFRA (2014) *SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document* Department for Environment, Food and Rural Affairs

DoE (1990) *The Environmental Protection Act* Department of The Environment HMSO

Department of Transport (2016) *Manual of Contract Documents For Highway Works (Volume 1) – Specification for Highway Works*, HMSO

Environment Agency (2018, updated October 2021) *Waste Classification: Guidance on the Classification and Assessment of Waste (1st Edition v1.2.GB) – Technical Guidance WM3* EA

Environment Agency (October 2020, Updated July 2023) *Land Contamination Risk Management (LCRM)* EA

LQM/CIEH (2015) *The LQM/CIEH S4ULs for Human Health Risk Assessment* Land Quality Press, Nottingham

Ministry of Housing, Communities and Local Government (2024) *National Planning Policy Framework*

NHBC (2025) *Standards* National House Building Council

TRRL (1989) *LR1132 – The Design of Bituminous Road Pavements* Transport and Road Research Laboratory

UKWIR (2010) *Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites* Report Ref. No. 10/WM/03/21 UK Water Industry Research

GENERAL NOTES

1. The report is limited to the site boundaries and is specific to the development proposals as identified by the Client (or Client's advisor) and confirmed within this report. The report should not be used in a different context. Where the report is identified as a site appraisal, further geoenvironmental assessment, and detailed investigations, will be required prior to finalisation of ground related assessment and designs. Other reports may recommend additional investigation or other works that would be considered essential prior to the preparation of final assessments and associated designs.
2. This report has been prepared by Crossfield Consulting Limited with all reasonable skill, care and diligence within the terms of the Appointment/Proposal Terms and Conditions (as applicable) and with the resources agreed with the Client. Responsibility for any matters outside the agreed scope is not accepted.
3. Where any data supplied by the Client or by other external sources, including previous site investigation data, have been used it has been assumed that the information is correct unless otherwise stated. No responsibility can be accepted by Crossfield Consulting Limited for inaccuracies within the data supplied by others.
4. Any borehole data from the British Geological Survey sources are included on the following basis: "The British Geological Survey accept no responsibility for omissions or misinterpretation of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation.
5. Any assessments made in this report are based on the ground conditions indicated by the factual records included and/or referenced in the report, namely, trial pits and/or boreholes, together with the results of any field or laboratory testing undertaken and, where appropriate, other relevant site data/desk study information which may have been obtained for the site. Variations in ground conditions may occur between exploratory hole locations and there may be special conditions appertaining to the site that have not been revealed by the investigation and that have not been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available.
6. Exploratory hole locations provided in the report are generally established by tape measurement (or similar measurement) from existing features or boundaries. Ground levels stated in the report are based on site survey plans as provided. Hole locations are not accurately surveyed and ground levels at these locations are not obtained unless specifically included in the agreed scope of services.
7. Unless stated otherwise, no consultations with regulatory authorities, funders or other third parties have been carried out; hence, definitive assurance that such third parties will accept the findings of this report cannot be provided.
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10. The Client cannot place reliance on the report until full payment has been made for the report and all associated works.
11. New information, improved methods, changes in published guidance, codes of practice, policies and legislation can occur at any time and may necessitate an alteration to the report in whole, or in part, after its submission. Therefore, with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to Crossfield Consulting Limited for re-assessment and, if necessary, re-appraisal.

TABLES

TABLE 1

CONCEPTUAL SITE MODEL

	Potential Contaminant Source	Potential Contaminants	Potential Pathway	Receptors and Assessed Contaminant Linkage
On-Site Solid	Historical agricultural land use considered not to be associated with a significant potential contaminant source. Possible imported materials to form hardstanding areas and level areas for sports pitches	N/A Asbestos fibres/ACM Toxic metals Phytotoxic metals Polyaromatic hydrocarbons	Dermal and oral exposure pathways (including air-borne migration) are present during construction phase but will generally not be present following development due to building and hardstanding effective barriers. Limited landscaping areas after development represent possible dust exposure pathways. Release into Liquid Phase Metals and PAHs have generally low solubility. Potential for plant uptake of metals. Release into Vapour Phase N/A (no significant source of volatiles identified)	Human Health End Users: Possible contaminant linkage Groundworkers: Possible contaminant linkage Neighbouring Properties/General Public: Possible contaminant linkage Buried Structures & Services Buried concrete: No contaminant linkage Potable water pipes: No contaminant linkage Other buried structures: No contaminant linkage Landscape Areas: Possible contaminant linkage
Off-Site Solid	Historical adjacent power plant – ashy material associated with coal combustion	Toxic metals Phytotoxic metals Polyaromatic hydrocarbons		
On-Site Liquid	No known source	N/A		
Off-Site Liquid	No known source	N/A		
On Site Liquid	No known source	N/A	N/A	Controlled Waters Groundwater: Superficial Secondary A aquifer Bedrock Secondary B aquifer No groundwater source protection zone: No contaminant linkage Surface Water: 20 m south of the site – No contaminant linkage
Ground Gases	No active or historical landfills within 250 m of the site (no source) Not a radon affected area (no source) No evidence to suggest significant Made Ground thickness or putrescible materials on site.	None None None	N/A (no source)	Human Health End Users: No contaminant linkage Construction Workers: No contaminant linkage

- NOTES
- The above conceptual model is based on CIRIA C552 (2001) and BS 10175:2011+A2:2017, BS EN ISO 21365:2020 and Environment Agency Land Contamination Risk Management (LCRM) (2023).
 - The Conceptual Site Model is prepared from available desk study and site walkover information.

TABLE 2
(Page 1 of 2)

SUMMARY OF ANALYTICAL TEST DATA: SOILS
RISKS TO HUMAN HEALTH

Determinand	Units	No of Tests	Concentration (mg/kg)		Generic Assessment Criteria (mg/kg) Commercial		Category 4 Screening Level (mg/kg) Commercial	
			Min	Max	Value	No>GAC	Value	No>C4SL
Arsenic	mg/kg	7	<10	92	640 ¹	0	640 ³	0
Cadmium	mg/kg	7	0.8	9.5	190 ¹	0	410 ³	0
Chromium (Total) ⁴	mg/kg	7	<1.0	21	8600 ¹	0	-	-
Chromium (VI)	mg/kg	7	<1.0	<1.0	33 ¹	0	49 ³	0
Lead	mg/kg	7	14	210	-	-	2330 ³	0
Inorganic Mercury	mg/kg	7	<2.5	<2.5	1100 ¹	0	-	-
Nickel	mg/kg	7	30	210	980 ¹	0	-	-
Selenium	mg/kg	7	<8.0	<8.0	12,000 ¹	0	-	-
Copper	mg/kg	7	17	240	68,000 ¹	0	-	-
Zinc	mg/kg	7	29	1200	730,000 ¹	0	-	-
Phenols	mg/kg	7	<1.0	<1.0	690 ¹	0	-	-
Petroleum Hydrocarbons								
Aliphatics C ₅ – C ₆	mg/kg	7	<0.06	<0.06	5900 ¹	0	-	-
Aliphatics C ₆ – C ₈	mg/kg	7	<0.06	0.36	17,000 ¹	0	-	-
Aliphatics C ₈ – C ₁₀	mg/kg	7	<0.06	<0.06	4800 ¹	0	-	-
Aliphatics C ₁₀ – C ₁₂	mg/kg	7	<1.0	1.9	23,000 ¹	0	-	-
Aliphatics C ₁₂ – C ₁₆	mg/kg	7	1.2	3.2	82,000 ¹	0	-	-
Aliphatics C ₁₆ – C ₃₅	mg/kg	7	3.3	38	1,000,000 ¹	0	-	-
Aromatics C ₆ – C ₇	mg/kg	7	<0.01	0.25	46,000 ¹	0	-	-
Aromatics C ₇ – C ₈	mg/kg	7	<0.01	0.04	110,000 ¹	0	-	-
Aromatics C ₈ – C ₁₀	mg/kg	7	<0.06	<0.06	8100 ¹	0	-	-
Aromatics C ₁₀ – C ₁₂	mg/kg	7	<1.0	<1.0	28,000 ¹	0	-	-
Aromatics C ₁₂ – C ₁₆	mg/kg	7	<1.0	3.7	37,000 ¹	0	-	-
Aromatics C ₁₆ – C ₂₁	mg/kg	7	<1.0	16	28,000 ¹	0	-	-
Aromatics C ₂₁ – C ₃₅	mg/kg	7	2.7	58	28,000 ¹	0	-	-
VOCs								
Benzene	mg/kg	7	<0.01	0.25	47 ¹	0	50 ³	0
Toluene	mg/kg	7	<0.01	0.04	110,000 ¹	0	-	-
Ethylbenzene	mg/kg	7	<0.01	<0.01	13,000 ¹	0	-	-
Xylene	mg/kg	7	<0.03	<0.03	14,000 ¹	0	-	-
MTBE	mg/kg	7	<0.01	<0.01	13,000 ²	0	-	-

TABLE 2
(Page 2 of 2)

Determinand	Units	No of Tests	Concentration (mg/kg)		Generic Assessment Criteria (mg/kg) Commercial		Category 4 Screening Level (mg/kg) Commercial	
			Min	Max	Value	No>GAC	Value	No>C4SL
PAHs								
Naphthalene	mg/kg	7	<0.02	0.03	460 ¹	0	-	-
Acenaphthylene	mg/kg	7	<0.02	0.05	97,000 ¹	0	-	-
Acenaphthene	mg/kg	7	<0.02	0.04	97,000 ¹	0	-	-
Fluorene	mg/kg	7	<0.02	0.09	680,000 ¹	0	-	-
Phenanthrene	mg/kg	7	<0.02	0.98	22,000 ¹	0	-	-
Anthracene	mg/kg	7	<0.02	0.37	540,000 ¹	0	-	-
Fluoranthene	mg/kg	7	<0.02	1.7	23,000 ¹	0	-	-
Pyrene	mg/kg	7	<0.02	1.4	54,000 ¹	0	-	-
Benz(a)anthracene	mg/kg	7	<0.02	0.68	170 ¹	0	-	-
Chrysene	mg/kg	7	<0.02	0.67	350 ¹	0	-	-
Benzo(b)fluoranthene	mg/kg	7	<0.02	0.88	44 ¹	0	-	-
Benzo(k)fluoranthene	mg/kg	7	<0.02	0.30	1200 ¹	0	-	-
Benzo(a)pyrene	mg/kg	7	<0.02	0.68	35 ¹	0	76 ³	0
Indeno(123cd)pyrene	mg/kg	7	<0.02	0.39	510 ¹	0	-	-
Dibenzo(ah)anthracene	mg/kg	7	<0.02	0.11	3.6 ¹	0	-	-
Benzo(ghi)perylene	mg/kg	7	<0.02	0.50	4000 ¹	0	-	-

NOTES

1. Suitable for Use Level (S4UL) published by LQM/CIEH, 2015 – Commercial landuse. S4UL assumptions comprise 2.5% soil organic matter, soil pH of 7 and sandy loam soil type. Where S4UL presented by LQM is greater than 100%, the S4UL for this assessment has been capped at 1,000,000 mg/kg. S4ULs are copyright © Land Quality Management Limited reproduced with permission; Publication Number S4UL3133.
2. Soil GAC for Human Health Risk Assessment produced by CL:AIRE (2010) – Commercial. Assumption of 2.5% soil organic matter.
3. Category 4 Screening Level (C4SL), Department for Environment Food and Rural Affairs (March 2014) – calculated for 2.5% SOM using the CLEA Model v1.071
4. In the absence of desk study or historical map evidence indicating a potential source of chromium (VI) usage at or in the near vicinity of the site, total chromium concentrations have been compared to the GAC for chromium (III).

TABLE 3

ASSESSMENT OF CONTAMINANT LINKAGES

NOTES:

- 1. Contaminant linkage validity assessed following qualitative or semi-quantitative risk assessment.
- 2. Contaminant linkage assessed following detailed quantitative risk assessment or assuming the recommended remediation or mitigation measures are in place.

		Consequence (C)			
		Severe	Medium	Mild	Minor
Probability (P)	High likelihood (HL)	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely (L)	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low likelihood (LL)	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely (UL)	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

All terminology in accordance with the definitions provided in CIRIA C552 (2001)

Contaminant Linkage			Assessment of Contaminant Linkage following Ground Investigation	Contaminant Linkage Valid? ¹	Risk Rating			Quantitative Risk Assessment	Recommended Remediation/Mitigation (See Section 7 for further details)	Recommended Work Verified?	Contaminant Linkage Valid? ²
Source	Pathway	Receptor			C	P	Risk				
Toxic metals PAHs Asbestos	Ingestion (dust), Dermal (dust) Inhalation (dust), Inhalation (vapour)	End Users	All concentrations below GAC/C4SL values No asbestos identified	No No	N/A N/A	N/A N/A	N/A N/A	Not applicable	Not required	Not applicable	No
Toxic metals PAHs Asbestos	Dermal contact, Ingestion, Inhalation	Construction workers	All potential contaminants identified in concentrations below short-term (acute) exposure limits No asbestos identified	No No	N/A N/A	N/A N/A	N/A N/A	Not applicable	Not applicable but standard personal protective equipment is recommended as good practice. Conventional dust control and soil dampening to be used during construction.	Not applicable	No
Toxic metals PAHs Asbestos	Dermal contact (dust), Ingestion (dust), Inhalation (dust)	Neighbours/general public	All concentrations below GAC/C4SL values No asbestos identified	No No	N/A N/A	N/A N/A	N/A N/A	Not applicable	Not required but dust suppression techniques should be used during construction in line with good practice.	Not applicable	No
Phytotoxic metals	Plant uptake	Landscape areas	No significant concentrations identified	No	N/A	N/A	N/A	Not applicable	Not required	Not applicable	No

FIGURES

FIGURE 1



SITE LOCATION PLAN

Scale 1: 50,000

Reproduced from the 2022 1:50,000 Ordnance Survey map with the permission of Ordnance Survey.

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FIGURE 2



SITE PLAN
Scale 1: 1000

Based on the 2025 1: 1,500 Ordnance Survey map with the permission of Ordnance Survey.
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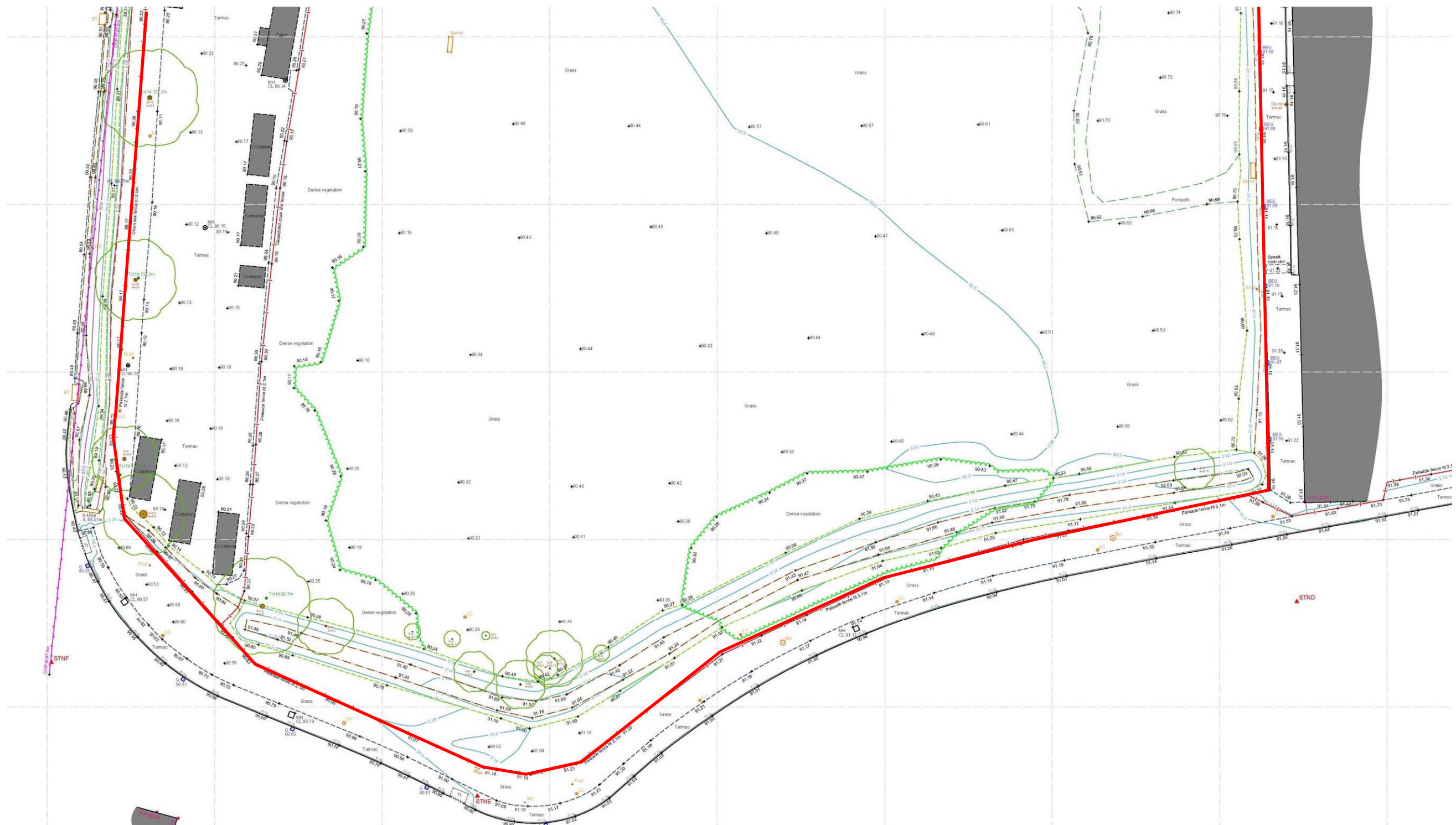
FIGURE 3



TOPOGRAPHICAL SURVEY - NORTH
Scale 1: 500

Reproduced from Topographical Survey, dated 27/03/2025, by StafSurv, Dwg No. 14109

FIGURE 4



TOPOGRAPHICAL SURVEY - SOUTH
Scale 1: 500

Reproduced from Topographical Survey, dated 27/03/2025, by StafSurv, Dwg No. 14109

FIGURE 5



PROPOSED DEVELOPMENT PLAN
Scale 1: 1,000

Reproduced from Proposed Site Plan, dated November 2024, by bhp design, Dwg No. 24-078-PL0003 Rev No. 003

APPENDIX I

APPENDIX I – GROUND INVESTIGATION

Introduction

This Appendix, together with Sections 2 to 5 of the report, forms the Ground Investigation Report for the development described in the report, in compliance with the requirements of BS 5930:2015+A1:2020, BS EN1997-1:2004(2007) and BS EN1997-2:2007(2007).

The site operations were carried out between 31st March and 2nd April 2025 under the supervision of a geotechnical engineer from Crossfield Consulting Limited. The scope and rationale for the design of the investigation is presented in Table I-1.

The ground investigation was designed and supervised by qualified and experienced geotechnical specialists from Crossfield Consulting Limited. Where appropriate, and as outlined below, specialist drilling/sampling equipment was procured together with trained and experienced operators. Unless otherwise indicated, sampling and logging remained the responsibility of trained staff from Crossfield Consulting Limited and field records were prepared on site, during or immediately following drilling/sampling or in situ measurements/tests. The results of in situ tests are presented on the relevant record sheets in this Appendix. Details of any correction factors used in processing the test results are presented in the summary figures.

Exploratory hole location plans are presented as Figure I-1 (north) and Figure I-2 (south).

Trial Pits

Fourteen trial pits, denoted as TP01 to TP12, TP01S and TP06S, were excavated by a JCB 3CX excavator between the 31st March and 1st April 2025. The trial pit records from the investigation are presented in this Appendix and these records include the descriptions and depths of the strata encountered, together with sample depths, groundwater observations and other pertinent comments.

In situ hand vane tests were carried out on fine-grained soils, where appropriate, to provide undrained shear strength data representative of the tested horizon. The tests were carried out using Pilcon-Edeco hand vane tester, with extension rods in accordance with the site health and safety method statement. With reference to the guidance published in Serota & Jangle (1972), it is noted that this instrument is calibrated and scaled to provide a direct reading of undrained shear strength, such that application of additional correction factors on the recorded measurements is not necessary. Published correlations with undrained shear strength, as measured by immediate undrained triaxial tests, indicate this hand vane tester provides measurements with a significantly lower scatter in comparison to triaxial tests, with fewer anomalous results. Specific test measurements are listed on the exploratory hole records.

In Situ Soakaway Tests

In situ soakaway tests were performed in Trial Pits TP01S and TP06S generally in accordance with the requirements of BRE DG365 (2016) except that they were filled only once. The trial pits were filled with clean water and the fall in water level measured with time. The results of the in situ testing are presented in this Appendix.

Boreholes

Three boreholes, denoted as BH01 to BH03, were sunk by RD Drilling Limited, between 31st March and 2nd April, to depths of 15.0 m. All exploratory holes were vertical, unless otherwise indicated on the record sheets. The drilling equipment and methods comprised:

Light cable percussion boring, using a Dando/Pilcon rig with clay-cutter and chisel drop-tools and in conjunction with 150 mm diameter temporary steel casing. Disturbed soil samples were recovered from arisings recovered from boring operations immediately following strata changes and at intervals not exceeding 1.5 m. These

samples have been used for descriptive and geotechnical testing purposes. 100 mm diameter “undisturbed” samples (denoted PS-T/W in BS EN 22475-1:2006) of fine-grained strata were taken for geotechnical testing purposes. The borehole record is based on the inspection of both drilling arisings and the recovered samples. Standard Penetration Tests (SPT) were carried out at regular intervals to provide data on the in situ density of coarse-grained strata and an indication of strength within fine-grained strata.

To minimise risks of introducing polluting substances, bio-degradable vegetable-based oils/greases were used on drilling/boring tools and casing.

On completion, combined groundwater monitoring standpipes were installed in boreholes BH01, BH02 and BH03 to approximately 10.0 m depths.

The borehole records from this investigation are presented in this Appendix. These records include the descriptions and depths of the strata encountered, together with sample depths, in situ test results (uncorrected values), groundwater observations, details of installations/backfill within exploratory holes and other pertinent comments.

Dynamic Sampling

Four dynamic sampling boreholes, denoted as DS01 to DS04, were sunk by LTS Drilling, on 2nd April to between 3.45 m and 4.95 m depth. Dynamic/driven open-tube soil sampling/boring was undertaken using a Premier Compact rig. Using a 1.0 m long thick-walled open-tube sampler (with plastic liner), Category A and B samples were recovered (sample disturbance being influenced by the specific soils encountered). Where appropriate, small disturbed sub-samples were recovered from the materials recovered in the open-tube sampler.

Standard Penetration Tests (SPT) were carried out at regular intervals to provide data on the in situ density of coarse-grained strata and an indication of strength within fine-grained strata. The SPTs were carried out in accordance with BS EN ISO 22476-3:2005(2007).

The records from the investigation are presented in this Appendix. These records include the descriptions and depths of the strata encountered, together with sample depths, in situ test results (uncorrected values), groundwater observations, details of installations/backfill within exploratory holes and other pertinent comments.

Soil Samples

All samples for analytical testing were collected in appropriate containers, stored in cool boxes (where appropriate) and sent to the testing laboratory overnight. The sample containers, storage and handling procedures were all compatible with the relevant recommendations of the UKAS accredited testing laboratory for the specific testing proposed.

Samples designated for geotechnical testing were collected, stored and transported in accordance with the published requirements for the specific tests scheduled, such that moisture content and soil structure integrity was maintained, as necessary for the test requirements.

Groundwater Monitoring

Groundwater levels within the three borehole standpipes/piezometers were measured on two occasions on 2nd April and 11th April 2025 by experienced staff from Crossfield Consulting Limited. Results of groundwater monitoring are presented in this Appendix.

Analytical Laboratory Testing

The rationale for the analytical testing is set out in Table I-2.

Selected samples of the soils encountered were submitted for screening analysis of the following determinands:

- Arsenic (Total)
- Chromium (Total and Hexavalent)
- Lead (Total)
- Nickel (Total)
- Selenium (Total)
- Cyanide (Total)
- Sulphate (Water soluble)
- pH
- Asbestos (Fibre & ACM Screen)
- Cadmium (Total)
- Copper (Total)
- Mercury (Total)
- Zinc (Total)
- Boron (Water soluble)
- Sulphide (Total)
- Phenols (Total-monohydric)
- Total Organic Carbon

Note: Total determinands are based on an aqua-regia extract.

Selected samples of the soils encountered were submitted for analysis of the following determinands:

- Total Petroleum Hydrocarbons – aromatic/aliphatic split and carbon number banding, using GC-FID techniques
- Polyaromatic Hydrocarbons – using GC-MS techniques

The analyses were carried out by Construction Testing Solutions Limited, a UKAS accredited laboratory, and the results are presented in this Appendix. Soil testing was undertaken in accordance with the Environment Agency's Monitoring Certification Scheme (MCERTS).

Geotechnical Laboratory Testing

The rationale for the geotechnical laboratory testing is set out in the Table 1-3.

Selected samples of the soils encountered were submitted for analysis for the following tests:

- pH value
- Water soluble sulphate
- Total Sulphate
- Total sulphur
- Moisture content
- Atterberg Limits
- Particle size distribution
- Dry density/moisture content relationship (4.5 kg rammer)
- Particle Density

The analyses were carried out by Construction Testing Solutions Limited, Earthworks Testing Limited and GSTL, UKAS accredited laboratories, and the results are presented in this Appendix.

TABLE I-1

RATIONALE FOR THE DESIGN OF THE GROUND INVESTIGATION

The scope of the ground investigation was designed with reference to the published geology and ground conditions indicated in the desk study.

In compliance with the guidance published in BS EN 1997-2:2007, the ground investigation was designed to verify the preliminary ground model, established from the desk study information and to characterise the ground conditions within influencing distance of the proposed structures. In this regard, the exploratory holes were targeted within relevant areas of the site to provide information on the strata profile down to competent materials. With reference to the desk study information and the support requirements of the proposed development, it is evident that adequate support is provided by the strata that continue below the depths of the exploratory holes.

In compliance with the guidance published in BS 10175:2011+A2:2017, BS 5930:2015+A1:2020 and Environment Agency LCRM (2023), the layout of the exploratory holes and sampling regime also considers the Conceptual Site Model and potential contaminant linkages, such that the spatial arrangement of the investigation provides the necessary information to support a risk assessment of the identified potential contaminant linkages.

Exploratory Hole and Technique	Rationale for Hole Location	Depth (m)	Sampling/In Situ Testing and Monitoring
TP01 to TP12	Exploratory holes located to provide information on the shallow ground conditions across the site and to recover samples for laboratory testing.	Up to 3.0 m	Representative samples collected for analytical and geotechnical laboratory testing. Hand shear vanes were undertaken at shallow depths to provide data on the strength within fine grained strata.
TP01S & TP06S	Exploratory holes located to provide information on water infiltration characteristics of the ground	0.6 m and 1.0 m	In situ percolation test
BH01 to BH03	Boreholes were located in, or close to, the proposed building footprint to provide details on deeper ground conditions	15.0 m	Representative soil samples were obtained for analytical and geotechnical testing. Standard penetration tests (SPT) undertaken at regular depth intervals. On completion, groundwater and gas monitoring standpipes were installed in all locations. Groundwater monitoring was carried out over a period of 2 weeks
DS01 to DS04	Dynamic sample holes were located to provide data within the western depot area	4.95 m	Representative soil samples were obtained for analytical and geotechnical testing. Standard penetration tests (SPT) undertaken at regular depth intervals.

Key:

TP X	Machine dug trial pit	BH X(LCP)	Light Cable Percussion Borehole
DS X	Dynamic Sample Borehole		

TABLE I-2

RATIONALE FOR THE ANALYTICAL TESTING SUITE

Exploratory Hole and Samples	Selection Criteria	Analytical Tests
DS01 - 0.80 m DS02 - 0.30 m DS03 - 0.40 m DS04 - 0.30 m DS04 - 0.70 m DS04 - 1.50 m TP09 - 0.30 m	Samples of made ground were selected from across the site where encountered and tested for potentially mobile contaminants	Metals and metalloids, cyanide (total), total organic carbon, pH, phenol, sulphate (water soluble and total), sulphide Petroleum Hydrocarbons PAHs Asbestos (fibre and ACM screen)

TABLE I-3

RATIONALE FOR THE GEOTECHNICAL TESTING SUITE

Exploratory Hole and Sample	Selection Criteria	Geotechnical Tests
TP01 0.60 m TP05 1.50 m TP06 2.30 m TP08 0.50 m TP10 1.40 m TP11 1.50 m TP12 0.60 m DS01 2.60 m DS02 1.80 m	Classification/Volume Change Potential	Moisture content Atterberg Limits
TP01 0.90 m TP02 0.80 m TP04 1.50 m TP05 2.00 m TP06 1.20 m TP08 1.00 m TP09 0.30 m TP10 1.00 m TP11 0.50 m TP12 0.70 m BH01 6.00 m BH01 12.00 m BH02 13.00 m BH03 8.00 m BH03 13.50 m	Classification of sulphate content to assist in the correct usage of concrete and to assess suitability for modification/stabilisation	pH Water soluble sulphate Acid soluble sulphate Total sulphur
BH01 4.50 m BH01 7.50 m BH02 6.00 m BH02 9.00 m	Design of deep foundations (if required)	Undrained shear strength
TP04 1.00 m TP09 0.50 m TP10 0.50 m TP11 1.00 m	Assessment of potential earthworks materials/Classification	Particle size distribution
TP04 1.00 m TP07 2.00 m TP08 1.50 m TP09 0.50 m TP10 0.50 m TP11 1.00 m	Assessment of potential earthworks materials	Moisture content Dry density/moisture content relationship (4.5 kg rammer) Particle Density

TRIAL PIT RECORDS

KEY

	J	Disturbed Jar Sample	} Category B Samples
	G	Soil Sample in Glass Container	
	g	Soil Sample in Glass Vial	
	B	Disturbed Bulk Sample	
	C	"Undisturbed" CBR Mould Sample (denoted Category A: OS-TK/W in BS EN 22475-1:2006)	
	W	Water Sample	
FVT	{	c_{fv}	Undrained Shear Strength (from hand vane shear vane test)
		c_{rv}	Undrained Remoulded Shear Strength (from hand vane shear vane test)
		c_{fv}^*	Undrained Shear Strength from Hand Vane Shear Strength Test on block sample dug from pit by excavator

Notes:

1. All measurement values on record sheets are uncorrected, unless otherwise indicated.
2. For corrected test values, refer to report.
3. Identification and classification of strata is based on the guidance published in the current edition of BS5930 together with BS EN ISO 14688-1:2002, BS EN ISO 14688-2:2004, BS EN ISO 14689-1:2003
4. Consistency (soft, firm, stiff etc.) relates to a manual test/inspection on site (in compliance with BS EN ISO 14688-1:2002 Section 5.14)
5. Undrained shear strength (low, medium, high etc.) relates to in situ or laboratory test data and the associated assessed strength of a stratum (in compliance with BS EN ISO 14688-2:2004 Section 5.3 and Table 5).
6. The density of coarse-grained soils is based on SPT N values (or equivalent Dynamic Probe test or CPT data) as outlined in BS5930 and BS EN ISO 14688-2:2004.
7. Rock strength (weak, strong etc.) is based on field identification (and/or strength test data), as outlined in BS EN ISO 14689-1:2003 Table 5.



Trial Pit Record Sheet

ProjectHammonds Way, Hinckley

Date01/04/2025

Hole Ref.TP01

Sheet1 of 1

Job No.CCL03854

Bearing:Southwest

PlantJCB 3CX

Trial Pit

Plan

A

→

B

C

ShoringNone used

StabilityPartial side collapse at 1.4 m

WaterWater seepage at 1.2 m

Ground Level90.25 m OD

Co-ordinates

Logged byJonW

Logged on site during excavation

Checked by



Depth	Face A	Face B	Face C	Depth
0.30		(1)		0.30
1.50		(2)		1.50
3.00		(3)		3.00
		End of Trial Pit		

Sampling			Strata		
Sample/Test Depth	Type	Strength (kN/m²)	Ref. No.	Strata Depth	Description
			1	0.00-0.30	Soft consistency black slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (TOPSOIL)
0.50	c _{fv}	20,25,20	2	0.30-1.50	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)
0.60	J				
0.90	J				
1.00	c _{fv}	40,40,35	3	1.50-3.00	Firm consistency blueish grey slightly sandy CLAY (GLACIAL DEPOSITS)
1.50	c _{fv} *	50,55,50			
2.00	c _{fv} *	60,60,65			
2.50	c _{fv} *	70,72,70			
3.00	c _{fv} *	70,75,75			

Remarks

Notes

1. All logging and sampling in accordance with BS 5930:2015+A1:2020

2. Symbols and abbreviations are explained on the accompanying key

3. All linear dimensions are in metres unless otherwise stated

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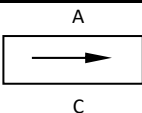
Trial Pit Record Sheet		Hole Ref.	TP01S
Project	Hammonds Way, Hinckley	Sheet	1 of 1
Date	01/04/2025	Job No.	CCL03854
Shoring	None used	Ground Level	90.25 m OD
Stability	Pit stable upon completion	Co-ordinates	
		Logged by	JonW Logged on site during excavation
Water	Groundwater not encountered to a depth of 1.0 m	Checked by	<i>AAH</i>

[illegible]

Sampling			Strata		
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description
0.50 1.00	c _{fv}	30,30,35	1	0.00-0.40	Soft consistency black sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (TOP SOIL)
	c _{fv}	40,30,40	2	0.40-1.00	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)

Remarks In situ percolation test attempted in excavated pit.	Notes 1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated
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Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL			Trial Pit Record Sheet			Hole Ref. TP02			
			Project Hammonds Way, Hinckley			Sheet 1 of 1			
			Date 01/04/2025			Job No. CCL03854			
Bearing: Southwest			Shoring None used			Ground Level 90.40 m OD			
Plant JCB 3CX			Stability Pit stable upon completion			Co-ordinates			
Trial Pit Plan A B C			Water Groundwater not encountered to a depth of 3.0 m			Logged by JonW Logged on site during excavation			
						Checked by 			
Depth		Face A		Face B		Face C		Depth	
0.30				(1)				0.30	
0.50				(2)				0.50	
0.70				(3)				0.70	
1.60				(4)				1.60	
3.00				(5)				3.00	
				End of Trial Pit					
Sampling			Strata						
Sample/Test Depth	Type	Strength (kN/m²)	Ref. No.	Strata Depth	Description				
0.50	c _{fv}	35,40,35	1	0.00-0.30	Loose black clayey slightly gravelly SAND. Gravel is fine to medium subrounded of quartzite (TOPSOIL)				
0.80	J		2	0.30-0.50	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)				
1.00	c _{fv}	45,40,45	3	0.50-0.70	Loose orangish brown SAND and GRAVEL. Gravel is fine to coarse subrounded of quartzite (ALLUVIUM)				
1.50	c _{fv} *	50,50,52	4	0.70-1.60	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)				
2.50	c _{fv} *	60,62,60	5	1.60-3.00	Firm consistency blueish grey slightly sandy CLAY				
Remarks					Notes				
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated				

		Trial Pit Record Sheet			Hole Ref. TP03	
		Project Hammonds Way, Hinckley			Sheet 1 of 1	
		Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest		Shoring None used			Ground Level 90.45 m OD	
Plant JCB 3CX		Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 		Water Seepage at 1.2m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C	
0.40			(1)			
1.20			(2)			
3.00			(3)			
			End of Trial Pit			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description	
			1	0.00-0.40	Loose black clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded of quartzite (TOPSOIL)	
0.50 1.00	c _{fv} c _{fv}	30,30,25 35,60,60	2	0.40-1.20	Soft to firm consistency orangish brown slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	
1.50 2.00 2.50 3.00	c _{fv} * c _{fv} * c _{fv} * c _{fv} *	70,70,72 80,75,80 90,85,90 100, 105, 95	3	1.20-3.00	Firm becoming stiff consistency grey slightly sandy CLAY (GLACIAL DEPOSITS)	
Remarks					Notes	
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	



Trial Pit Record Sheet

ProjectHammonds Way, Hinckley

Date31/03/2025

Hole Ref.TP04

Sheet1 of 1

Job No.CCL03854

Bearing:Southwest

PlantJCB 3CX

Trial Pit

Plan

A

→

B

C

ShoringNone used

StabilityPartial pit collapse at 1.2 m

WaterSeepage at 1.2 m

Ground Level90.55 m OD

Co-ordinates

Logged byJonW

Checked by

Logged on site during excavation

Depth	Face A	Face B	Face C	Depth
0.40		(1)		0.40
1.20		(2)		1.20
1.60		(3)		1.60
3.00		(4)		3.00
		End of Trial Pit		

Sampling			Strata		
Sample/Test Depth	Type	Strength (kN/m²)	Ref. No.	Strata Depth	Description
			1	0.00-0.40	Soft consistency friable black slightly clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subangular to subrounded (TOPSOIL)
0.50	c _{fv}	50,45,49	2	0.40-1.20	Firm consistency orangish brown slightly sandy gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)
1.00	c _{fv}	30,30,32			
1.00	BB				
1.50	J		3	1.20-1.60	Loose orangish brown clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded (ALLUVIUM)
1.50	c _{fv} *	40,35,40			
2.00	c _{fv} *	70,65,60	4	1.60-3.00	Firm consistency grey slightly sandy CLAY (GLACIAL DEPOSITS)
2.50	c _{fv} *	70,74,70			
3.00	c _{fv} *	80,86,80			

Remarks

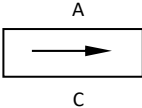
Notes

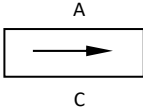
1. All logging and sampling in accordance with BS 5930:2015+A1:2020

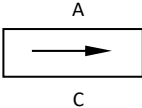
2. Symbols and abbreviations are explained on the accompanying key

3. All linear dimensions are in metres unless otherwise stated

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		Trial Pit Record Sheet			Hole Ref. TP05	
		Project Hammonds Way, Hinckley			Sheet 1 of 2	
		Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest		Shoring None used			Ground Level 92.25 m OD	
Plant JCB 3CX		Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 		Water Groundwater not encountered during to a depth of 4.8 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C	
1.80			(1)			
3.00			(2)			
			(3)			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description	
			1	0.0-1.80	Soft consistency reddish brown slightly sandy gravelly clay. Gravel is fine to medium subangular of brick and concrete (MADE GROUND)	
2.30	c _{fv}	70,70,72	2	1.80-3.00	Soft to firm consistency orangish brown slightly sandy slightly gravelly clay. Gravel is fine to medium subangular of brick (MADE GROUND)	
2.80	c _{fv}	70,75,70				
3.30	J		3	3.00-4.30	Firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)	
3.80	c _{fv} *	80,82,85				
3.80	J					
Remarks					Notes	
Pit was partially dug into a mound, the ground level is indicative of the height of the mound which was 1.8 m					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	

			Trial Pit Record Sheet			Hole Ref. TP05	
			Project Hammonds Way, Hinckley			Sheet 2 of 2	
			Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest			Shoring None used			Ground Level 92.25 m OD	
Plant JCB 3CX			Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 			Water Groundwater not encountered during to a depth of 4.8 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C		Depth
			(3)				
4.30			(4)				4.30
4.80			End of Trial Pit				4.80
Sampling			Strata				
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description		
3.30	J	80,82,85	3	3.00-4.30	Firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)		
3.80	c _{fv} *						
3.80	J						
4.30	c _{fv} *	60,70,72	4	4.30-4.80	Firm consistency greyish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)		
4.80	c _{fv} *						
Remarks					Notes		
Pit was partially dug into a mound, the ground level is indicative of the height of the mound which was 1.8 m					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated		

			Trial Pit Record Sheet			Hole Ref. TP06S	
			Project Hammonds Way, Hinckley			Sheet 1 of 1	
			Date 01/04/2025			Job No. CCL03854	
Bearing: Southwest			Shoring None used			Ground Level 90.40 m OD	
Plant JCB 3CX			Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 			Water Groundwater not encountered to a depth of 0.8 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C		Depth
0.30			(1)				0.30
0.80			(2)				0.80
			End of Trial Pit				
Sampling			Strata				
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description		
0.50	c _{fv}	42,40,45	1	0.0-0.30	Soft consistency black clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded (TOPSOIL)		
			2	0.30-0.80	Firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)		
Remarks					Notes		
In situ percolation test attempted in excavated pit.					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated		

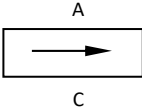
Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL			Trial Pit Record Sheet			Hole Ref. TP06			
			Project Hammonds Way, Hinckley			Sheet 1 of 1			
			Date 01/04/2025			Job No. CCL03854			
Bearing: Southwest			Shoring None used			Ground Level 90.40 m OD			
Plant JCB 3CX			Stability Pit stable upon completion			Co-ordinates			
Trial Pit Plan A B C			Water Groundwater not encountered to a depth of 3.0 m			Logged by JonW Logged on site during excavation			
						Checked by 			
Depth		Face A		Face B		Face C		Depth	
0.30				(1)				0.30	
0.40				(2)				0.40	
0.80				(3)				0.80	
1.50				(4)				1.50	
3.00				(5)				3.00	
				End of Trial Pit					
Sampling			Strata						
Sample/Test Depth	Type	Strength (kN/m²)	Ref. No.	Strata Depth	Description				
			1	0.00-0.30	Soft consistency black clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded quartzite (TOPSOIL)				
			2	0.30-0.40	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)				
			3	0.40-0.80	Loose orangish brown slightly clayey fine to coarse SAND and GRAVEL. Gravel is fine to coarse subrounded quartzite (ALLUVIUM)				
1.00	c _{fv}	70,75,70	4	0.80-1.50	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)				
1.20	J								
1.50	c _{fv} *	60,65,60							
2.30	J		5	1.50-3.00	Firm consistency blue grey slightly sandy CLAY. (GLACIAL DEPOSITS)				
2.50	c _{fv} *	55,50,60							
3.00	c _{fv} *	90,90,82							
Remarks					Notes				
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020				
					2. Symbols and abbreviations are explained on the accompanying key				
					3. All linear dimensions are in metres unless otherwise stated				

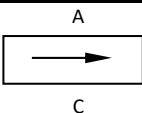
Trial Pit Record Sheet		Hole Ref.	TP07
Project	Hammonds Way, Hinckley	Sheet	1 of 1
Date	31/03/2025	Job No.	CCL03854
Shoring	None used	Ground Level	90.45 m OD
Stability	Pit stable upon completion	Co-ordinates	
		Logged by	JonW Logged on site during excavation
Water	Groundwater not encountered to a depth of 3.0 m	Checked by	<i>AAH</i>

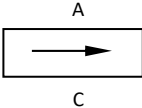
Depth	Face A	Face B	Face C	Depth
0.30		(1)		0.30

Sampling			Strata		
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description
			1	0.00-0.30	Soft consistency black clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded quartzite (TOPSOIL)
0.50	c _{fv}	30,20,30	2	0.30-2.10	Soft consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite
1.00	c _{fv}	60,40,60			
1.50	c _{fv} *	50,55,50			(ALLUVIUM)
2.00	c _{fv} *	65,60,60			
2.50	BB		3	2.10-3.00	Firm consistency orangish brown slightly sandy CLAY.
2.50	c _{fv} *	60,65,60			(ALLUVIUM)
3.00	c _{fv} *	80,85,80			

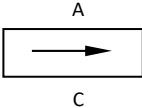
Remarks	Notes
	1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated

		Trial Pit Record Sheet			Hole Ref. TP08	
		Project Hammonds Way, Hinckley			Sheet 1 of 1	
		Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest		Shoring None used			Ground Level 90.70 m OD	
Plant JCB 3CX		Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 		Water Seepage at 1.8 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C	
0.30			(1)			
1.90			(2)			
3.00			(3)			
			End of Trial Pit			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description	
			1	0.00-0.30	Soft consistency black slightly clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded of quartzite (TOP SOIL)	
0.50	J		2	0.30-1.90	Soft consistency brown slightly sandy gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	
0.50	c _{fv}	30,35,34				
1.00	J		3	1.90-3.00	Firm consistency grey slightly sandy CLAY (GLACIAL DEPOSITS)	
1.00	c _{fv}	40,45,45				
1.50	BB					
1.50	c _{fv} *	50,60,50				
2.00	c _{fv} *	55,55,50				
2.50	c _{fv} *	60,55,60				
3.00	c _{fv} *	70,65,60				
Remarks					Notes	
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	

		Trial Pit Record Sheet			Hole Ref. TP09	
		Project Hammonds Way, Hinckley			Sheet 1 of 1	
		Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest		Shoring None used			Ground Level 92.45 m OD	
Plant JCB 3CX		Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 		Water Groundwater not encountered to a depth of 5.8 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C	
1.80			(1)			
1.90						
2.80			(3)			
5.80						
5.80			(4)			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description	
0.30 0.50	JGg BB		1	0.00-1.80	Soft consistency friable slightly sandy slightly gravelly clay. Gravel is fine to coarse subangular of brick and concrete (MADE GROUND)	
			2	1.80-1.90	Soft consistency black very sandy slightly gravelly CLAY. (MADE GROUND)	
2.00 2.50	c _{fv} c _{fv}	40,45,40 70,72,70	3	1.90-2.80	Firm consistency black slightly sandy slightly gravelly clay. Gravel is fine to medium subangular to subrounded of brick (MADE GROUND)	
3.50 4.00	c _{fv} * c _{fv} *	70,72,75 80,75,80	4	2.80-5.80	Firm to stiff consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)	
Remarks					Notes	
Trial pit was dug into the side of the northern bund. Bund was 1.8 m high The ground level is taken from the top of the bund.					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	

		Trial Pit Record Sheet			Hole Ref. TP10	
		Project Hammonds Way, Hinckley			Sheet 1 of 1	
		Date 01/04/2025			Job No. CCL03854	
Bearing: Southwest		Shoring None used			Ground Level 90.50 m OD	
Plant JCB 3CX		Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 		Water Groundwater not encountered to a depth of 3.0 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C	
0.30			(1)			
			(2)			
1.10			(3)			
1.30			(4)			
3.00			End of Trial Pit			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description	
			1	0.00-0.30	Soft consistency black clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded of quartzite (TOP SOIL)	
0.50	BB		2	0.30-1.10	Orangish brown clayey SAND and GRAVEL. Gravel is fine to coarse subrounded of quartzite (ALLUVIUM)	
1.00	J		3	1.10-1.30	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	
1.40	J		4	1.30-3.00	Firm consistency blueish grey slightly sandy CLAY (GLACIAL DEPOSITS)	
1.50	c _{fv}	35,40,40				
2.00	c _{fv}	70,70,72				
2.50	c _{fv} *	98, 95, 100				
3.00	c _{fv} *	95, 100,				
Remarks					Notes	
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL		Trial Pit Record Sheet			Hole Ref. TP11	
		Project Hammonds Way, Hinckley			Sheet 1 of 1	
		Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest		Shoring			Ground Level 90.65 m OD	
Plant JCB 3CX		Stability Pit collapse 0.5-1.1 m			Co-ordinates	
Trial Pit Plan A → B C		Water Seepage between 0.5 m and 1.1 m			Logged by JonW Logged on site during excavation	
Checked by						
Depth	Face A		Face B		Face C	
0.30			(1)			
0.50			(2)			
1.10			(3)			
1.60			(4)			
3.00			(5)			
			End of Trial Pit			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m²)	Ref. No.	Strata Depth	Description	
			1	0.00-0.30	Soft consistency black slightly clayey gravelly fine to medium SAND. Gravel is fine to medium subrounded quartzite (TOPSOIL)	
0.50 0.50	J c _{fv}	40,40,50	2	0.30-0.50	Soft consistency orangish black slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	
1.00 1.00	BB c _{fv}	50,55,50	3	0.50-1.10	Orangish brown slightly sandy slightly gravelly SILT. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	
1.50 1.50	J c _{fv} *	30,35,30	4	1.10-1.60	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium suborned of quartzite (ALLUVIUM)	
2.00 2.50 3.00	c _{fv} * c _{fv} * c _{fv} *	60,65,62 60,70,65 80,85,80	5	1.60-3.00	Firm consistency grey slightly sandy CLAY (GLACIAL DEPOSITS)	
Remarks					Notes	
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	

		Trial Pit Record Sheet			Hole Ref. TP12	
		Project Hammonds Way, Hinckley			Sheet 1 of 1	
		Date 31/03/2025			Job No. CCL03854	
Bearing: Southwest		Shoring None used			Ground Level 90.80 m OD	
Plant JCB 3CX		Stability Pit stable upon completion			Co-ordinates	
Trial Pit Plan 		Water Groundwater not encountered to a depth of 3.0 m			Logged by JonW Logged on site during excavation Checked by 	
Depth	Face A		Face B		Face C	
0.30			(1)			
1.80			(2)			
3.00			(3)			
			End of Trial Pit			
Sampling			Strata			
Sample/Test Depth	Type	Strength (kN/m ²)	Ref. No.	Strata Depth	Description	
			1	0.00-0.30	Soft consistency black slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (TOP SOIL)	
0.50	c _{fv}	30,35,40	2	0.30-1.80	Soft to firm consistency yellow brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	
0.60	J					
0.70	J					
1.00	c _{fv}	50,55,45	3	1.80-3.00	Firm to stiff consistency grey slightly sandy CLAY (GLACIAL DEPOSITS)	
1.50	c _{fv} *	65,60,65				
2.00	c _{fv} *	70,65,65				
2.50	c _{fv} *	80,80,78				
3.00	c _{fv} *	100, 95, 100				
Remarks					Notes	
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. Symbols and abbreviations are explained on the accompanying key 3. All linear dimensions are in metres unless otherwise stated	

In Situ Percolation Test

Hole Ref. **TP01S**

Project: Hammonds Way, Hinckley

Sheet 1 of 1

Job No. CCL03854

Date: 31/03/2025

Test by: JonW

Checked by: *AM*

Trial Pit TP01S

Test 1

Depth 1.00 m
Length 1.60 m
Width 0.60 m

Depth to water at start of test 0.36 m
Max Effective Depth 0.64 m
75% Effective Depth 0.48 m
25% Effective Depth 0.16 m

Water Level Measurements

Time at Start of Test	Time (Minutes)	Depth to Water (metres)	Effective Depth (m)
10:06	0	0.36	0.64
	1	0.36	0.64
	2	0.36	0.64
	28	0.36	0.64
	56	0.36	0.64
	128	0.35	0.65
	268	0.34	0.66

Outflow Volume

Effectively no out flow

Soil Infiltration Rate

Less than 1×10^{-6} m/sec

In Situ Percolation Test

Hole Ref. **TP06S**

Project: Hammonds Way, Hinckley

Sheet 1 of 1

Job No. CCL03854

Date: 31/03/2025

Test by: JonW

Checked by: *AM*

Trial Pit TP06S

Test 1

Depth 0.80 m
Length 1.60 m
Width 0.60 m

Depth to water at start of test 0.44 m
Max Effective Depth 0.36 m
75% Effective Depth 0.27 m
25% Effective Depth 0.09 m

Water Level Measurements

Time at Start of Test	Time (Minutes)	Depth to Water (metres)	Effective Depth (m)
10:06	0	0.44	0.36
	2	0.44	0.36
	4	0.44	0.36
	22	0.44	0.36
	86	0.44	0.36
	241	0.44	0.36

Outflow Volume

Effectively no out flow

Soil Infiltration Rate

Less than 1×10^{-6} m/sec

BOREHOLE & PROBING RECORDS

KEY

Sampling

J	Soil Sample: Plastic Jar	}	Category B Samples
G	Soil Sample: Glass Jar		
g	Soil Sample: Glass Vial		
D	Soil Sample: Small Bag Sample		
B	Disturbed Bulk Soil Sample		
W	Water Sample – recovered during boring operations		
U	"Undisturbed" 100 mm Diameter Soil Sample (denoted Category A OS-TK/W in BS EN 22475-1:2006)		
P	"Undisturbed" Piston Soil Sample (denoted PS-T/W in BS EN 22475-1:2006)		
NR	Sample not recovered		
S	Standard Penetration Test (SPT: split spoon sampler)		
SPT(C)	SPT carried out with a 60° cone		
IC	Nett sample recovery ratio (ratio of length of recovered sample to length of sample run)		

In Situ Measurements

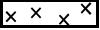
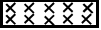
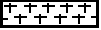
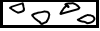
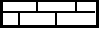
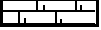
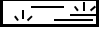
FVT	{	C_{fv}	Undrained Shear Strength (from hand vane shear vane test)
		C_{rv}	Undrained Remoulded Shear Strength (from hand vane shear vane test)
		C_{fv}^*	Hand Vane Shear Strength Test (on Category A: OS-TK/W soil sample "U" type, as outlined above)
SPT N		100 (10)	'N' Value from SPT test Number of blows to drive U100
		N_{10}	Dynamic Probe Test: Number of blows to drive 100 mm
DPH		N_{H10}	Dynamic Probe Test: Heavy (30 kg mass & 500 mm fall)
DPSH-A		N_{SHA10}	Dynamic Probe Test: Super-Heavy A (63.5 kg mass & 500 mm fall)
DPSH-B		N_{SHB10}	Dynamic Probe Test: Super-Heavy B (63.5 kg mass & 750 mm fall)
		$\frac{x}{y}$ mm	x Blows per y Driving Distance (for non-standard driving distance)
T			Torque (max) required to turn rods (unit: Nm, unless otherwise shown)

Notes:

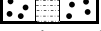
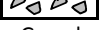
1. All measurement values on record sheets are uncorrected.
2. For corrected test values, refer to report.
3. Identification and classification of strata is based on the guidance published in the current edition of BS5930 together with BS EN ISO 14688-1:2002, BS EN ISO 14688-2:2004, BS EN ISO 14689-1:2003
4. Consistency (soft, firm, stiff etc) relates to a manual test/inspection on site (in compliance with BS EN ISO 14688-1:2002 Section 5.14)
5. Undrained shear strength (low, medium, high etc) relates to in situ or laboratory test data and the associated assessed strength of a stratum (in compliance with BS EN ISO 14688-2:2004 Section 5.3 and Table 5).
6. The density of coarse-grained soils is based on SPT N values (or equivalent Dynamic Probe test or CPT data) as outlined in BS5930 and BS EN ISO 14688-2:2004.
7. Rock strength (weak, strong etc) is based on field identification (and/or strength test data), as outlined in BS EN ISO 14689-1:2003 Table 5.

BOREHOLE & DRILLHOLE RECORDS - LEGENDS KEY SHEET

Legend - Strata Encountered in Exploratory Hole

Soil	Rock		
	Sedimentary	Igneous	Metamorphic
 Made Ground	 Mudstone	 Fine-grained	 Fine-grained
 Clay	 Shale	 Medium-grained	 Medium-grained
 Silt	 Siltstone	 Coarse-grained	 Coarse-grained
 Sand	 Sandstone		
 Gravel	 Limestone		
 Peat/Topsoil	 Chalk		
 Organic Sand	 Coal		
 Organic Clay	 Conglomerate		

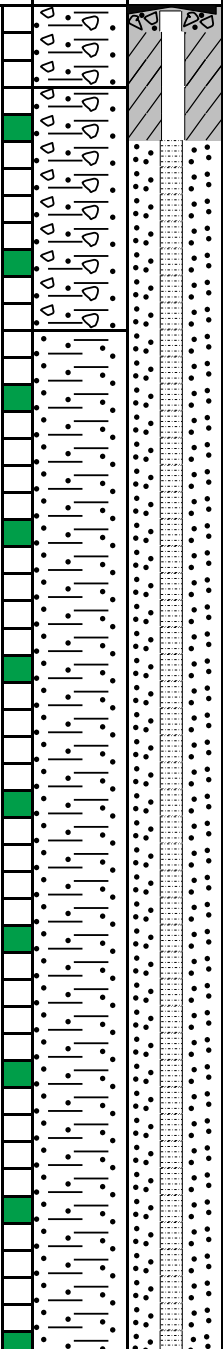
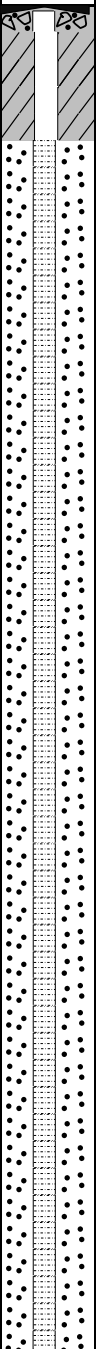
Legend - Backfill to Borehole and Standpipe Installations

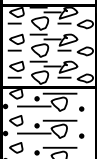
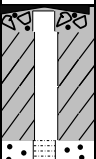
Backfill	Installations
 Soil arisings	 Concrete Cover Over Standpipe
 Bentonite	 Plain Standpipe - Bentonite Surround
 Cement-based Grout	 Perforated Standpipe - Geotextile and Granular Filter Surround
 Gravel	 Perforated Standpipe End Geotextile and Granular Filter Surround

Notes:

1. A combination of the strata symbols are indicative of mixed soil types.
2. The response zone of a standpipe refers to the section of perforated pipe within a granular surround, where substances may freely enter the standpipe from the surrounding strata.

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL					Light Cable Percussion Borehole Record Sheet					Hole Ref. BH01			
					Project: Hammonds Way, Hinckley					Sheet 1 of 2			
					Start Date 31/03/2025 End Date 31/03/2025					Job No. CCL03854			
Contractor RD Drilling Ltd					Equipment Dando 2000 Mk2					Ground Level 90.3 m OD			
Method 0 m - 15.0 m Light Cable Percussion Boring										Co-ordinates			
Boring Diameter 0 m - 15.0 m 150 mm										Logged by: JonW Logged on site during drilling operations			
Casing Diameter 0 m - 1.5 m 150 mm										Checked by: <i>JonW</i>			
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description					Depth	Legend	Backfill	Level O.D.
1.00	D				Soft consistency black slightly sandy slightly gravelly CLAY (TOPSOIL)					0.30			90.00
1.50-1.95	S	1.50	Dry	N=7	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)								
2.00	D												
3.00-3.45	S	1.50	Dry	N=14	Stiff consistency blueish grey slightly sandy CLAY (GLACIAL DEPOSITS)					2.80			
3.00	D												
4.00	D												
4.50-4.95	U	1.50	Dry	(75)									
5.00	D												
6.00-6.45	S	1.50	Dry	N=19									
6.00	D												
7.50-7.95	U	1.50	Dry	(80)									
8.00	D												
9.00	S	1.50	Dry	N=23									
9.00	D												
10.00	D				Borehole continues on page 2 of 2								
Progress/Groundwater								Chiselling		Additional Tests			
Date/Time		Hole Depth	Case Depth	Water Depth	Depth Struck	Depth after 20 min	Depth Sealed	Depth Range	Time (hours)	Test Type	Test Depth	Test Value	
31/03/25 am 31/03/25 pm		0.00 15.00	0.00 1.50	- Dry									
Remarks								Notes					
								1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²					

					Light Cable Percussion Borehole Record Sheet					Hole Ref. BH02		
					Project: Hammonds Way, Hinckley					Sheet 1 of 2		
					Start Date 01/04/2025 End Date 01/04/2025					Job No. CCL03854		
Contractor RD Drilling Ltd Equipment Dando 2000 Mk2					Ground Level 90.4 m OD							
Method 0 m - 15.0 m Light Cable Percussion Boring					Co-ordinates							
Boring Diameter 0 m - 15.0 m 150 mm					Logged by: JonW Logged on site during drilling operations							
Casing Diameter 0 m - 1.5 m 150 mm					Checked by: <i>JonW</i>							
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description	Depth	Legend	Backfill	Level O.D.			
1.00	D				Soft consistency black sandy slightly gravelly CLAY. Gravel is subrounded fine to medium (TOPSOIL)	0.40			89.98			
1.50-1.95	S	1.50	Dry	N=6	Soft to firm consistency sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)							
2.00	D											
3.00-3.45	S	1.50	Dry	N=9	Stiff consistency blueish grey slightly sandy CLAY (GLACIAL DEPOSITS)	1.40						
3.00	D											
4.00	D											
4.50-4.95	S	1.50	Dry	N=19								
5.00	D											
6.00-6.45	U	1.50	Dry	(67)								
6.50	D											
7.00	D											
7.50-7.95	S	1.50	Dry	N=19								
8.00	D											
9.00-9.45	U	1.50	Dry	(81)								
9.50	D											
10.00	D				Borehole continues on page 2 of 2							
Progress/Groundwater					Chiselling					Additional Tests		
Date/Time	Hole Depth	Case Depth	Water Depth	Depth Struck	Depth after 20 min	Depth Sealed	Depth Range	Time (hours)	Test Type	Test Depth	Test Value	
01/04/25 AM	0.00	0.00	-									
01/04/25 PM	15.00	1.50	Dry									
Remarks					Notes 1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²							

					Light Cable Percussion Borehole Record Sheet					Hole Ref. BH03			
					Project: Hammonds Way, Hinckley					Sheet 1 of 2			
					Start Date 02/04/2025 End Date 02/04/2025					Job No. CCL03854			
Contractor RD Drilling Ltd Equipment Dando 2000 Mk2					Ground Level 90.7 m OD								
Method 0 m - 15.0 m Light Cable Percussion Boring					Co-ordinates								
Boring Diameter 0 m - 15.0 m 150 mm					Logged by: JonW Logged on site during drilling operations								
Casing Diameter 0 m - 1.5 m 150 mm					Checked by: <i>JonW</i>								
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description					Depth	Legend	Backfill	Level O.D.
0.40	B				Soft consistency black sandy slightly gravelly CLAY. Gravel is subrounded fine to medium (TOPSOIL)					0.40			90.26
1.50-1.95	S	1.50	Dry	N=7	Soft to firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)					1.30			89.36
2.00	B				Firm to stiff consistency blueish grey slightly sandy CLAY (GLACIAL DEPOSITS)								
3.00-3.45	S	1.50	Dry	N=8									
4.00	B												
4.50-4.95	S	1.50	Dry	N=10									
5.00	B												
6.00-6.45	S	1.50	Dry	N=12									
6.00	B												
7.00	B												
7.50	S	1.50	Dry	N=14									
8.00	B												
9.00	S	1.50	Dry	N=18									
9.00	B												
10.00	B				Borehole continues on page 2 of 2								
Progress/Groundwater								Chiselling		Additional Tests			
Date/Time	Hole Depth	Case Depth	Water Depth	Depth Struck	Depth after 20 min	Depth Sealed	Depth Range	Time (hours)	Test Type	Test Depth	Test Value		
02/04/25 AM	0.00	0.00	-										
02/04/25 PM	15.00	1.50	Dry										
Remarks								Notes 1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²					

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL					Light Cable Percussion Borehole Record Sheet					Hole Ref. BH03				
					Project: Hammonds Way, Hinckley					Sheet 2 of 2				
					Start Date 02/04/2025 End Date 02/04/2025					Job No. CCL03854				
Contractor RD Drilling Ltd					Equipment Dando 2000 Mk2					Ground Level 90.7 m OD				
Method 0 m - 15.0 m Light Cable Percussion Boring										Co-ordinates				
Boring Diameter 0 m - 15.0 m 150 mm										Logged by: JonW Logged on site during drilling operations				
Casing Diameter 0 m - 1.5 m 150 mm										Checked by: <i>JonW</i>				
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description					Depth	Legend	Backfill	Level O.D.	
10.50-10.95	S	1.50	Dry	N=21	Firm to stiff consistency blueish grey slightly sandy CLAY (GLACIAL DEPOSITS)								75.66	
11.00	B													
12.00-12.45	U*	1.50	Dry	(75)										
13.00	B													
13.50-13.95	S	1.50	Dry	N=25										
15.00-15.45	U	1.50	Dry	(86)	End of Borehole					15.00				
Progress/Groundwater					Chiselling					Additional Tests				
Date/Time	Hole Depth	Case Depth	Water Depth	Depth Struck	Depth after 20 min	Depth Sealed	Depth Range	Time (hours)	Test Type	Test Depth	Test Value			
02/04/25 AM 02/04/25 PM	0.00 15.00	0.00 1.50	- Dry											
Remarks * No recovery							Notes 1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²							

22-24 Aaron Road
Whittlesey
Peterborough
PE7 2EX

SPT Hammer Ref: RD2
Test Date: 02/01/2024
Report Date: 02/01/2024
File Name: RD2.spt
Test Operator: PR

Instrumented Rod Data

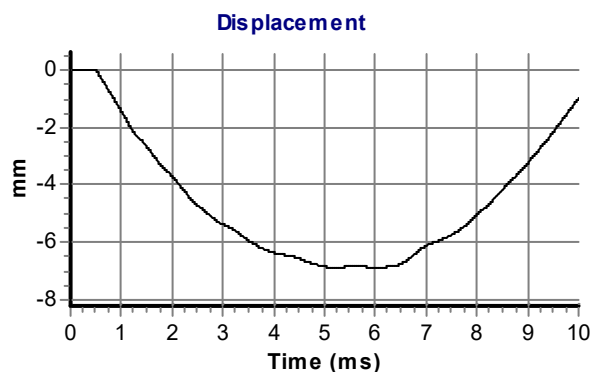
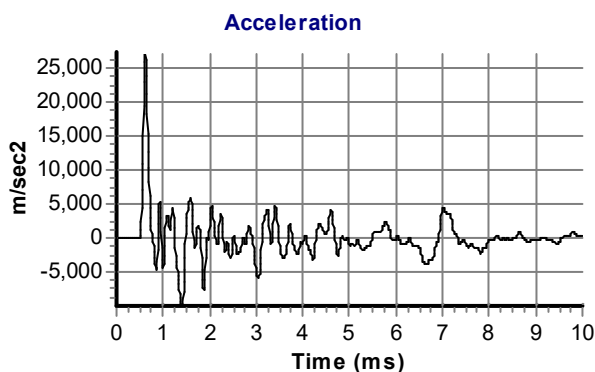
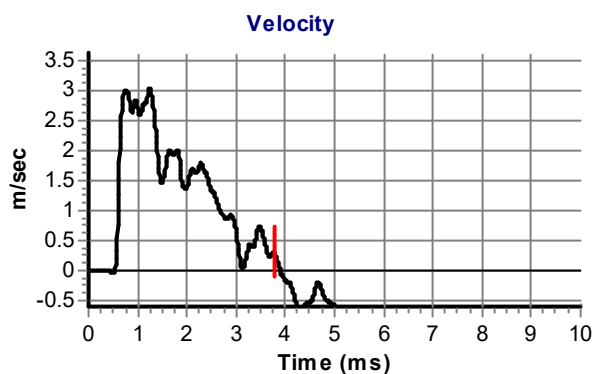
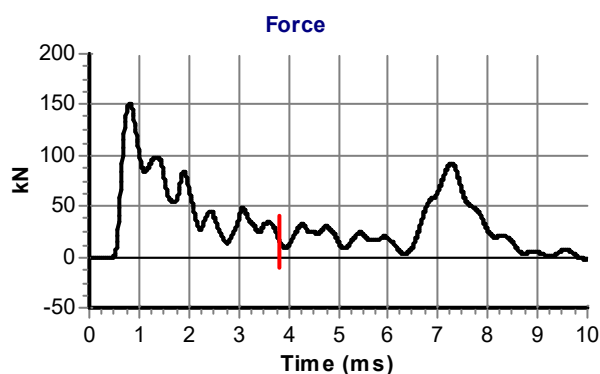
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.3
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 11853
Accelerometer No.2: 10332

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 15.0

Comments / Location

Maximum calibration interval is 12 months



Calculations

Area of Rod A (mm^2): 944
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 365

Energy Ratio E_r (%): **77**

P. Rodgman
Signed: Phil Rodgman
Title: Mr

TABLE I-4

GROUNDWATER MONITORING DATA

Borehole	Ground Level (mOD)	Date: 02/04/2025		Date: 11/04/2025	
		Depth to Groundwater (m)	Groundwater Level (mOD)	Depth to Groundwater (m)	Groundwater Level (mOD)
BH01	90.30	Dry	-	9.50	80.80
BH02	90.40	Dry	-	7.28	83.12
BH03	90.70	Dry	-	0.81	89.89

Notes:

1. Ground levels based on StafSurv Drawing No. 14109

DYNAMIC SAMPLE RECORDS

KEY

Sampling

J	Disturbed Jar Sample
G	Jar Sample in Glass Container
g	Soil Sample in Glass Vial
W	Water Sample
IC	Nett sample recovery ratio (ratio of length of recovered sample to length of sample run)

In Situ Measurements

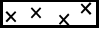
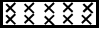
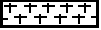
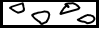
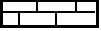
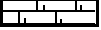
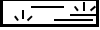
FVT	C _{fv}	Undrained Shear Strength (from hand vane shear vane test)
	C _{rv}	Undrained Remoulded Shear Strength (from hand vane shear vane test)
	C _{fv} *	Hand Vane Shear Strength Test (on Category A: OS-TK/W soil sample recovered in window sampler)
	S	Standard Penetration Test (SPT: split spoon sampler)
	SPT(C)	SPT carried out with a 60° cone
	'N'	'N' Value from SPT test
	N ₁₀	Dynamic Probe Test: Number of blows to drive 100 mm
DPH	N _{H10}	Dynamic Probe Test: Heavy (30 kg mass & 500 mm fall)
DPSH-A	N _{SHA10}	Dynamic Probe Test: Super-Heavy A (63.5 kg mass & 500 mm fall)
DPSH-B	N _{SHB10}	Dynamic Probe Test: Super-Heavy B (63.5 kg mass & 750 mm fall)
	<u>x</u>	x Blows per y Driving Distance (for non-standard SPT or DP driving distance)
	y mm	
	T	Torque (max) required to turn rods (unit: Nm, unless otherwise shown)

Notes:

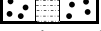
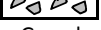
1. All measurement values on record sheets are uncorrected, unless otherwise indicated.
2. For corrected test values, refer to report.
3. Identification and classification of strata is based on the guidance published in the current edition of BS5930 together with BS EN ISO 14688-1:2002, BS EN ISO 14688-2:2004 and BS EN ISO 14689-1:2003
4. Consistency (soft, firm, stiff etc) relates to a manual test/inspection on site (in compliance with BS EN ISO 14688-1:2002 Section 5.14).
5. Undrained shear strength (low, medium, high etc) relates to in situ or laboratory test data and the associated assessed strength of a stratum (in compliance with BS EN ISO 14688-2:2004 Section 5.3 and Table 5).
6. The density of coarse-grained soils is based on SPT N values (or equivalent Dynamic Probe test or CPT data) as outlined in BS5930 and BS EN ISO 14688-2:2004.
7. Rock strength (weak, strong etc) is based on field identification (and/or strength test data), as outlined in BS EN ISO 14689-1:2003 Table 5.

BOREHOLE & DRILLHOLE RECORDS - LEGENDS KEY SHEET

Legend - Strata Encountered in Exploratory Hole

Soil	Rock		
	Sedimentary	Igneous	Metamorphic
 Made Ground	 Mudstone	 Fine-grained	 Fine-grained
 Clay	 Shale	 Medium-grained	 Medium-grained
 Silt	 Siltstone	 Coarse-grained	 Coarse-grained
 Sand	 Sandstone		
 Gravel	 Limestone		
 Peat/Topsoil	 Chalk		
 Organic Sand	 Coal		
 Organic Clay	 Conglomerate		

Legend - Backfill to Borehole and Standpipe Installations

Backfill	Installations
 Soil arisings	 Concrete Cover Over Standpipe
 Bentonite	 Plain Standpipe - Bentonite Surround
 Cement-based Grout	 Perforated Standpipe - Geotextile and Granular Filter Surround
 Gravel	 Perforated Standpipe End Geotextile and Granular Filter Surround

Notes:

1. A combination of the strata symbols are indicative of mixed soil types.
2. The response zone of a standpipe refers to the section of perforated pipe within a granular surround, where substances may freely enter the standpipe from the surrounding strata.

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL					Dynamic Sample Record Sheet					Hole Ref. DS01	
					Project: Hammonds Way, Hinckley					Sheet 1 of 1	
					Date: 02/04/2025					Job No. CCL03854	
Contractor LTS Drilling					Equipment Archway Dart					Ground Level. 90.55 m OD	
Method 0.0 m to 5.0 m dynamic sampling										Co-ordinates	
Boring Diameter 100 mm										Logged by: JonW Logged on site during drilling operations	
					Checked by: <i>AMH</i>						
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description	Depth	Legend	Backfill	Level O.D.		
0.80	JGg				Concrete (MADE GROUND)	0.15			90.40		
					Greyish black sand and gravel (MADE GROUND)	0.30			90.25		
					Soft consistency dark greyish brown sandy slightly gravelly clay. Gravel is fine to medium subangular to subrounded (MADE GROUND)						
1.00-1.45	S	1.00	Dry	N=4		1.10			89.45		
2.00-2.45	S	1.00	2.00	N=10	Loose greyish brown clayey slightly gravelly fine to medium sand. Gravel is fine to medium subangular to subrounded (MADE GROUND)	1.40			89.15		
					Firm consistency orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)	1.80			88.75		
					Firm to stiff consistency grey slightly sandy CLAY (GLACIAL DEPOSITS)						
2.60	J										
3.00-3.45	S	1.00	2.00	N=20							
4.00-4.45	S	1.00	2.00	N=36							
4.45-4.90	S	1.00	2.00	N=50 / 285 mm							
					End of Borehole	4.95			85.60		
Core Recovery					Groundwater					Additional Tests	
Depth		Recovery		Hole Depth	Strike Depth	Water Depth	Observations		Test type	Test Depth	Test Value
0.00-1.00		100%		4.95	2.00	2.00					
1.00-2.00		100%									
2.00-3.00		100%									
3.00-4.00		100%									
4.00-5.00		100%									
Remarks					Notes						
Borehole backfilled (collapse) back to 2.5 m					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²						

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL					Dynamic Sample Record Sheet					Hole Ref. DS02	
					Project: Hammonds Way, Hinckley					Sheet 1 of 1	
					Date: 02/04/2025					Job No. CCL03854	
Contractor LTS Drilling					Equipment Archway Dart					Ground Level. 90.20 m OD	
Method 0.0 m to 5.0 m dynamic sampling										Co-ordinates	
Boring Diameter 100 mm										Logged by: JonW Logged on site during drilling operations	
					Checked by: <i>ARM</i>						
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description	Depth	Legend	Backfill	Level O.D.		
0.30	JGg				Concrete (MADE GROUND)	0.25			89.95		
					Loose grey sandy gravel (MADE GROUND)	0.35			89.85		
					Soft consistency dark greyish brown sandy slightly gravelly clay. Gravel is fine to medium subangular of brick (MADE GROUND)						
0.80	J										
1.00	S	1.00	Dry	N=7							
						1.20			89.00		
					Firm consistency orangish brown grey slightly sandy CLAY (ALLUVIUM)						
2.00	S	1.00	Dry	N=15		2.00				88.20	
3.00	S	1.00	Dry	N=21	Medium dense to dense brown sandy GRAVEL. Fine to coarse subrounded to rounded quartzite (ALLUVIUM)						
4.00	S	1.00	Dry	N=18							
4.45	S	1.00	Dry	N=35							
					End of Borehole	4.95			85.25		
Core Recovery					Groundwater			Additional Tests			
Depth		Recovery		Hole Depth	Strike Depth	Water Depth	Observations	Test type	Test Depth	Test Value	
0.00-1.00		100%		4.95	Dry	Dry	-				
1.00-2.00		100%									
2.00-3.00		10%									
3.00-4.00		100%									
4.00-5.00		100%									
Remarks					Notes						
					1. All logging and sampling in accordance with BS 5930:2015+A1:2020						
					2. The depths to strata change are approximate only						
					3. Symbols and abbreviations are explained on the accompanying key						
					4. All linear dimensions are in metres unless otherwise stated						
					5. Undrained shear strength test value given in kN/m²						

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL					Dynamic Sample Record Sheet					Hole Ref. DS03	
					Project: Hammonds Way, Hinckley					Sheet 1 of 1	
					Date: 02/04/2025					Job No. CCL03854	
Contractor LTS Drilling					Equipment Archway Dart					Ground Level. 90.40 m OD	
Method 0.0 m to 5.0 m dynamic sampling										Co-ordinates	
Boring Diameter 100 mm										Logged by: JonW Logged on site during drilling operations	
					Checked by: <i>AMH</i>						
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description	Depth	Legend	Backfill	Level O.D.		
0.40	JGg				Concrete (MADE GROUND)	0.25			90.15		
					Black slightly sandy GRAVEL. Gravel is fine to medium subrounded (MADE GROUND)	0.35			90.05		
					Soft to firm consistency brownish black slightly sandy slightly gravel clay. Gravel is fine to medium subangular brick (MADE GROUND)	0.50			89.90		
0.80	J				Firm blueish grey mottled brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subrounded quartzite (ALLUVIUM)	1.00			89.40		
1.00-1.45	S	1.00	Dry	N=11	Soft to firm consistency reddish grey very sandy CLAY (ALLUVIUM)	1.50			88.90		
2.00-2.45	S	1.00	2.00	N=13	Medium dense reddish brown slightly clayey slightly gravelly fine to medium SAND. Gravel is fine to medium subrounded of quartzite (ALLUVIUM)	2.00			88.40		
3.00-3.45	S	1.00	2.00	N=20	Firm to stiff consistency grey blue mottled brown slightly sandy slightly gravelly CLAY. Gravel is fine subrounded (GLACIAL DEPOSITS)	4.95			85.45		
4.00-4.45	S	1.00	2.00	N=34							
4.45-4.90	S	1.00	2.00	N=50 / 275 mm							
					End of Borehole						
Core Recovery					Groundwater			Additional Tests			
Depth		Recovery		Hole Depth	Strike Depth	Water Depth	Observations	Test type	Test Depth	Test Value	
0.00-1.00		100%		4.95	2.00	2.00					
1.00-2.00		100%									
2.00-3.00		100%									
3.00-4.00		100%									
4.00-5.00		100%									
Remarks					Notes						
Backfill at 4.0 m, SPT refusal at 4.45 m					1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²						

Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL					Dynamic Sample Record Sheet					Hole Ref. DS04	
					Project: Hammonds Way, Hinckley					Sheet 1 of 1	
					Date: 02/04/2025					Job No. CCL03854	
Contractor LTS Drilling					Equipment Archway Dart					Ground Level. 90.55 m OD	
Method 0.0 m to 5.0 m dynamic sampling										Co-ordinates	
Boring Diameter 100 mm										Logged by: JonW Logged on site during drilling operations	
					Checked by: <i>ARM</i>						
Sample Depth	Sample or Test	Casing Depth	Water Depth	Test Value	Description	Depth	Legend	Backfill	Level O.D.		
0.30	JGg				Concrete (MADE GROUND)	0.10			90.45		
					Dark grey sandy gravel. Gravel is fine to medium subangular (MADE GROUND)	0.20			90.35		
					Loose black sand and gravel. Gravel is fine subangular of bituminous material (MADE GROUND)	0.40			90.15		
					Soft to firm consistency dark greyish brown slightly sandy slightly gravelly clay. Gravel is fine subrounded (MADE GROUND)	1.00			89.55		
0.70	JGg				Stiff consistency orangish brown mottled blueish grey slightly sandy slightly gravel CLAY. Gravel is fine subrounded quartzite (ALLUVIUM)						
1.00-1.45	S	1.00	Dry	N=12		2.00			88.55		
1.50	JGg										
2.00-2.45	S	1.00	2.00	N=15							
3.00-3.45	S	1.00	2.00	N=28	Medium dense to dense brown sandy GRAVEL (ALLUVIUM)						
3.45-3.90	S	1.00	2.00	N=39		3.95			86.60		
					End of Borehole						
Core Recovery					Groundwater			Additional Tests			
Depth		Recovery		Hole Depth	Strike Depth	Water Depth	Observations	Test type	Test Depth	Test Value	
0.00-1.00		100%		3.95	2.00	2.00					
1.00-2.00		100%									
2.00-3.00		0%									
3.00-4.00		40%									
Remarks						Notes					
Sample tube with catcher unable to recover sample 2.00-3.00 m.						1. All logging and sampling in accordance with BS 5930:2015+A1:2020 2. The depths to strata change are approximate only 3. Symbols and abbreviations are explained on the accompanying key 4. All linear dimensions are in metres unless otherwise stated 5. Undrained shear strength test value given in kN/m ²					

Dynamic Sampling Uk Ltd
Unit 8 Victory Park
Victory Road
Derby
DE248ZF

SPT Hammer Energy Test Report

In accordance with BSEN ISO 22476-3:2005

SPT Hammer Ref: AF01
Test Date: 17/01/2025
Report Date: 17/01/2025
File Name: AF01.spt
Test Operator: B.HUNTER

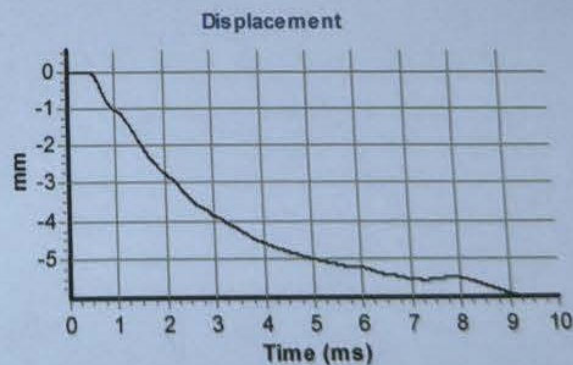
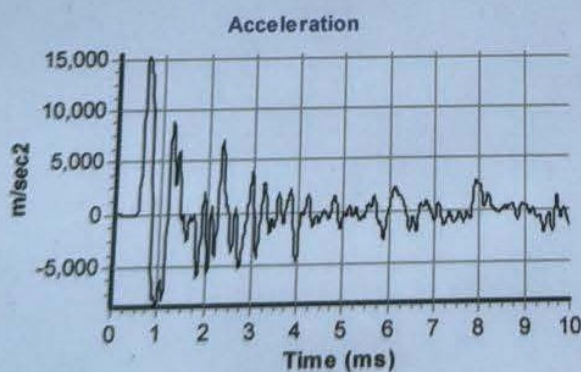
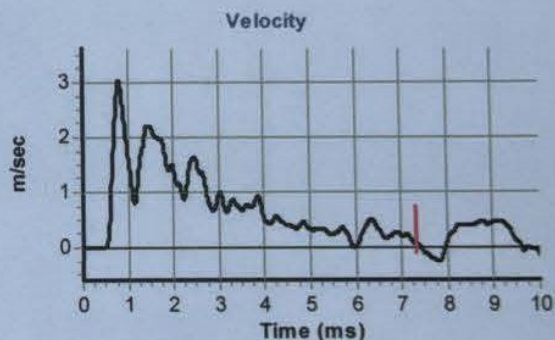
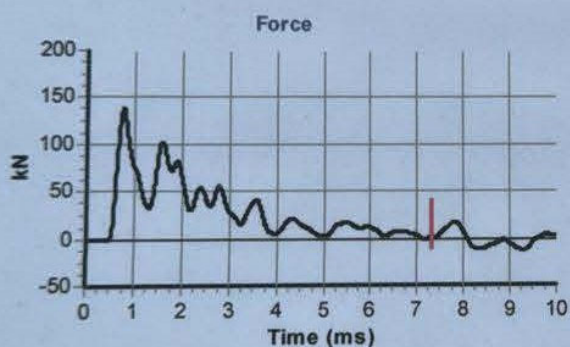
Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.6
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 62901
Accelerometer No.2: 69902

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location



Calculations

Area of Rod A (mm^2): 983
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 302

Energy Ratio E_r (%):

64

Signed: B.Hunter
Title: Operations Manager



4161



Crossfield Consulting Ltd
The Granary, White Hall Farm
Long Itchington
CV47 9PU



7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: P25/00263/CFC - 25-61861

Your Project Reference:	Hammonds Way, Hinckley CCL03854		
Your Order Number:	PO13751	Samples Received / Instructed:	07/04/2025 / 07/04/2025
Report Issue Number:	1	Sample Tested:	07/04 to 17/04/2025
Samples Analysed:	7 sample(s)	Report issued:	17/04/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Asbestos

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and other than the asbestos test(s) these results are not covered by our accreditation

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduced except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 12.03.25

Issued by: J. Gane

Issue No: 4

Rev No: 26



4161



P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley

CCL03854

Analytical Test Results - Solid

Lab Reference			482956	482957	482958	482959	482960	482961
Client Sample ID			-	-	-	-	-	-
Client Sample Location			TP09	DS01	DS02	DS03	DS04	DS04
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			0.30	0.80	0.30	0.40	0.30	0.70
Depth - Bottom (m)			0.30	0.80	0.30	0.40	0.30	0.70
Date of Sampling			31/03/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Sand	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Arsenic	(mg/kg)	MCERTS	< 10	12	19	35	92	11
Boron (w/s)	(mg/kg)	u	< 2.5	< 2.5	7.2	12	13	5.0
Cadmium	(mg/kg)	MCERTS	1.2	0.9	1.6	3.0	9.5	1.1
Chromium (Total)	(mg/kg)	UKAS	15	9.4	7.9	13	< 1.0	21
Copper	(mg/kg)	MCERTS	84	18	120	160	240	17
Lead	(mg/kg)	MCERTS	140	14	130	140	210	22
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	31	32	30	84	210	33
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	150	42	240	680	1200	67
Total Phenols	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sulphate (Acid Soluble)	(%)	u	0.08	0.03	0.05	0.09	0.21	0.04
pH	pH Units	MCERTS	8.6	8.2	7.9	7.4	7.2	7.5
Sulphate (Water soluble as SO ₄)	(mg/l)	u	21	17	< 10	90	190	21
Sulphide	(mg/kg)	u	< 15	< 15	52	72	210	48
Sulphur (Total)	(%)	UKAS	0.04	0.01	0.04	0.20	0.75	0.05
Acenaphthene	(mg/kg)	MCERTS	< 0.20	< 0.02	0.04	< 0.20	< 0.02	< 0.02
Acenaphthylene	(mg/kg)	UKAS	< 0.20	< 0.02	0.05	< 0.20	< 0.02	< 0.02
Anthracene	(mg/kg)	UKAS	< 0.20	< 0.02	0.37	< 0.20	0.03	< 0.02
Benzo (a) anthracene	(mg/kg)	MCERTS	0.43	< 0.02	0.68	< 0.20	0.10	< 0.02
Benzo (a) pyrene	(mg/kg)	MCERTS	0.56	< 0.02	0.68	< 0.20	0.15	< 0.02
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.60	< 0.02	0.88	< 0.20	0.18	< 0.02
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.50	< 0.02	0.44	< 0.20	0.11	< 0.02
Benzo (k) fluoranthene	(mg/kg)	MCERTS	0.24	< 0.02	0.30	< 0.20	0.07	< 0.02
Chrysene	(mg/kg)	MCERTS	0.48	< 0.02	0.67	< 0.20	0.11	< 0.02
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	< 0.20	< 0.02	0.11	< 0.20	0.03	< 0.02
Fluoranthene	(mg/kg)	MCERTS	0.78	< 0.02	1.7	< 0.20	0.18	< 0.02
Fluorene	(mg/kg)	MCERTS	< 0.20	< 0.02	0.09	< 0.20	< 0.02	< 0.02
Indeno (1, 2, 3-cd) pyrene	(mg/kg)	MCERTS	0.38	< 0.02	0.39	< 0.20	0.09	< 0.02
Naphthalene	(mg/kg)	MCERTS	< 0.20	< 0.02	< 0.02	< 0.20	0.03	< 0.02
Phenanthrene	(mg/kg)	MCERTS	0.25	< 0.02	0.98	< 0.20	0.04	< 0.02
Pyrene	(mg/kg)	MCERTS	0.75	< 0.02	1.4	< 0.20	0.20	< 0.02
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	6.3	< 0.32	8.7	< 3.20	1.4	< 0.32
TOC	(%)	MCERTS	1.5	< 0.5	4.4	9.6	17	0.9
Asbestos	-	UKAS	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected



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P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley

CCL03854

Analytical Test Results - Solid

Lab Reference

482962

Client Sample ID

-

Client Sample Location

DS04

Client Sample Type

-

Client Sample Number

-

Depth - Top (m)

1.50

Depth - Bottom (m)

1.50

Date of Sampling

02/04/2025

Time of Sampling

-

Sample Matrix

Clay

Determinant	Units	Accreditation	
Arsenic	(mg/kg)	MCERTS	< 10
Boron (w/s)	(mg/kg)	u	< 2.5
Cadmium	(mg/kg)	MCERTS	0.8
Chromium (Total)	(mg/kg)	UKAS	11
Copper	(mg/kg)	MCERTS	28
Lead	(mg/kg)	MCERTS	15
Mercury	(mg/kg)	UKAS	< 2.5
Nickel	(mg/kg)	MCERTS	34
Selenium	(mg/kg)	u	< 8.0
Zinc	(mg/kg)	MCERTS	29
Total Phenols	(mg/kg)	MCERTS	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	< 1.0
Chromium (Hexavalent)	(mg/kg)	u	< 1.0
Sulphate (Acid Soluble)	(%)	u	0.06
pH	pH Units	MCERTS	7.8
Sulphate (Water soluble as SO ₄)	(mg/l)	u	82
Sulphide	(mg/kg)	u	< 15
Sulphur (Total)	(%)	UKAS	0.03
Acenaphthene	(mg/kg)	MCERTS	< 0.02
Acenaphthylene	(mg/kg)	UKAS	< 0.02
Anthracene	(mg/kg)	UKAS	< 0.02
Benzo (a) anthracene	(mg/kg)	MCERTS	< 0.02
Benzo (a) pyrene	(mg/kg)	MCERTS	< 0.02
Benzo (b) fluoranthene	(mg/kg)	MCERTS	< 0.02
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	< 0.02
Benzo (k) fluoranthene	(mg/kg)	MCERTS	< 0.02
Chrysene	(mg/kg)	MCERTS	< 0.02
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	< 0.02
Fluoranthene	(mg/kg)	MCERTS	< 0.02
Fluorene	(mg/kg)	MCERTS	< 0.02
Indeno (1, 2, 3-cd) pyrene	(mg/kg)	MCERTS	< 0.02
Naphthalene	(mg/kg)	MCERTS	< 0.02
Phenanthrene	(mg/kg)	MCERTS	< 0.02
Pyrene	(mg/kg)	MCERTS	< 0.02
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	< 0.32
TOC	(%)	MCERTS	0.6
Asbestos	-	UKAS	No asbestos detected



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P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley

CCL03854

Analytical Test Results - VPH / EPH

Lab Reference	482956	482957	482958	482959	482960	482961		
Client Sample ID	-	-	-	-	-	-		
Client Sample Location	TP09	DS01	DS02	DS03	DS04	DS04		
Client Sample Type	-	-	-	-	-	-		
Client Sample Number	-	-	-	-	-	-		
Depth - Top (m)	0.30	0.80	0.30	0.40	0.30	0.70		
Depth - Bottom (m)	0.30	0.80	0.30	0.40	0.30	0.70		
Date of Sampling	31/03/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025		
Time of Sampling	-	-	-	-	-	-		
Sample Matrix	Sand	Clay	Clay	Clay	Clay	Clay		
Determinant	Units	Accreditation						
Benzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	0.25	< 0.01	
Toluene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	0.04	< 0.01	
Ethylbenzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
m&p Xylene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	
o-Xylene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
MTBE	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic >C ₅ to C ₆ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	
Aliphatic >C ₆ to C ₈ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	0.36	< 0.06	
Aliphatic >C ₈ to C ₁₀ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	
Aliphatic >C ₁₀ to C ₁₂ [EH_2D_AL]	(mg/kg)	MCERTS	< 1.0	< 1.0	1.9	1.7	1.4	
Aliphatic >C ₁₂ to C ₁₆ [EH_2D_AL]	(mg/kg)	MCERTS	1.5	1.2	3.2	2.2	1.6	
Aliphatic >C ₁₆ to C ₂₁ [EH_2D_AL]	(mg/kg)	MCERTS	3.3	< 1.0	3.3	2.6	1.6	
Aliphatic >C ₂₁ to C ₃₅ [EH_2D_AL]	(mg/kg)	MCERTS	15	3.3	35	21	9.3	7.2
Aliphatic >C ₃₅ to C ₄₄ [EH_2D_AL]	(mg/kg)	u	< 5.0	< 5.0	27	13	< 5.0	< 5.0
Aromatic >C ₅ to C ₇ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01	0.25	< 0.01
Aromatic >C ₇ to C ₈ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01	0.04	< 0.01
Aromatic >C ₈ to C ₁₀ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Aromatic >C ₁₀ to C ₁₂ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C ₁₂ to C ₁₆ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0	< 1.0	3.7	< 1.0	< 1.0	< 1.0
Aromatic >C ₁₆ to C ₂₁ [EH_2D_AR]	(mg/kg)	MCERTS	2.8	< 1.0	16	4.3	3.1	1.3
Aromatic >C ₂₁ to C ₃₅ [EH_2D_AR]	(mg/kg)	MCERTS	18	2.7	58	22	9.1	5.5
Aromatic >C ₃₅ to C ₄₄ [EH_2D_AR]	(mg/kg)	u	7.3	< 5.0	33	9.9	< 5.0	< 5.0
Total >C ₅ to C ₃₅ [EH_2D+HS_1D_Total]	(mg/kg)	MCERTS	41	< 10	120	54	29	19



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P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley

CCL03854

Analytical Test Results - VPH / EPH

Lab Reference

482962

Client Sample ID

-

Client Sample Location

DS04

Client Sample Type

-

Client Sample Number

-

Depth - Top (m)

1.50

Depth - Bottom (m)

1.50

Date of Sampling

02/04/2025

Time of Sampling

-

Sample Matrix

Clay

Determinant	Units	Accreditation	
Benzene	(mg/kg)	MCERTS	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01
MTBE	(mg/kg)	MCERTS	< 0.01
Aliphatic >C ₅ to C ₆ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06
Aliphatic >C ₆ to C ₈ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06
Aliphatic >C ₈ to C ₁₀ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06
Aliphatic >C ₁₀ to C ₁₂ [EH_2D_AL]	(mg/kg)	MCERTS	1.3
Aliphatic >C ₁₂ to C ₁₆ [EH_2D_AL]	(mg/kg)	MCERTS	1.9
Aliphatic >C ₁₆ to C ₂₁ [EH_2D_AL]	(mg/kg)	MCERTS	2.3
Aliphatic >C ₂₁ to C ₃₅ [EH_2D_AL]	(mg/kg)	MCERTS	4.0
Aliphatic >C ₃₅ to C ₄₄ [EH_2D_AL]	(mg/kg)	u	< 5.0
Aromatic >C ₅ to C ₇ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01
Aromatic >C ₇ to C ₈ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01
Aromatic >C ₈ to C ₁₀ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.06
Aromatic >C ₁₀ to C ₁₂ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0
Aromatic >C ₁₂ to C ₁₆ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0
Aromatic >C ₁₆ to C ₂₁ [EH_2D_AR]	(mg/kg)	MCERTS	1.6
Aromatic >C ₂₁ to C ₃₅ [EH_2D_AR]	(mg/kg)	MCERTS	5.1
Aromatic >C ₃₅ to C ₄₄ [EH_2D_AR]	(mg/kg)	u	< 5.0
Total >C ₅ to C ₃₅ [EH_2D+HS_1D_Total]	(mg/kg)	MCERTS	16



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P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley CCL03854

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
482956	-	TP09	-	-	Brown very gravelly silty sand with rare rootlets	9.0	22	69
482957	-	DS01	-	-	Brown slightly gravelly sandy clay	15	12	100
482958	-	DS02	-	-	Dark brown slightly gravelly sandy clay with rare brick fragments	17	13	95
482959	-	DS03	-	-	Dark brown very gravelly sandy clay	29	26	96
482960	-	DS04	-	-	Dark brown very gravelly sandy clay with occasional brick fragments mudstone	32	2.9	94
482961	-	DS04	-	-	Greyish brown silty clay	22	4.9	100
482962	-	DS04	-	-	Brown silty clay	17	< 0.1	100



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P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley CCL03854

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
482956	-	TP09	-	-	VPH/BTEX - Sample taken from container with headspace. PAHAR 1/10 dilution dark extract
482957	-	DS01	-	-	
482958	-	DS02	-	-	VPH/BTEX - Sample taken from container with headspace.
482959	-	DS03	-	-	PAHAR 1/10 dilution dark extract VPH/BTEX - Sample taken from container with headspace.
482960	-	DS04	-	-	VPH/BTEX - Sample taken from container with headspace.
482961	-	DS04	-	-	VPH/BTEX - Sample taken from container with headspace.
482962	-	DS04	-	-	VPH/BTEX - Sample taken from container with headspace.



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P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley CCL03854

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
SULPHIDES	MS - CL - Sulphide in Soils	As received	Passing 10mm test sieve	Determination of sulphide in soil via titration
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
GCXGCS	MS - CL - TPH & EPH by GCXGC	As received	Passing 10mm test sieve	Determination of TPH and EPH in soils via GCxGC-FID
CWGS	Calculation from VPH-S and EPH-S	As received	Passing 10mm test sieve	Determination of TPH CWG (Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons) in soils via Headspace-GC-MS and GC-GC-FID respectively
VPHS	MS - CL - VPH	As received	Passing 10mm test sieve	Determination of VPH in soils via Headspace-GC-MS
WSBORONS	MS - CL - WS Boron	Air dried	Passing 10mm test sieve	Determination of Water soluble Boron in soils via ICP
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)



P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley CCL03854

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided

W - No time of sampling provided for water sample

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
482956	-	TP09	-	-	MS - CL - pH in Soils	RX
482956	-	TP09	-	-	MS - CL - VPH	RX
482957	-	DS01	-	-	MS - CL - pH in Soils	R
482957	-	DS01	-	-	MS - CL - VPH	R
482958	-	DS02	-	-	MS - CL - pH in Soils	R
482958	-	DS02	-	-	MS - CL - VPH	R
482959	-	DS03	-	-	MS - CL - pH in Soils	R
482959	-	DS03	-	-	MS - CL - VPH	R
482960	-	DS04	-	-	MS - CL - pH in Soils	R
482960	-	DS04	-	-	MS - CL - VPH	R
482961	-	DS04	-	-	MS - CL - pH in Soils	R
482961	-	DS04	-	-	MS - CL - VPH	R
482962	-	DS04	-	-	MS - CL - pH in Soils	R
482962	-	DS04	-	-	MS - CL - VPH	R



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7 - 11 Harding Street
Leicester
LE1 4DH

P25/00263/CFC - 25-61861

Project Reference - Hammonds Way, Hinckley CCL03854

HWOL TPH Acronym Index

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics and Aromatics
AL	Aliphatics Only
AR	Aromatics Only
2D	GC-GC - Double Coil Gas Chromatography
#1	EH_Total but with humics mathmatically subtracted
#2	EH_Total but with fatty acids mathmatically subtracted
_	Operator - underscore to separate acronyms (except for +)
+	Operator to indicate cumlative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



4161



Crossfield Consulting Ltd
The Granary, White Hall Farm
Long Itchington
CV47 9PU

Analytical Test Report: P25/00279/CFC - 25-62085

Your Project Reference:	Hammonds Way, Hinkley CCL03854		
Your Order Number:	PO13751	Samples Received / Instructed:	09/04/2025 / 09/04/2025
Report Issue Number:	1	Sample Tested:	09/04 to 22/04/2025
Samples Analysed:	17 sample(s)	Report issued:	22/04/2025

Signed



James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 12.03.25

Issued by: J. Gane

Issue No: 4

Rev No: 26



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P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley

CCL03854

Analytical Test Results - Chemical Analysis

Lab Reference			484601	484602	484603	484604	484605	484606
Client Sample ID			-	-	-	-	-	-
Client Sample Location			TP01	TP02	TP04	TP05	TP06	TP08
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			0.90	0.80	1.50	2.00	1.20	1.00
Depth - Bottom (m)			0.90	0.80	1.50	2.00	1.20	1.00
Date of Sampling			-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Water soluble sulphate (as SO ₄)	(mg/l)	u	110	100	28	79	110	38
Acid Soluble Sulphate	(%)	u	0.05	0.04	0.01	0.06	0.05	0.02
Total Sulphur	(%)	UKAS	0.04	0.03	0.01	0.04	0.03	0.03
pH Value	pH Units	MCERTS	9.2	8.9	8.7	8.5	8.4	8.5



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P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley

CCL03854

Analytical Test Results - Chemical Analysis

Lab Reference			484607	484608	484609	484610	484611	484612
Client Sample ID			-	-	-	-	-	-
Client Sample Location			TP09	TP10	TP11	TP12	BH01	BH01
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			0.30	1.00	0.50	0.70	6.00	12.00
Depth - Bottom (m)			0.30	1.00	0.50	0.70	6.00	12.00
Date of Sampling			-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Water soluble sulphate (as SO ₄)	(mg/l)	u	44	47	64	27	760	540
Acid Soluble Sulphate	(%)	u	0.06	0.02	0.04	0.02	0.27	0.24
Total Sulphur	(%)	UKAS	0.03	0.01	0.04	0.02	0.69	0.55
pH Value	pH Units	MCERTS	8.5	8.5	8.0	8.1	8.3	8.4



P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley

CCL03854

Analytical Test Results - Chemical Analysis

7 - 11 Harding Street
Leicester
LE1 4DH

Lab Reference			484613	484614	484615	484616
Client Sample ID			-	-	-	-
Client Sample Location			BH02	BH02	BH03	BH03
Client Sample Type			-	-	-	-
Client Sample Number			-	-	-	-
Depth - Top (m)			4.00	13.00	8.00	13.50
Depth - Bottom (m)			4.00	13.00	8.00	13.50
Date of Sampling			-	-	-	-
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay
Determinant	Units	Accreditation				
Water soluble sulphate (as SO ₄)	(mg/l)	u	390	390	600	510
Acid Soluble Sulphate	(%)	u	0.19	0.21	0.26	0.24
Total Sulphur	(%)	UKAS	0.52	0.70	0.74	0.74
pH Value	pH Units	MCERTS	8.3	8.5	8.2	8.3

P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley CCL03854

Soils - No Testing Scheduled

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Status
484617	-	BH02	-	-	No Testing Scheduled



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P25/00279/CFC - 25-62085

7 - 11 Harding Street
Leicester
LE1 4DH

Project Reference - Hammonds Way, Hinkley CCL03854

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
484601	-	TP01	-	-	Greyish brown slightly gravelly slightly sandy silty clay	-	-	93
484602	-	TP02	-	-	Brown slightly gravelly slightly sandy silty clay	-	-	64
484603	-	TP04	-	-	Brown slightly gravelly slightly sandy silty clay	-	-	85
484604	-	TP05	-	-	Greyish brown slightly gravelly silty clay with rare organic matter	-	-	100
484605	-	TP06	-	-	Greyish brown slightly gravelly silty clay	-	-	100
484606	-	TP08	-	-	Greyish brown slightly gravelly slightly sandy silty clay with rare organic matter	-	-	100
484607	-	TP09	-	-	Brown slightly gravelly silty clay	-	-	100
484608	-	TP10	-	-	Brown slightly gravelly sandy silty clay	-	-	89
484609	-	TP11	-	-	Greyish brown slightly gravelly slightly sandy silty clay with rare organic matter	-	-	83
484610	-	TP12	-	-	Greyish brown slightly gravelly slightly sandy silty clay	-	-	81
484611	-	BH01	-	-	Grey slightly gravelly silty clay with rare organic matter	-	-	100
484612	-	BH01	-	-	Grey slightly gravelly silty clay	-	-	100
484613	-	BH02	-	-	Brownish grey slightly gravelly silty clay with rare organic matter	-	-	100
484614	-	BH02	-	-	Grey slightly gravelly silty clay with rare organic matter	-	-	100
484615	-	BH03	-	-	Brownish grey slightly gravelly silty clay	-	-	100
484616	-	BH03	-	-	Brownish grey slightly gravelly silty clay with rare organic matter	-	-	100



4161



P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley CCL03854

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
484601	-	TP01	-	-	
484602	-	TP02	-	-	
484603	-	TP04	-	-	
484604	-	TP05	-	-	
484605	-	TP06	-	-	
484606	-	TP08	-	-	
484607	-	TP09	-	-	
484608	-	TP10	-	-	
484609	-	TP11	-	-	
484610	-	TP12	-	-	
484611	-	BH01	-	-	
484612	-	BH01	-	-	
484613	-	BH02	-	-	
484614	-	BH02	-	-	
484615	-	BH03	-	-	
484616	-	BH03	-	-	



P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley CCL03854

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
HOLD	No Testing Scheduled	-	-	No Testing Scheduled
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)



P25/00279/CFC - 25-62085

Project Reference - Hammonds Way, Hinkley CCL03854

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided

W - No time of sampling provided for water sample

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
484601	-	TP01	-	-		A
484602	-	TP02	-	-		A
484603	-	TP04	-	-		A
484604	-	TP05	-	-		A
484605	-	TP06	-	-		A
484606	-	TP08	-	-		A
484607	-	TP09	-	-		A
484608	-	TP10	-	-		A
484609	-	TP11	-	-		A
484610	-	TP12	-	-		A
484611	-	BH01	-	-		A
484612	-	BH01	-	-		A
484613	-	BH02	-	-		A
484614	-	BH02	-	-		A
484615	-	BH03	-	-		A
484616	-	BH03	-	-		A



Laboratory Report



Contract Number: 78180

Client Ref: **CCL03854**

Client PO: **13752**

Date Received: **10-04-2025**

Date Completed: **29-04-2025**

Report Date: **29-04-2025**

Client: **Crossfield Consulting**

This report has been checked and approved by:

Contract Title: **Hammonds Way, Hinckley**

For the attention of: **Info Email**

Brendan Evans
Senior Office Administrator

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - @ Non Accredited Test	9
4 Point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	9
Quick Undrained Triaxial Compression test - single specimen at one confining pressure (100mm or 38mm diameter) BS 1377:1990 - Part 7 : 8 - * UKAS	4

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

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Approved Signatories:

Brendan Evans (Senior Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director)

Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager)

Wayne Honey (HR & HSE Manager)

[illegible]

Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 78180

Borehole/Pit No. BH01

Project Name Hammonds Way, Hinckley

Sample No.

Soil Description Brown sandy silty CLAY

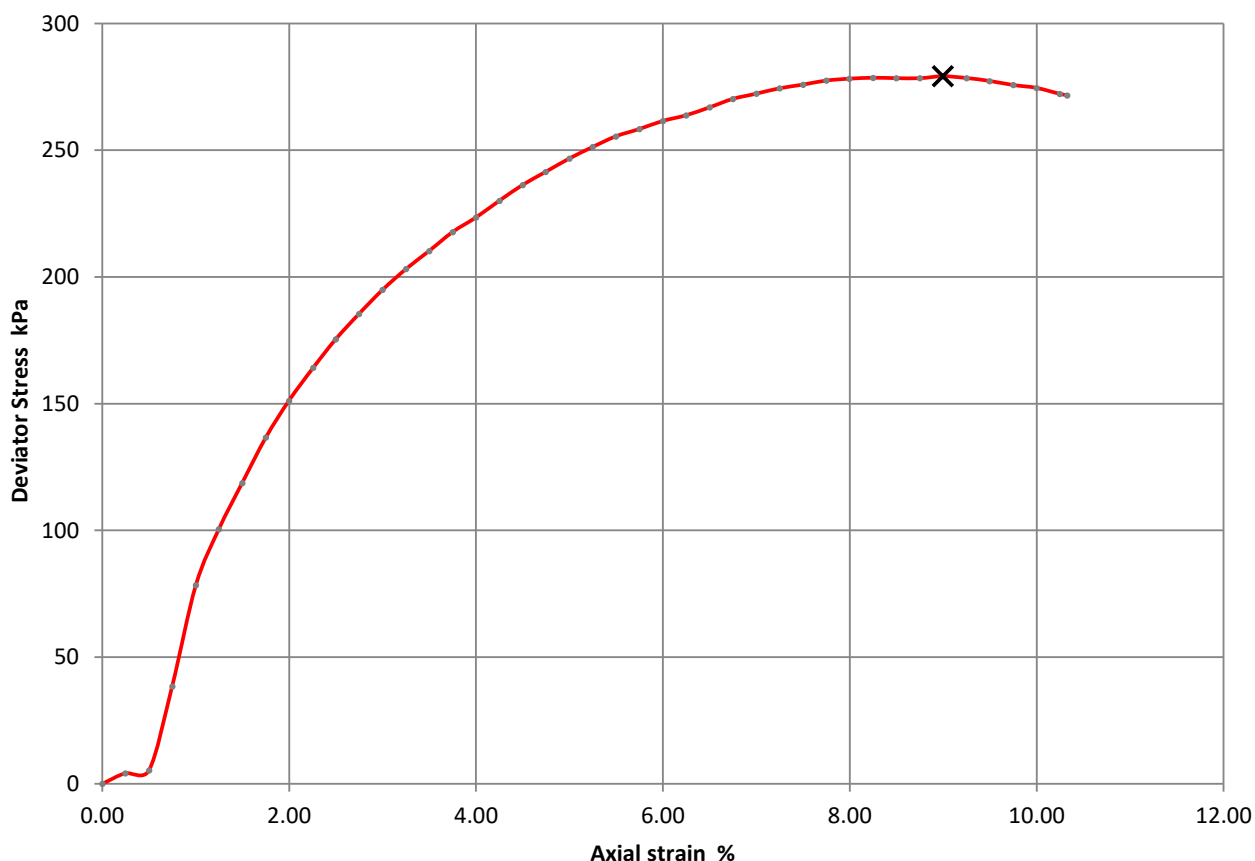
Depth Top (m) 4.50

Depth Base (m)

Date Tested 29/04/2025

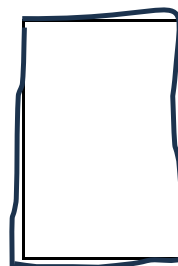
Sample Type U

Operator David E.



Moisture Content (%)	24
Bulk Density (Mg/m ³)	1.90
Dry Density (Mg/m ³)	1.53
Specimen Length (mm)	208.3
Specimen Diameter (mm)	104.2
Cell Pressure (kPa)	90
Deviator Stress (kPa)	279
Undrained Shear Strength (kPa)	140
Failure Strain (%)	9
Mode Of Failure	Plastic
Membrane Used/Thickness	Rubber/0.4mm
Rate of Strain (%/min)	1.32

Notes.



Failure Sketch.

Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 78180

Borehole/Pit No. BH01

Project Name Hammonds Way, Hinckley

Sample No.

Soil Description Brown silty CLAY

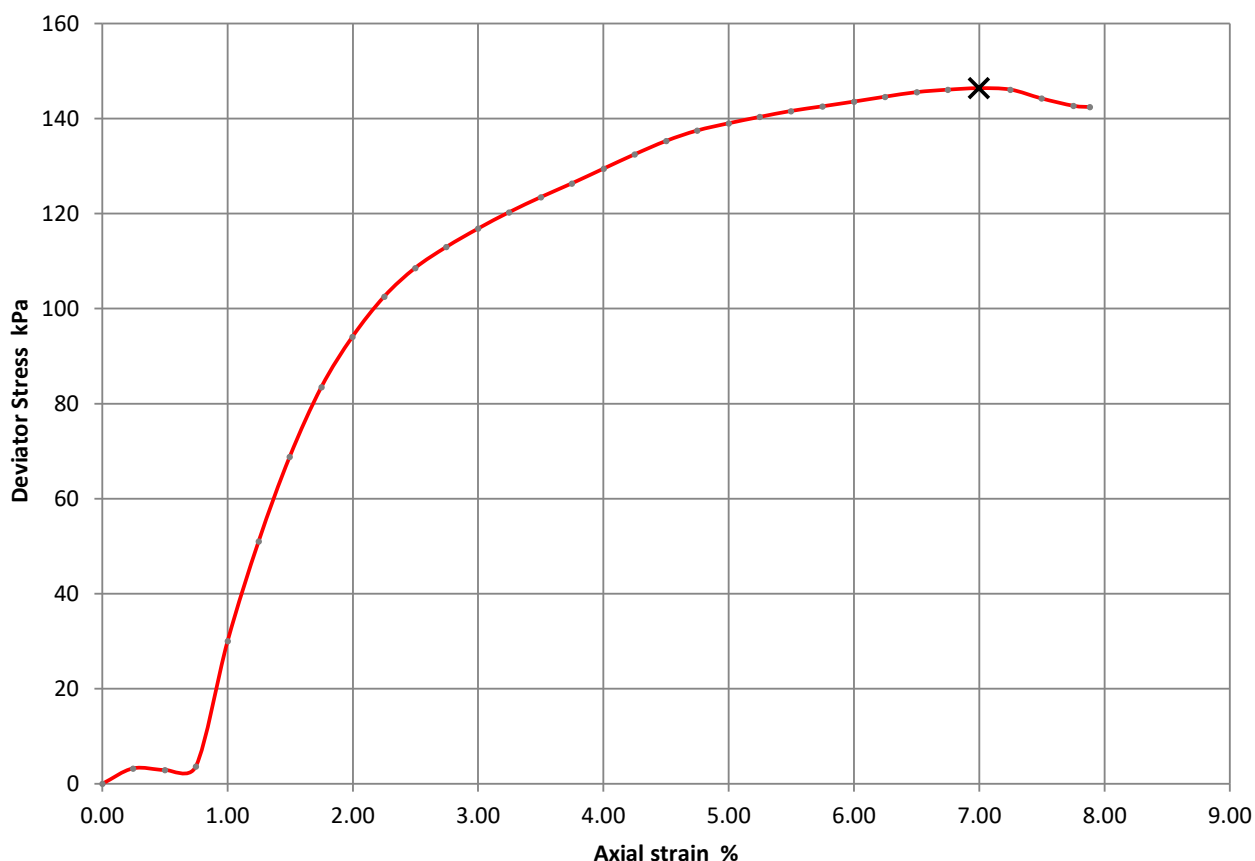
Depth Top (m) 7.50

Depth Base (m)

Date Tested 29/04/2025

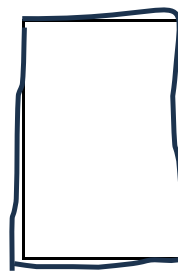
Sample Type U

Operator David E.



Moisture Content (%)	26
Bulk Density (Mg/m ³)	1.95
Dry Density (Mg/m ³)	1.56
Specimen Length (mm)	208.4
Specimen Diameter (mm)	104.2
Cell Pressure (kPa)	150
Deviator Stress (kPa)	146
Undrained Shear Strength (kPa)	73
Failure Strain (%)	7
Mode Of Failure	Plastic
Membrane Used/Thickness	Rubber/0.4mm
Rate of Strain (%/min)	1.32

Notes.



Failure Sketch.

Single Stage Unconsolidated-Undrained Triaxial Test BS 1377 : 1990 Part 7 : 8

Contract Number 78180

Borehole/Pit No. BH02

Project Name Hammonds Way, Hinckley

Sample No.

Soil Description Brown silty CLAY

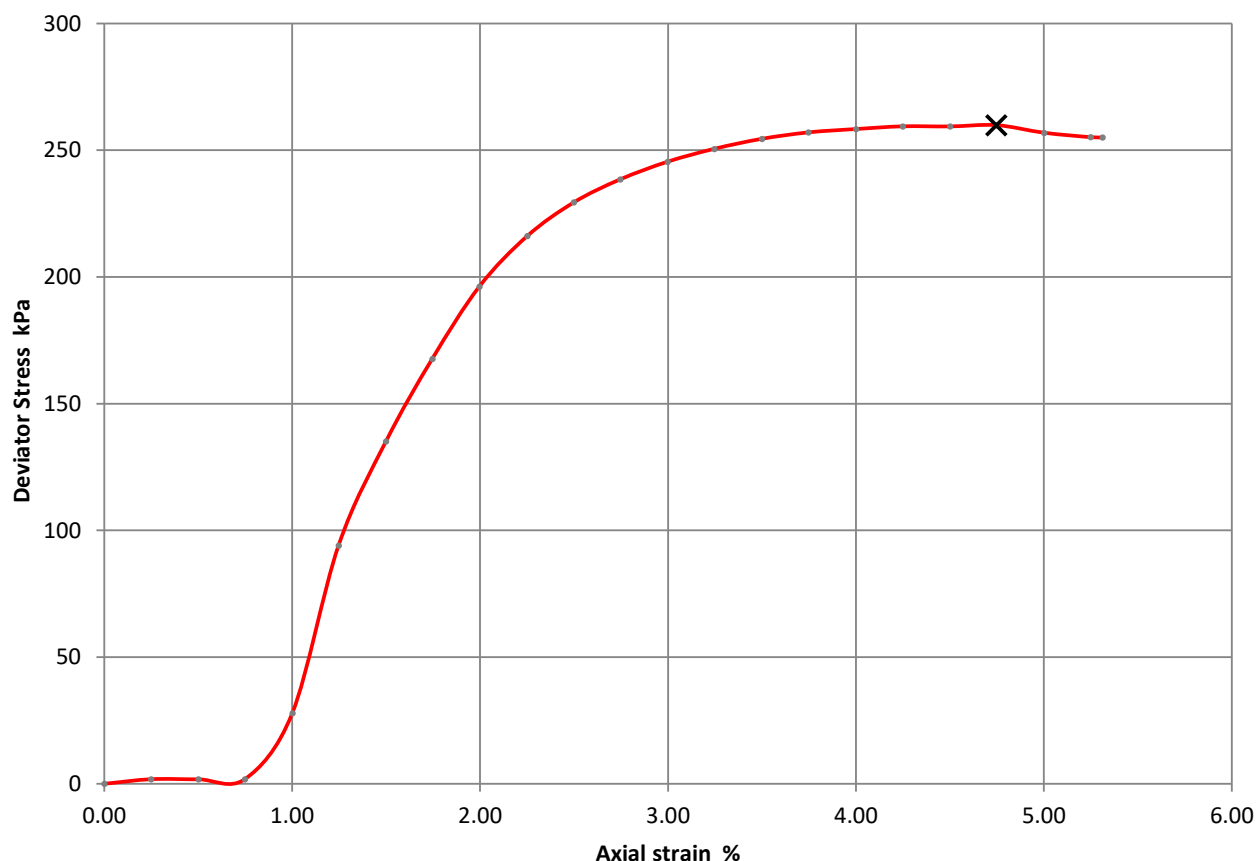
Depth Top (m) 6.00

Depth Base (m)

Date Tested 29/04/2025

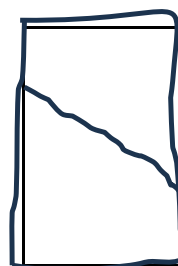
Sample Type U

Operator David E.



Moisture Content (%)	23
Bulk Density (Mg/m ³)	1.67
Dry Density (Mg/m ³)	1.36
Specimen Length (mm)	193.2
Specimen Diameter (mm)	104.3
Cell Pressure (kPa)	120
Deviator Stress (kPa)	260
Undrained Shear Strength (kPa)	130
Failure Strain (%)	5
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.4mm
Rate of Strain (%/min)	1.42

Notes.

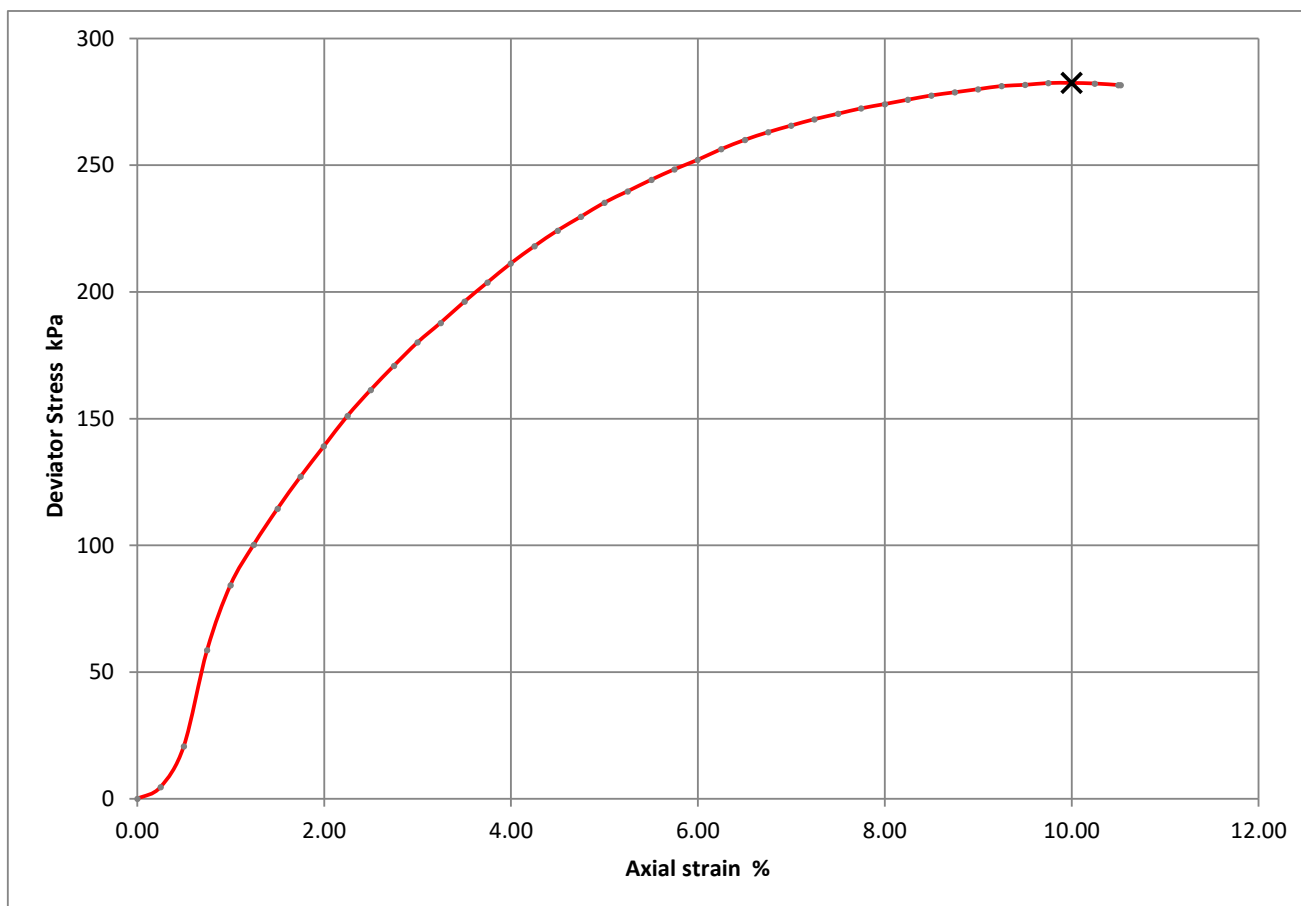


Failure Sketch.

Single Stage Unconsolidated-Undrained Triaxial Test BS 1377 : 1990 Part 7 : 8

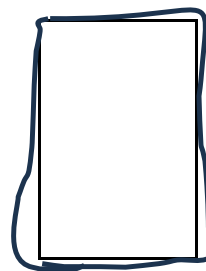
Contract Number	78180
Borehole/Pit No.	BH02
Sample No.	
Depth Top (m)	9.00
Depth Base (m)	
Sample Type	U
Operator	David E.

Project Name	Hammonds Way, Hinckley
Soil Description	Brown silty CLAY
Date Tested	29/04/2025



Moisture Content (%)	21
Bulk Density (Mg/m ³)	2.05
Dry Density (Mg/m ³)	1.69
Specimen Length (mm)	208.3
Specimen Diameter (mm)	101.3
Cell Pressure (kPa)	180
Deviator Stress (kPa)	282
Undrained Shear Strength (kPa)	141
Failure Strain (%)	10
Mode Of Failure	Plastic
Membrane Used/Thickness	Rubber/0.4mm
Rate of Strain (%/min)	1.32

Notes.



Failure Sketch.

Laboratory Report	ETS/16265	Contract Sample No	C1470/1	 	
Report Date	17/04/2025	Clients Reference	C1470/1		
		Material Description			
Crossfields Consulting				Unit 6 Eco Park, Eco Way Bootham Lane Dunscroft Doncaster DN7 4JJ	
White Hall Farm		Date Sampled	Not Stated		
Leamington Road		Source	As-Dug		
Southam		Supplier	As-Dug		
CV47 9PU		Sampled By	Client		
		Sampling Environment	Unknown		
		Sample Type	Bulk	Tel: 0345 2162900	
		Location in sample	Unknown	Email: ops@earthworkstesting.co.uk	
Hammonds Way, Hinckley		Sample Location	TP04 @ 1.0 m	Date Received	02/04/2025
		Sampling Plan	Not Known	Date Tests Completed	07/04/2025
		Sampling Method	Sampling from shallow trial pits	TEST REPORT	

Determination of moisture content

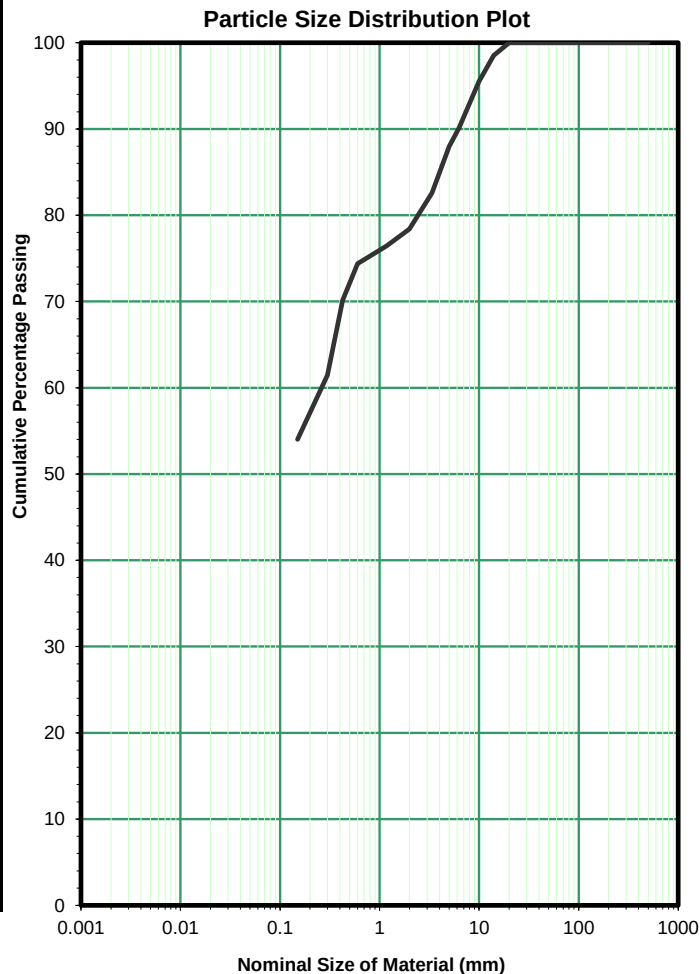
Prepared and tested in Accordance with BS 1377: Part 2: 1990 Clause 3.2 - Oven drying

Moisture Content

22 %

Particle size distribution (wet sieving method) - Tested in accordance with BS 1377: Part 2: 1990 Clause 9.2

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

[illegible]

Specification

MCHW SHW Vol 1 Series 600 Table 6/2
Class 2C

100

15 - 80

15 - 80

Material when tested complies with the material specification limits defined in the table above.

Decision Rule Applied: For a test performed according to the stated method above, with published acceptance limits. PASS: when measured values are equal to or within the conformance limits FAIL: otherwise.

Determination of Particle Density

Tested In Accordance with BS 1377: Part 2: 1990, Clause 8.2 (Gas Jar Method)

Average Particle Density

2.66 Mg/m³

Determination of Dry Density / Moisture Content Relationship

Tested in Accordance with BS 1377: Part 4: 1990 Clause 3.5.4.2 (4.5kg Rammer, 1 Litre mould)

Sample prepared in Accordance with BS 1377-1:2016, clause 8.4

Laboratory Report	ETS/16265	Contract Sample No	C1470/1
Report Date	17/04/2025	Clients Reference	C1470/1
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley		Material Description	
		Date Sampled	Not Stated
		Source	As-Dug
		Supplier	As-Dug
		Sampled By	Client
		Sampling Environment	Unknown
		Sample Type	Bulk
		Location in sample	Unknown
		Sample Location	TP04 @ 1.0 m
		Sampling Plan	Not Known
Sampling Method	Sampling from shallow trial pits		



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 DN7 4JJ



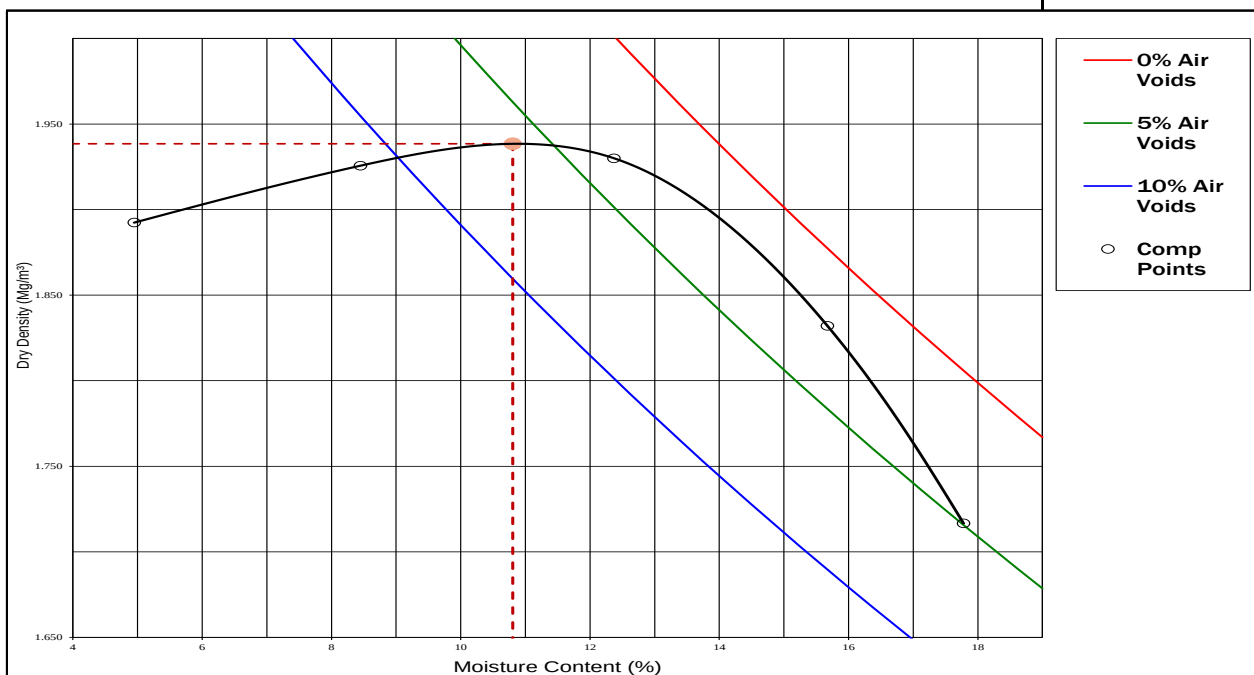
TEST REPORT

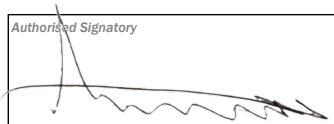
Tel: 0345 2162900
Email: ops@earthworkstesting.co.uk

Date Received 02/04/2025
Date Tests Completed 07/04/2025

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)

Sample particle size adjustment: None



Laboratory Report	ETS/16265	Contract Sample No	C1470/1	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ 	
Report Date	17/04/2025	Clients Reference	C1470/1		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description				
	Date Sampled		Not Stated		
	Source		As-Dug		
	Supplier		As-Dug		
	Sampled By		Client		
	Sampling Environment		Unknown		
	Sample Type		Bulk		
	Location in sample		Unknown		
Sample Location		TP04 @ 1.0 m	Date Received	02/04/2025	
Sampling Plan		Not Known	Date Tests Completed	07/04/2025	
Sampling Method		Sampling from shallow trial pits	TEST REPORT		
Optimum Moisture Content (%) 11 % Maximum Dry Density 1.94 Mg/m ³ Material Retained on 37.5mm test sieve 0 % Material Retained on 20.0mm test sieve 1 % Particle Density (Measured) Determined by BS1377:Part 2:1990 Clause 8.2 2.66 Mg/m ³					
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					Authorised Signatory 

**** END OF REPORT ****
 Earthworks Testing Ltd - Company No. 14251352

Laboratory Report	ETS/16266	Contract Sample No	C1470/2
Report Date	17/04/2025	Clients Reference	C1470/2
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description		
	Date Sampled	Not Stated	
	Source	As-Dug	
	Supplier	As-Dug	
	Sampled By	Client	
	Sampling Environment	Unknown	
	Sample Type	Bulk	
	Location in sample	Unknown	
	Sample Location	TP07 @ 2.0 m	Date Received
	Sampling Plan	Not Known	Date Tests Completed
Sampling Method		Sampling from shallow trial pits	
			TEST REPORT



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EARTHWORKS TESTING LTD

Unit 6 Eco Park, Eco Way
Bootham Lane
Duncroft
Doncaster
DN7 4JJ



Tel: 0345 2162900

Email: ops@earthworkstesting.co.uk

Determination of moisture content

Prepared and tested in Accordance with BS 1377: Part 2: 1990 Clause 3.2 - Oven drying

Moisture Content 26 %

Determination of Particle Density

Tested in Accordance with BS 1377: Part 2: 1990. Clause 8.2 (Gas Jar Method)

Average Particle Density 2.68 Mg/m³

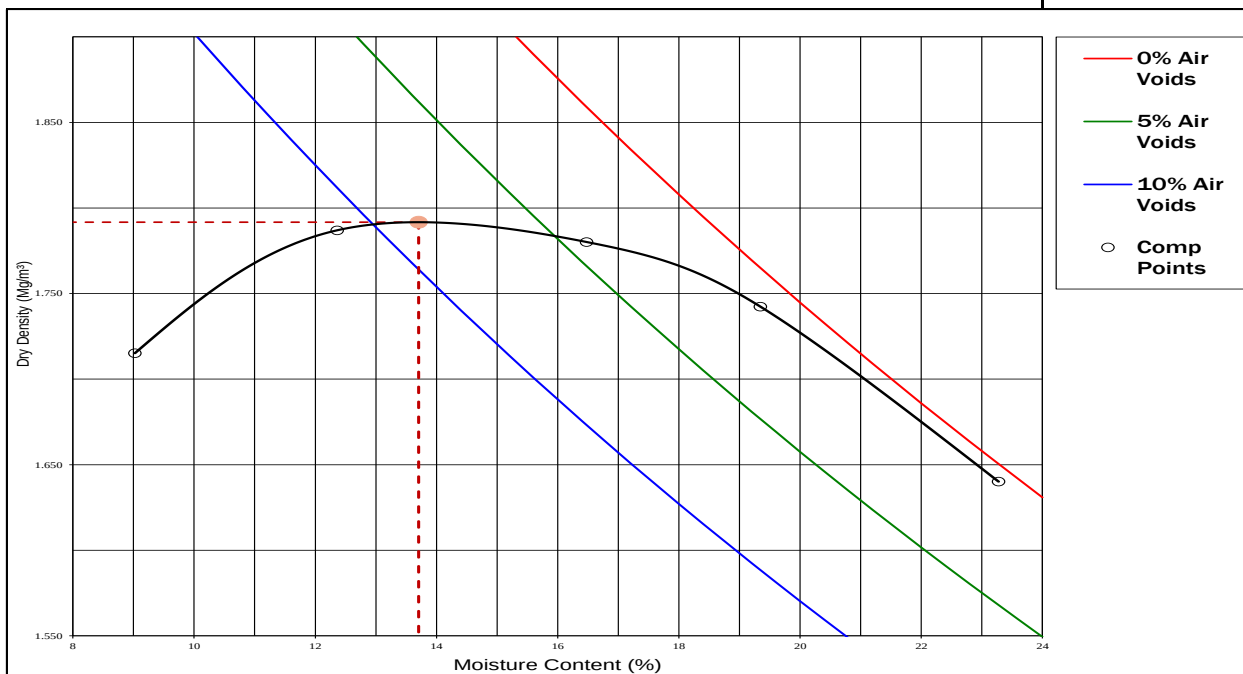
Sample prepared in Accordance with BS 1377-1:2016, clause 8.4

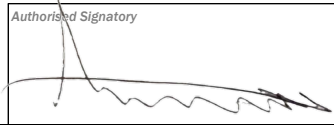
Determination of Dry Density / Moisture Content Relationship

Tested in Accordance with BS 1377: Part 4: 1990 Clause 3.5.4.2 (4.5kg Rammer, 1 Litre mould)

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)

Sample particle size adjustment: None



Laboratory Report	ETS/16266	Contract Sample No	C1470/2	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ  Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk	
Report Date	17/04/2025	Clients Reference	C1470/2		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description				
	Date Sampled		Not Stated		
	Source		As-Dug		
	Supplier		As-Dug		
	Sampled By		Client		
	Sampling Environment		Unknown		
	Sample Type		Bulk		
	Location in sample		Unknown		
Sample Location		TP07 @ 2.0 m	Date Received	02/04/2025	
Sampling Plan		Not Known	Date Tests Completed	07/04/2025	
Sampling Method		Sampling from shallow trial pits	TEST REPORT		
Optimum Moisture Content (%) 14 % Maximum Dry Density 1.79 Mg/m³ Material Retained on 37.5mm test sieve 0 % Material Retained on 20.0mm test sieve 0 % Particle Density (Measured) Determined by BS1377:Part 2:1990 Clause 8.2 2.68 Mg/m³					
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**** END OF REPORT ****
 Earthworks Testing Ltd - Company No. 14251352

Laboratory Report	ETS/16266	Contract Sample No	C1470/2
Report Date	17/04/2025	ETS Contract No	C1470/2
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Project: Hammonds Way, Hinckley	Date Sampled	Not Stated	
	Sample Location	See Below	
	Client Reference	C1470/2	
	Source	As-Dug	
	Supplier	As-Dug	
	Sampling Environment	Not Stated	
	Material Description		
	Date Received	02/04/2025	
	Date Tested	16/04/2025	



Unit 6 Eco Park, Eco Way
Bootham Lane
Dunscroft
Doncaster
DN7 4JJ

Tel: 0345 2162900
Email: ops@earthworkstesting.co.uk

TEST REPORT

Laboratory Report	ETS/16267	Contract Sample No	C1470/3	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ  27572	
Report Date	17/04/2025	Clients Reference	C1470/3		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley		Material Description			
		Date Sampled	Not Stated		
		Source	As-Dug		
		Supplier	As-Dug		
		Sampled By	Client		
		Sampling Environment	Unknown		
		Sample Type	Bulk	Tel: 0345 2162900	
		Location in sample	Unknown	Email: ops@earthworkstesting.co.uk	
		Sample Location	TP08 @ 1.5 m	Date Received	02/04/2025
		Sampling Plan	Not Known	Date Tests Completed	07/04/2025
		Sampling Method	Sampling from shallow trial pits	TEST REPORT	

Determination of moisture content

Prepared and tested in Accordance with BS 1377: Part 2: 1990 Clause 3.2 - Oven drying

Moisture Content 25 %

Determination of Particle Density

Tested in Accordance with BS 1377: Part 2: 1990. Clause 8.2 (Gas Jar Method)

Average Particle Density 2.66 Mg/m³

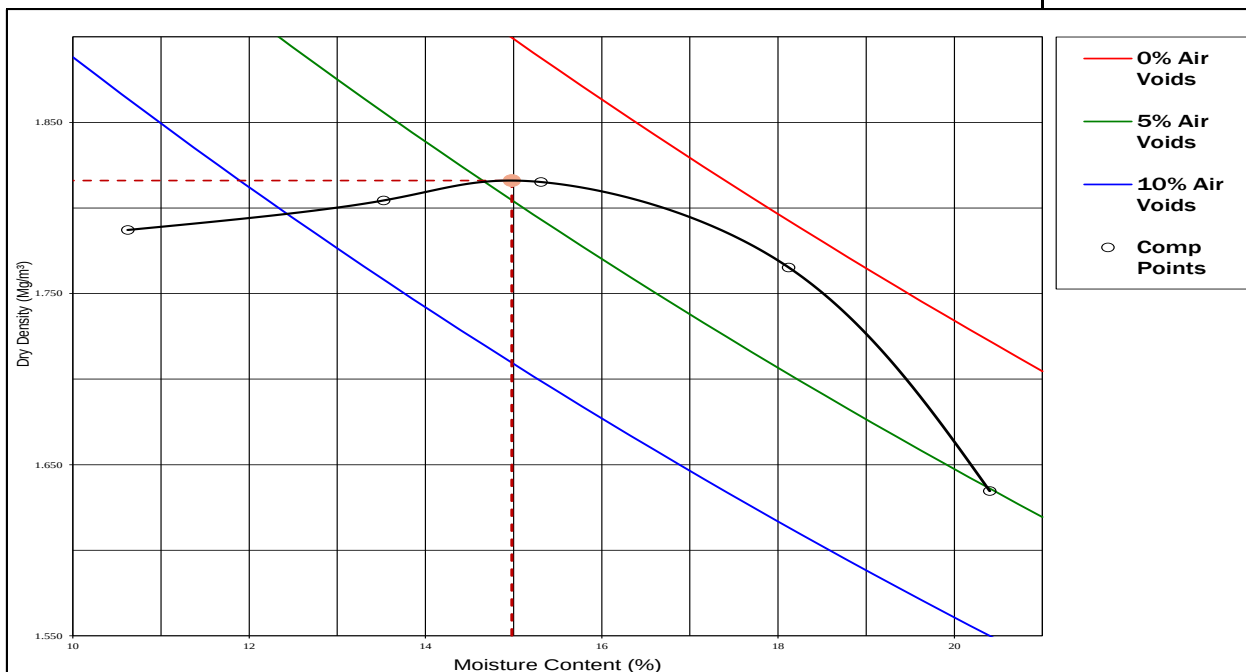
Sample prepared in Accordance with BS 1377-1:2016, clause 8.4

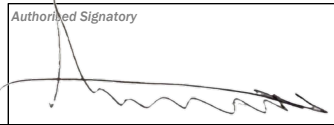
Determination of Dry Density / Moisture Content Relationship

Tested in Accordance with BS 1377: Part 4: 1990 Clause 3.5.4.2 (4.5kg Rammer, 1 Litre mould)

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)

Sample particle size adjustment: None



Laboratory Report	ETS/16267	Contract Sample No	C1470/3	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ  Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk	
Report Date	17/04/2025	Clients Reference	C1470/3		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description				
	Date Sampled		Not Stated		
	Source		As-Dug		
	Supplier		As-Dug		
	Sampled By		Client		
	Sampling Environment		Unknown		
	Sample Type		Bulk		
	Location in sample		Unknown		
Sample Location		TP08 @ 1.5 m	Date Received	02/04/2025	
Sampling Plan		Not Known	Date Tests Completed	07/04/2025	
Sampling Method		Sampling from shallow trial pits	TEST REPORT		
Optimum Moisture Content (%) 15 % Maximum Dry Density 1.82 Mg/m³ Material Retained on 37.5mm test sieve 0 % Material Retained on 20.0mm test sieve 0 % Particle Density (Measured) Determined by BS1377:Part 2:1990 Clause 8.2 2.66 Mg/m³					
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** END OF REPORT **
 Earthworks Testing Ltd - Company No. 14251352

Laboratory Report	ETS/16268	Contract Sample No	C1470/4	
Report Date	17/04/2025	Clients Reference	C1470/4	
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description			
	Date Sampled	Not Stated		
	Source	As-Dug		
	Supplier	As-Dug		
	Sampled By	Client		
	Sampling Environment	Unknown		
	Sample Type	Bulk		
	Location in sample	Unknown		
	Sample Location	TP09 @ 0.5 m	Date Received	02/04/2025
	Sampling Plan	Not Known	Date Tests Completed	07/04/2025
Sampling Method	Sampling from shallow trial pits			
		TEST REPORT		



Unit 6 Eco Park, Eco Way
Bootham Lane
Dunscroft
Doncaster
DN7 4JJ

Tel: 0345 2162900

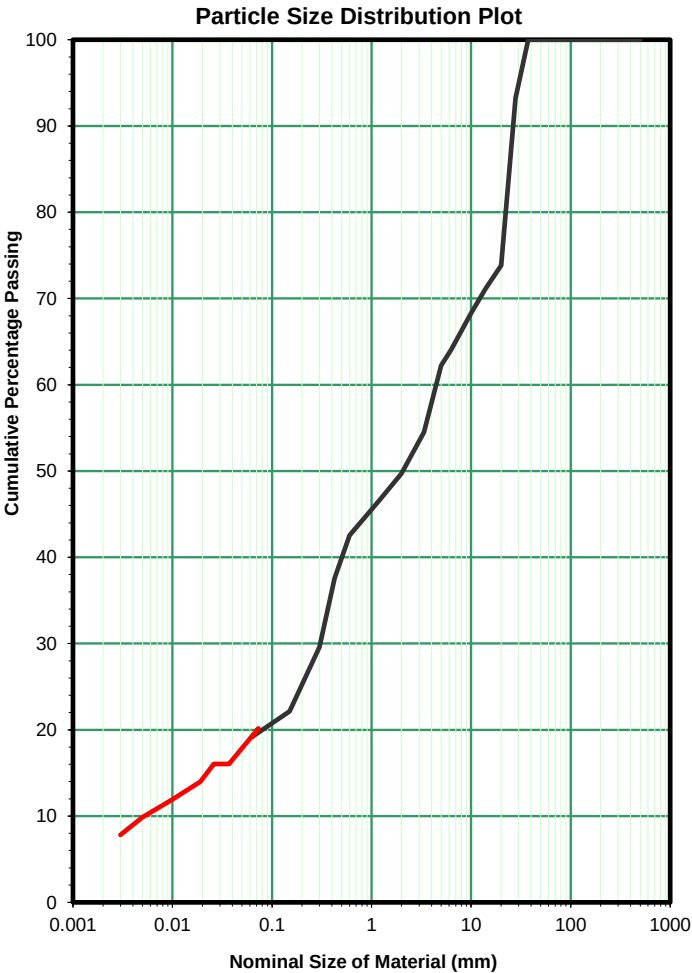
Email: ops@earthworkstesting.co.uk

Determination of moisture content
Prepared and tested in Accordance with BS 1377: Part 2: 1990 Clause 3.2 - Oven drying
Moisture Content 12 %

Particle size distribution (wet sieving method) - Tested in accordance with BS 1377: Part 2: 1990 Clause 9.2

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

BS Sieve Size (mm)	Passing BS Sieve (%)
500	100
300	100
125	100
100	100
90	100
75	100
63	100
50	100
37.5	100
28	93
20	74
14	71
10	68
6.3	64
5	62
3.35	54
2	50
1.18	47
0.600	43
0.425	38
0.300	30
0.150	22
0.063	19
0.073	20
0.052	18
0.037	16
0.026	16
0.019	14
0.01	12
0.005	10
0.003	8



Specification
MCHW SHW Vol 1 Series 600 Table 6/2
Class 2A

100

80 - 100

15 - 100

Material when tested does not comply with the material specification limits defined in the table above.

Decision Rule Applied: For a test performed according to the stated method above, with published acceptance limits. PASS: when measured values are equal to or within the conformance limits FAIL: otherwise.

Determination of Particle Size Distribution (Hydrometer Method)

Tested in Accordance with BS 1377: Part 2: 1990 Clause 9.5

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

Pretreatment for organic matter with hydrogen peroxide was not required.

Finer than designated size

20 µm

14 %

Laboratory Report	ETS/16268	Contract Sample No	C1470/4	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Dunscroft Doncaster DN7 4JJ  27572	
Report Date	17/04/2025	Clients Reference	C1470/4		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley		Material Description			
		Date Sampled	Not Stated		
		Source	As-Dug		
		Supplier	As-Dug		
		Sampled By	Client	Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk	
		Sampling Environment	Unknown		
		Sample Type	Bulk	Date Received 02/04/2025 Date Tests Completed 07/04/2025	
		Location in sample	Unknown		
		Sample Location	TP09 @ 0.5 m	TEST REPORT	
		Sampling Plan	Not Known		
		Sampling Method	Sampling from shallow trial pits		

6 μ m	10 %
2 μ m	7 %

Determination of Particle Density

Tested In Accordance with BS 1377: Part 2: 1990. Clause 8.2 (Gas Jar Method)

Average Particle Density

2.64 Mg/m³

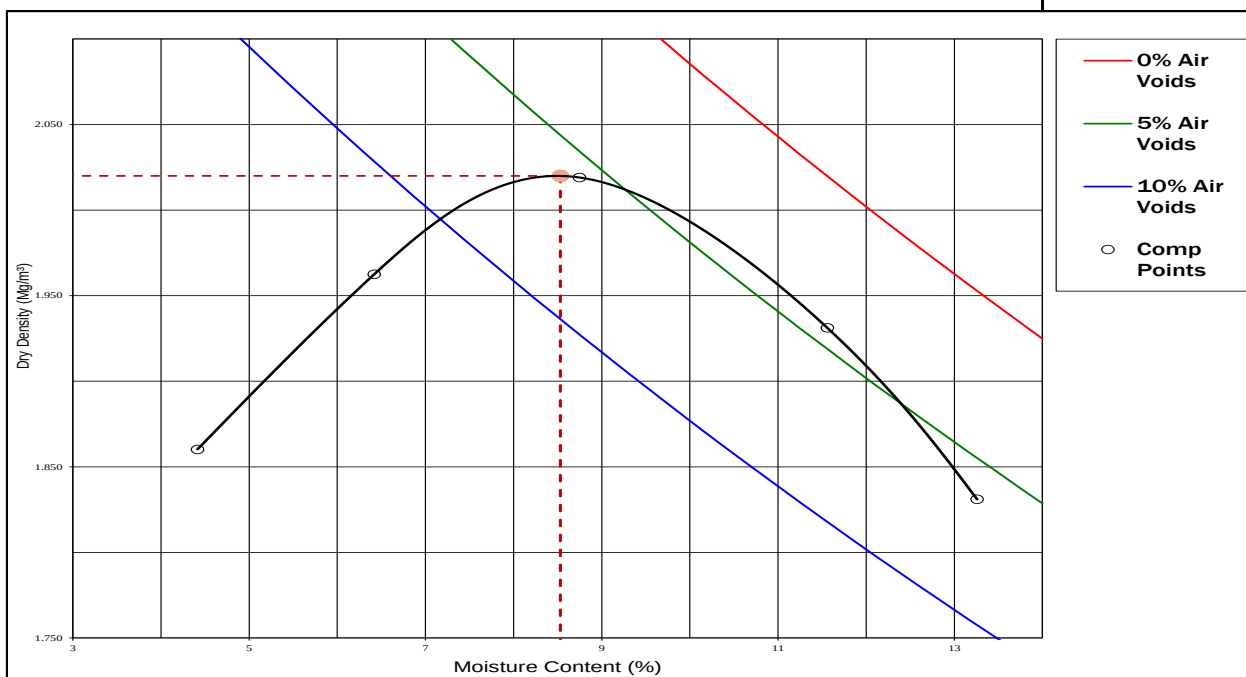
Sample prepared in Accordance with BS 1377-1:2016, clause 8.4

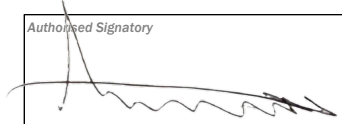
Determination of Dry Density / Moisture Content Relationship

Tested In Accordance with BS 1377: Part 4: 1990 Clause 3.6.4.2 (4.5kg Rammer, CBR mould)

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)

Sample particle size adjustment: None



Laboratory Report	ETS/16268	Contract Sample No	C1470/4	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ 	
Report Date	17/04/2025	Clients Reference	C1470/4		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description				
	Date Sampled		Not Stated		
	Source		As-Dug		
	Supplier		As-Dug		
	Sampled By		Client		
	Sampling Environment		Unknown		
	Sample Type		Bulk		
	Location in sample		Unknown		
Sample Location		TP09 @ 0.5 m	Date Received	02/04/2025	
Sampling Plan		Not Known	Date Tests Completed	07/04/2025	
Sampling Method		Sampling from shallow trial pits	TEST REPORT		
Optimum Moisture Content (%) 8.5 % Maximum Dry Density 2.02 Mg/m ³ Material Retained on 37.5mm test sieve 4 % Material Retained on 20.0mm test sieve 10 % Particle Density (Measured) Determined by BS1377:Part 2:1990 Clause 8.2 2.64 Mg/m ³					
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					Authorised Signatory 

**** END OF REPORT ****
 Earthworks Testing Ltd - Company No. 14251352

Laboratory Report	ETS/16268	Contract Sample No	C1470/4
Report Date	17/04/2025	ETS Contract No	C1470/4
 Unit 6 Eco Park, Eco Way Bootham Lane Dunscroft Doncaster DN7 4JJ Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk			
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Project: Hammonds Way, Hinckley	Date Sampled	Not Stated	
	Sample Location	See Below	
	Client Reference	C1470/4	
	Source	As-Dug	
	Supplier	As-Dug	
	Sampling Environment	Not Stated	
	Material Description		
	Date Received	02/04/2025	
	Date Tested	16/04/2025	
TEST REPORT			

Laboratory Report		ETS/16269		Contract Sample No		C1470/5	
Report Date		17/04/2025		Clients Reference		C1470/5	
				Material Description			
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU				Date Sampled		Not Stated	
				Source		As-Dug	
				Supplier		As-Dug	
				Sampled By		Client	
				Sampling Environment		Unknown	
				Sample Type		Bulk	
				Location in sample		Unknown	
				Sample Location		TP10 @ 0.5 m	
Hammonds Way, Hinckley				Sampling Plan		Not Known	
				Sampling Method		Sampling from shallow trial pits	
				 			
				Unit 6 Eco Park, Eco Way Bootham Lane Dunscroft Doncaster DN7 4JJ			
				Tel: 0345 2162900			
				Email: ops@earthworkstesting.co.uk			
				Date Received		02/04/2025	
				Date Tests Completed		07/04/2025	
				TEST REPORT			

Determination of moisture content

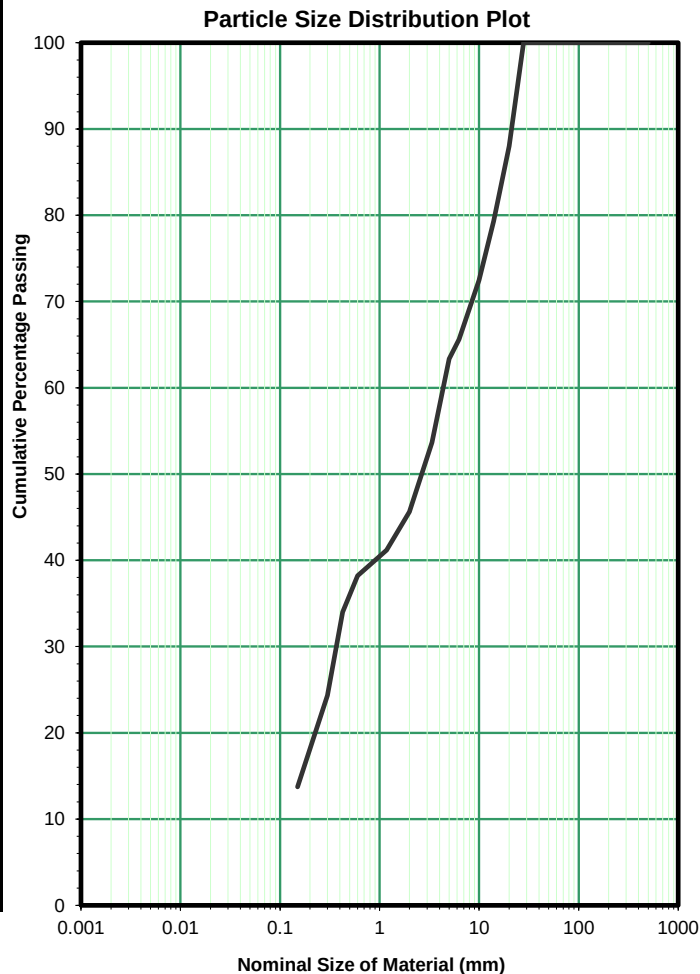
Prepared and tested in Accordance with BS 1377: Part 2: 1990 Clause 3.2 - Oven drying

Moisture Content

14 %

Particle size distribution (wet sieving method) - Tested in accordance with BS 1377: Part 2: 1990 Clause 9.2

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

[illegible]

Specification

MCHW Volume 1 Series 600 Table 6/2
Class 1A

100

95 - 100

0 - 15

Material when tested complies with the material specification limits defined in the table above.

Decision Rule Applied: For a test performed according to the stated method above, with published acceptance limits. PASS: when measured values are equal to or within the conformance limits FAIL: otherwise.

Determination of Particle Density

Tested In Accordance with BS 1377: Part 2: 1990. Clause 8.2 (Gas Jar Method)

Average Particle Density

2.63 Mg/m³

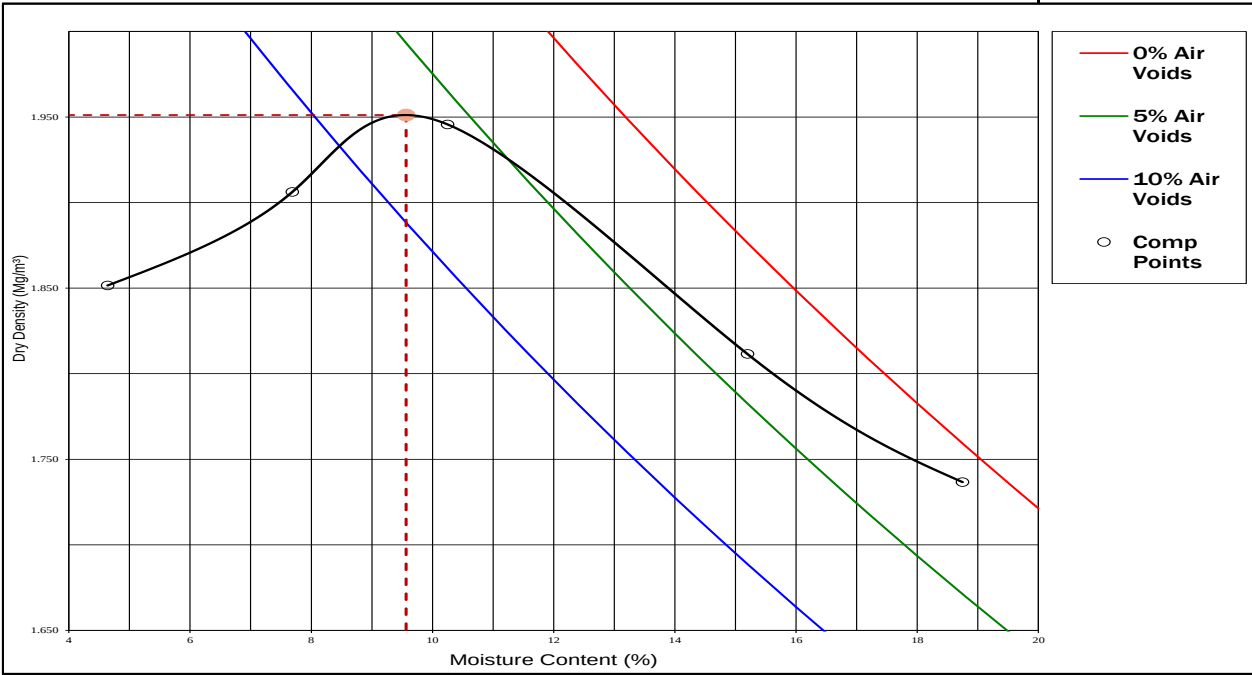
Sample prepared in Accordance with BS 1377-1:2016, clause 8.4

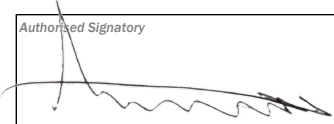
Determination of Dry Density / Moisture Content Relationship

Tested In Accordance with BS 1377: Part 4: 1990 Clause 3.6.4.2 (4.5kg Rammer, CBR mould)

Laboratory Report	ETS/16269	Contract Sample No	C1470/5	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Dunscroft Doncaster DN7 4JJ  27572	
Report Date	17/04/2025	Clients Reference	C1470/5		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley		Material Description			
		Date Sampled	Not Stated		
		Source	As-Dug		
		Supplier	As-Dug		
		Sampled By	Client		
		Sampling Environment	Unknown		
		Sample Type	Bulk	Tel: 0345 2162900	
		Location in sample	Unknown	Email: ops@earthworkstesting.co.uk	
		Sample Location	TP10 @ 0.5 m	Date Received	02/04/2025
		Sampling Plan	Not Known	Date Tests Completed	07/04/2025
		Sampling Method	Sampling from shallow trial pits	TEST REPORT	

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)
Sample particle size adjustment: None



Laboratory Report	ETS/16269	Contract Sample No	C1470/5	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ  Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk	
Report Date	17/04/2025	Clients Reference	C1470/5		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description				
	Date Sampled		Not Stated		
	Source		As-Dug		
	Supplier		As-Dug		
	Sampled By		Client		
	Sampling Environment		Unknown		
	Sample Type		Bulk		
	Location in sample		Unknown		
Sample Location		TP10 @ 0.5 m	Date Received	02/04/2025	
Sampling Plan		Not Known	Date Tests Completed	07/04/2025	
Sampling Method		Sampling from shallow trial pits	TEST REPORT		
Optimum Moisture Content (%) 9.6 % Maximum Dry Density 1.95 Mg/m ³ Material Retained on 37.5mm test sieve 9 % Material Retained on 20.0mm test sieve 17 % Particle Density (Measured) Determined by BS1377:Part 2:1990 Clause 8.2 2.63 Mg/m ³					
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Laboratory Report		ETS/16270		Contract Sample No		C1470/6	
Report Date		17/04/2025		Clients Reference		C1470/6	
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley				Material Description			
				Date Sampled		Not Stated	
				Source		As-Dug	
				Supplier		As-Dug	
				Sampled By		0	
				Sampling Environment		Unknown	
				Sample Type		Bulk	
				Location in sample		Unknown	
				Sample Location		TP11 @ 1.0 m	
				Sampling Plan		Not Known	
Sampling Method		Sampling from shallow trial pits		  Unit 6 Eco Park, Eco Way Bootham Lane Dunscroft Doncaster DN7 4JJ Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk TEST REPORT			
Date Received		02/04/2025					
Date Tests Completed		07/04/2025					

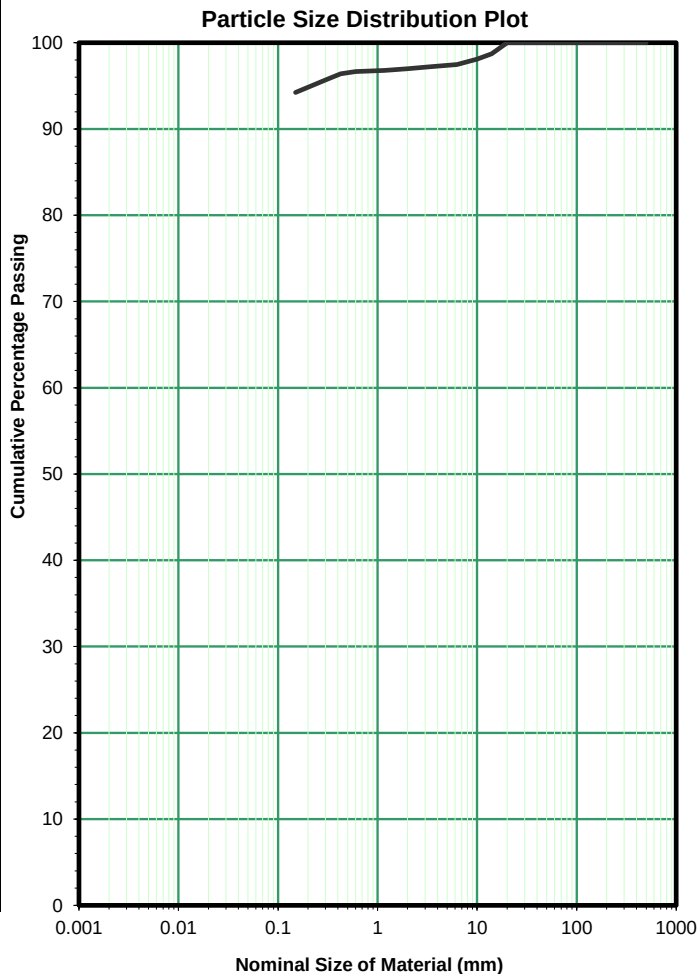
Determination of moisture content

Prepared and tested in accordance with BS 1377: Part 2: 1990 Clause 3.2 - Oven drying

Moisture Content	23 %
------------------	------

Particle size distribution (wet sieving method) - Tested in accordance with BS 1377: Part 2: 1990 Clause 9.2

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

[illegible]

Specification
MCHW SHW Vol 1 Series 600 Table 6/2 Class 2A/2B
100
80 - 100
15 - 100
Material when tested complies with the material specification limits defined in the table above. Decision Rule Applied: For a test performed according to the stated method above, with published acceptance limits. PASS: when measured values are equal to or within the conformance limits FAIL: otherwise.

Determination of Particle Density

Tested In Accordance with BS 1377: Part 2: 1990. Clause 8.2 (Gas Jar Method)

Average Particle Density	2.60 Mg/m ³
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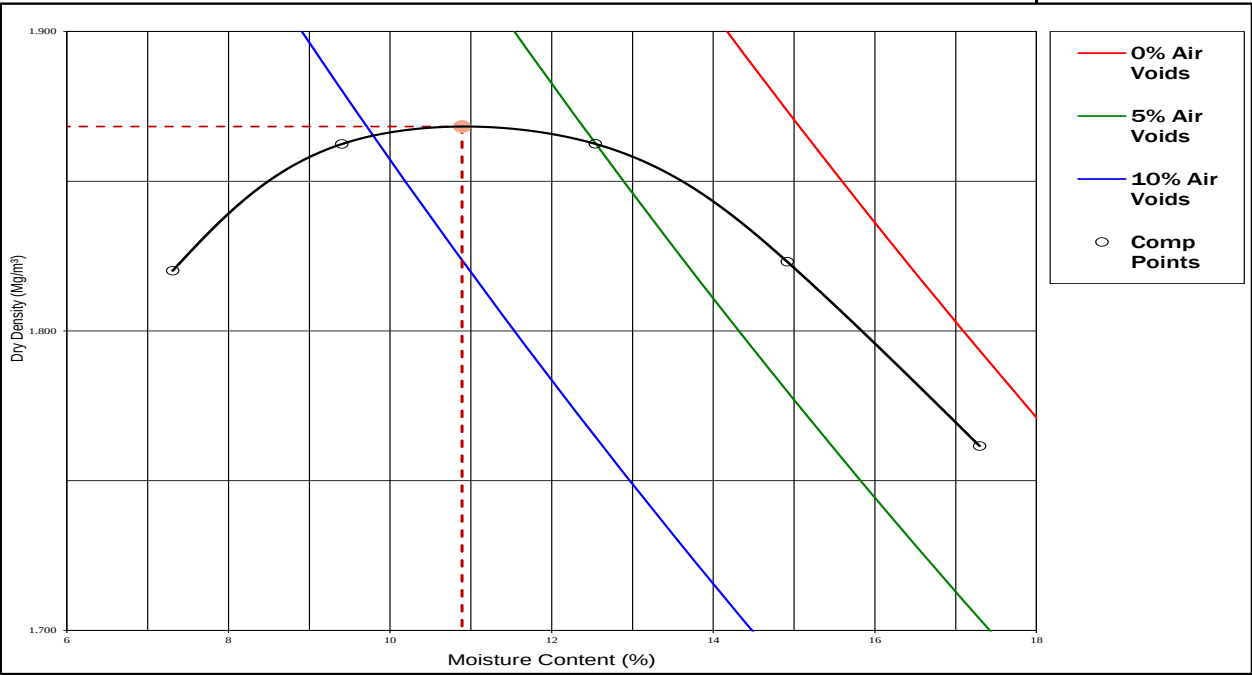
Sample prepared in Accordance with BS
1377-1:2016, clause 8.4

Determination of Dry Density / Moisture Content Relationship

Tested In Accordance with BS 1377: Part 4: 1990 Clause 3.5.4.2 (4.5kg Rammer, 1 Litre mould)

Laboratory Report	ETS/16270	Contract Sample No	C1470/6	 ETL EARTHWORKS TESTING LTD 
Report Date	17/04/2025	Clients Reference	C1470/6	
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description			
	Date Sampled	Not Stated		
	Source	As-Dug		
	Supplier	As-Dug		
	Sampled By	0		
	Sampling Environment	Unknown		
	Sample Type	Bulk		
	Location in sample	Unknown		
Sample Location	TP11 @ 1.0 m	Date Received	02/04/2025	
Sampling Plan	Not Known	Date Tests Completed	07/04/2025	
Sampling Method	Sampling from shallow trial pits		TEST REPORT	

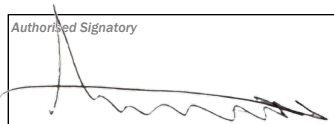
The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)
 Sample particle size adjustment: None



Laboratory Report	ETS/16270	Contract Sample No	C1470/6	 ETL EARTHWORKS TESTING LTD Unit 6 Eco Park, Eco Way Bootham Lane Duncroft Doncaster DN7 4JJ  Tel: 0345 2162900 Email: ops@earthworkstesting.co.uk	
Report Date	17/04/2025	Clients Reference	C1470/6		
Crossfields Consulting White Hall Farm Leamington Road Southam CV47 9PU Hammonds Way, Hinckley	Material Description				
	Date Sampled	Not Stated			
	Source	As-Dug			
	Supplier	As-Dug			
	Sampled By	0			
	Sampling Environment	Unknown			
	Sample Type	Bulk			
	Location in sample	Unknown			
Sample Location	TP11 @ 1.0 m	Date Received	02/04/2025		
Sampling Plan	Not Known	Date Tests Completed	07/04/2025		
Sampling Method	Sampling from shallow trial pits	TEST REPORT			

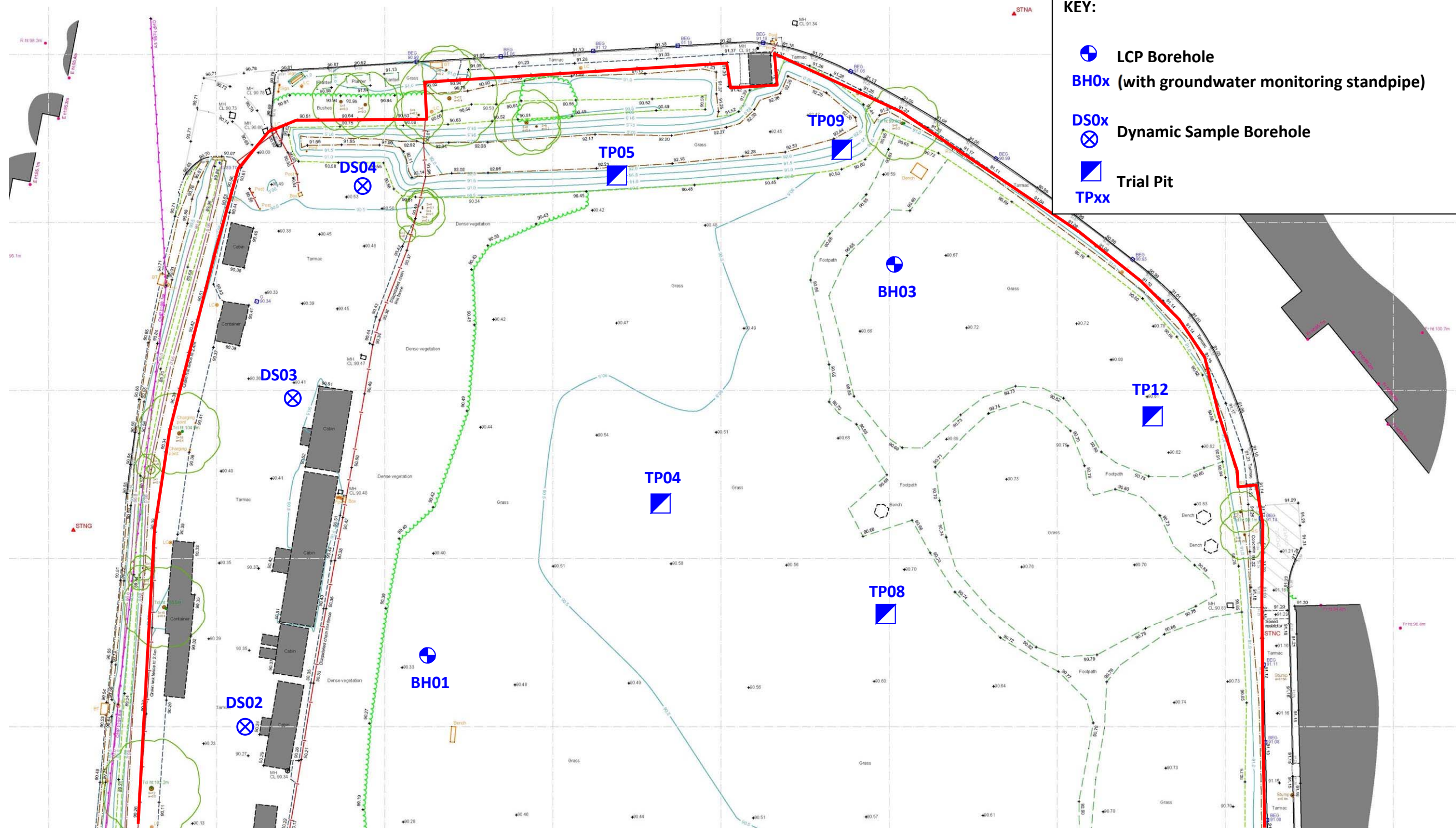
Optimum Moisture Content (%)	11 %	
Maximum Dry Density	1.87 Mg/m ³	
Material Retained on 37.5mm test sieve	0 %	
Material Retained on 20.0mm test sieve	0 %	
Particle Density (Measured) Determined by BS1377:Part 2:1990 Clause 8.2	2.60 Mg/m ³	

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Authorised Signatory


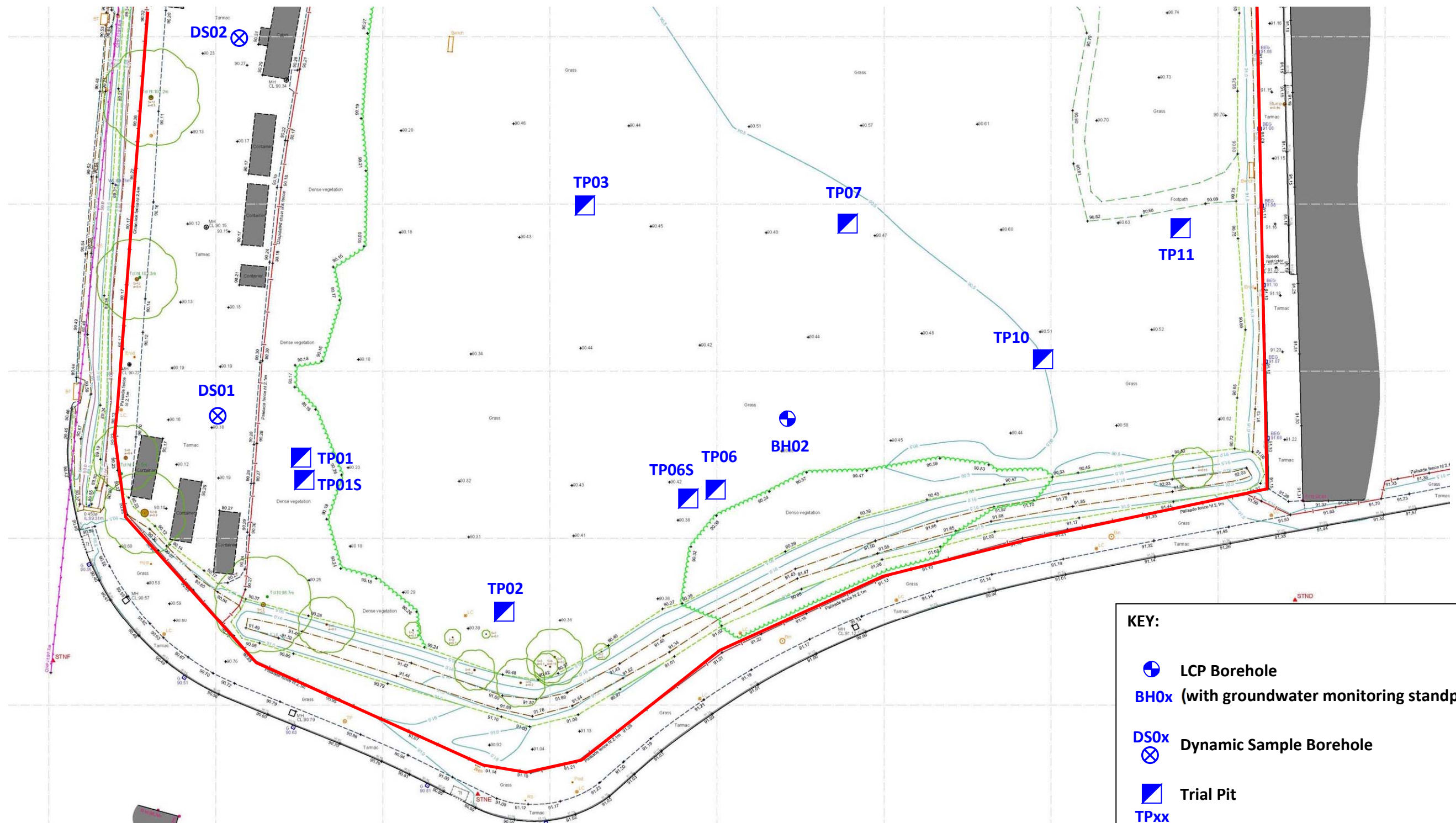
** END OF REPORT **
 Earthworks Testing Ltd - Company No. 14251352

FIGURE I-1



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FIGURE I-2



EXPLORATORY HOLE LOCATION PLAN - SOUTH
Scale 1: 500

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