

# **Ground Investigation Report**

**Land at Knowle Hill  
Allbrook  
Eastleigh  
Hampshire**

Client

Bargate Homes

J202334

January 2026



|                           |                                                                                                                                                      |                 |                            |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------|
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### APPENDIX

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## EXECUTIVE SUMMARY

*This executive summary contains an overview of the key findings and conclusions. No reliance should be placed on any part of the executive summary until the whole of the report has been read. Other sections of the report may contain information that puts into context the findings that are summarised in the executive summary.*

## BRIEF

This report describes the findings of a ground investigation carried out by the Wilson Bailey Partnership on the instructions of Bargate Homes with respect to the proposed residential development of this site. The purpose of the investigation has been to investigate the ground conditions and assess the implications of the findings with regards to geotechnical design and land contamination.

## DESK STUDY

The desk study research has indicated that whilst the site itself is a greenfield site, it adjoins a backfilled former brick clay extraction pit and a former builders merchant, the majority of which has been subsequently redeveloped for housing. The site is therefore not considered to present a potentially contaminative land use history, but may be located in a setting where potentially mobile contaminants could migrate onto the site from adjoining land with potentially contaminative site histories. No other indications of potential contaminated land issues of concern have been identified in the vicinity of the site.

## GROUND CONDITIONS

The boreholes and trial pits formed as part of the ground investigation have identified predominantly clay soils of the London Clay in the northern part of the site, with near surface sand soils of the Whitecliff Sand Member encountered within the central part of the site. In the southern part of the site these soils have been found to be overlain by variable clayey gravel, clay and sand of the River Terrace Deposits.

Groundwater was generally not encountered during the ground investigation, although monitoring carried out in installed boreholes has indicated the presence of groundwater within the deeper boreholes in the River Terrace Deposits, together with variable pockets of groundwater within the predominantly clay soils, although these have been assessed as pockets of perched water rather than actual groundwater.

Laboratory soil contamination testing of selected soil samples have not indicated the presence of raised or elevated concentrations of a wide range of routine potential chemicals of concern. Laboratory geotechnical testing has indicated the clay soils to be high plasticity.

A programme of soil gas monitoring has been carried out and has indicated raised concentrations of carbon dioxide considered to be associated with the adjoining backfilled former clay extraction pit.

## GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

The near surface natural and undisturbed firm clay soils and generally medium dense sand and gravel soils are considered suitable to support the anticipated light to moderate foundation loads likely to be associated with traditional two storey houses and foundations may be designed based on an assumed net allowable bearing capacity of 100 kPa. Due to the presence of high plasticity clay soils, floor slabs should be designed to be suspended over a naturally ventilated void.

Foundations will need to be deepened in the vicinity of trees due to the plasticity of the clay soils.

Normal sulphate design precautions should be adopted for the specification of foundation concrete.

Based on preliminary testing, road pavements may be designed based on an assessed CBR of 2% within the clay soils at this stage. Further testing should be carried out once the road levels have been finalised. The proposed residential development of this site has also been designed to incorporate an element of cut and fill, such that some roads will be formed within fill materials that are yet to be placed. A suitable earthworks specification will need to be developed to ensure the suitability of site won placed fill materials to support proposed new road pavements.

Surface water management is to comprise a series of attenuation features together with an off-site discharge, such that infiltration based drainage does not form part of the development proposals.

## GEOENVIRONMENTAL CONCLUSIONS AND RECOMMENDATIONS

The historical use of the site as open agricultural land is not considered to present a potentially contaminative land use, although the adjoining backfilled former clay extraction pit has been found to present a source of mobile carbon dioxide that has been found to affect this site. As with any agricultural land there is also always the potential for localised burial of materials and potential for localised ground contamination.

Desk study research indicates that whilst the site is located within a 1km grid square where there is a raised potential risk of radon, the site itself is not located within a radon affected area such that additional precautions with respect to radon are not required.

A requirement for soil gas protection to proposed buildings has been identified on the basis of raised concentrations of carbon dioxide having been recorded with detectable flow rates and the proximity of a viable source of potentially mobile soil gasses in the form of the adjoining backfilled former brickworks clay excavation pit. The gas risk assessment carried out in accordance with BS8485 indicates a Gas Characteristic Situation of CS3. This information has then been used by a specialist gas membrane supply, install and verification company to provide detailed proposals, the summary of which is included in the appendix to this report.

A requirement for remediation over and above a routine geo-environmental watching brief has not been identified. In the unlikely event that suspicious or contaminated soils are encountered during the ground works, the watching brief will ensure that any such soils that may be encountered by the ground worker during the course of the development may be investigated, assessed, and remediated as necessary under the supervision of Wilson Bailey Partnership and in conjunction with the Local Authority.

Across the site, subject to appropriate segregation, handling and storage, the site won topsoil is anticipated to be chemically suitable for reuse, although further testing of the topsoil once it has been collected into stockpiles will be required. Additional physical topsoil testing may be prudent to check that topsoil will be physically suitable to promote the healthy growth and development of garden plants in due course.

Any stockpiling of topsoil should be carried out in accordance with the guidance provided by DEFRA and should be carried out in accordance with the principles of a Materials Management Plan with regards to the sustainable reuse of topsoil on its site of origin.

## **1.0 INTRODUCTION**

Wilson Bailey Partnership has been commissioned by Bargate Homes to carry out a ground investigation of development land at Knowle Hill, Allbrook, Eastleigh, Hampshire.

### **1.1 Proposed Development**

Consideration is currently being given to the development of the site through the construction of 49 residential dwellings, together with access roads, paths, landscaping, hard standing for car parking, driveways drainage infrastructure including a series of reed beds, attenuation basins and associated works. The development will include areas of private residential gardens associated with the new dwellings.

### **1.2 Purpose of Work**

The principal technical objectives of the work carried out were as follows.

- to check the history of the site with respect to previous uses of the site and surroundings;
- to determine the prevailing near surface ground conditions;
- to investigate and test for the presence of contamination;
- to carry out an appropriate risk assessment with regards to any contamination; and
- to provide advice and recommendations with respect to geotechnical design.

### **1.3 Scope of Work**

In order to meet the above objectives, a desk study was carried out, followed by a ground investigation. The desk study comprised:

- a review of readily available geological maps and publicly available information provided by the Environment Agency;
- a review of information provided by the Health Protection Agency with regards to radon;
- a review of Ordnance Survey (OS) maps sourced from the Groundsure database; and
- a walkover survey of the site.

The physical ground investigation has been carried out in a single main phase and comprised, in summary, the following activities:

- a series of 14 small diameter boreholes drilled to depths of up to 4.45 m below ground level in locations across the site;
- a series of 11 trial pits excavated by a tracked mechanical excavator and used for soakage testing;
- installation of combined soil gas and groundwater monitoring standpipes in 5 locations across the site to facilitate winter water level monitoring and soil gas monitoring;
- laboratory testing of selected soil samples for geotechnical properties;
- laboratory testing of selected soil samples for the presence of contamination; and
- provision of a report presenting and interpreting the above data, together with our advice and recommendations with respect to the proposed development.

A further phase of soil sampling has been carried out following discussions with the Local Authority Pollution Control Specialist, which comprised the following;

- a series of 6 additional shallow hand dug trial pits located within the southern and western parts of the site; and
- laboratory testing of selected soil samples for the presence of contamination.

## 1.4 Limitations

The conclusions and recommendations made in this report are limited to those that can be made based on the investigation. The results of the work should be viewed in the context of the range of data sources consulted, the number of locations where the ground was sampled and the number of soil, gas or groundwater samples tested; no liability can be accepted for information in other data sources or conditions not revealed by the sampling or testing. Any comments made based on information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate; no independent validation of such information has been made by the Wilson Bailey Partnership.

## 2.0 Desk Study

### 2.1 Site Description and Site Walkover

The site comprises a parcel of open agricultural land that was in use as horse grazing at the time of our works. The site is irregularly shaped and has maximum dimensions of 410m by 105m.

The curved eastern boundary to the site is formed by a post and rail fence, beyond which is a sloping embankment down to Allbrook Way.

The northern part of the western site boundary is formed by a further fence, beyond which is an area of dense woodland. The central part of the western boundary is formed by a mixed residential boundary with the house and gardens of Westfield House. The southern part of the western site boundary is formed by a mature hedgerow, beyond which is Knowle Hill which provided vehicular access to the site.

The site has an overall gentle slope downwards to the south with a change in level of approximately 12m along the length of the site.

No indications of potentially contaminative uses were identified as part of the site walkover survey of the site.

### 2.2 Desk Study Findings

The desk study research has identified that the site has not been previously developed.

The desk study research has indicated the presence of nearby potentially contaminative land uses as noted overleaf.

- **Former Landfill Site**  
The former Allbrook Brickworks site is located 20 metres to the west and south of the site and was licensed between 1977 and 1981 for the importation and placement of Inert Wastes.
- **Historical Fuel Tanks**  
As part of the operation of the former Brickworks which was subsequently reused as a builders merchant following closure of the brickworks, a number of underground fuel tanks are known to have been present. These tanks were however removed and the associated soils were investigated and validated as clean and suitable as part of the residential redevelopment of this site in 2014 by Wilson Bailey Partnership on behalf of Bargate Homes, who were the developer of that adjoining site at the time.

The Geological Survey map of the area indicates the southern part of the site to be underlain by superficial River Terrace Deposits, with the remainder of the site indicated to be underlain directly by the London Clay, with outcrops of the Whitecliff Sand Member of the London Clay and the underlying Wittering Formation indicated to be present locally.

The River Terrace Deposits are identified as a Secondary A Superficial Aquifer, with underlying London Clay classed as an unproductive strata with negligible permeability. The site is not shown to be located within any class of groundwater source protection zone.

Desk study research indicates that whilst the site is located within a 1km grid square where there is a raised potential risk of radon, the site itself is not shown to be located within a radon affected area however, such that additional precautions with respect to radon are not required.

## 2.3 Preliminary Conceptual Model & Risk Assessment based on Desk Study

The long-term historical use of the site as open agricultural land is not considered to be significantly contaminative, although as with any agricultural land there remains an albeit minimal risk of potential buried or localised contamination.

The presence of an adjoining area of backfilled former brickworks excavation presents a potential source of potentially mobile ground contamination, although the landfill permit for this adjoining site only permitted the placement of Inert Wastes. It is important to note however that the definition of Inert Wastes has changed over time, and at the time of placement between 1977 and 1981, materials such as topsoil and subsoil are likely to have been classified as Inert. These materials are now no longer considered to be Inert as a result of their organic content, which can give rise to the generation of methane and carbon dioxide when landfilled.

The anticipated ground conditions at the site are not considered to be particularly sensitive, with the clay soils of the London Clay anticipated to be essentially impermeable. The granular soils of the River Terrace Deposits underlying the southern part of the site are anticipated to be at least locally permeable.

The proposed residential development of this site will introduce potentially sensitive receptors that may be affected by any potential ground contamination and potentially onerous soil gas regimes.

### 3.0 EXPLORATORY WORK SAMPLING STRATEGY

In order to meet the objectives described in Section 1.2 and address the key findings of the desk study a series of 14 small diameter boreholes have been drilled within accessible locations across the site together with a series of 11 machine excavated trial pits.

The locations of the exploratory holes were selected to obtain a general coverage and allow investigation of the prevailing ground conditions in accessible locations within the constraints presented by the site.

A second phase of supplementary soil contamination sampling and testing has also been carried out following on from discussions with the Local Authority Pollution Control Specialist.

Representative samples of the soils encountered were taken to the laboratory for geotechnical testing and contamination analyses. The analytical suite of soil contamination testing was selected to identify concentrations of a wide range of potential contaminants of concern for the purposes of general coverage. For this investigation the analytical suite included a range of metals, speciated total petroleum hydrocarbons (TPHCWG), speciated polycyclic aromatic hydrocarbons (PAH), and monohydric phenols together with routine analyses for pH and organic content. The contamination analyses were carried out at a MCERTs accredited laboratory and details of the MCERTs accreditation and test methods may be supplied on request.

The borehole and trial pit records and results of the insitu soil testing and laboratory analyses carried out as part of the initial and the supplementary phases of investigation are appended together with a site plan indicating the exploratory positions.

### 4.0 GROUND CONDITIONS

The investigation has broadly confirmed the expected ground conditions in that across the southern part of the site a variable clay, sand and gravel was encountered overlying clay soils of the London Clay, whilst across the remainder of the site London Clay was encountered from beneath the topsoil covering of the site. Within the central part of the site, silty sand soils of the Whitecliff Sand Member were encountered at the base of several of the exploratory holes.

#### 4.1 Topsoil

Apparently natural and undisturbed topsoil was encountered in the exploratory positions located across the site to generally consistent depths of between 0.20 m and 0.30m, locally extending to 0.50 m below ground level in selected boreholes.

No visual or olfactory indications of ground contamination were noted within the topsoil encountered as part of the ground investigation.

Representative samples of the soils were recovered from selected exploratory positions and analysed for a range of contaminants and the results are summarised in Section 4.5. Whilst not every soil sample has been tested a suitable coverage of the site has been achieved.

## 4.2 Made Ground

In Borehole No 9, made ground comprising reworked topsoil with occasional brick fragments was encountered to 0.70 m below ground level. No visual or olfactory indications of ground contamination were noted within the made ground.

## 4.3 River Terrace Deposits

Where present within the southern parts of the site the River Terrace Deposits have been found to be highly variable comprising several interbedded layers of clayey gravel, clay with gravel, sand and gravel and sand.

No visual or olfactory indications of ground contamination were noted within these soils which were encountered to the full depth of investigation across much of the southern parts of the site.

## 4.4 London Clay Formation

Underlying the topsoil and the Head Deposits where proved, firm grey clay soils of the London Clay were encountered to the full depth of investigation in the majority of the exploratory positions. Laboratory geotechnical testing has confirmed these clay soils to be of High Plasticity, with indications of the effects of trees not being noted.

No visual or olfactory indications of ground contamination were noted within these soils.

## 4.5 Whitecliff Sand Member

Exploratory holes located within a central belt through the site encountered fine yellowish brown silty sand soils underlying the London Clay at depths of about 1.00m to 1.20 m below ground level. It is considered that these sand soils are indicative of the Whitecliff Sand Member, which is one of several locally significant interstitial layers of sand within the London Clay.

No visual or olfactory indications of ground contamination was noted within these soils.

## 4.6 Soil Contamination

Part IIA of the Environmental Protection Act 1990, which was inserted into that Act by Section 57 of the Environment Act 1995, provides the main regulatory regime for the identification and remediation of contaminated land. The determination of contaminated sites is based on a "suitable for use" approach which involves managing the risks posed by contaminated land by making risk-based decisions. This risk assessment is carried out on the basis of a source-pathway-receptor approach.

The results of laboratory analyses carried out by an MCERTS accredited laboratory on five representative soil samples recovered from this site are enclosed. The testing suite has included testing for a wide range of metallic contaminants, speciated hydrocarbons, speciated poly-aromatic hydrocarbons and asbestos. The acceptability criteria used as part of the assessment of these results are presented below together with an assessment of the significance of the measured concentrations;

The acceptability criteria are widely accepted as providing a suitable initial screening value against which measured concentrations of potential contaminants can be assessed to determine the requirement for site specific quantitative risk assessment.

| Determinant                                   | Acceptability Criteria<br>(residential with plant<br>uptake) mg/kg | Number of exceedances<br>(number of samples<br>tested) | Location and value of exceedances |
|-----------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------|
| Asbestos                                      | Trace concentration<br>( $<0.001\%$ )                              | None (of 12)                                           | --                                |
| Arsenic (As)                                  | 32                                                                 | None (of 12)                                           | --                                |
| Cadmium (Cd)                                  | 10                                                                 | None (of 12)                                           | --                                |
| Chromium (hex)                                | 4.3                                                                | None (of 12)                                           | --                                |
| Chromium (Cr)                                 | 3000                                                               | None (of 12)                                           | --                                |
| Copper (Cu)                                   | 2330                                                               | None (of 12)                                           | --                                |
| Lead (Pb)                                     | 200                                                                | None (of 12)                                           | --                                |
| Mercury (Hg)                                  | 1.0                                                                | None (of 12)                                           | --                                |
| Nickel (Ni)                                   | 130                                                                | None (of 12)                                           | --                                |
| Selenium (Se)                                 | 350                                                                | None (of 12)                                           | --                                |
| Zinc (Zn)                                     | 3750                                                               | None (of 12)                                           | --                                |
| Benzo(a)pyrene                                | 5.0                                                                | None (of 12)                                           | --                                |
| Total Phenols (mono)                          | 420                                                                | None (of 12)                                           | --                                |
| Speciated Fuel Relation<br>hydrocarbons (TPH) | Various species-specific<br>values                                 | None (of 12)                                           | --                                |

#### 4.7 Groundwater

Groundwater was not encountered as part of the ground investigation at this site, although selected boreholes that extended to a greater depth encountered groundwater inflows at depths of 5.80 m and 7.80 m below ground level.

Water monitoring standpipes have been installed in several boreholes and a programme of water level monitoring has been carried out during the winter of 2023-2024 and 2024-2025, the records of which are appended. The results of this water monitoring programme have indicated variable and locally shallow depths of groundwater, although in view of the variability and the predominantly clay soils, these readings are assessed as being associated with a perched waters rather than actual groundwater.

#### 4.8 Soil Gas

A programme of soil gas monitoring has been carried out that has included a period of low and falling atmospheric pressure, with the results of this monitoring appended.

This programme of monitoring has indicated the presence of adverse soil gas conditions, with elevated gas concentrations of Carbon Dioxide measured in a number of the boreholes together with detectable and variable gas flow rates. For the purposes of a gas risk assessment in accordance with BS8485, the worst case gas conditions are to be considered, which are a peak carbon dioxide reading of 14.8%, with many readings above 5%, together with a peak flow rate of 14.8l/hr.

## 5.0 GEOTECHNICAL ADVICE AND RECOMMENDATIONS

The firm clay soils of the London Clay should be suitable for supporting the anticipated lightly loaded spread foundations associated with traditional two storey houses. The superficial clay, sand and gravel of the River Terrace Deposits should also be suitable for the support of anticipated foundation loads, although the variability of these soils would require the use of mesh reinforcement.

As a result of the proposed cut and fill works that will be required achieve the proposed development levels, there is a risk that foundations to plots within the central part of the site may penetrate through the London Clay and locally be formed in the underlying silt and sand soils of the Whitecliff Sand Member. The Whitecliff Sand Member should also be suitable for supporting anticipated foundation loads, although foundations may locally require additional deepening to ensure that the foundations to any one plot are formed in the same founding strata if the sand soils are locally encountered.

### 5.1 Spread Foundations

Moderate width pad or strip foundations are anticipated to be viable for traditional housing up to two storeys constructed within this land parcel.

Foundations should bypass the topsoil and apparently localised made ground and may be designed to found within the firm clay and dense gravel of the River Terrace Deposits, the firm clay of the London Clay or the dense sand of the Whitecliff Sand Member at a minimum depth of 1.00 m below ground level and apply a net allowable bearing pressure of 100 kN/m<sup>2</sup>, with a minimum width of 0.60m for external cavity walls.

In view of the variability of the sand and clay soils of the River Terrace Deposits, foundations bearing within these soils should be mesh reinforced to mitigate the risk of differential settlements. This is likely to affect foundations to Plot No 1.

As a result of the proposed cut and fill works, there is a potential that foundations to plots constructed within the south-central part of the site may extend into the silty sand soils of the Whitecliff Sand Member that have been encountered within this part of the site. Where encountered, foundations will need to be deepened in order that all parts of the foundation to any one plot are formed in a single soil type. This may affect Plot Nos 2 to 22.

This assumed net allowable bearing capacity value includes an adequate factor of safety against bearing capacity failure and should ensure that settlement remains within normal tolerable limits. In the unlikely event that heavily or eccentrically loaded foundations are required, a check should however be made on the magnitude of settlement once the base sizes are known, as the design bearing pressure is settlement dependent.

Foundations will need to be deepened in the vicinity of existing, retained and proposed trees and National House Building Council (NHBC). Where trees are to be removed the required founding depth should be determined on the basis of the existing tree height if it is less than 50% of the mature height and on the basis of full mature height if the current height is more than 50% of the mature height. Where a tree is to be retained the final mature height should be adopted and due allowance should be made for future growth of trees. Where groups of trees are present, due allowance should be made for the group effects of trees.

Notwithstanding NHBC guidelines, all foundations should extend beyond the zone of desiccation; in this respect it would be prudent to have foundation excavations inspected by a suitably experienced engineer. The requirement for compressible material alongside foundations should be determined by reference to the NHBC guidelines.

The results of laboratory geotechnical testing indicate the clay soils to be High Plasticity.

Subject to the detailed design of the proposed layout, selected plots may be constructed in the vicinity of the various mature and semi-mature boundary trees, which include high water demand species such as oak. Where any such plots being constructed in the vicinity of trees are to be founded within clay soils, there is a potential risk that deepened foundation excavations could become problematic or potentially excessively deep. Further ground investigation may be prudent within any such areas to check whether a sufficient depth of granular soils may be encountered in foundation excavations to any affected plots, at which point further deepening may not be necessary. Further deepening below the upper levels of the Whitecliff Sand Member, if encountered, would not be required, as these soils are assessed as being non-plastic.

## 5.2 Excavations

Shallow excavations for services and foundations within the near surface soils may remain dry and stable during the traditionally drier summer months.

Within winter months, there is a potential that groundwater could be encountered in the foundation excavations and deeper drainage excavations to Plot Nos 1-23 in the sand and gravel layers encountered in these areas, with associated excavation instability to be anticipated.

Where personnel are required to enter excavations, a risk assessment should be carried out and temporary lateral support or battering of the excavation sides considered in order to comply with normal safety requirements.

## 5.3 Ground Floor Slabs

In view of the presence of High Volume Change potential clay soils, and the localised presence of variable made ground within the western part of the site, it is anticipated that there will be a requirement for suspended ground floor slabs over a void in accordance with NHBC guidelines at this site.

In view of the raised concentration of Carbon Dioxide, detectable flow and the proximity of a viable source of potential soil gases in the form of the backfilled former brickworks clay excavation pit, it is considered that the ground floor slabs to proposed houses should be designed to incorporate a precautionary gas membrane.

## 5.4 Pavement Design

Preliminary CBR testing has been carried out by means of a TRL DCP probe which provides a profile of CBR values. The results of this testing are appended and indicate a design CBR value of 2% may be appropriate at this stage.

Further CBR testing will be required at the selected formation depth, depending upon finished levels, to confirm the design CBR value once the layout and levels of the proposed

development are known.

Due to the presence of clay soils, earthworks and road formations constructed within winter months may be challenging and the formation level may be expected to degrade rapidly if exposed to site traffic and inclement weather.

## 5.5 Buried Services

Precautions to ensure the protection of potentially sensitive underground services, such as drinking water pipes, are not likely to be required based on the results of soil contamination testing.

Statutory utility providers do however have a responsibility for ensuring the provision of wholesome water and may insist upon a protected plastic services. Detailed discussions with the utility company should be held as soon as possible in order to discuss the protection of buried potentially sensitive services.

## 5.6 Effect of Sulphates

The results of chemical analyses indicate low concentrations of soluble sulphate, corresponding to Class DS-1 AC-1s of Table 2 of BRE Special Digest 1: SD1 Part. The guidelines contained in the above digest should be followed in the design of foundation concrete.

## 5.7 Surface Water Drainage

Whilst soakage testing has been carried out to determine the suitability of the sand soils of the Whitecliff Sand Member and the River Terrace Deposits for the use of soakaways, this testing has indicated significantly variable results, with the remainder of the site underlain by impermeable clay soils of the London Clay.

The use of on site infiltration based drainage has therefore been considered and discounted as an alternative to the approved discharge of attenuated surface waters through a new discharge into the River Itchen to the southeast of the site.

In view of the presence of clay soils across most of the site, careful consideration should be given to the incorporation of garden drainage as part of the design and construction of proposed areas of private domestic garden. With an impermeable subsoil, together with impermeable construction elements such as patios and pathways and the foundations to walls and foundations, there is a significant risk of waterlogging to gardens.

## 6.0 CONTAMINATED LAND ADVICE AND RECOMMENDATIONS

### 6.1 Updated Conceptual Model

The preliminary conceptual model that was established for this site on the basis of the desk study research indicated a potential for soil contamination and a potentially onerous soil gas regime.

Following on from the completion of the ground investigation work including the supplementary phase of soil contamination sampling and testing, the site conceptual model has been updated to reflect the findings of these supplementary works. On the basis of the soil contamination testing it is considered that a site wide ground contamination is not present

at this site, although as with any development there is always a potential for localised ground contamination

Based upon the findings of the soil gas monitoring, a potentially onerous soil gas regime has been confirmed.

## 6.2 Contamination Risk Assessment

The history and current use of the site as open agricultural land is not considered to present a contaminated land use and the results of the ground investigation across this part of the site have not identified the presence of soil contamination.

One of the requirements of the Environment Act (1995) is that local authorities carry out inspections of their area with a view to identifying sites that may be contaminated. When assessing whether a site is contaminated the local authority will attempt to establish the presence of a 'pollution linkage'.

A pollution linkage requires there to be a source of contamination, a sensitive receptor that can be adversely affected by the contamination and a pathway via which contamination can reach the target.

The proposed development of the site will introduce new sensitive receptors in the form of end users and construction workers, together with the formation of new pathways through the creation of areas of private domestic gardens.

With regards to specific considerations, the risk to the following potentially sensitive receptors has been considered;

### **Human Health (end users)**

Potential risks posed to human health have been considered and the results of soil contamination testing indicate that there is no substantial requirement for ground remediation.

A requirement for soil gas protection from the elevated concentrations of Carbon Dioxide that have been measured has been identified.

In view of the presence of an assessed viable source of potentially mobile soil gasses in the form of the nearby backfilled form clay extraction pit, it is considered that the gas risk should be assessed using the approach set out in BS8485. This approach adopts a combination of the worst case measured gas concentration (14.8% v/v) and the worst case measured flow rate (14.8l/hr) which together indicate a Gas Screening Value of 2.2, which equates to a Characteristic Situation CS3 classification for the site.

As with any development site there is also an albeit limited potential for localised ground contamination that should be managed as part of an overall site contaminated land watching brief.

### **Human Health (site workers and future maintenance workers)**

Precautions with regards to site workers and future maintenance workers are not anticipated over and above normal safe working practices such as restricted eating and drinking, regular hand washing and the provision and use of routine PPE.

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**Property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes**

The risk to these potential receptors has been considered and in view of the absence of contamination, a significant risk warranting further action has not been identified. The requirement for protected services such as drinking water has been considered and should be discussed in detail with the statutory utility provider for potable water.

**Adjoining land**

The risk to this potential receptor has been considered and in view of the absence of ground contamination, a significant risk warranting further action has not been identified.

**Groundwaters and surface waters**

The risk to these potential receptors has been considered and in view of the absence of potentially mobile ground contamination, or a hydraulically continuous groundwater regime, a significant risk warranting further action has not been identified.

### **6.3 Potential Reuse of Site Won Topsoil**

Chemical testing carried out as part of this ground investigation indicates that the topsoil present across the site may be chemically suitable for reuse.

Additional testing has also been carried out to confirm the textural classification of the site won topsoil as part of a soil resource assessment. The testing carried out on a single recovered representative topsoil sample indicates that it complies with a Low Fertility Classification and may be expected provide a suitable growing medium for plants with minimal addition and amelioration.

### **6.4 Waste Disposal and Materials Management**

Any spoil arising from excavations or landscaping works will need to be disposed of to a licensed tip. Under the European Waste Directive landfills are classified as accepting Inert, Non-hazardous or Hazardous wastes in accordance with Waste Acceptance Criteria (WAC) which, for Non-hazardous and Inert wastes are based upon the results of CEN method bulk leaching tests or percolation tests. Based upon the results of the analyses carried out and the technical guidance provided by the Environment Agency<sup>1</sup> it is considered likely that arisings of natural clay from construction works on this site are likely to be generally classified as Inert waste, providing that these soils can be effectively segregated.

Surplus topsoil at this site is not likely to be classified as Inert of waste disposal purposes due to the presence of vegetation, rootlets, and a moderate organic content. Providing they can be appropriately segregated and stockpiled; it is anticipated that the site won topsoil should be suitable for reuse within proposed new areas of private domestic gardens.

In the unlikely event that during the ground works soils are found to be stained or have any hydrocarbon odour, they should be stockpiled separately from other soils in order that they may be tested to determine a revised waste classification, as these soils may potentially require classification as Hazardous waste. Any such segregation, stockpiling or on-site treatment to reduce or later the likely waste classification will need to be carried out in

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<sup>1</sup> Environment Agency 2003. *Hazardous Waste: Interpretation of the definition and classification of hazardous waste*. Technical Guidance WM2

accordance with a Materials Management Plan that will need to be approved by the Environment Agency prior to commencement of work.

In any case, all waste classifications should be confirmed by the receiving landfill once the soils to be discarded have been identified. To finalise an Inert waste classification, it will probably be necessary to carry out further analyses including WAC CEN method bulk leaching tests. Such tests should be carried out upon representative samples from the waste stream once the extent of the materials to be discarded has been established. The local waste regulation department of the Environment Agency (EA) should be contacted to obtain details of tips that are licensed to accept the soil represented by the test results. The tips will be able to provide costs for disposing of this material and the scope of any additional testing that may be required.

## **7.0 REQUIREMENT FOR REMEDIATION**

On the basis of the desk study and ground investigation works presented within this report a requirement for site wide soil remediation has not been identified, although remedial actions are considered necessary as part of the proposed residential development.

### **7.1 Contaminated Land Watching Brief**

The development should be carried out in accordance with the requirements of a routine geo-environmental watching brief, whereby should any contaminated or suspicious soils be encountered by the ground works contractor as part of the proposed site works, they should be immediately brought to the attention of Wilson Bailey Partnership in order that they may be appropriately tested, investigated and assessed by Wilson Bailey Partnership in consultation with the Regulatory Authorities, before agreeing the scope of any remedial actions as necessary.

### **7.2 Soil Gas Protection to Proposed New Dwellings**

A requirement for soil gas protection commensurate with Characteristic Situation 3 has been identified.

The advice of a specialist gas protection membrane supplier, installer and verification contractor has been sought and proposals for gas protection have been obtained. A copy of summary correspondence with the appointed contractor is included in the appendix to this report.

The appointed contractor shall be responsible for the installation and verification of the gas membrane works and a verification report will be provided upon completion of the installation works by the contractor.

## **8.0 FURTHER WORK**

A further phase of geotechnical focused ground investigation is currently underway in order to provide a refined foundation assessment and to provide design information to support the design of piled foundations that are locally required in the vicinity of boundary trees. These works will be carried out in accordance with the contaminated land watching brief and reported separately.

## APPENDIX

Borehole Records

Trial Pit Records

Soakage Test Results

Gas Monitoring Records

Soil Geotechnical Laboratory Analyses

Groundwater and Soil Gas Monitoring Records

Soil Chemical Analyses

Desk Study Search Records

Historical Mapping Records

Site Plans

Gas Protection Summary from Specialist



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m)         | Sample / Tests  | Water Depth (m) | Field Records             | Level (mOD) | Depth (m) (Thickness)            | Description                                                                                           | Legend   | Water |
|-------------------|-----------------|-----------------|---------------------------|-------------|----------------------------------|-------------------------------------------------------------------------------------------------------|----------|-------|
| 0.50              | D1              |                 |                           |             | (0.20)<br>0.20<br>(0.30)<br>0.50 | TOPSOIL<br>Orange-brown silty sandy fine to medium flint GRAVEL<br>Firm orange-brown silty sandy CLAY | <br><br> |       |
| 1.00-1.45<br>1.00 | SPT N=16<br>D2  |                 | 3,3/4,4,4,4               |             | (0.70)<br>1.20                   | Orange-brown clayey silty fine to medium SAND                                                         |          |       |
| 1.50              | D3              |                 |                           |             | (0.70)<br>1.90                   | Firm orange-brown silty sandy locally very sandy CLAY                                                 |          |       |
| 2.00-2.45<br>2.00 | SPT N=9<br>D4   |                 | 2,2/2,2,2,3               |             | (2.40)                           |                                                                                                       |          |       |
| 2.50              | D5              |                 |                           |             |                                  |                                                                                                       |          |       |
| 3.00-3.45<br>3.00 | SPT N=24<br>D6  |                 | 6,6/6,6,6,6               |             |                                  |                                                                                                       |          |       |
| 3.50              | D7              |                 |                           |             |                                  |                                                                                                       |          |       |
| 4.00-4.45<br>4.00 | SPT N=9<br>D8   |                 | 6,6/3,2,2,2               |             | 4.30                             | Orange-brown clayey silty SAND with pockets and layers of silty sandy clay                            |          |       |
| 4.50              | D9              |                 |                           |             |                                  |                                                                                                       |          |       |
| 5.00-5.45<br>5.00 | SPT N=19<br>D10 |                 | 4,4/5,4,5,5               |             |                                  |                                                                                                       |          |       |
| 5.50              | D11             |                 |                           |             |                                  |                                                                                                       |          |       |
| 6.00-6.45<br>6.00 | SPT N=20<br>D12 |                 | 4,4/5,5,5,5               |             | (3.70)                           |                                                                                                       |          |       |
| 6.50              | D13             |                 |                           |             |                                  |                                                                                                       |          |       |
| 7.00              | D14             |                 |                           |             |                                  |                                                                                                       |          |       |
| 7.50              | D15             |                 |                           |             |                                  |                                                                                                       |          |       |
| 8.00              | D16             |                 | Water strike(1) at 7.80m. |             | 8.00                             | Complete at 8.00m                                                                                     |          | ▽1    |

|                                                                                                                   |                                  |                  |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|
| <b>Remarks</b><br>Groundwater encountered at 7.80m. Standpipe installed with a response zone from 1.00m to 8.00m. | <b>Scale (approx)</b><br>1:50    | <b>Logged By</b> |
|                                                                                                                   | <b>Figure No.</b><br>J202334.BH1 |                  |
|                                                                                                                   |                                  |                  |



|                                                         |  |                   |  |                            |  |                                |  |                              |  |
|---------------------------------------------------------|--|-------------------|--|----------------------------|--|--------------------------------|--|------------------------------|--|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler |  | <b>Dimensions</b> |  | <b>Ground Level (mOD)</b>  |  | <b>Client</b><br>Bargate Homes |  | <b>Job Number</b><br>J202334 |  |
|                                                         |  | <b>Location</b>   |  | <b>Dates</b><br>12/10/2023 |  | <b>Engineer</b><br>DPB         |  | <b>Sheet</b><br>1/1          |  |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                                                   | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|-----------------------------------------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.25)<br>0.25        | TOPSOIL with abundany gravel                                                                  |        |       |
| 1.00      | D2             |                 |               |             |                       | Firm pale orange-brown and pale grey silty CLAY with partings of orange-brown silty fine sand |        |       |
| 1.50      | D3             |                 |               |             | (2.75)                |                                                                                               |        |       |
| 2.00      | D4             |                 |               |             |                       |                                                                                               |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                                                               |        |       |
| 3.00      | D6             |                 |               |             | 3.00                  | Complete at 3.00m                                                                             |        |       |

|                |  |  |  |  |  |  |                                   |                  |
|----------------|--|--|--|--|--|--|-----------------------------------|------------------|
| <b>Remarks</b> |  |  |  |  |  |  | <b>Scale (approx)</b><br>1:50     | <b>Logged By</b> |
|                |  |  |  |  |  |  | <b>Figure No.</b><br>J202334.BH10 |                  |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m)         | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                   | Legend | Water |
|-------------------|----------------|-----------------|---------------|-------------|-----------------------|---------------------------------------------------------------|--------|-------|
| 0.50              | D1             |                 |               |             | (0.25)<br>0.25        | TOPSOIL                                                       |        |       |
| 1.00-1.45<br>1.00 | SPT N=8<br>D2  |                 | 2,2/2,2,2,2   |             |                       | Firm pale orange-brown pale grey and brown mottled silty CLAY |        |       |
| 1.50              | D3             |                 |               |             | (2.75)                |                                                               |        |       |
| 2.00-2.45<br>2.00 | SPT N=12<br>D4 |                 | 2,3/3,3,3,3   |             |                       |                                                               |        |       |
| 2.50              | D5             |                 |               |             |                       |                                                               |        |       |
| 3.00-3.45<br>3.00 | SPT N=11<br>D6 |                 | 3,3/3,2,3,3   |             | 3.00                  | Complete at 3.00m                                             |        |       |

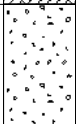
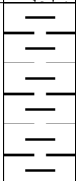
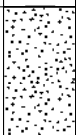
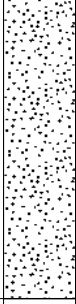
|                |                                   |                  |
|----------------|-----------------------------------|------------------|
| <b>Remarks</b> | <b>Scale (approx)</b><br>1:50     | <b>Logged By</b> |
|                | <b>Figure No.</b><br>J202334.BH11 |                  |



|                                                         |  |                   |  |                            |  |                                |  |                              |  |
|---------------------------------------------------------|--|-------------------|--|----------------------------|--|--------------------------------|--|------------------------------|--|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler |  | <b>Dimensions</b> |  | <b>Ground Level (mOD)</b>  |  | <b>Client</b><br>Bargate Homes |  | <b>Job Number</b><br>J202334 |  |
|                                                         |  | <b>Location</b>   |  | <b>Dates</b><br>12/10/2023 |  | <b>Engineer</b><br>DPB         |  | <b>Sheet</b><br>1/1          |  |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                                                                                                                              | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.20)<br>0.20        | TOPSOIL<br><br>Firm pale yellowish brown, orange-brown and aple grey slightly silty CLAY with partings and layers of orange-brown silty fine sand and degraded ironstone |        |       |
| 1.00      | D2             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 1.50      | D3             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 2.00      | D4             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 3.00      | D6             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 3.50      | D7             |                 |               |             | (6.80)                |                                                                                                                                                                          |        |       |
| 4.00      | D8             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 4.50      | D9             |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 5.00      | D10            |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 5.50      | D11            |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 6.00      | D12            |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 6.50      | D13            |                 |               |             |                       |                                                                                                                                                                          |        |       |
| 7.00      | D14            |                 |               |             | 7.00                  | Complete at 7.00m                                                                                                                                                        |        |       |

|                                                                                                             |                                   |                  |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------|
| <b>Remarks</b><br>Groudwater not encountered. Standpipe installed with a response zone from 1.00m to 6.00m. | <b>Scale (approx)</b>             | <b>Logged By</b> |
|                                                                                                             | 1:50                              |                  |
|                                                                                                             | <b>Figure No.</b><br>J202334.BH12 |                  |

|  <b>WILSON BAILEY</b><br>GEOTECHNICAL & ENVIROMENTAL |                |                   |                           |                            |                       | <b>Site</b><br>Knowle Hill, Allbrooke, Eastleigh                                                                                                        |                                                                                       | <b>Number</b><br><b>BH13</b>                              |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|---------------------------|----------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler                                                                             |                | <b>Dimensions</b> |                           | <b>Ground Level (mOD)</b>  |                       | <b>Client</b><br>Bargate Homes                                                                                                                          |                                                                                       | <b>Job Number</b><br>J202334                              |
|                                                                                                                                     |                | <b>Location</b>   |                           | <b>Dates</b><br>12/10/2023 |                       | <b>Engineer</b><br>DPB                                                                                                                                  |                                                                                       | <b>Sheet</b><br>1/1                                       |
| Depth (m)                                                                                                                           | Sample / Tests | Water Depth (m)   | Field Records             | Level (mOD)                | Depth (m) (Thickness) | Description                                                                                                                                             | Legend                                                                                | Water                                                     |
| 0.50                                                                                                                                | D1             |                   |                           |                            | (0.30)<br>0.30        | TOPSOIL with abundant fine to medium flint gravel                                                                                                       |    |                                                           |
| 1.00-1.45<br>1.00                                                                                                                   | SPT N=10<br>D2 |                   | 2,2/2,2,3,3               |                            | (0.80)<br>1.10        | Orange-brown silty sandy clayey fine to medium flint GRAVEL                                                                                             |    |                                                           |
| 1.50                                                                                                                                | D3             |                   |                           |                            | (1.20)                | Firm orange-brown and brown silty sandy CLAY with abundant flint gravel                                                                                 |    |                                                           |
| 2.00-2.45<br>2.00                                                                                                                   | SPT N=12<br>D4 |                   | 3,3/3,3,3,3               |                            | 2.30                  | Firm orange-brown and brown silty sandy CLAY with pockeys of pale yellowish brown and orange-brown silty sand with abundant fine to medium flint gravel |    |                                                           |
| 2.50                                                                                                                                | D5             |                   |                           |                            | (0.90)                |                                                                                                                                                         |   |                                                           |
| 3.00-3.45<br>3.00                                                                                                                   | SPT N=10<br>D6 |                   | 3,3/2,2,3,3               |                            | 3.20                  | Pale yellowish brown and orange-brown silty fine to medium SAND                                                                                         |  |                                                           |
| 3.50                                                                                                                                | D7             |                   |                           |                            |                       |                                                                                                                                                         |                                                                                       |                                                           |
| 4.00                                                                                                                                | D8             |                   |                           |                            |                       |                                                                                                                                                         |                                                                                       |                                                           |
| 4.50                                                                                                                                | D9             |                   |                           |                            | (2.80)                |                                                                                                                                                         |                                                                                       |                                                           |
| 5.00                                                                                                                                | D10            |                   |                           |                            |                       |                                                                                                                                                         |                                                                                       |                                                           |
| 5.50                                                                                                                                | D11            |                   |                           |                            |                       |                                                                                                                                                         |                                                                                       |                                                           |
| 6.00                                                                                                                                | D12            |                   | Water strike(1) at 5.80m. |                            | 6.00                  | Complete at 6.00m                                                                                                                                       |                                                                                       | ▽1                                                        |
| <b>Remarks</b><br>Groundwater encountered at 5.80m. Standpipe installed with a response zone from 1.00m to 6.00m.                   |                |                   |                           |                            |                       |                                                                                                                                                         | <b>Scale (approx)</b><br><br>1:50                                                     | <b>Logged By</b><br><br><b>Figure No.</b><br>J202334.BH13 |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                                                      | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|--------------------------------------------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.50)                | TOPSOIL with adbundant fine to medium flint gravel                                               |        |       |
| 1.00      | D2             |                 |               |             | 0.50                  | Firm pale brown and pale grey mottled very silty locally sandy CLAY                              |        |       |
| 1.50      | D3             |                 |               |             | (2.30)                |                                                                                                  |        |       |
| 2.00      | D4             |                 |               |             |                       |                                                                                                  |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                                                                  |        |       |
| 3.00      | D6             |                 |               |             | 2.80 (0.40)           | Firm pale brown and pale orange-brown silty sandy CLAY with scattred fine to medium flint gravel |        |       |
| 3.50      | D7             |                 |               |             | 3.20                  | Dark reddish orange-brown, orange-brown and pale yellow SAND                                     |        |       |
| 4.00      | D8             |                 |               |             | (1.40)                |                                                                                                  |        |       |
| 4.50      | D9             |                 |               |             | 4.60                  | Complete at 4.60m                                                                                |        |       |

|                                                                          |                                   |                  |
|--------------------------------------------------------------------------|-----------------------------------|------------------|
| <b>Remarks</b><br>Groundwater not encountered. Sampler refused at 4.60m. | <b>Scale (approx)</b><br>1:50     | <b>Logged By</b> |
|                                                                          | <b>Figure No.</b><br>J202334.BH14 |                  |
|                                                                          |                                   |                  |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                                                                | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|------------------------------------------------------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.25)<br>0.25        | TOPSOIL                                                                                                    |        |       |
| 1.00      | D2             |                 |               |             |                       | Firm orange-brown silty slightly sandy CLAY with scatted fine to medium flint gravel                       |        |       |
| 1.50      | D3             |                 |               |             | (2.85)                |                                                                                                            |        |       |
| 2.00      | D4             |                 |               |             |                       |                                                                                                            |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                                                                            |        |       |
| 3.00      | D6             |                 |               |             | 3.10                  | Firm orange-brown silty sloghtly sandy CLAY                                                                |        |       |
| 3.50      | D7             |                 |               |             | (1.10)                |                                                                                                            |        |       |
| 4.00      | D8             |                 |               |             | 4.20                  | Orange-brown silty locally very silty sandy CLAY with partings of dak reddish orange-brown silty fine sand |        |       |
| 4.50      | D9             |                 |               |             |                       |                                                                                                            |        |       |
| 5.00      | D10            |                 |               |             |                       |                                                                                                            |        |       |
| 5.50      | D11            |                 |               |             | (2.80)                |                                                                                                            |        |       |
| 6.00      | D12            |                 |               |             |                       |                                                                                                            |        |       |
| 6.50      | D13            |                 |               |             |                       |                                                                                                            |        |       |
| 7.00      | D14            |                 |               |             | 7.00                  | Complete at 7.00m                                                                                          |        |       |

|                                                                                                              |                                  |                  |
|--------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|
| <b>Remarks</b><br>Groundwater not encountered. Standpipe installed with a response zone from 1.00m to 6.00m. | <b>Scale (approx)</b><br>1:50    | <b>Logged By</b> |
|                                                                                                              | <b>Figure No.</b><br>J202334.BH2 |                  |
|                                                                                                              |                                  |                  |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                                                                    | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|----------------------------------------------------------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.60)<br>0.60        | TOPSOIL with abundant fine to medium flint gravel - possible made ground                                       |        |       |
| 1.00      | D2             |                 |               |             |                       | Firm orange-brown silty sandy CLAY                                                                             |        |       |
| 1.50      | D3             |                 |               |             |                       |                                                                                                                |        |       |
| 2.00      | D4             |                 |               |             | (2.40)                |                                                                                                                |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                                                                                |        |       |
| 3.00      | D6             |                 |               |             | 3.00                  | Dark orange -brown very silty very clayey sandy fine to medium flint GRAVEL                                    |        |       |
| 3.50      | D7             |                 |               |             | (1.30)                |                                                                                                                |        |       |
| 4.00      | D8             |                 |               |             | 4.30                  | Firm orange-brown and pale brown silty sandy CLAY                                                              |        |       |
| 4.50      | D9             |                 |               |             | (0.50)<br>4.80        | Pale orange-brown very clayey sandy SILT with layers and partings of fine to medium very silty very sandy clay |        |       |
| 5.00      | D10            |                 |               |             | (1.20)                |                                                                                                                |        |       |
| 5.50      | D11            |                 |               |             |                       |                                                                                                                |        |       |
| 6.00      | D12            |                 |               |             | 6.00                  | Complete at 6.00m                                                                                              |        |       |

|                                                                                                              |                                  |                  |
|--------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|
| <b>Remarks</b><br>Groundwater not encountered. Standpipe installed with a response zone from 1.00m to 6.00m. | <b>Scale (approx)</b><br>1:50    | <b>Logged By</b> |
|                                                                                                              | <b>Figure No.</b><br>J202334.BH3 |                  |
|                                                                                                              |                                  |                  |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m)         | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                | Legend | Water |
|-------------------|----------------|-----------------|---------------|-------------|-----------------------|------------------------------------------------------------|--------|-------|
| 0.50              | D1             |                 |               |             | (0.45)<br>0.45        | TOPSOIL                                                    |        |       |
| 1.00-1.45<br>1.00 | SPT N=8<br>D2  |                 | 2,2/2,2,2,2   |             |                       | Firm pale orange-brown silty sandy locally very silty CLAY |        |       |
| 1.50              | D3             |                 |               |             | (2.55)                |                                                            |        |       |
| 2.00-2.45<br>2.00 | SPT N=8<br>D4  |                 | 2,2/2,2,2,2   |             |                       |                                                            |        |       |
| 2.50              | D5             |                 |               |             |                       |                                                            |        |       |
| 3.00-3.45<br>3.00 | SPT N=9<br>D6  |                 | 2,2/2,2,2,3   |             | 3.00                  | Complete at 3.00m                                          |        |       |

|                                                |                                  |                  |
|------------------------------------------------|----------------------------------|------------------|
| <b>Remarks</b><br>Groundwater not encountered. | <b>Scale (approx)</b><br>1:50    | <b>Logged By</b> |
|                                                | <b>Figure No.</b><br>J202334.BH4 |                  |



|                                                         |  |                   |  |                            |  |                                |  |                              |  |
|---------------------------------------------------------|--|-------------------|--|----------------------------|--|--------------------------------|--|------------------------------|--|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler |  | <b>Dimensions</b> |  | <b>Ground Level (mOD)</b>  |  | <b>Client</b><br>Bargate Homes |  | <b>Job Number</b><br>J202334 |  |
|                                                         |  | <b>Location</b>   |  | <b>Dates</b><br>12/10/2023 |  | <b>Engineer</b><br>DPB         |  | <b>Sheet</b><br>1/1          |  |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                 | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|-------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.20)<br>0.20        | TOPSOIL                                                     |        |       |
|           |                |                 |               |             | (0.60)                | Firm orange-brown silty sandy CLAY                          |        |       |
| 1.00      | D2             |                 |               |             | 0.80<br>(0.40)        | Fir orange-brown very silty very sandy CLAY                 |        |       |
| 1.50      | D3             |                 |               |             | 1.20                  | Pale orange-brown, yellowish brown and pale grey silty SAND |        |       |
| 2.00      | D4             |                 |               |             | (1.80)                |                                                             |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                             |        |       |
| 3.00      | D6             |                 |               |             | 3.00                  | Complete at 3.00m                                           |        |       |

|                |  |  |  |  |  |  |  |                                  |  |                  |  |
|----------------|--|--|--|--|--|--|--|----------------------------------|--|------------------|--|
| <b>Remarks</b> |  |  |  |  |  |  |  | <b>Scale (approx)</b>            |  | <b>Logged By</b> |  |
|                |  |  |  |  |  |  |  | 1:50                             |  |                  |  |
|                |  |  |  |  |  |  |  | <b>Figure No.</b><br>J202334.BH5 |  |                  |  |



|                                                         |  |                   |  |                            |  |                                |  |                              |  |
|---------------------------------------------------------|--|-------------------|--|----------------------------|--|--------------------------------|--|------------------------------|--|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler |  | <b>Dimensions</b> |  | <b>Ground Level (mOD)</b>  |  | <b>Client</b><br>Bargate Homes |  | <b>Job Number</b><br>J202334 |  |
|                                                         |  | <b>Location</b>   |  | <b>Dates</b><br>12/10/2023 |  | <b>Engineer</b><br>DPB         |  | <b>Sheet</b><br>1/1          |  |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.30)<br>0.30        | TOPSOIL                                                    |        |       |
| 1.00      | D2             |                 |               |             |                       | Firm pale orange-brown silty sandy locally very silty CLAY |        |       |
| 1.50      | D3             |                 |               |             |                       |                                                            |        |       |
| 2.00      | D4             |                 |               |             | (3.15)                |                                                            |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                            |        |       |
| 3.00      | D6             |                 |               |             |                       |                                                            |        |       |
| 3.45      | D7             |                 |               |             | 3.45                  | Complete at 3.45m                                          |        |       |

|         |                           |           |
|---------|---------------------------|-----------|
| Remarks | Scale (approx)            | Logged By |
|         | 1:50                      |           |
|         | Figure No.<br>J202334.BH6 |           |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m)         | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness)            | Description                                                                                                                                 | Legend   | Water |
|-------------------|----------------|-----------------|---------------|-------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|
| 0.50              | D1             |                 |               |             | (0.20)<br>0.20<br>(0.50)<br>0.70 | TOPSOIL<br>Pale yellowish brown silty calyey sandy fine to medium flint GRAVEL<br>Firm orange-brown and pale grey silty slightly sandy CLAY | <br><br> |       |
| 1.00-1.45<br>1.00 | SPT N=10<br>D2 |                 | 2,2/2,2,3,3   |             |                                  |                                                                                                                                             |          |       |
| 1.50              | D3             |                 |               |             |                                  |                                                                                                                                             |          |       |
| 2.00-2.45<br>2.00 | SPT N=11<br>D4 |                 | 2,2/2,3,3,3   |             | (2.30)                           |                                                                                                                                             |          |       |
| 2.50              | D5             |                 |               |             |                                  |                                                                                                                                             |          |       |
| 3.00-3.45<br>3.00 | SPT N=10<br>D6 |                 | 2,3/2,2,3,3   |             | 3.00                             | Complete at 3.00m                                                                                                                           |          |       |

|                |                                  |                  |
|----------------|----------------------------------|------------------|
| <b>Remarks</b> | <b>Scale (approx)</b><br>1:50    | <b>Logged By</b> |
|                | <b>Figure No.</b><br>J202334.BH7 |                  |



|                                                         |  |                   |  |                            |  |                                |  |                              |  |
|---------------------------------------------------------|--|-------------------|--|----------------------------|--|--------------------------------|--|------------------------------|--|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler |  | <b>Dimensions</b> |  | <b>Ground Level (mOD)</b>  |  | <b>Client</b><br>Bargate Homes |  | <b>Job Number</b><br>J202334 |  |
|                                                         |  | <b>Location</b>   |  | <b>Dates</b><br>12/10/2023 |  | <b>Engineer</b><br>DPB         |  | <b>Sheet</b><br>1/1          |  |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                                   | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|---------------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.30)<br>0.30        | TOPSOIL with abundant gravel                                  |        |       |
| 1.00      | D2             |                 |               |             |                       | Firm pale orange-brown and pale grey mottled silty sandy CLAY |        |       |
| 1.50      | D3             |                 |               |             | (2.70)                |                                                               |        |       |
| 2.00      | D4             |                 |               |             |                       |                                                               |        |       |
| 2.50      | D5             |                 |               |             |                       |                                                               |        |       |
| 3.00      | D6             |                 |               |             | 3.00                  | Complete at 3.00m                                             |        |       |

|         |                           |           |
|---------|---------------------------|-----------|
| Remarks | Scale (approx)            | Logged By |
|         | 1:50                      |           |
|         | Figure No.<br>J202334.BH8 |           |



|                                                         |                   |                            |                                |                              |
|---------------------------------------------------------|-------------------|----------------------------|--------------------------------|------------------------------|
| <b>Excavation Method</b><br>Drive-in Windowless Sampler | <b>Dimensions</b> | <b>Ground Level (mOD)</b>  | <b>Client</b><br>Bargate Homes | <b>Job Number</b><br>J202334 |
|                                                         | <b>Location</b>   | <b>Dates</b><br>12/10/2023 | <b>Engineer</b><br>DPB         | <b>Sheet</b><br>1/1          |

| Depth (m)         | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness)            | Description                                                                                                                                     | Legend | Water |
|-------------------|----------------|-----------------|---------------|-------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|
| 0.50              | D1             |                 |               |             | (0.20)<br>0.20<br>(0.50)<br>0.70 | MADE GROUND (reworked topsoil)<br>MADE GROUND (reworked topsoil with brick and gravel)<br>Firm pale orange-brown and pale grey silty sandy CLAY | <br>   |       |
| 1.00-1.45<br>1.00 | SPT N=8<br>D2  |                 | 1,2/2,2,2,2   |             |                                  |                                                                                                                                                 |        |       |
| 1.50              | D3             |                 |               |             |                                  |                                                                                                                                                 |        |       |
| 2.00-2.45<br>2.00 | SPT N=12<br>D4 |                 | 2,2/3,3,3,3   |             | (2.75)                           |                                                                                                                                                 |        |       |
| 2.50              | D5             |                 |               |             |                                  |                                                                                                                                                 |        |       |
| 3.00-3.45<br>3.00 | SPT N=11<br>D6 |                 | 2,3/2,3,3,3   |             |                                  |                                                                                                                                                 |        |       |
| 3.45              | D7             |                 |               |             | 3.45                             | Complete at 3.45m                                                                                                                               |        |       |

|                |                                  |                  |
|----------------|----------------------------------|------------------|
| <b>Remarks</b> | <b>Scale (approx)</b><br>1:50    | <b>Logged By</b> |
|                | <b>Figure No.</b><br>J202334.BH9 |                  |



|                                |            |                     |                         |                       |
|--------------------------------|------------|---------------------|-------------------------|-----------------------|
| Excavation Method<br>Trial Pit | Dimensions | Ground Level (mOD)  | Client<br>Bargate Homes | Job Number<br>J202334 |
|                                | Location   | Dates<br>19/12/2025 | Engineer<br>DPB         | Sheet<br>1/1          |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                | Legend                                                                              | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|--------------------------------------------|-------------------------------------------------------------------------------------|-------|
| 0.50      | D1             |                 |               |             | (0.15)                | TOPSOIL                                    |  |       |
|           |                |                 |               |             | (0.15)                |                                            |  |       |
|           |                |                 |               |             | (0.35)                | Firm brown and dark brown silty sandy CLAY |  |       |
|           |                |                 |               |             | 0.50                  | Complete at 0.50m                          |                                                                                     |       |

|                                                                                                                                                                            |         |           |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|-----------------------------|
| <div>Plan</div> <div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div> | Remarks |           |                             |
|                                                                                                                                                                            |         |           |                             |
|                                                                                                                                                                            |         |           |                             |
|                                                                                                                                                                            |         |           |                             |
|                                                                                                                                                                            |         |           |                             |
|                                                                                                                                                                            |         |           |                             |
|                                                                                                                                                                            |         |           |                             |
| Scale (approx)<br>1:50                                                                                                                                                     |         | Logged By | Figure No.<br>J202334.HDTP1 |



Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**HDTP2**

## Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 19/12/2025 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

Location

|              |            |
|--------------|------------|
| <b>Dates</b> | 19/12/2025 |
|--------------|------------|

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

(0.20)  
0.20  
(0.30)  
0.50

|                                                                                        |
|----------------------------------------------------------------------------------------|
| TOPSOIL                                                                                |
| Firm brown and dark brown silty sandy CLAY with occasional fine to medium flint gravel |
| Complete at 0.50m                                                                      |

### Plan

Remarks

Scale (approx)

1:50

**Logged By**

Figure No.

J202334.HDTP2



Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**HDTP3**

## Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 19/12/2025 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

Location

|              |            |
|--------------|------------|
| <b>Dates</b> | 19/12/2025 |
|--------------|------------|

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

(0.15)  
0.15  
(0.35)  
0.50

|                                                               |
|---------------------------------------------------------------|
| TOPSOIL                                                       |
| Firm dark brown silty sandy CLAY with occasional flint gravel |
| Complete at 0.50m                                             |



### Plan

Remarks

Scale (approx)

1:50

**Logged By**

Figure No.

J202334.HDTP3

|                                                                                                                                                                         |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|---------------|---------------------|-----------------------|---------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|-------|
| <div><div><div>WILSON BAILEY</div><div>GEOTECHNICAL &amp; ENVIROMENTAL</div></div></div> |                |                 |               |                     |                       | Site<br>Knowle Hill, Allbrooke, Eastleigh                           |  | Trial Pit Number<br>HDTP4                                                           |       |
| Excavation Method<br>Trial Pit                                                                                                                                          |                | Dimensions      |               | Ground Level (mOD)  |                       | Client<br>Bargate Homes                                             |  | Job Number<br>J202334                                                               |       |
|                                                                                                                                                                         |                | Location        |               | Dates<br>19/12/2025 |                       | Engineer<br>DPB                                                     |  | Sheet<br>1/1                                                                        |       |
| Depth (m)                                                                                                                                                               | Sample / Tests | Water Depth (m) | Field Records | Level (mOD)         | Depth (m) (Thickness) | Description                                                         |  | Legend                                                                              | Water |
| 0.50                                                                                                                                                                    | D1             |                 |               |                     | (0.20)                | TOPSOIL                                                             |  |  |       |
|                                                                                                                                                                         |                |                 |               |                     | 0.20                  |                                                                     |  |  |       |
|                                                                                                                                                                         |                |                 |               |                     | (0.30)                | Firm dark brown and brown silty sandy CLAY with occasional rootlets |  |  |       |
|                                                                                                                                                                         |                |                 |               |                     | 0.50                  | Complete at 0.50m                                                   |  |  |       |
| Plan                                                                                                                                                                    |                |                 |               |                     | Remarks               |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                     |  |                                                                                     |       |
| Scale (approx)                                                                                                                                                          |                |                 | Logged By     |                     | Figure No.            |                                                                     |  |                                                                                     |       |
| 1:50                                                                                                                                                                    |                |                 |               |                     | J202334.HDTP4         |                                                                     |  |                                                                                     |       |

|                                                                                                                                                                         |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|---------------|---------------------|-----------------------|-------------------------------------------|--|-------------------------------------------------------------------------------------|-------|
| <div><div><div>WILSON BAILEY</div><div>GEOTECHNICAL &amp; ENVIROMENTAL</div></div></div> |                |                 |               |                     |                       | Site<br>Knowle Hill, Allbrooke, Eastleigh |  | Trial Pit Number<br>HDTP5                                                           |       |
| Excavation Method<br>Trial Pit                                                                                                                                          |                | Dimensions      |               | Ground Level (mOD)  |                       | Client<br>Bargate Homes                   |  | Job Number<br>J202334                                                               |       |
|                                                                                                                                                                         |                | Location        |               | Dates<br>19/12/2025 |                       | Engineer<br>DPB                           |  | Sheet<br>1/1                                                                        |       |
| Depth (m)                                                                                                                                                               | Sample / Tests | Water Depth (m) | Field Records | Level (mOD)         | Depth (m) (Thickness) | Description                               |  | Legend                                                                              | Water |
| 0.50                                                                                                                                                                    | D1             |                 |               |                     | (0.15)                | TOPSOIL                                   |  |  |       |
|                                                                                                                                                                         |                |                 |               |                     | 0.15                  |                                           |  |  |       |
|                                                                                                                                                                         |                |                 |               |                     | (0.35)                | Firm dark brown silty sandy CLAY          |  |  |       |
|                                                                                                                                                                         |                |                 |               |                     | 0.50                  | Complete at 0.50m                         |  |  |       |
| Plan                                                                                                                                                                    |                |                 |               |                     | Remarks               |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                           |  |                                                                                     |       |
| Scale (approx)                                                                                                                                                          |                |                 | Logged By     |                     | Figure No.            |                                           |  |                                                                                     |       |
| 1:50                                                                                                                                                                    |                |                 |               |                     | J202334.HDTP5         |                                           |  |                                                                                     |       |



Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**HOTP6**

### Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 19/12/2025 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

Location

|              |            |
|--------------|------------|
| <b>Dates</b> | 19/12/2025 |
|--------------|------------|

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

|       |  |
|-------|--|
| Water |  |
|-------|--|

0.50

D1

(0.15)  
(0.15)  
(0.35)

TOPSOIL

Firm dark brown and brown silty sandy CLAY with occasional fine to medium flint gravel

Complete at 0.50m

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

### Plan

Remarks

Groundwater not encountered.

Scale (approx)

1:50

**Logged By**

Figure No.

J202334.HDTP6

|                                                                                                                                                                         |                |                 |               |                     |                       |                                                                           |                                                                                     |                         |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|---------------|---------------------|-----------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------|--|
| <div><div><div>WILSON BAILEY</div><div>GEOTECHNICAL &amp; ENVIROMENTAL</div></div></div> |                |                 |               |                     |                       | Site<br>Knowle Hill, Allbrooke, Eastleigh                                 |                                                                                     | Trial Pit Number<br>TP1 |  |
| Excavation Method<br>Trial Pit                                                                                                                                          |                | Dimensions      |               | Ground Level (mOD)  |                       | Client<br>Bargate Homes                                                   |                                                                                     | Job Number<br>J202334   |  |
|                                                                                                                                                                         |                | Location        |               | Dates<br>11/10/2023 |                       | Engineer<br>DPB                                                           |                                                                                     | Sheet<br>1/1            |  |
| Depth (m)                                                                                                                                                               | Sample / Tests | Water Depth (m) | Field Records | Level (mOD)         | Depth (m) (Thickness) | Description                                                               | Legend                                                                              | Water                   |  |
| 0.50                                                                                                                                                                    | D1             |                 |               |                     | (0.30)                | TOPSOIL                                                                   |  |                         |  |
|                                                                                                                                                                         |                |                 |               |                     | 0.30                  | Firm brown and dark brown silty sandy CLAY - subsoil                      |  |                         |  |
|                                                                                                                                                                         |                |                 |               |                     | (0.30)                | Firm brown silty slightly sandy CLAY with occasional layers of silty sand |  |                         |  |
| 1.00                                                                                                                                                                    | D2             |                 |               |                     | 0.60                  |                                                                           |  |                         |  |
| 1.50                                                                                                                                                                    | D3             |                 |               |                     | (1.30)                |                                                                           |  |                         |  |
| 1.90                                                                                                                                                                    | D4             |                 |               |                     | 1.90                  | Complete at 1.90m                                                         |  |                         |  |
| Plan                                                                                                                                                                    |                |                 |               |                     |                       | Remarks                                                                   |                                                                                     |                         |  |
| .                                                                                                                                                                       |                |                 |               |                     |                       | Groundwater not encountered. Trial pit used for soakage testing.          |                                                                                     |                         |  |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                           |                                                                                     |                         |  |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                           |                                                                                     |                         |  |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                           |                                                                                     |                         |  |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                           |                                                                                     |                         |  |
| .                                                                                                                                                                       |                |                 |               |                     |                       |                                                                           |                                                                                     |                         |  |
| Scale (approx)                                                                                                                                                          |                |                 |               | Logged By           |                       | Figure No.                                                                |                                                                                     |                         |  |
| 1:50                                                                                                                                                                    |                |                 |               |                     |                       | J202334.TP1                                                               |                                                                                     |                         |  |



Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number  
TP10**

### Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 13/10/2023 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

**Location**

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

1.00

D2

(0.20)

$$\begin{pmatrix} 0.20 \\ 0.15 \end{pmatrix}$$

0.35

(10.25)

(0.65)

433

1.00

TOPSOIL

Firm dark brown silty sandy CLAY - subsoil

Firm brown silty CLAY

Complete at 1.00m

### Plan

Remarks

Scale (approx)

1:50

**Logged By**

Figure No.

J202334.TP10



Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number  
TP11**

## Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 14/10/2023 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

Location

## Dates

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

1.00

D2

(Q.15)

(0.30)

0.45

0.43

(0.55)

1.00

TOPSOIL

Firm dark brown silty sandy CLAY - subsoil

|                              |
|------------------------------|
| <p>Firm brown silty CLAY</p> |
|------------------------------|

Complete at 1.00m

### Plan

Remarks

Scale (approx)

1:50

**Logged By**

Figure No.

J202334.TP11





Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**TP2**

### Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 11/10/2023 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

**Location**

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)

Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

1.00

D2

1.50

D3

2 00

D4

(0.25)  
0.25  
(0.20)  
0.45

TOPSOIL

Firm brown and orange-brown silty sandy CLAY with occasional fine to medium flint gravel

(1.55)

2.00

Complete at 2.00m

### Plan

Remarks

Groundwater not encountered. Trial pit used for soakage testing.

**Scale (approx)**

1:50

**Logged By**

**Figure No.**

J202334.TP2





Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**TP4**

## Trial Pit

Ground Level (mOD)

## Bargate Homes

Job  
Number  
J202334

|              |            |
|--------------|------------|
| <b>Dates</b> | 12/10/2023 |
|--------------|------------|

DPB

Sheet  
1/1

Water

Complete at 2.60m

Remarks

**Figure No.**

J202334.TP4



|                                |            |  |                     |                         |                       |
|--------------------------------|------------|--|---------------------|-------------------------|-----------------------|
| Excavation Method<br>Trial Pit | Dimensions |  | Ground Level (mOD)  | Client<br>Bargate Homes | Job Number<br>J202334 |
|                                | Location   |  | Dates<br>12/10/2023 | Engineer<br>DPB         | Sheet<br>1/1          |

| Depth (m) | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                           | Legend | Water |
|-----------|----------------|-----------------|---------------|-------------|-----------------------|-------------------------------------------------------|--------|-------|
| 0.50      | D1             |                 |               |             | (0.20)<br>0.20        | TOPSOIL                                               |        |       |
|           |                |                 |               |             |                       | Firm brown silty CLAY                                 |        |       |
| 1.00      | D2             |                 |               |             | (2.00)                |                                                       |        |       |
| 1.50      | D3             |                 |               |             |                       |                                                       |        |       |
| 2.00      | D4             |                 |               |             | 2.20                  |                                                       |        |       |
| 2.50      | D5             |                 |               |             | (0.40)                | Pale yellowish brown and orange-brown very sandy SILT |        |       |
| 2.60      | D6             |                 |               |             | 2.60                  | Complete at 2.60m                                     |        |       |

|                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|-------------|
| Plan<br><div><div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div></div></div> | Remarks        |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                           |                |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                           | Scale (approx) | Logged By | Figure No.  |
|                                                                                                                                                                                                                                                                                                                                                                                                           | 1:50           |           | J202334.TP5 |



|                                |            |  |                     |                         |                       |
|--------------------------------|------------|--|---------------------|-------------------------|-----------------------|
| Excavation Method<br>Trial Pit | Dimensions |  | Ground Level (mOD)  | Client<br>Bargate Homes | Job Number<br>J202334 |
|                                | Location   |  | Dates<br>12/10/2023 | Engineer<br>DPB         | Sheet<br>1/1          |

| Depth (m)    | Sample / Tests | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description                                    | Legend | Water |
|--------------|----------------|-----------------|---------------|-------------|-----------------------|------------------------------------------------|--------|-------|
| 0.50         | D1             |                 |               |             | (0.25)<br>0.25        | TOPSOIL                                        |        |       |
| 1.00         | D2             |                 |               |             |                       | Firm brown silty CLAY                          |        |       |
| 1.50         | D3             |                 |               |             | (2.55)                |                                                |        |       |
| 2.00         | D4             |                 |               |             |                       |                                                |        |       |
| 2.50         | D5             |                 |               |             |                       |                                                |        |       |
| 3.00         | D6             |                 |               |             | 2.80<br>(0.80)        | Pale yellowish brown and brown very sandy SILT |        |       |
| 3.50<br>3.60 | D7<br>D8       |                 |               |             | 3.60                  | Complete at 3.60m                              |        |       |

|                                    |         |   |   |   |   |   |           |   |                           |   |
|------------------------------------|---------|---|---|---|---|---|-----------|---|---------------------------|---|
| Plan<br>.<br>.<br>.<br>.<br>.<br>. | Remarks |   |   |   |   |   |           |   |                           |   |
|                                    | .       | . | . | . | . | . | .         | . | .                         | . |
|                                    | .       | . | . | . | . | . | .         | . | .                         | . |
|                                    | .       | . | . | . | . | . | .         | . | .                         | . |
|                                    | .       | . | . | . | . | . | .         | . | .                         | . |
| Scale (approx)<br>1:50             |         |   |   |   |   |   | Logged By |   | Figure No.<br>J202334.TP6 |   |





Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**TP8**

### Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 13/10/2023 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

Location

## Dates

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

1.00

D2

0.10

(0.30)

0.40

(0.60)

433

1.00

TOPSOIL

Firm dark brown silty sandy CLAY with occasional root hairs  
- subsoil

Firm brown silty CLAY

Complete at 1.00m

### Plan

Remarks

Scale (approx)

1:50

**Logged By**

Figure No.

J202334.TP8



Knowle Hill, Allbrooke, Eastleigh

**Trial Pit  
Number**  
**TP9**

## Trial Pit

### Dimensions

|              |            |
|--------------|------------|
| <b>Dates</b> | 13/10/2023 |
|--------------|------------|

## Bargate Homes

Job  
Number  
J202334

Location

## Dates

DPB

Sheet  
1/1

Dept  
(m)

### Sample / Tests

Water  
Depth  
(m)

## Field Records

Level  
(mOD)Depth  
(m)  
(Thickness)

### Description

### Legend

Water

0.50

D1

1.00

D2

0.10

(0.30)

0.40

(0.60)

433

1.00

TOPSOIL

Firm dark brown silty sandy CLAY - subsoil

Firm brown silty CLAY

Complete at 1.00m

### Plan

Remarks

Scale (approx)

1:50

**Logged By**

Figure No.

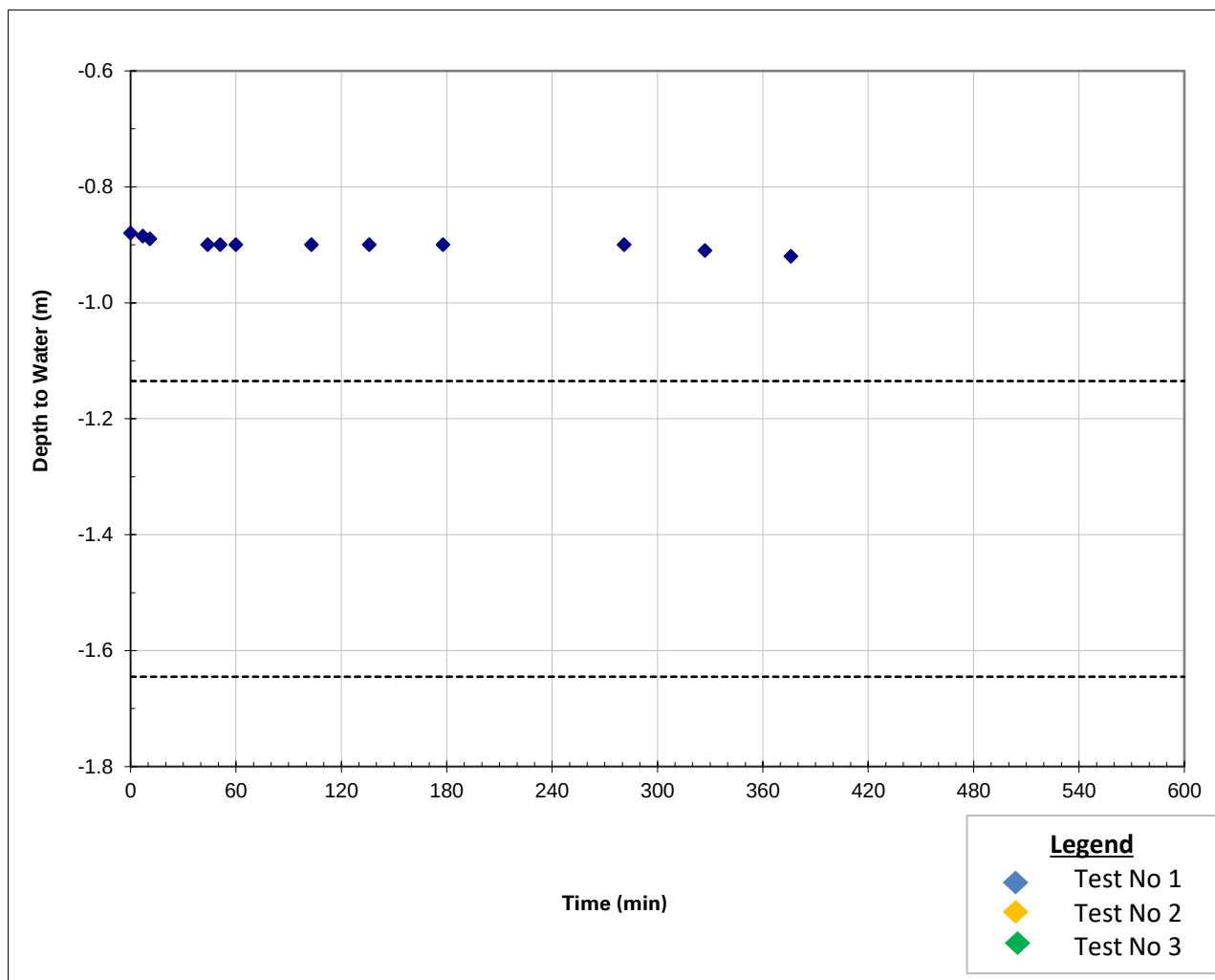
J202334.TP9

**Site** Knowle Hill, Allbrook, Eastleigh

**Client** Bargate Homes

Trial Pit No. 1  
Date of test 11/10/2023

Pit Length (m) 1.45  
Pit Width (m) 0.5  
Pit Depth (m) 1.9



Design Soakage Rate -- m/s (based on linear portion of graph as shown)  
-- m/day (line represents lower bound rate measured)

**Notes**

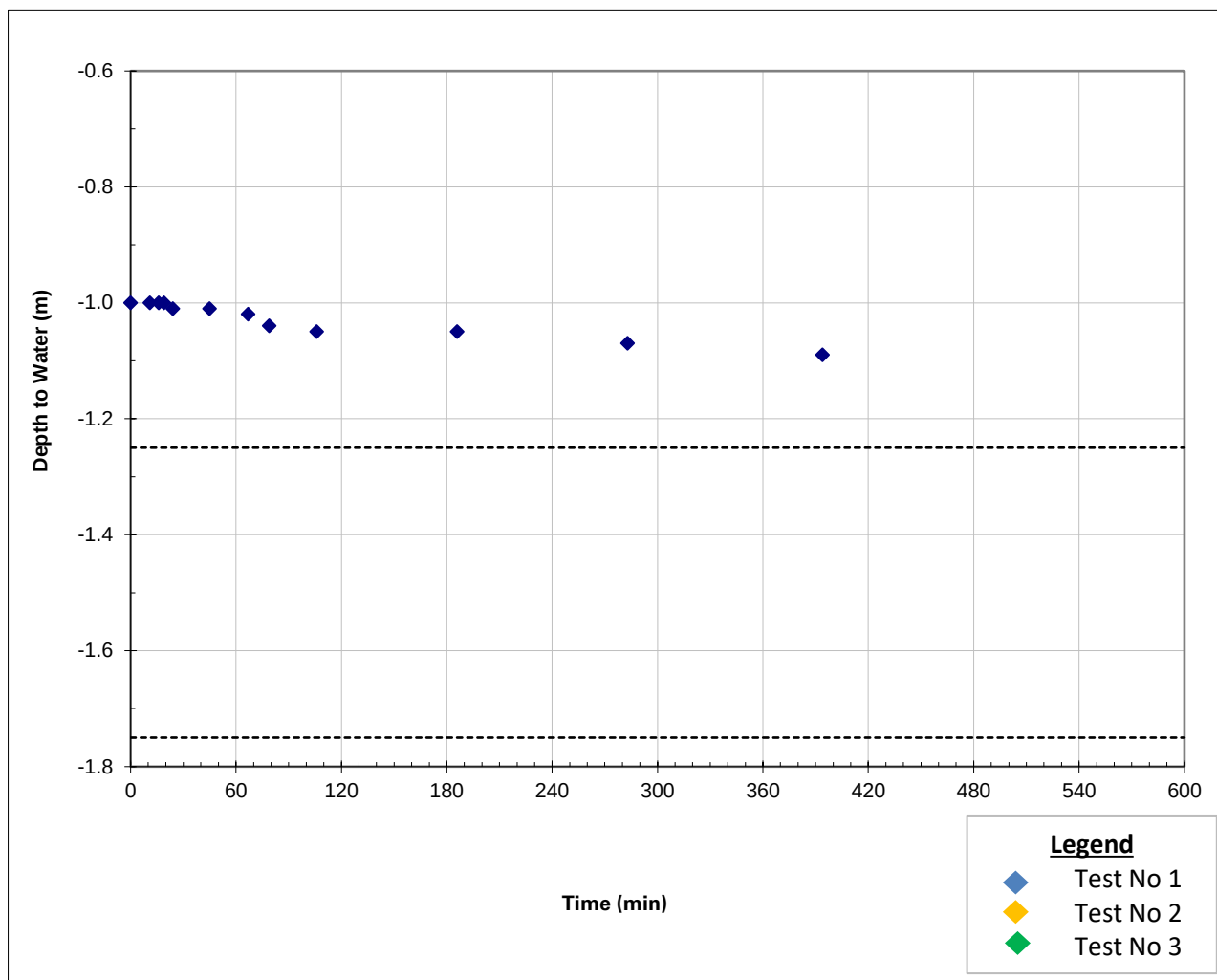
Testing abandoned after 6 hours  
No effective infiltration

**Site** Knowle Hill, Allbrook, Eastleigh

**Client** Bargate Homes

Trial Pit No. 2  
Date of test 11/10/2023

Pit Length (m) 1.4  
Pit Width (m) 0.5  
Pit Depth (m) 2



Design Soakage Rate -- m/s (based on linear portion of graph as shown)  
-- m/day (line represents lower bound rate measured)

**Notes**

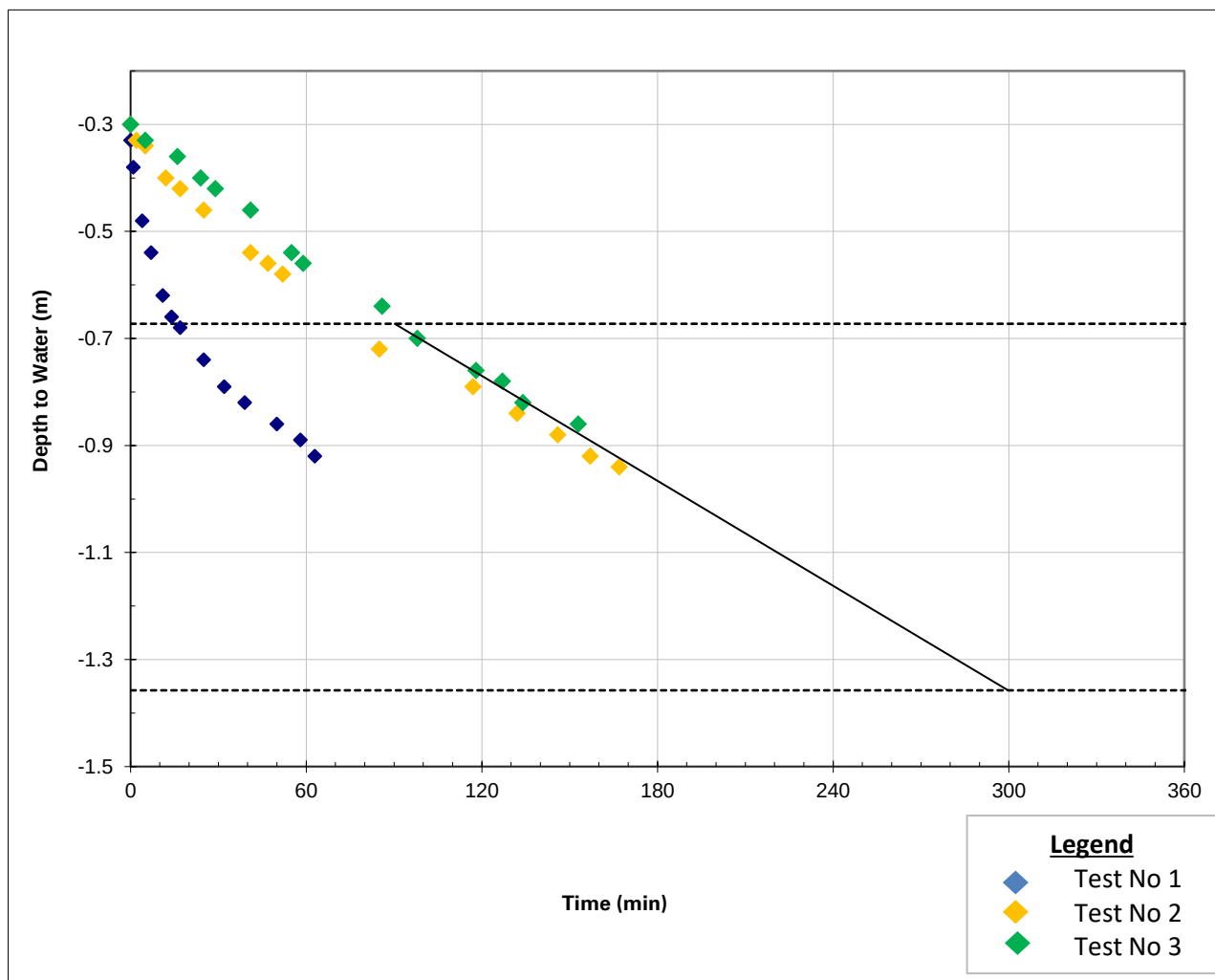
Testing abandoned after 6 hours  
No effective infiltration

**Site** Knowle Hill, Allbrook, Eastleigh

**Client** Bargate Homes

Trial Pit No. 3  
Date of test 11/10/2023

Pit Length (m) 1.15  
Pit Width (m) 0.5  
Pit Depth (m) 1.7



Design Soakage Rate 1.1E-05 m/s (based on linear portion of graph as shown)  
0.95 m/day (line represents lower bound rate measured)

**Notes**

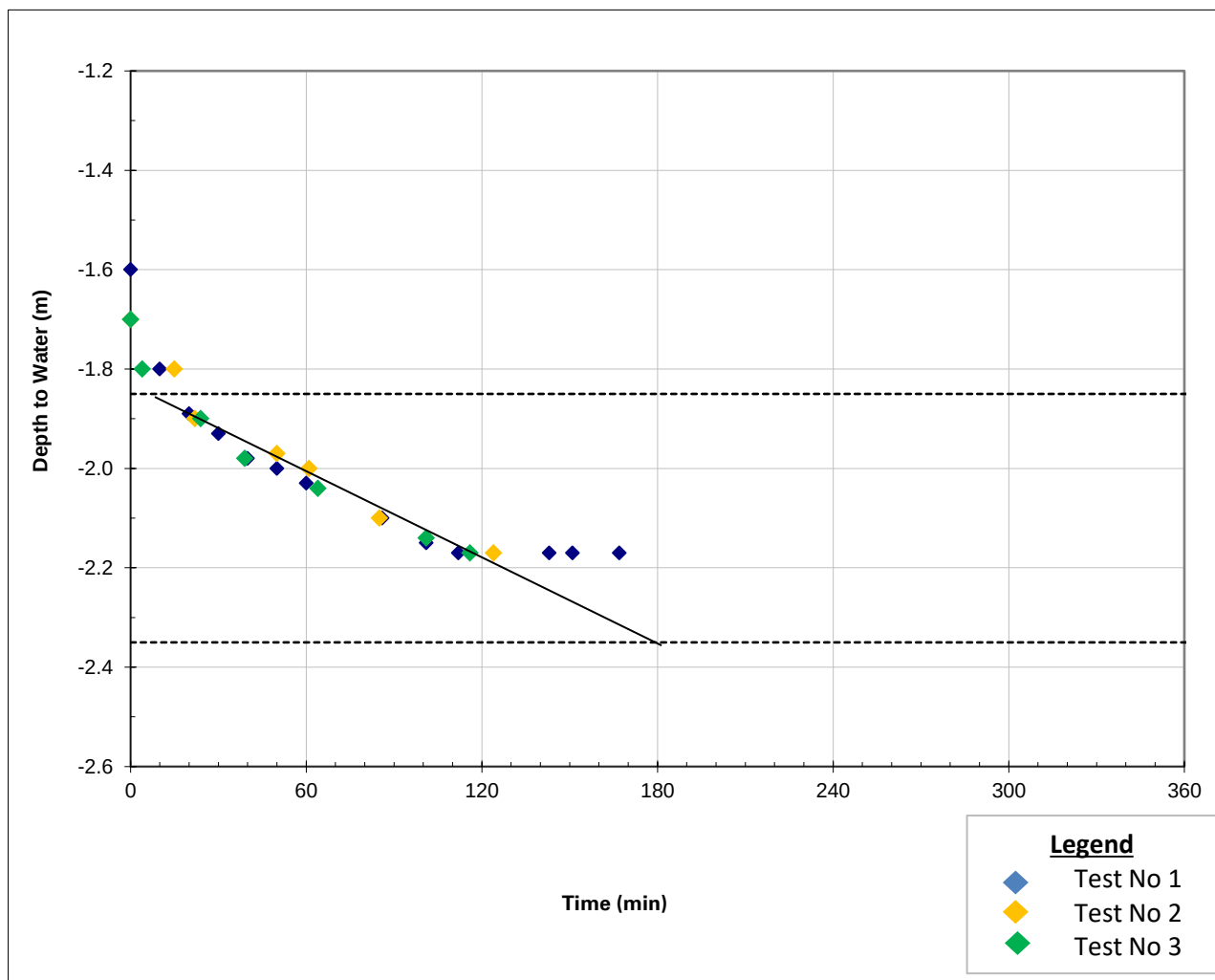
Testing carried out in a single day with three fills  
Testing carried out through clay to top of white and pale yellow SILT

**Site** Knowle Hill, Allbrook, Eastleigh

**Client** Bargate Homes

Trial Pit No. 4  
Date of test 12/10/2023

Pit Length (m) 3  
Pit Width (m) 0.6  
Pit Depth (m) 2.6



Design Soakage Rate 1.6E-05 m/s (based on linear portion of graph as shown)  
1.41 m/day (line represents lower bound rate measured)

**Notes**

Testing carried out in a single day with three fills

Base of Clay at 1.90m

Trial pit backfilled to 2.20 in SILT

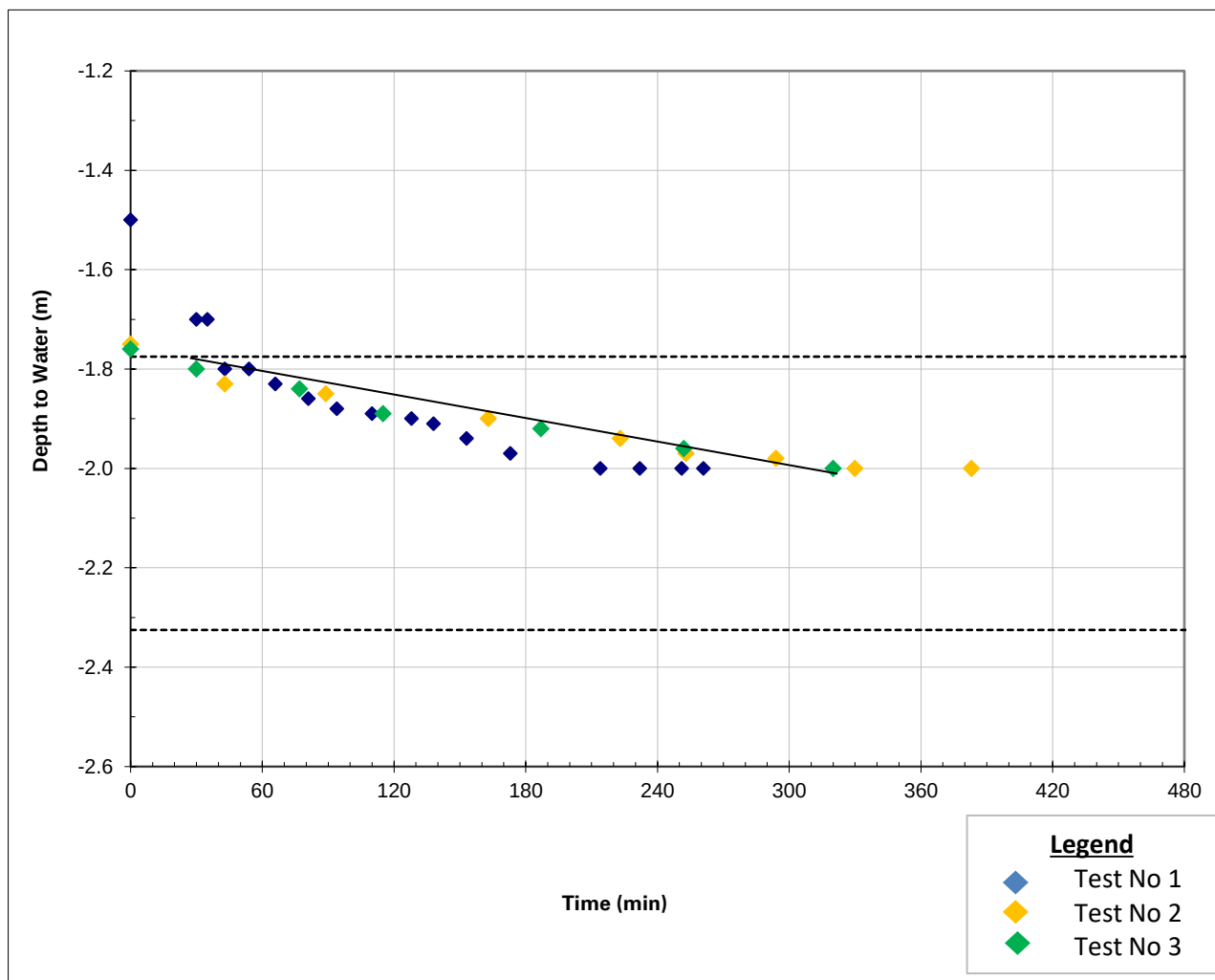
GW monitoring on 22 October indicates water rest level at 3.83m bgl

**Site** Knowle Hill, Allbrook, Eastleigh

**Client** Bargate Homes

Trial Pit No. 5  
Date of test 12/10/2023  
13/10/2023

Pit Length (m) 2.5  
Pit Width (m) 0.6  
Pit Depth (m) 2.6



Design Soakage Rate 3.4E-06 m/s (based on linear portion of graph as shown)  
0.29 m/day (line represents lower bound rate measured)

**Notes**

Testing carried out in a single day with three fills

Base of Clay at 2.00m

Trial pit backfilled to 2.10 in SILT

# Ground Gas and Groundwater Monitoring Record Sheet

## JOB DETAILS:

**Client:** Wilson Bailey  
**Site:** Allbrook  
**Date:** 29/12/2023

**Quote No:**  
**Visit No:** 1 of 6  
**Operator:** Hazel Alabaster **Project Manager:** Dan Stodgell



|                  | GAS CONCENTRATIONS |        |      |        |                       |        |                        |        |                          |        |               |        | VOLATILES      |                        | FLOW DATA        |        |                                     |                                  | WELL AND WATER DATA |                   | Comments |
|------------------|--------------------|--------|------|--------|-----------------------|--------|------------------------|--------|--------------------------|--------|---------------|--------|----------------|------------------------|------------------|--------|-------------------------------------|----------------------------------|---------------------|-------------------|----------|
| Monitoring Point | Methane (%v/v)     |        | %LEL |        | Carbon dioxide (%v/v) |        | Carbon monoxide (ppmv) |        | Hydrogen sulphide (ppmv) |        | Oxygen (%v/v) |        | PID Peak (ppm) | Product thickness (mm) | Flow rate (l/hr) |        | Differential borehole Pressure (Pa) | Time for flow to equalise (secs) | Water level (mbgl)  | Depth of well (m) |          |
|                  | Peak               | Steady | Peak | Steady | Peak                  | Steady | Peak                   | Steady | Peak                     | Steady | Min.          | Steady |                |                        | Peak             | Steady |                                     |                                  |                     |                   |          |
| BH1              | ND                 | ND     | ND   | ND     | 6.2                   | 5.2    | ND                     | ND     | 1                        | 1      | 7.4           | 10     | NR             | NR                     | 0.9              | 0.9    | 1.04                                | 30                               | Dry                 | 6.16              |          |
| BH2              | ND                 | ND     | ND   | ND     | 5                     | 5      | ND                     | ND     | ND                       | ND     | 7.9           | 7.9    | NR             | NR                     | -3.5             | -3.5   | -13.75                              | 30                               | 2.34                | 6.19              |          |
| BH3              | ND                 | ND     | ND   | ND     | 14.6                  | 14.6   | ND                     | ND     | ND                       | ND     | 1.8           | 1.8    | NR             | NR                     | -2.3             | -2.3   | -6.83                               | 30                               | 3.19                | 8.07              |          |
| BH12             | ND                 | ND     | ND   | ND     | 1.3                   | 1.3    | ND                     | ND     | ND                       | ND     | 20.4          | 20.4   | NR             | NR                     | 0.1              | 0.1    | 0.53                                | 30                               | Dry                 | 5.91              |          |
| BH13             | ND                 | ND     | ND   | ND     | 1.3                   | 0.3    | ND                     | ND     | ND                       | ND     | 20.1          | 20.8   | NR             | NR                     | 0                | 0      | -1.36                               | 30                               | Dry                 | 4.36              |          |
| BH14             | ND                 | ND     | ND   | ND     | 6.1                   | 6.1    | 1                      | 1      | 1                        | 1      | 12.2          | 12.2   | NR             | NR                     | 0                | 0      | -1                                  | 30                               | Dry                 | 4.25              |          |
| Max              | ND                 | ND     | ND   | ND     | 14.6                  | 14.6   | ND                     | ND     | 1                        | 1      | 7.9           | 10.0   | NR             | NR                     | 0.9              | 0.9    | 1                                   | 30                               | 3.19                | 8.07              |          |
| Min              | ND                 | ND     | ND   | ND     | 5.0                   | 5.0    | ND                     | ND     | ND                       | ND     | 1.8           | 1.8    | NR             | NR                     | -3.5             | -3.5   | -13.8                               | 30                               | DRY                 | 6.16              |          |

ND - Not detected  
 NR - Not recorded  
 NA - Non applicable

## METEOROLOGICAL AND SITE INFORMATION:

(Select correct box with X or enter data, as applicable)

State of ground: ☐ Dry ☐ Moist ☒ Wet ☐ Snow ☐ Frozen  
 Wind: ☐ Calm ☒ Light ☐ Moderate ☐ Strong  
 Cloud cover: ☐ None ☐ Slight ☒ Cloudy ☐ Overcast  
 Precipitation: ☐ None ☒ Slight ☐ Moderate ☐ Heavy  
 Time monitoring performed: ☐ 10:10 Start ☐ 11:06 End  
 Barometric pressure (mbar): ☐ 1007 Start ☐ 1007 End  
 Pressure trend (Daily): ☐ Falling ☒ Steady ☐ Rising  
 Source: ☐ met office ☐ 10 Before ☐ 10 After

## INSTRUMENTATION TECHNICAL SPECIFICATIONS:

**Ground gas meter:** G504657  
**Gas Range:** CH<sub>4</sub> 0 - 100% CO<sub>2</sub> 0 - 100% O<sub>2</sub> 0 - 25%  
**Gas Flow range:** +100/-50 l/hour  
**Differential Pressure:** (+/-) 1000 Pa  
**Date of last calibration:** 12/10/2023  
**Date of next calibration:** 12/04/2024

**Ambient air check:** CH<sub>4</sub>  CO<sub>2</sub>  O<sub>2</sub>

## Ground Gas and Groundwater Monitoring Record Sheet

### JOB DETAILS:

**Client:** Wilson Bailey  
**Site:** Allbrook  
**Date:** 08/01/2024

**Quote No:**  
**Visit No:** 2 of 6  
**Operator:** Hazel Alabaster **Project Manager:** Dan Stodgell



|                  | GAS CONCENTRATIONS |        |      |        |                       |        |                        |        |                          |        |               |        | VOLATILES      |                        | FLOW DATA        |        |                                     |                                  | WELL AND WATER DATA |                   | Comments |
|------------------|--------------------|--------|------|--------|-----------------------|--------|------------------------|--------|--------------------------|--------|---------------|--------|----------------|------------------------|------------------|--------|-------------------------------------|----------------------------------|---------------------|-------------------|----------|
| Monitoring Point | Methane (%v/v)     |        | %LEL |        | Carbon dioxide (%v/v) |        | Carbon monoxide (ppmv) |        | Hydrogen sulphide (ppmv) |        | Oxygen (%v/v) |        | PID Peak (ppm) | Product thickness (mm) | Flow rate (l/hr) |        | Differential borehole Pressure (Pa) | Time for flow to equalise (secs) | Water level (mbgl)  | Depth of well (m) |          |
|                  | Peak               | Steady | Peak | Steady | Peak                  | Steady | Peak                   | Steady | Peak                     | Steady | Min.          | Steady |                |                        | Peak             | Steady |                                     |                                  |                     |                   |          |
| BH1              | ND                 | ND     | ND   | ND     | 1.5                   | 1.4    | ND                     | ND     | ND                       | ND     | 19.6          | 19.6   | NR             | NR                     | -1.3             | -1.3   | -1.56                               | 30                               | 3.10                | 6.16              | all ok   |
| BH2              | ND                 | ND     | ND   | ND     | 5.4                   | 5.3    | ND                     | ND     | 1                        | 1      | 9.5           | 9.6    | NR             | NR                     | 2.9              | 2.9    | 9.21                                | 30                               | 2.22                | 6.19              | all ok   |
| BH3              | ND                 | ND     | ND   | ND     | 14.8                  | 14.4   | ND                     | ND     | ND                       | ND     | 4.5           | 4.5    | NR             | NR                     | 4.4              | 4.4    | 13.75                               | 30                               | 3.02                | 8.07              | all ok   |
| BH12             | ND                 | ND     | ND   | ND     | 1.2                   | 0.7    | ND                     | ND     | 1                        | 1      | 20.4          | 20.6   | NR             | NR                     | 0                | 0      | -0.07                               | 30                               | 1.02                | 5.91              | all ok   |
| BH13             | ND                 | ND     | ND   | ND     | 1.1                   | 1.1    | ND                     | ND     | 1                        | 1      | 20.1          | 20.4   | NR             | NR                     | 0                | 0      | -0.07                               | 30                               | 0.95                | 4.32              | all ok   |
| BH14             | ND                 | ND     | ND   | ND     | 5.2                   | 5.2    | 1                      | 1      | 1                        | 1      | 14.4          | 14.4   | NR             | NR                     | 0.1              | 0.1    | 0.12                                | 30                               | 4.13                | 4.25              | all ok   |
| Max              | ND                 | ND     | ND   | ND     | 14.8                  | 14.4   | 1                      | 1      | 1                        | 1      | 20.4          | 20.6   | NR             | NR                     | 4.4              | 4.4    | 14                                  | 30                               | 4.13                | 8.07              |          |
| Min              | ND                 | ND     | ND   | ND     | 1.1                   | 0.7    | ND                     | ND     | ND                       | ND     | 4.5           | 4.5    | NR             | NR                     | -1.3             | -1.3   | -1.6                                | 30                               | 0.95                | 4.25              |          |

ND - Not detected

NR - Not recorded

NA - Non applicable

### METEOROLOGICAL AND SITE INFORMATION:

(Select correct box with X or enter data, as applicable)

State of ground: ☐ Dry ☐ Moist ☒ Wet ☐ Snow ☐ Frozen  
 Wind: ☐ Calm ☒ Light ☐ Moderate ☐ Strong  
 Cloud cover: ☐ None ☐ Slight ☐ Cloudy ☒ Overcast  
 Precipitation: ☒ None ☐ Slight ☐ Moderate ☐ Heavy  
 Time monitoring performed:  Start  End  
 Barometric pressure (mbar):  Start  End  
 Pressure trend (Daily):  Falling ☒ Steady  Rising  
 Source:   
 Air Temperature (Deg. C):  Before  After

### INSTRUMENTATION TECHNICAL SPECIFICATIONS:

**Ground gas meter:** G504657  
 Gas Range: **CH<sub>4</sub>** 0 - 100% **CO<sub>2</sub>** 0 - 100% **O<sub>2</sub>** 0 - 25%  
 Gas Flow range: +100/-50 l/hour  
 Differential Pressure: (+/-) 1000 Pa  
**Date of last calibration:** 12/10/2023  
**Date of next calibration:** 12/04/2024

**Ambient air check:** **CH<sub>4</sub>**  **CO<sub>2</sub>**  **O<sub>2</sub>**

# Ground Gas and Groundwater Monitoring Record Sheet

## JOB DETAILS:

**Client:** Wilson Bailey  
**Site:** Allbrook  
**Date:** 22/01/2024

**Quote No:**  
**Visit No:** 3 of 6  
**Operator:** Hazel Alabaster **Project Manager:** Dan Stodgell



|                  | GAS CONCENTRATIONS |        |      |        |                       |        |                        |        |                          |        |               |        | VOLATILES      |                        | FLOW DATA        |        |                                     |                                  | WELL AND WATER DATA |                   | Comments |
|------------------|--------------------|--------|------|--------|-----------------------|--------|------------------------|--------|--------------------------|--------|---------------|--------|----------------|------------------------|------------------|--------|-------------------------------------|----------------------------------|---------------------|-------------------|----------|
| Monitoring Point | Methane (%v/v)     |        | %LEL |        | Carbon dioxide (%v/v) |        | Carbon monoxide (ppmv) |        | Hydrogen sulphide (ppmv) |        | Oxygen (%v/v) |        | PID Peak (ppm) | Product thickness (mm) | Flow rate (l/hr) |        | Differential borehole Pressure (Pa) | Time for flow to equalise (secs) | Water level (mbgl)  | Depth of well (m) |          |
|                  | Peak               | Steady | Peak | Steady | Peak                  | Steady | Peak                   | Steady | Peak                     | Steady | Min.          | Steady |                |                        | Peak             | Steady |                                     |                                  |                     |                   |          |
| BH1              | ND                 | ND     | ND   | ND     | 5.4                   | 5.3    | ND                     | ND     | 1                        | 1      | 11            | 11.1   | NR             | NR                     | 2.2              | 2.2    | -17.22                              | 30                               | 3.58                | 6.16              |          |
| BH2              | ND                 | ND     | ND   | ND     | 4.6                   | 4.6    | ND                     | ND     | 1                        | 1      | 11.2          | 11.2   | NR             | NR                     | -6.8             | -6.8   | -44.73                              | 30                               | 2.39                | 6.19              | all ok   |
| BH3              | ND                 | ND     | ND   | ND     | 13.4                  | 13.1   | 1                      | 1      | ND                       | ND     | 6.5           | 6.6    | NR             | NR                     | 0                | 0      | -14.85                              | 30                               | 3.30                | 8.07              | all ok   |
| BH12             | ND                 | ND     | ND   | ND     | 4                     | 2.6    | ND                     | ND     | 1                        | 1      | 12            | 15.3   | NR             | NR                     | 1.6              | 1.6    | -16.64                              | 30                               | 2.20                | 5.92              | all ok   |
| BH13             | ND                 | ND     | ND   | ND     | 1.8                   | 1.8    | ND                     | ND     | 1                        | 1      | 19.3          | 19.4   | NR             | NR                     | 0                | 0      | -20.55                              | 30                               | 2.44                | 4.31              | all ok   |
| BH14             | ND                 | ND     | ND   | ND     | 6.4                   | 6.4    | ND                     | ND     | 1                        | 1      | 11.6          | 11.6   | NR             | NR                     | -0.2             | -0.2   | -21.58                              | 30                               | Dry                 | 4.25              | all ok   |
| Max              | ND                 | ND     | ND   | ND     | 13.4                  | 13.1   | 1                      | 1      | 1                        | 1      | 19.3          | 19.4   | NR             | NR                     | 2.2              | 2.2    | -15                                 | 30                               | 3.58                | 8.07              |          |
| Min              | ND                 | ND     | ND   | ND     | 1.8                   | 1.8    | ND                     | ND     | ND                       | ND     | 6.5           | 6.6    | NR             | NR                     | -6.8             | -6.8   | -44.7                               | 30                               | DRY                 | 4.25              |          |

ND - Not detected  
 NR - Not recorded  
 NA - Non applicable

## METEOROLOGICAL AND SITE INFORMATION:

(Select correct box with X or enter data, as applicable)

State of ground: ☐ Dry ☐ Moist ☒ Wet ☐ Snow ☐ Frozen  
 Wind: ☐ Calm ☐ Light ☒ Moderate ☐ Strong  
 Cloud cover: ☐ None ☒ Slight ☐ Cloudy ☐ Overcast  
 Precipitation: ☒ None ☐ Slight ☐ Moderate ☐ Heavy  
 Time monitoring performed:  Start  End  
 Barometric pressure (mbar):  Start  End  
 Pressure trend (Daily):  Falling  Steady  Rising  
 Source:   
 Air Temperature (Deg. C):  Before  After

## INSTRUMENTATION TECHNICAL SPECIFICATIONS:

**Ground gas meter:** G504657  
 Gas Range: **CH<sub>4</sub>** 0 - 100% **CO<sub>2</sub>** 0 - 100% **O<sub>2</sub>** 0 - 25%  
 Gas Flow range: +100/-50 l/hour  
 Differential Pressure: (+/-) 1000 Pa  
**Date of last calibration:** 12/10/2023  
**Date of next calibration:** 12/04/2024

**Ambient air check:** **CH<sub>4</sub>**  **CO<sub>2</sub>**  **O<sub>2</sub>**

# Ground Gas and Groundwater Monitoring Record Sheet

## JOB DETAILS:

**Client:** Wilson Bailey  
**Site:** Allbrook  
**Date:** 08/02/2024

**Quote No:**  
**Visit No:** 4 of 6  
**Operator:** Hazel Alabaster **Project Manager:** Dan Stodgell



|                  | GAS CONCENTRATIONS |        |      |        |                       |        |                        |        |                          |        |               |        | VOLATILES      |                        | FLOW DATA        |        |                                     |                                  | WELL AND WATER DATA |                   | Comments |
|------------------|--------------------|--------|------|--------|-----------------------|--------|------------------------|--------|--------------------------|--------|---------------|--------|----------------|------------------------|------------------|--------|-------------------------------------|----------------------------------|---------------------|-------------------|----------|
| Monitoring Point | Methane (%v/v)     |        | %LEL |        | Carbon dioxide (%v/v) |        | Carbon monoxide (ppmv) |        | Hydrogen sulphide (ppmv) |        | Oxygen (%v/v) |        | PID Peak (ppm) | Product thickness (mm) | Flow rate (l/hr) |        | Differential borehole Pressure (Pa) | Time for flow to equalise (secs) | Water level (mbgl)  | Depth of well (m) |          |
|                  | Peak               | Steady | Peak | Steady | Peak                  | Steady | Peak                   | Steady | Peak                     | Steady | Min.          | Steady |                |                        | Peak             | Steady |                                     |                                  |                     |                   |          |
| BH1              | ND                 | ND     | ND   | ND     | 6.2                   | 6.2    | 1                      | 1      | 1                        | 1      | 9             | 9      | NR             | NR                     | 14.8             | 14.8   | 19.02                               | 30                               | 3.27                | 6.16              |          |
| BH2              | ND                 | ND     | ND   | ND     | 5                     | 4.5    | ND                     | ND     | 1                        | 1      | 11.9          | 12.5   | NR             | NR                     | 3.9              | 3.9    | -16.77                              | 30                               | 2.49                | 6.19              |          |
| BH3              | ND                 | ND     | ND   | ND     | 10.4                  | 10.3   | 1                      | 1      | ND                       | ND     | 9.3           | 9.3    | NR             | NR                     | 5.3              | 5.3    | -8.84                               | 30                               | NR                  | NR                |          |
| BH12             | ND                 | ND     | ND   | ND     | 2.4                   | 2.1    | ND                     | ND     | ND                       | ND     | 17.3          | 17.4   | NR             | NR                     | 0                | 0      | -25.46                              | 30                               | 0.70                | 5.92              |          |
| BH13             | ND                 | ND     | ND   | ND     | 5.1                   | 5.1    | 8                      | 8      | 1                        | 1      | 14.1          | 14.1   | NR             | NR                     | 0                | 0      | -20.68                              | 30                               | 3.41                | 3.92              |          |
| BH14             | ND                 | ND     | ND   | ND     | 6.3                   | 6.3    | 1                      | 1      | ND                       | ND     | 11.7          | 11.7   | NR             | NR                     | 1                | 1      | -18.56                              | 30                               | Dry                 | 4.25              |          |
| Max              | ND                 | ND     | ND   | ND     | 10.4                  | 10.3   | 8                      | 8      | 1                        | 1      | 17.3          | 17.4   | NR             | NR                     | 14.8             | 14.8   | 19                                  | 30                               | 3.41                | 6.19              |          |
| Min              | ND                 | ND     | ND   | ND     | 2.4                   | 2.1    | ND                     | ND     | ND                       | ND     | 9.0           | 9.0    | NR             | NR                     | 0.0              | 0.0    | -25.5                               | 30                               | DRY                 | 3.92              |          |

ND - Not detected  
 NR - Not recorded  
 NA - Non applicable

## METEOROLOGICAL AND SITE INFORMATION:

(Select correct box with X or enter data, as applicable)

State of ground: ☐ Dry ☐ Moist ☒ Wet ☐ Snow ☐ Frozen  
 Wind: ☐ Calm ☒ Light ☐ Moderate ☐ Strong  
 Cloud cover: ☐ None ☐ Slight ☒ Cloudy ☒ Overcast  
 Precipitation: ☐ None ☒ Slight ☒ Moderate ☐ Heavy  
 Time monitoring performed: ☐ 14:00 Start ☐ 15:00 End  
 Barometric pressure (mbar): ☐ 986 Start ☐ 986 End  
 Pressure trend (Daily): ☐ Falling ☒ Steady ☐ Rising  
 Source: ☐ met office  
 Air Temperature (Deg. C): ☐ 12 Before ☐ 11 After

## INSTRUMENTATION TECHNICAL SPECIFICATIONS:

**Ground gas meter:** G504657  
 Gas Range: CH<sub>4</sub> 0 - 100% CO<sub>2</sub> 0 - 100% O<sub>2</sub> 0 - 25%  
 Gas Flow range: +100/-50 l/hour  
 Differential Pressure: (+/-) 1000 Pa  
**Date of last calibration:** 12/10/2023  
**Date of next calibration:** 12/04/2024

**Ambient air check:** CH<sub>4</sub>  CO<sub>2</sub>  O<sub>2</sub>

## Ground Gas and Groundwater Monitoring Record Sheet

### JOB DETAILS:

**Client:** Wilson Bailey  
**Site:** Allbrook  
**Date:** 23/02/2024

**Quote No:**  
**Visit No:** 5 of 6  
**Operator:** Hazel Alabaster **Project Manager:** Dan Stodgell



|                  | GAS CONCENTRATIONS |        |      |        |                       |        |                        |        |                          |        |               |        | VOLATILES      |                        | FLOW DATA        |        |                                     |                                  | WELL AND WATER DATA |                   | Comments |
|------------------|--------------------|--------|------|--------|-----------------------|--------|------------------------|--------|--------------------------|--------|---------------|--------|----------------|------------------------|------------------|--------|-------------------------------------|----------------------------------|---------------------|-------------------|----------|
| Monitoring Point | Methane (%v/v)     |        | %LEL |        | Carbon dioxide (%v/v) |        | Carbon monoxide (ppmv) |        | Hydrogen sulphide (ppmv) |        | Oxygen (%v/v) |        | PID Peak (ppm) | Product thickness (mm) | Flow rate (l/hr) |        | Differential borehole Pressure (Pa) | Time for flow to equalise (secs) | Water level (mbgl)  | Depth of well (m) |          |
|                  | Peak               | Steady | Peak | Steady | Peak                  | Steady | Peak                   | Steady | Peak                     | Steady | Min.          | Steady |                |                        | Peak             | Steady |                                     |                                  |                     |                   |          |
| BH1              | ND                 | ND     | ND   | ND     | 6.6                   | 6.6    | 1                      | 1      | 1                        | 1      | 7.4           | 7.4    | NR             | NR                     | 5.2              | 5.2    | 19.97                               | 30                               | 2.42                | 6.16              | all ok   |
| BH2              | ND                 | ND     | ND   | ND     | 4.6                   | 3.3    | 1                      | 1      | 1                        | 1      | 13.5          | 15.3   | NR             | NR                     | 8.4              | 8.4    | 32.29                               | 30                               | 2.30                | 6.19              | all ok   |
| BH3              | ND                 | ND     | ND   | ND     | 13                    | 12.9   | 2                      | 2      | 0                        | 0      | 8.4           | 8.4    | NR             | NR                     | 14.6             | 14.6   | 73.62                               | 30                               | 3.05                | 8.00              | all ok   |
| BH12             | ND                 | ND     | ND   | ND     | 1.4                   | 0.5    | 2                      | 2      | 1                        | 1      | 19.6          | 20.2   | NR             | NR                     | 0                | 0      | 0.85                                | 30                               | 0.64                | 5.93              | all ok   |
| BH13             | ND                 | ND     | ND   | ND     | 6.8                   | 4.5    | 2                      | 2      | 1                        | 1      | 13.7          | 15.7   | NR             | NR                     | 0                | 0      | 1.33                                | 30                               | 1.34                | 3.91              | all ok   |
| BH14             | ND                 | ND     | ND   | ND     | 6.4                   | 6.4    | 1                      | 1      | 1                        | 1      | 11.3          | 11.3   | NR             | NR                     | 0.2              | 0.2    | 1.51                                | 30                               | Dry                 | 4.25              | dry      |
| Max              | ND                 | ND     | ND   | ND     | 13.0                  | 12.9   | 2                      | 2      | 1                        | 1      | 19.6          | 20.2   | NR             | NR                     | 14.6             | 14.6   | 74                                  | 30                               | 3.05                | 8.00              |          |
| Min              | ND                 | ND     | ND   | ND     | 1.4                   | 0.5    | 1                      | 1      | 0                        | 0      | 7.4           | 7.4    | NR             | NR                     | 0.0              | 0.0    | 0.9                                 | 30                               | DRY                 | 3.91              |          |

ND - Not detected  
 NR - Not recorded  
 NA - Non applicable

### METEOROLOGICAL AND SITE INFORMATION:

(Select correct box with X or enter data, as applicable)

State of ground: ☐ Dry ☐ Moist ☒ Wet ☐ Snow ☐ Frozen  
 Wind: ☐ Calm ☒ Light ☐ Moderate ☐ Strong  
 Cloud cover: ☐ None ☒ Slight ☐ Cloudy ☐ Overcast  
 Precipitation: ☒ None ☐ Slight ☐ Moderate ☐ Heavy  
 Time monitoring performed:  Start  End  
 Barometric pressure (mbar):  Start  End  
 Pressure trend (Daily):  Falling ☒ Steady  Rising  
 Source:   
 Air Temperature (Deg. C):  Before  After

### INSTRUMENTATION TECHNICAL SPECIFICATIONS:

**Ground gas meter:** G504657  
 Gas Range: **CH<sub>4</sub>** 0 - 100% **CO<sub>2</sub>** 0 - 100% **O<sub>2</sub>** 0 - 25%  
 Gas Flow range: +100/-50 l/hour  
 Differential Pressure: (+/-) 1000 Pa  
**Date of last calibration:** 12/10/2024  
**Date of next calibration:** 12/04/2024

**Ambient air check:** **CH<sub>4</sub>**  **CO<sub>2</sub>**  **O<sub>2</sub>**

# Ground Gas and Groundwater Monitoring Record Sheet

## JOB DETAILS:

**Client:** Wilson Bailey  
**Site:** Allbrook  
**Date:** 08/03/2024

**Quote No:**  
**Visit No:** 6 of 6  
**Operator:** Hazel Alabaster **Project Manager:** Dan Stodgell



|                  | GAS CONCENTRATIONS |        |      |        |                       |        |                        |        |                          |        |               |        | VOLATILES      |                        | FLOW DATA        |        |                                     |                                  | WELL AND WATER DATA |                   | Comments |
|------------------|--------------------|--------|------|--------|-----------------------|--------|------------------------|--------|--------------------------|--------|---------------|--------|----------------|------------------------|------------------|--------|-------------------------------------|----------------------------------|---------------------|-------------------|----------|
| Monitoring Point | Methane (%v/v)     |        | %LEL |        | Carbon dioxide (%v/v) |        | Carbon monoxide (ppmv) |        | Hydrogen sulphide (ppmv) |        | Oxygen (%v/v) |        | PID Peak (ppm) | Product thickness (mm) | Flow rate (l/hr) |        | Differential borehole Pressure (Pa) | Time for flow to equalise (secs) | Water level (mbgl)  | Depth of well (m) |          |
|                  | Peak               | Steady | Peak | Steady | Peak                  | Steady | Peak                   | Steady | Peak                     | Steady | Min.          | Steady |                |                        | Peak             | Steady |                                     |                                  |                     |                   |          |
| BH1              | ND                 | ND     | ND   | ND     | 6.3                   | 6.3    | ND                     | ND     | 1                        | 1      | 6.5           | 6.5    | NR             | NR                     | -6.2             | -6.2   | -20.87                              | 30                               | 2.76                | 6.16              |          |
| BH2              | ND                 | ND     | ND   | ND     | 4.8                   | 4.7    | ND                     | ND     | 1                        | 1      | 12.5          | 12.5   | NR             | NR                     | 7.6              | 7.6    | 37.18                               | 30                               | 2.15                | 6.19              | all ok   |
| BH3              | ND                 | ND     | ND   | ND     | 13.3                  | 13.3   | ND                     | ND     | ND                       | ND     | 8.5           | 8.5    | NR             | NR                     | 10.3             | 10.3   | 45                                  | 30                               | 2.82                | 7.97              | all ok   |
| BH12             | ND                 | ND     | ND   | ND     | 4.3                   | 4.1    | 1                      | 1      | 1                        | 1      | 18            | 18     | NR             | NR                     | -2.1             | -2.1   | -20.21                              | 30                               | 0.57                | 5.93              | all ok   |
| BH13             | ND                 | ND     | ND   | ND     | 7.9                   | 6.9    | 1                      | 1      | 1                        | 1      | 10.5          | 12.2   | NR             | NR                     | -3               | -3     | -17.39                              | 30                               | 1.14                | 3.91              | all ok   |
| BH14             | ND                 | ND     | ND   | ND     | 6.3                   | 6.3    | ND                     | ND     | 1                        | 1      | 10.7          | 10.7   | NR             | NR                     | 0.5              | 0.5    | 2.94                                | 30                               | Dry                 | 4.24              | dry      |
| Max              | ND                 | ND     | ND   | ND     | 13.3                  | 13.3   | 1                      | 1      | 1                        | 1      | 18.0          | 18.0   | NR             | NR                     | 10.3             | 10.3   | 45                                  | 30                               | 2.82                | 7.97              |          |
| Min              | ND                 | ND     | ND   | ND     | 4.3                   | 4.1    | ND                     | ND     | ND                       | ND     | 6.5           | 6.5    | NR             | NR                     | -6.2             | -6.2   | -20.9                               | 30                               | DRY                 | 3.91              |          |

ND - Not detected  
 NR - Not recorded  
 NA - Non applicable

## METEOROLOGICAL AND SITE INFORMATION:

(Select correct box with X or enter data, as applicable)

State of ground: ☐ Dry ☒ Moist ☐ Wet ☐ Snow ☐ Frozen  
 Wind: ☐ Calm ☒ Light ☐ Moderate ☐ Strong  
 Cloud cover: ☐ None ☒ Slight ☐ Cloudy ☐ Overcast  
 Precipitation: ☒ None ☐ Slight ☐ Moderate ☐ Heavy  
 Time monitoring performed:  Start  End  
 Barometric pressure (mbar):  Start  End  
 Pressure trend (Daily): ☒ Falling ☐ Steady ☐ Rising  
 Source:   
 Air Temperature (Deg. C):  Before  After

## INSTRUMENTATION TECHNICAL SPECIFICATIONS:

**Ground gas meter:** G504657  
 Gas Range: **CH<sub>4</sub>** 0 - 100% **CO<sub>2</sub>** 0 - 100% **O<sub>2</sub>** 0 - 25%  
 Gas Flow range: +100/-50 l/hour  
 Differential Pressure: (+/-) 1000 Pa  
**Date of last calibration:** 12/10/2024  
**Date of next calibration:** 12/04/2024

**Ambient air check:** **CH<sub>4</sub>**  **CO<sub>2</sub>**  **O<sub>2</sub>**



# LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No. 34396

Borehole/Pit No. BH3

Site Name Knowle

Sample No. -

Project No. - Client Wilson Bailey

Depth Top m 1.00

Soil Description Orangish brown slightly mottled bluish grey sandy silty CLAY

Depth Base m -

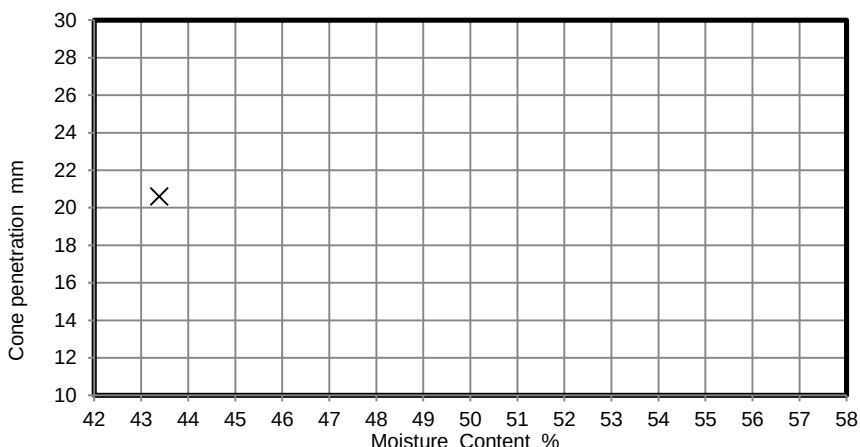
Sample Type D

Samples received 06/11/2023

Schedules received 13/11/2023

Project Started 14/11/2023

Date Tested 27/11/2023

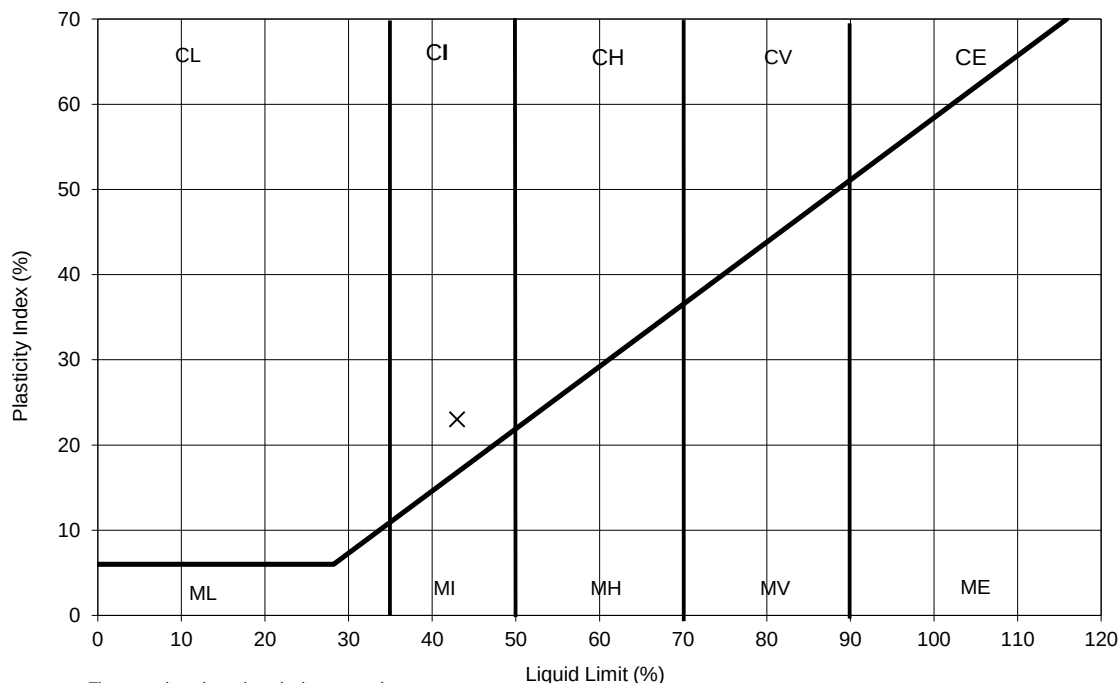


|                          |     |   |
|--------------------------|-----|---|
| NATURAL MOISTURE CONTENT | 21  | % |
| % PASSING 425µm SIEVE    | 100 | % |
| LIQUID LIMIT             | 43  | % |
| PLASTIC LIMIT            | 20  | % |
| PLASTICITY INDEX         | 23  | % |

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

## PLASTICITY INDEX



These results only apply to the items tested

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### TEST METHOD

BS1377: Part 2 :Clause 4.4 : 1990 Determination of the liquid limit by the cone penetrometer method

BS1377: Part 2 :Clause 5.0 : 1990: Determination of the plastic limit and plasticity index

BS1377: Part 2 :Clause 3.2 : 1990:Determination of the moisture content by the oven drying

Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU

Tel: [REDACTED]

Checked and Approved

Initials: J.P

Date: 28/11/2023

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

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2519



# LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No. 34396

Borehole/Pit No. BH6

Site Name Knowle

Sample No. -

Project No. -

Client

Wilson Bailey

Depth Top m 1.50

Soil Description

Brown and orangish brown mottled slightly sandy silty CLAY

Depth Base m -

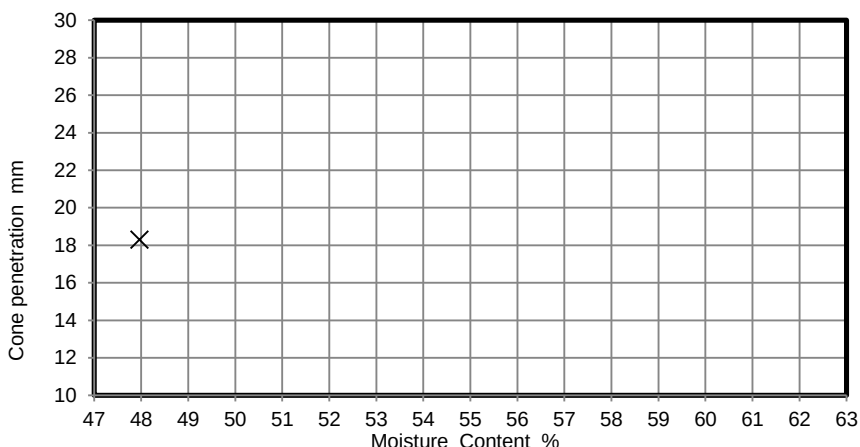
Sample Type D

Samples received 06/11/2023

Schedules received 13/11/2023

Project Started 14/11/2023

Date Tested 27/11/2023



NATURAL MOISTURE CONTENT

26

%

% PASSING 425µm SIEVE

100

%

LIQUID LIMIT

50

%

PLASTIC LIMIT

23

%

PLASTICITY INDEX

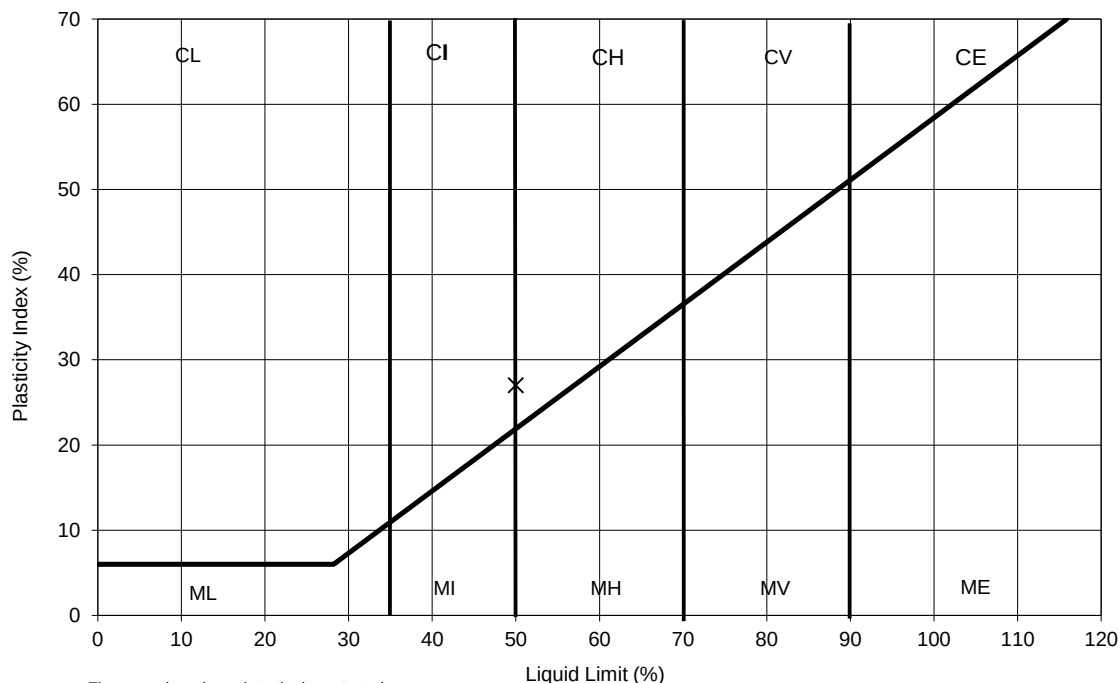
27

%

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

## PLASTICITY INDEX



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### TEST METHOD

BS1377: Part 2 :Clause 4.4 : 1990 Determination of the liquid limit by the cone penetrometer method

BS1377: Part 2 :Clause 5.0 : 1990: Determination of the plastic limit and plasticity index

BS1377: Part 2 :Clause 3.2 : 1990:Determination of the moisture content by the oven drying

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Tel: [REDACTED]

Checked and Approved

Initials: J.P

Date: 28/11/2023

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Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

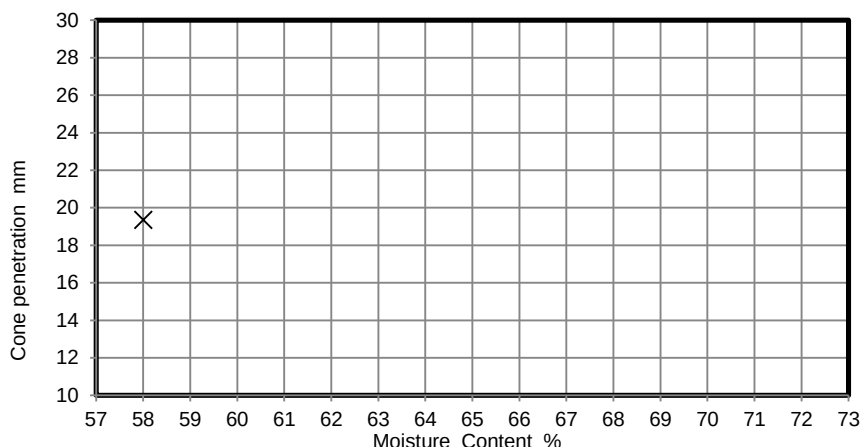
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## LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

|                  |                                                                           |        |               |
|------------------|---------------------------------------------------------------------------|--------|---------------|
| Job No.          | 34396                                                                     |        |               |
|                  | Borehole/Pit No.                                                          |        |               |
| Site Name        | Knowle                                                                    |        |               |
| Project No.      | -                                                                         | Client | Wilson Bailey |
| Soil Description | Yellowish brown, orangish brown and bluish grey slightly sandy silty CLAY |        |               |
|                  |                                                                           |        |               |
|                  |                                                                           |        |               |
|                  |                                                                           |        |               |
|                  |                                                                           |        |               |
|                  |                                                                           |        |               |

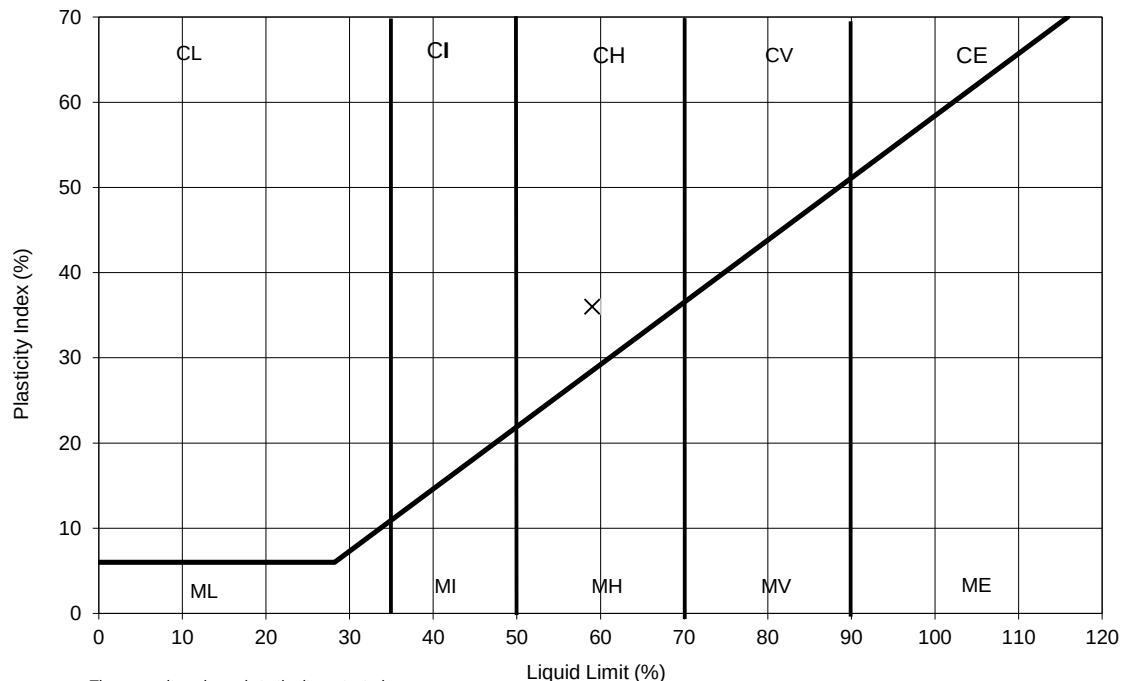


|                          |     |   |
|--------------------------|-----|---|
| NATURAL MOISTURE CONTENT | 26  | % |
| % PASSING 425µm SIEVE    | 100 | % |
| LIQUID LIMIT             | 59  | % |
| PLASTIC LIMIT            | 23  | % |
| PLASTICITY INDEX         | 36  | % |

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

### PLASTICITY INDEX



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#### TEST METHOD

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BS1377: Part 2 :Clause 5.0 : 1990: Determination of the plastic limit and plasticity index

BS1377: Part 2 :Clause 3.2 : 1990:Determination of the moisture content by the oven drying

Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU

Tel: 01923 711 288 Email: James@k4soils.co.uk

**Checked and Approved**

Initials: J.P

Date: 28/11/2023



# LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No. 34396

Borehole/Pit No. BH9

Site Name Knowle

Sample No. -

Project No. - Client Wilson Bailey

Depth Top m 2.00

Soil Description Orangish brown mottled light greyish brown silty CLAY

Depth Base m -

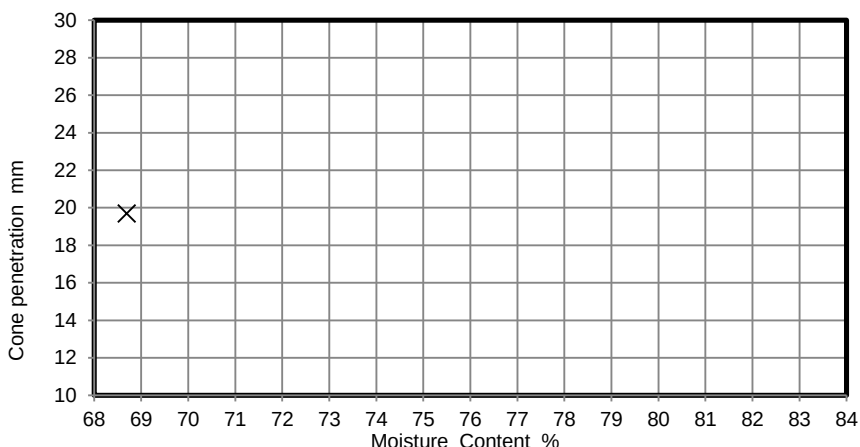
Sample Type D

Samples received 06/11/2023

Schedules received 13/11/2023

Project Started 14/11/2023

Date Tested 27/11/2023

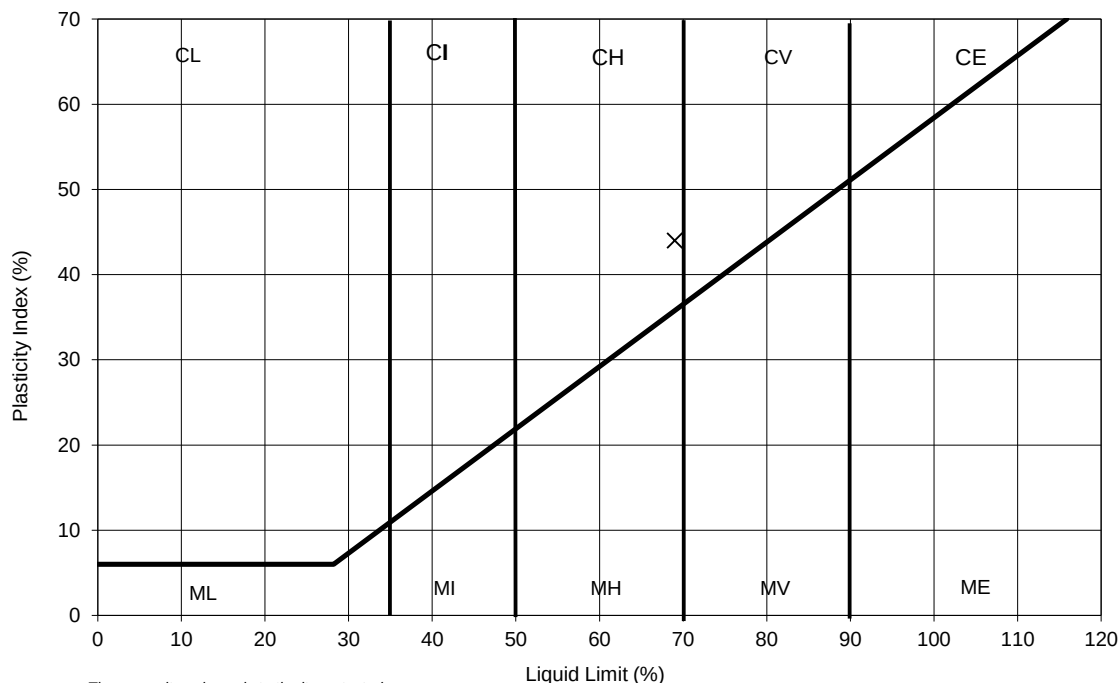


|                          |     |   |
|--------------------------|-----|---|
| NATURAL MOISTURE CONTENT | 27  | % |
| % PASSING 425µm SIEVE    | 100 | % |
| LIQUID LIMIT             | 69  | % |
| PLASTIC LIMIT            | 25  | % |
| PLASTICITY INDEX         | 44  | % |

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

## PLASTICITY INDEX



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### TEST METHOD

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BS1377: Part 2 :Clause 5.0 : 1990: Determination of the plastic limit and plasticity index

BS1377: Part 2 :Clause 3.2 : 1990:Determination of the moisture content by the oven drying

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Tel: 01923 711 288 Email: James@k4soils.com

Checked and Approved

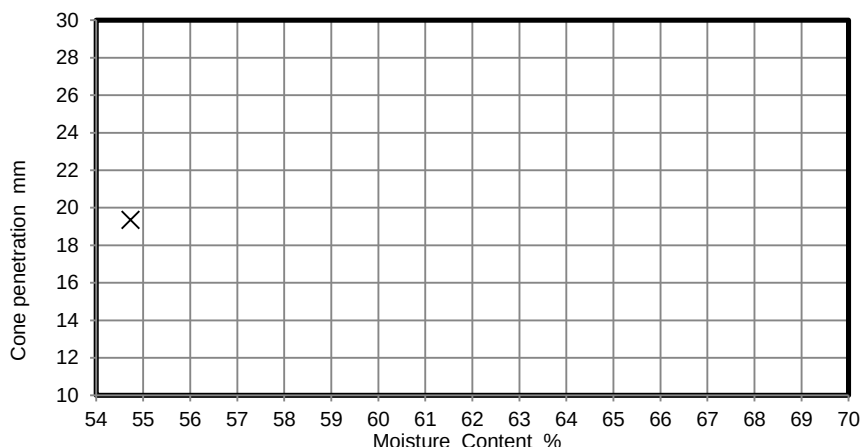
Initials: J.P

Date: 28/11/2023



## LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

|                    |                  |  |  |
|--------------------|------------------|--|--|
| Job No.            | 34396            |  |  |
|                    | Borehole/Pit No. |  |  |
| Sample No.         | -                |  |  |
| Depth Top m        | 1.00             |  |  |
| Depth Base m       | -                |  |  |
| Sample Type        | D                |  |  |
| Samples received   | 06/11/2023       |  |  |
| Schedules received | 13/11/2023       |  |  |
| Project Started    | 14/11/2023       |  |  |
| Date Tested        | 27/11/2023       |  |  |

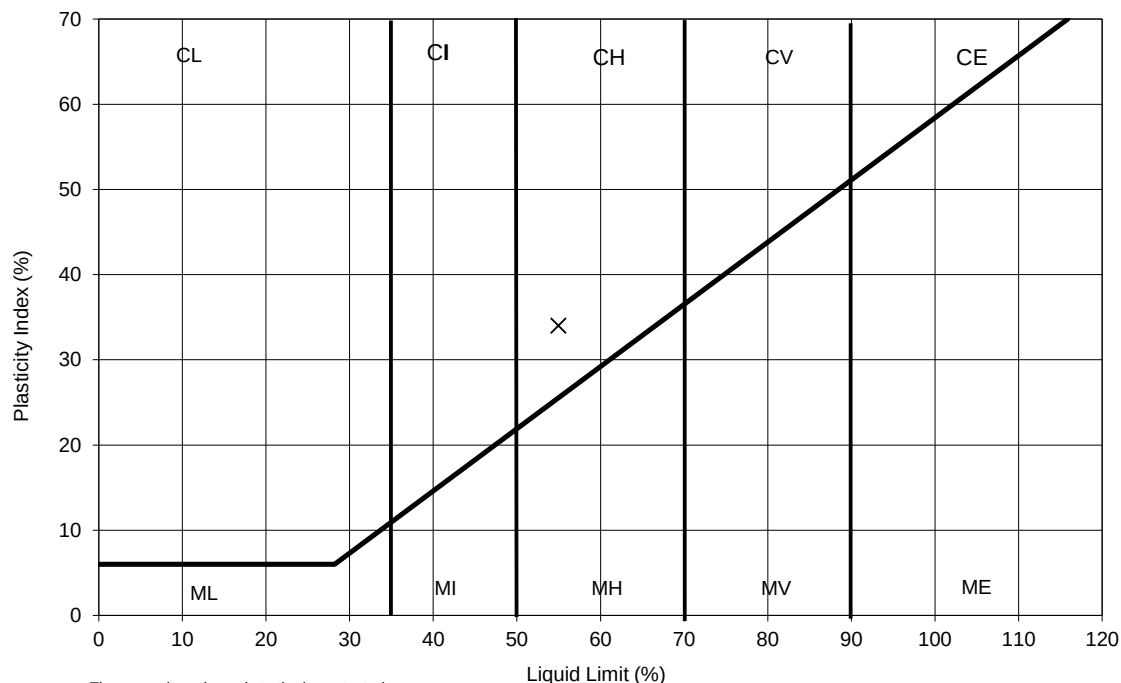


|                          |     |   |
|--------------------------|-----|---|
| NATURAL MOISTURE CONTENT | 26  | % |
| % PASSING 425µm SIEVE    | 100 | % |
| LIQUID LIMIT             | 55  | % |
| PLASTIC LIMIT            | 21  | % |
| PLASTICITY INDEX         | 34  | % |

### Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

### PLASTICITY INDEX



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#### TEST METHOD

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Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU

Tel: 01923 711 288 Email: James@k4soils.com

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

#### Checked and Approved

Initials: J.P

Date: 28/11/2023

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# LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No. 34396

Borehole/Pit No. BH12

Site Name Knowle

Sample No. -

Project No. - Client Wilson Bailey

Depth Top m 1.00

Soil Description Brown mottled orangish brown silty CLAY

Depth Base m -

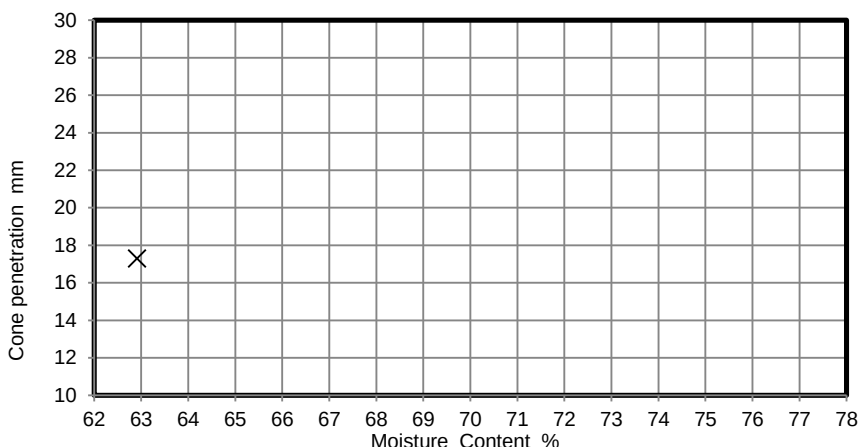
Sample Type D

Samples received 06/11/2023

Schedules received 13/11/2023

Project Started 14/11/2023

Date Tested 27/11/2023



NATURAL MOISTURE CONTENT

30

%

% PASSING 425µm SIEVE

100

%

LIQUID LIMIT

66

%

PLASTIC LIMIT

26

%

PLASTICITY INDEX

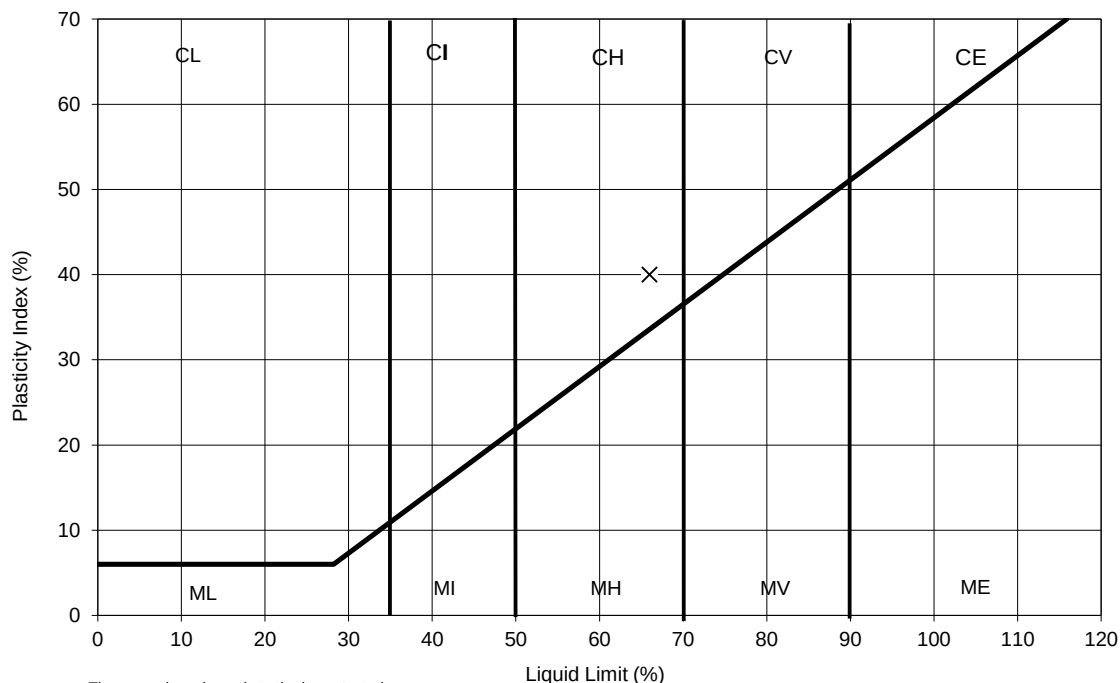
40

%

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

## PLASTICITY INDEX



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### TEST METHOD

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Checked and Approved

Initials: J.P

Date: 28/11/2023

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Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

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## LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No. 34396

Borehole/Pit No. BH12

Site Name Knowle

Sample No. -

Project No. -

Client

Wilson Bailey

Depth Top m 3.00

Soil Description

Greenish grey, orangish brown and bluish grey slightly sandy silty CLAY

Depth Base m -

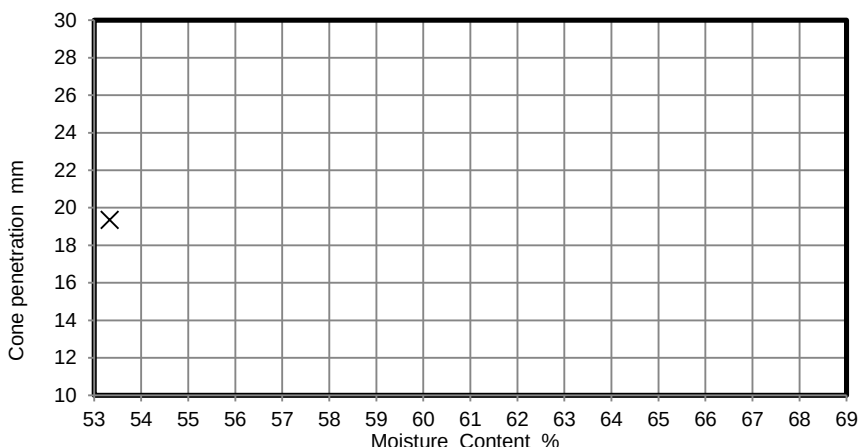
Sample Type D

Samples received 06/11/2023

Schedules received 13/11/2023

Project Started 14/11/2023

Date Tested 27/11/2023



NATURAL MOISTURE CONTENT

33

%

% PASSING 425µm SIEVE

100

%

LIQUID LIMIT

54

%

PLASTIC LIMIT

22

%

PLASTICITY INDEX

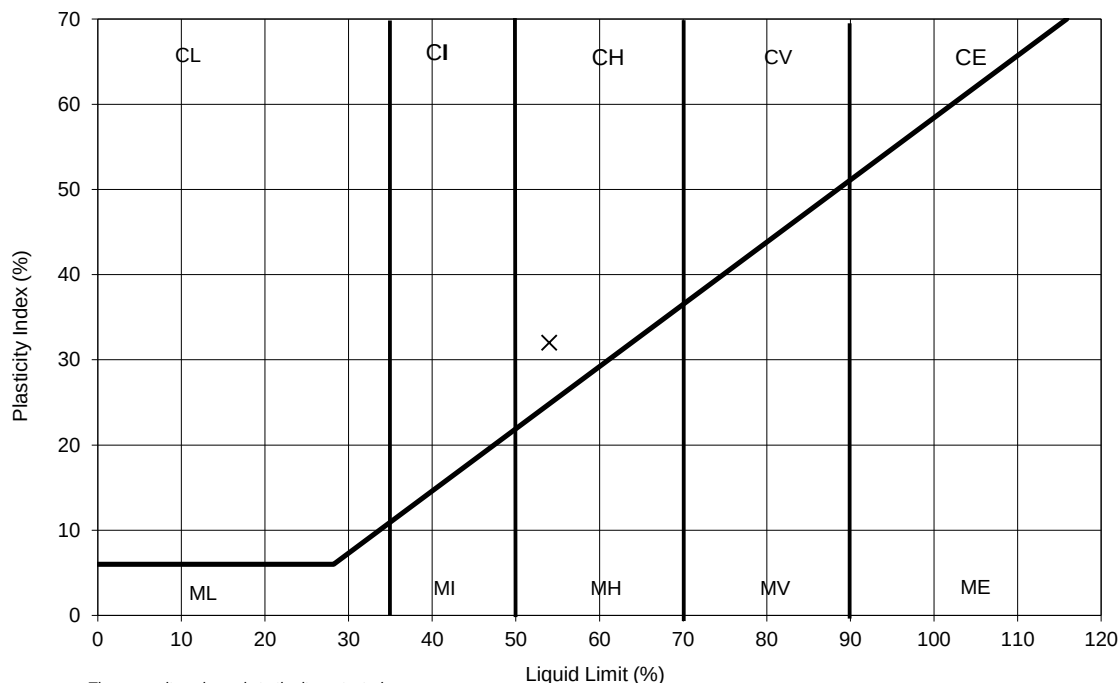
32

%

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

### PLASTICITY INDEX



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BS1377: Part 2 :Clause 5.0 : 1990: Determination of the plastic limit and plasticity index

BS1377: Part 2 :Clause 3.2 : 1990:Determination of the moisture content by the oven drying

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Initials: J.P

Date: 28/11/2023

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

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|  |        |               |           |      | Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results               |                   |                       |            |         |         |         |
|-----------------------------------------------------------------------------------|--------|---------------|-----------|------|-------------------------------------------------------------------------------------------|-------------------|-----------------------|------------|---------|---------|---------|
| Job No.                                                                           |        | Project Name  |           |      |                                                                                           | Programme         |                       |            |         |         |         |
| 34396                                                                             |        | Knowle        |           |      |                                                                                           | Samples received  |                       | 06/11/2023 |         |         |         |
| Project No.                                                                       |        | Client        |           |      |                                                                                           | Schedule received |                       | 13/11/2023 |         |         |         |
| -                                                                                 |        | Wilson Bailey |           |      |                                                                                           | Project started   |                       | 14/11/2023 |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           | Testing Started   |                       | 27/11/2023 |         |         |         |
| Hole No.                                                                          | Sample |               |           |      | Soil Description                                                                          | NMC<br>%          | Passing<br>425µm<br>% | LL<br>%    | PL<br>% | PI<br>% | Remarks |
|                                                                                   | Ref    | Top<br>m      | Base<br>m | Type |                                                                                           |                   |                       |            |         |         |         |
| BH3                                                                               | -      | 1.00          | -         | D    | Orangish brown slightly mottled bluish grey sandy silty CLAY                              | 21                | 100                   | 43         | 20      | 23      |         |
| BH6                                                                               | -      | 1.50          | -         | D    | Brown and orangish brown mottled slightly sandy silty CLAY                                | 26                | 100                   | 50         | 23      | 27      |         |
| BH9                                                                               | -      | 1.00          | -         | D    | Yellowish brown, orangish brown and bluish grey slightly sandy silty CLAY                 | 26                | 100                   | 59         | 23      | 36      |         |
| BH9                                                                               | -      | 2.00          | -         | D    | Orangish brown mottled light greyish brown silty CLAY                                     | 27                | 100                   | 69         | 25      | 44      |         |
| BH10                                                                              | -      | 1.00          | -         | D    | Orangish brown slightly mottled yellowish brown and bluish grey slightly sandy silty CLAY | 26                | 100                   | 55         | 21      | 34      |         |
| BH12                                                                              | -      | 1.00          | -         | D    | Brown mottled orangish brown silty CLAY                                                   | 30                | 100                   | 66         | 26      | 40      |         |
| BH12                                                                              | -      | 3.00          | -         | D    | Greenish grey, orangish brown and bluish grey slightly sandy silty CLAY                   | 33                | 100                   | 54         | 22      | 32      |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |
|                                                                                   |        |               |           |      |                                                                                           |                   |                       |            |         |         |         |

|                                                                                     |                                                                                                                                                                                    |                                                                                                                                                              |                                                                                     |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  | <b>Test Methods: BS1377: Part 2: 1990:</b><br>Natural Moisture Content : clause 3.2<br>Atterberg Limits: clause 4.3 and 5.0<br><i>These results only apply to the items tested</i> | <b>Test Report by K4 SOILS LABORATORY</b><br>Unit 8 Olds Close Olds Approach<br>Watford Herts WD18 9RU<br><br>Tel: 01923 711 288<br>Email: James@k4soils.com | <b>Checked and Approved</b><br><br>Initials      J.P<br><br>Date:        28/11/2023 |
|                                                                                     | NOTE: The report shall not be reproduced except in full without authority of the laboratory                                                                                        |                                                                                                                                                              |                                                                                     |
|                                                                                     | 2519                                                                                                                                                                               |                                                                                                                                                              | Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)                        |
|                                                                                     | MSF-5-R1(b)                                                                                                                                                                        |                                                                                                                                                              |                                                                                     |

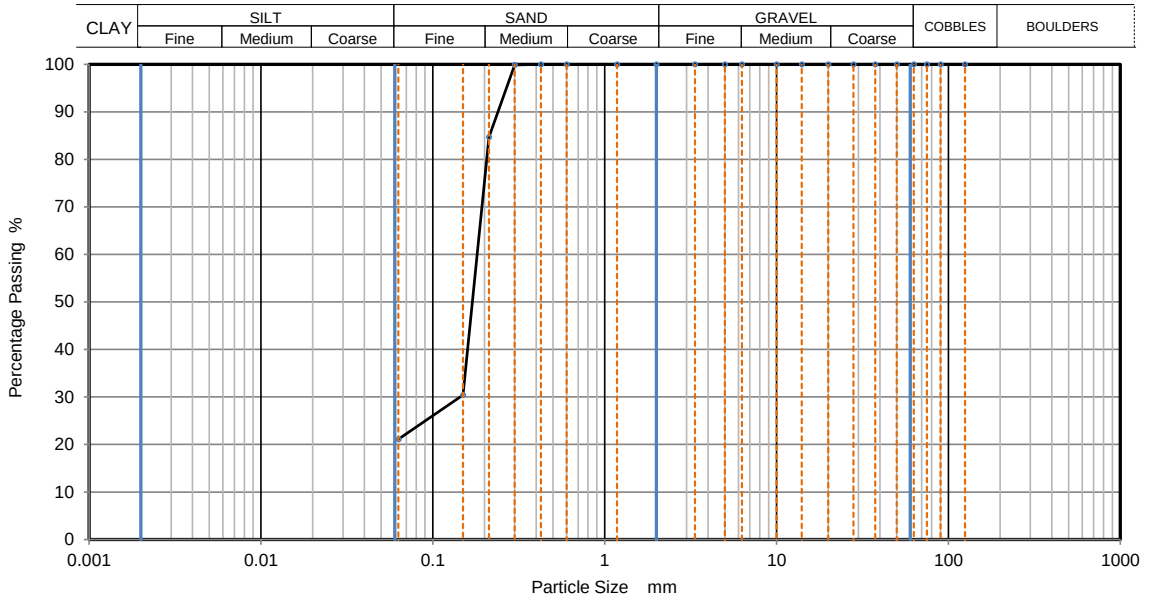


# PARTICLE SIZE DISTRIBUTION

|                    |            |
|--------------------|------------|
| Job Ref            | 34396      |
| Borehole/Pit No.   | BH13       |
| Sample No.         | -          |
| Depth Top          | 5.00 m     |
| Depth Base         | - m        |
| Sample Type        | D          |
| Samples received   | 06/11/2023 |
| Schedules received | 13/11/2023 |
| Project started    | 14/11/2023 |
| Date tested        | 20/11/2023 |

|                  |                                   |        |               |
|------------------|-----------------------------------|--------|---------------|
| Site Name        | Knowle                            |        |               |
| Project No.      | -                                 | Client | Wilson Bailey |
| Soil Description | Yellowish brown silty clayey SAND |        |               |
| Test Method      | BS1377:Part 2: 1990, clause 9.0   |        |               |

These results only apply to the items tested



| Sieving          |           | Sedimentation    |           |
|------------------|-----------|------------------|-----------|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125              | 100       |                  |           |
| 90               | 100       |                  |           |
| 75               | 100       |                  |           |
| 63               | 100       |                  |           |
| 50               | 100       |                  |           |
| 37.5             | 100       |                  |           |
| 28               | 100       |                  |           |
| 20               | 100       |                  |           |
| 14               | 100       |                  |           |
| 10               | 100       |                  |           |
| 6.3              | 100       |                  |           |
| 5                | 100       |                  |           |
| 3.35             | 100       |                  |           |
| 2                | 100       |                  |           |
| 1.18             | 100       |                  |           |
| 0.6              | 100       |                  |           |
| 0.425            | 100       |                  |           |
| 0.3              | 100       |                  |           |
| 0.212            | 85        |                  |           |
| 0.15             | 30        |                  |           |
| 0.063            | 21        |                  |           |

| Sample Proportions | % dry mass |
|--------------------|------------|
| Very coarse        | 0.00       |
| Gravel             | 0.00       |
| Sand               | 78.91      |
| Fines <0.063mm     | 21.09      |

| Grading Analysis       |    |
|------------------------|----|
| D100                   | mm |
| D60                    | mm |
| D30                    | mm |
| D10                    | mm |
| Uniformity Coefficient |    |
| Curvature Coefficient  |    |

Remarks  
Preparation and testing in accordance with BS1377 unless noted below

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Checked and Approved

Initials: J.P  
Date: 28/11/2023

2519 Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R3

|    |        |                         |           |      | <b>Sulphate Content (Gravimetric Method) for 2:1 Soil: Water Extract and pH Value - Summary of Results</b><br><b>Tested in accordance with BS1377 : Part 3 : 2018, Clause 7.6 &amp; Clause 12</b>                                                                                                                                                                 |                                 |                        |                   |                                                                               |  |
|-------------------------------------------------------------------------------------|--------|-------------------------|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------|-------------------|-------------------------------------------------------------------------------|--|
| Job No.<br>34396                                                                    |        | Project Name<br>Knowle  |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        | Programme         |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        | Samples received  | 06/11/2023                                                                    |  |
| Project No.<br>-                                                                    |        | Client<br>Wilson Bailey |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        | Schedule received | 13/11/2023                                                                    |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        | Project started   | 14/11/2023                                                                    |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        | Testing Started   | 20/11/2023                                                                    |  |
| Hole No.                                                                            | Sample |                         |           |      | Soil description                                                                                                                                                                                                                                                                                                                                                  | Dry Mass<br>passing<br>2mm<br>% | SO4<br>Content<br>mg/l | pH                | Remarks                                                                       |  |
|                                                                                     | Ref    | Top<br>m                | Base<br>m | Type |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
| BH3                                                                                 | -      | 1.00                    | -         | D    | Orangish brown slightly mottled bluish grey sandy silty CLAY                                                                                                                                                                                                                                                                                                      | 100                             | 220                    | 7.6               |                                                                               |  |
| BH9                                                                                 | -      | 1.00                    | -         | D    | Yellowish brown, orangish brown and bluish grey slightly sandy silty CLAY                                                                                                                                                                                                                                                                                         | 100                             | 190                    | 7.6               |                                                                               |  |
| BH10                                                                                | -      | 1.00                    | -         | D    | Orangish brown slightly mottled yellowish brown and bluish grey slightly sandy silty CLAY                                                                                                                                                                                                                                                                         | 100                             | 180                    | 7.6               |                                                                               |  |
| BH12                                                                                | -      | 3.00                    | -         | D    | Greenish grey, orangish brown and bluish grey slightly sandy silty CLAY                                                                                                                                                                                                                                                                                           | 100                             | 190                    | 7.6               |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|                                                                                     |        |                         |           |      |                                                                                                                                                                                                                                                                                                                                                                   |                                 |                        |                   |                                                                               |  |
|  |        |                         |           |      | <b>Test Report by K4 SOILS LABORATORY</b><br><b>Unit 8 Olds Close Olds Approach</b><br><b>Watford Herts WD18 9RU</b><br><b>Tel: 01923 711 288</b><br><b>Email: James@k4soils.com</b><br><small>These results only apply to the items tested</small><br><small>NOTE: The report shall not be reproduced except in full without authority of the laboratory</small> |                                 |                        |                   | <b>Checked and Approved</b><br><b>Initials J.P</b><br><b>Date: 28/11/2023</b> |  |
| 2519                                                                                |        |                         |           |      | Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)                                                                                                                                                                                                                                                                                                      |                                 |                        |                   | MSF-5-R29                                                                     |  |



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t: 01622 850410

## **DETS Report No: 23-13203**

**Site Reference:** Knowle Hill Allbrook Eastleigh  
**Project / Job Ref:** DB  
**Order No:** None Supplied  
**Sample Receipt Date:** 24/10/2023  
**Sample Scheduled Date:** 24/10/2023  
**Report Issue Number:** 1  
**Reporting Date:** 31/10/2023

**Authorised by:**

Kevin Old  
Operations Director

Dates of laboratory activities for each tested analyte are available upon request.

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

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.



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| Soil Analysis Certificate                                 |                        |               |               |               |               |               |
|-----------------------------------------------------------|------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>DETS Report No: 23-13203</b>                           | <b>Date Sampled</b>    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| <b>Wilson Bailey Geotechnical &amp; Environmental Ltd</b> | <b>Time Sampled</b>    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| <b>Site Reference: Knowle Hill Allbrook Eastleigh</b>     | <b>TP / BH No</b>      | BH 2          | BH 4          | BH 6          | BH 8          | Topsoil TS    |
| <b>Project / Job Ref: DB</b>                              | <b>Additional Refs</b> | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| <b>Order No: None Supplied</b>                            | <b>Depth (m)</b>       | 0.25          | 0.25          | 0.25          | 0.50          | GL - 0.25     |
| <b>Reporting Date: 31/10/2023</b>                         | <b>DETS Sample No</b>  | 681938        | 681939        | 681940        | 681941        | 681942        |

| Determinand                    | Unit     | RL    | Accreditation |              |              |              |              |              |
|--------------------------------|----------|-------|---------------|--------------|--------------|--------------|--------------|--------------|
| Asbestos Screen <sup>(S)</sup> | N/a      | N/a   | ISO17025      | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
| pH                             | pH Units | N/a   | MCERTS        | 6.0          | 6.1          | 6.3          | 6.1          | 6.3          |
| TOC (Total Organic Carbon)     | %        | < 0.1 | MCERTS        | 0.7          | 1            | 0.7          | 1.1          | 0.6          |
| Arsenic (As)                   | mg/kg    | < 2   | MCERTS        | 84           | 76           | 21           | 25           | 18           |
| W/S Boron                      | mg/kg    | < 1   | NONE          | < 1          | < 1          | < 1          | < 1          | < 1          |
| Cadmium (Cd)                   | mg/kg    | < 0.2 | MCERTS        | 0.6          | 0.6          | < 0.2        | 0.3          | < 0.2        |
| Chromium (Cr)                  | mg/kg    | < 2   | MCERTS        | 22           | 22           | 21           | 15           | 26           |
| Chromium (hexavalent)          | mg/kg    | < 2   | NONE          | < 2          | < 2          | < 2          | < 2          | < 2          |
| Copper (Cu)                    | mg/kg    | < 4   | MCERTS        | 23           | 21           | 11           | 12           | 12           |
| Lead (Pb)                      | mg/kg    | < 3   | MCERTS        | 29           | 31           | 27           | 22           | 17           |
| Mercury (Hg)                   | mg/kg    | < 1   | MCERTS        | < 1          | < 1          | < 1          | < 1          | < 1          |
| Nickel (Ni)                    | mg/kg    | < 3   | MCERTS        | 12           | 12           | 12           | 5            | 10           |
| Selenium (Se)                  | mg/kg    | < 2   | MCERTS        | < 2          | < 2          | < 2          | < 2          | < 2          |
| Zinc (Zn)                      | mg/kg    | < 3   | MCERTS        | 53           | 53           | 47           | 32           | 46           |
| Total Phenols (monohydric)     | mg/kg    | < 2   | NONE          | < 2          | < 2          | < 2          | < 2          | < 2          |

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion  
Subcontracted analysis (S)



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# Soil Analysis Certificate

|                                                           |                        |               |  |  |  |  |
|-----------------------------------------------------------|------------------------|---------------|--|--|--|--|
| <b>DETS Report No: 23-13203</b>                           | <b>Date Sampled</b>    | None Supplied |  |  |  |  |
| <b>Wilson Bailey Geotechnical &amp; Environmental Ltd</b> | <b>Time Sampled</b>    | None Supplied |  |  |  |  |
| <b>Site Reference: Knowle Hill Allbrook Eastleigh</b>     | <b>TP / BH No</b>      | WAC           |  |  |  |  |
| <b>Project / Job Ref: DB</b>                              | <b>Additional Refs</b> | None Supplied |  |  |  |  |
| <b>Order No: None Supplied</b>                            | <b>Depth (m)</b>       | None Supplied |  |  |  |  |
| <b>Reporting Date: 31/10/2023</b>                         | <b>DETS Sample No</b>  | 681943        |  |  |  |  |

| Determinand                    | Unit     | RL    | Accreditation |              |  |  |  |
|--------------------------------|----------|-------|---------------|--------------|--|--|--|
| Asbestos Screen <sup>(S)</sup> | N/a      | N/a   | ISO17025      | Not Detected |  |  |  |
| pH                             | pH Units | N/a   | MCERTS        | 6.0          |  |  |  |
| TOC (Total Organic Carbon)     | %        | < 0.1 | MCERTS        | 0.2          |  |  |  |
| Arsenic (As)                   | mg/kg    | < 2   | MCERTS        | 9            |  |  |  |
| W/S Boron                      | mg/kg    | < 1   | NONE          | < 1          |  |  |  |
| Cadmium (Cd)                   | mg/kg    | < 0.2 | MCERTS        | < 0.2        |  |  |  |
| Chromium (Cr)                  | mg/kg    | < 2   | MCERTS        | 15           |  |  |  |
| Chromium (hexavalent)          | mg/kg    | < 2   | NONE          | < 2          |  |  |  |
| Copper (Cu)                    | mg/kg    | < 4   | MCERTS        | 5            |  |  |  |
| Lead (Pb)                      | mg/kg    | < 3   | MCERTS        | 5            |  |  |  |
| Mercury (Hg)                   | mg/kg    | < 1   | MCERTS        | < 1          |  |  |  |
| Nickel (Ni)                    | mg/kg    | < 3   | MCERTS        | < 3          |  |  |  |
| Selenium (Se)                  | mg/kg    | < 2   | MCERTS        | < 2          |  |  |  |
| Zinc (Zn)                      | mg/kg    | < 3   | MCERTS        | 17           |  |  |  |
| Total Phenols (monohydric)     | mg/kg    | < 2   | NONE          | < 2          |  |  |  |

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion  
 Subcontracted analysis (S)



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| Soil Analysis Certificate - Speciated PAHs     |                 |               |               |               |               |               |
|------------------------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|
| DETS Report No: 23-13203                       | Date Sampled    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Wilson Bailey Geotechnical & Environmental Ltd | Time Sampled    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Site Reference: Knowle Hill Allbrook Eastleigh | TP / BH No      | BH 2          | BH 4          | BH 6          | BH 8          | Topsoil TS    |
| Project / Job Ref: DB                          | Additional Refs | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Order No: None Supplied                        | Depth (m)       | 0.25          | 0.25          | 0.25          | 0.50          | GL - 0.25     |
| Reporting Date: 31/10/2023                     | DETS Sample No  | 681938        | 681939        | 681940        | 681941        | 681942        |

| Determinand            | Unit  | RL    | Accreditation |       |       |       |       |       |
|------------------------|-------|-------|---------------|-------|-------|-------|-------|-------|
| Naphthalene            | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Acenaphthylene         | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Acenaphthene           | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Fluorene               | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Phenanthrene           | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Anthracene             | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Fluoranthene           | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Pyrene                 | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Benzo(a)anthracene     | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Chrysene               | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Benzo(b)fluoranthene   | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Benzo(k)fluoranthene   | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Benzo(a)pyrene         | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Indeno(1,2,3-cd)pyrene | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Dibenz(a,h)anthracene  | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Benzo(ghi)perylene     | mg/kg | < 0.1 | MCERTS        | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Total EPA-16 PAHs      | mg/kg | < 1.6 | MCERTS        | < 1.6 | < 1.6 | < 1.6 | < 1.6 | < 1.6 |



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| Soil Analysis Certificate - Speciated PAHs   |                 |               |  |  |  |  |
|----------------------------------------------|-----------------|---------------|--|--|--|--|
| DETS Report No: 23-13203                     | Date Sampled    | None Supplied |  |  |  |  |
| Wilson Bailey Geotechnical & Environmental L | Time Sampled    | None Supplied |  |  |  |  |
| Site Reference: Knowle Hill Allbrook         | TP / BH No      | WAC           |  |  |  |  |
| Eastleigh                                    | Additional Refs | None Supplied |  |  |  |  |
| Project / Job Ref: DB                        | Depth (m)       | None Supplied |  |  |  |  |
| Order No: None Supplied                      | DETS Sample No  | 681943        |  |  |  |  |
| Reporting Date: 31/10/2023                   |                 |               |  |  |  |  |

| Determinand            | Unit  | RL    | Accreditation |       |  |  |  |
|------------------------|-------|-------|---------------|-------|--|--|--|
| Naphthalene            | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Acenaphthylene         | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Acenaphthene           | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Fluorene               | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Phenanthrene           | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Anthracene             | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Fluoranthene           | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Pyrene                 | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Benzo(a)anthracene     | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Chrysene               | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Benzo(b)fluoranthene   | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Benzo(k)fluoranthene   | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Benzo(a)pyrene         | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Indeno(1,2,3-cd)pyrene | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Dibenz(a,h)anthracene  | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Benzo(ghi)perylene     | mg/kg | < 0.1 | MCERTS        | < 0.1 |  |  |  |
| Total EPA-16 PAHs      | mg/kg | < 1.6 | MCERTS        | < 1.6 |  |  |  |



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**Soil Analysis Certificate - TPH CWG Banded**

|                                                         |                        |               |               |               |               |               |
|---------------------------------------------------------|------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>DETS Report No: 23-13203</b>                         | <b>Date Sampled</b>    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| <b>Wilson Bailey Geotechnical &amp; Environmental L</b> | <b>Time Sampled</b>    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| <b>Site Reference: Knowle Hill Allbrook</b>             | <b>TP / BH No</b>      | BH 2          | BH 4          | BH 6          | BH 8          | Topsoil TS    |
| <b>Eastleigh</b>                                        | <b>Additional Refs</b> | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| <b>Project / Job Ref: DB</b>                            | <b>Depth (m)</b>       | 0.25          | 0.25          | 0.25          | 0.50          | GL - 0.25     |
| <b>Order No: None Supplied</b>                          | <b>DETS Sample No</b>  | 681938        | 681939        | 681940        | 681941        | 681942        |
| <b>Reporting Date: 31/10/2023</b>                       |                        |               |               |               |               |               |

| Determinand          | Unit  | RL     | Accreditation |        |        |        |        |        |
|----------------------|-------|--------|---------------|--------|--------|--------|--------|--------|
| Aliphatic >C5 - C6   | mg/kg | < 0.01 | NONE          | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic >C6 - C8   | mg/kg | < 0.05 | NONE          | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Aliphatic >C8 - C10  | mg/kg | < 2    | MCERTS        | < 2    | < 2    | < 2    | < 2    | < 2    |
| Aliphatic >C10 - C12 | mg/kg | < 2    | MCERTS        | < 2    | < 2    | < 2    | < 2    | < 2    |
| Aliphatic >C12 - C16 | mg/kg | < 3    | MCERTS        | < 3    | < 3    | < 3    | < 3    | < 3    |
| Aliphatic >C16 - C21 | mg/kg | < 3    | MCERTS        | < 3    | < 3    | < 3    | < 3    | < 3    |
| Aliphatic >C21 - C34 | mg/kg | < 10   | MCERTS        | < 10   | < 10   | < 10   | < 10   | < 10   |
| Aliphatic (C5 - C34) | mg/kg | < 21   | NONE          | < 21   | < 21   | < 21   | < 21   | < 21   |
| Aromatic >C5 - C7    | mg/kg | < 0.01 | NONE          | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic >C7 - C8    | mg/kg | < 0.05 | NONE          | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Aromatic >C8 - C10   | mg/kg | < 2    | MCERTS        | < 2    | < 2    | < 2    | < 2    | < 2    |
| Aromatic >C10 - C12  | mg/kg | < 2    | MCERTS        | < 2    | < 2    | < 2    | < 2    | < 2    |
| Aromatic >C12 - C16  | mg/kg | < 2    | MCERTS        | < 2    | < 2    | < 2    | < 2    | < 2    |
| Aromatic >C16 - C21  | mg/kg | < 3    | MCERTS        | < 3    | < 3    | < 3    | < 3    | < 3    |
| Aromatic >C21 - C35  | mg/kg | < 10   | MCERTS        | < 10   | < 10   | < 10   | < 10   | < 10   |
| Aromatic (C5 - C35)  | mg/kg | < 21   | NONE          | < 21   | < 21   | < 21   | < 21   | < 21   |
| Total >C5 - C35      | mg/kg | < 42   | NONE          | < 42   | < 42   | < 42   | < 42   | < 42   |



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# Soil Analysis Certificate - TPH CWG Banded

|                                              |                 |               |  |  |  |  |
|----------------------------------------------|-----------------|---------------|--|--|--|--|
| DETS Report No: 23-13203                     | Date Sampled    | None Supplied |  |  |  |  |
| Wilson Bailey Geotechnical & Environmental L | Time Sampled    | None Supplied |  |  |  |  |
| Site Reference: Knowle Hill Allbrook         | TP / BH No      | WAC           |  |  |  |  |
| Eastleigh                                    | Additional Refs | None Supplied |  |  |  |  |
| Project / Job Ref: DB                        | Depth (m)       | None Supplied |  |  |  |  |
| Order No: None Supplied                      | DETS Sample No  | 681943        |  |  |  |  |
| Reporting Date: 31/10/2023                   |                 |               |  |  |  |  |

| Determinand          | Unit  | RL     | Accreditation |        |  |  |  |
|----------------------|-------|--------|---------------|--------|--|--|--|
| Aliphatic >C5 - C6   | mg/kg | < 0.01 | NONE          | < 0.01 |  |  |  |
| Aliphatic >C6 - C8   | mg/kg | < 0.05 | NONE          | < 0.05 |  |  |  |
| Aliphatic >C8 - C10  | mg/kg | < 2    | MCERTS        | < 2    |  |  |  |
| Aliphatic >C10 - C12 | mg/kg | < 2    | MCERTS        | < 2    |  |  |  |
| Aliphatic >C12 - C16 | mg/kg | < 3    | MCERTS        | < 3    |  |  |  |
| Aliphatic >C16 - C21 | mg/kg | < 3    | MCERTS        | < 3    |  |  |  |
| Aliphatic >C21 - C34 | mg/kg | < 10   | MCERTS        | < 10   |  |  |  |
| Aliphatic (C5 - C34) | mg/kg | < 21   | NONE          | < 21   |  |  |  |
| Aromatic >C5 - C7    | mg/kg | < 0.01 | NONE          | < 0.01 |  |  |  |
| Aromatic >C7 - C8    | mg/kg | < 0.05 | NONE          | < 0.05 |  |  |  |
| Aromatic >C8 - C10   | mg/kg | < 2    | MCERTS        | < 2    |  |  |  |
| Aromatic >C10 - C12  | mg/kg | < 2    | MCERTS        | < 2    |  |  |  |
| Aromatic >C12 - C16  | mg/kg | < 2    | MCERTS        | < 2    |  |  |  |
| Aromatic >C16 - C21  | mg/kg | < 3    | MCERTS        | < 3    |  |  |  |
| Aromatic >C21 - C35  | mg/kg | < 10   | MCERTS        | < 10   |  |  |  |
| Aromatic (C5 - C35)  | mg/kg | < 21   | NONE          | < 21   |  |  |  |
| Total >C5 - C35      | mg/kg | < 42   | NONE          | < 42   |  |  |  |



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| Soil Analysis Certificate - BTEX / MTBE      |                 |               |               |               |               |               |
|----------------------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|
| DETS Report No: 23-13203                     | Date Sampled    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Wilson Bailey Geotechnical & Environmental L | Time Sampled    | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Site Reference: Knowle Hill Allbrook         | TP / BH No      | BH 2          | BH 4          | BH 6          | BH 8          | Topsoil TS    |
| Eastleigh                                    | Additional Refs | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Project / Job Ref: DB                        | Depth (m)       | 0.25          | 0.25          | 0.25          | 0.50          | GL - 0.25     |
| Order No: None Supplied                      | DETS Sample No  | 681938        | 681939        | 681940        | 681941        | 681942        |
| Reporting Date: 31/10/2023                   |                 |               |               |               |               |               |

| Determinand  | Unit  | RL  | Accreditation |     |     |     |     |     |
|--------------|-------|-----|---------------|-----|-----|-----|-----|-----|
| Benzene      | ug/kg | < 2 | MCERTS        | < 2 | < 2 | < 2 | < 2 | < 2 |
| Toluene      | ug/kg | < 5 | MCERTS        | < 5 | < 5 | < 5 | < 5 | < 5 |
| Ethylbenzene | ug/kg | < 2 | MCERTS        | < 2 | < 2 | < 2 | < 2 | < 2 |
| p & m-xylene | ug/kg | < 2 | MCERTS        | < 2 | < 2 | < 2 | < 2 | < 2 |
| o-xylene     | ug/kg | < 2 | MCERTS        | < 2 | < 2 | < 2 | < 2 | < 2 |
| MTBE         | ug/kg | < 5 | MCERTS        | < 5 | < 5 | < 5 | < 5 | < 5 |



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| Soil Analysis Certificate - BTEX / MTBE      |                 |               |  |  |  |  |
|----------------------------------------------|-----------------|---------------|--|--|--|--|
| DETS Report No: 23-13203                     | Date Sampled    | None Supplied |  |  |  |  |
| Wilson Bailey Geotechnical & Environmental L | Time Sampled    | None Supplied |  |  |  |  |
| Site Reference: Knowle Hill Allbrook         | TP / BH No      | WAC           |  |  |  |  |
| Eastleigh                                    | Additional Refs | None Supplied |  |  |  |  |
| Project / Job Ref: DB                        | Depth (m)       | None Supplied |  |  |  |  |
| Order No: None Supplied                      | DETS Sample No  | 681943        |  |  |  |  |
| Reporting Date: 31/10/2023                   |                 |               |  |  |  |  |

| Determinand  | Unit  | RL  | Accreditation |     |  |  |  |
|--------------|-------|-----|---------------|-----|--|--|--|
| Benzene      | ug/kg | < 2 | MCERTS        | < 2 |  |  |  |
| Toluene      | ug/kg | < 5 | MCERTS        | < 5 |  |  |  |
| Ethylbenzene | ug/kg | < 2 | MCERTS        | < 2 |  |  |  |
| p & m-xylene | ug/kg | < 2 | MCERTS        | < 2 |  |  |  |
| o-xylene     | ug/kg | < 2 | MCERTS        | < 2 |  |  |  |
| MTBE         | ug/kg | < 5 | MCERTS        | < 5 |  |  |  |

**Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3**

|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|------------------------------------------------|--------------|-----------------|---------------|-------------|-----------------|-----------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------|
| DETS Report No: 23-13203                       |              | Date Sampled    | None Supplied |             |                 |                             | Landfill Waste Acceptance Criteria Limits                                                  |                                                                  |                          |
| Wilson Bailey Geotechnical & Environmental Ltd |              | Time Sampled    | None Supplied |             |                 |                             | Inert Waste Landfill                                                                       | Stable Non-reactive<br>HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |
| Site Reference: Knowle Hill Allbrook Eastleigh |              | TP / BH No      | WAC           |             |                 |                             |                                                                                            |                                                                  |                          |
| Project / Job Ref: DB                          |              | Additional Refs | None Supplied |             |                 |                             |                                                                                            |                                                                  |                          |
| Order No: None Supplied                        |              | Depth (m)       | None Supplied |             |                 |                             |                                                                                            |                                                                  |                          |
| Reporting Date: 31/10/2023                     |              | DETS Sample No  | 681943        |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
| Determinand                                    | Unit         | MDL             |               |             |                 |                             |                                                                                            |                                                                  |                          |
| TOC <sup>MU</sup>                              | %            | < 0.1           | 0.2           |             |                 |                             | 3%                                                                                         | 5%                                                               | 6%                       |
| Loss on Ignition <sup>MU</sup>                 | %            | < 0.01          | 2.50          | --          | --              | 10%                         |                                                                                            |                                                                  |                          |
| BTEX <sup>MU</sup>                             | mg/kg        | < 0.05          | < 0.05        | 6           | --              | --                          |                                                                                            |                                                                  |                          |
| Sum of PCBs                                    | mg/kg        | < 0.1           | < 0.1         | 1           | --              | --                          |                                                                                            |                                                                  |                          |
| Mineral Oil <sup>MU</sup>                      | mg/kg        | < 10            | < 10          | 500         | --              | --                          |                                                                                            |                                                                  |                          |
| Total PAH <sup>MU</sup>                        | mg/kg        | < 1.7           | < 1.7         | 100         | --              | --                          |                                                                                            |                                                                  |                          |
| pH <sup>MU</sup>                               | pH Units     | N/a             | 6.0           | --          | >6              | --                          |                                                                                            |                                                                  |                          |
| Acid Neutralisation Capacity                   | mol/kg (+/-) | < 1             | < 1           | --          | To be evaluated | To be evaluated             |                                                                                            |                                                                  |                          |
| Eluate Analysis                                |              |                 | 2:1<br>mg/l   | 8:1<br>mg/l |                 | Cumulative<br>10:1<br>mg/kg | Limit values for compliance leaching test<br>using BS EN 12457-3 at L/S 10 l/kg<br>(mg/kg) |                                                                  |                          |
| Arsenic <sup>U</sup>                           |              | < 0.0002        | < 0.0002      |             |                 | 0.0030                      | 0.5                                                                                        | 2                                                                | 25                       |
| Barium <sup>U</sup>                            |              | 0.0200          | 0.0030        |             |                 | 0.0710                      | 20                                                                                         | 100                                                              | 300                      |
| Cadmium <sup>U</sup>                           |              | < 0.0002        | < 0.0002      |             |                 | < 0.002                     | 0.04                                                                                       | 1                                                                | 5                        |
| Chromium <sup>U</sup>                          |              | < 0.0002        | 0.0004        |             |                 | 0.0070                      | 0.5                                                                                        | 10                                                               | 70                       |
| Copper <sup>U</sup>                            |              | 0.0004          | 0.0009        |             |                 | 0.0150                      | 2                                                                                          | 50                                                               | 100                      |
| Mercury <sup>U</sup>                           |              | < 0.00004       | < 0.00004     |             |                 | < 0.0004                    | 0.01                                                                                       | 0.2                                                              | 2                        |
| Molybdenum <sup>U</sup>                        |              | 0.0007          | 0.0003        |             |                 | 0.0060                      | 0.5                                                                                        | 10                                                               | 30                       |
| Nickel <sup>U</sup>                            |              | 0.0003          | 0.0012        |             |                 | 0.0210                      | 0.4                                                                                        | 10                                                               | 40                       |
| Lead <sup>U</sup>                              |              | < 0.0002        | < 0.0002      |             |                 | < 0.002                     | 0.5                                                                                        | 10                                                               | 50                       |
| Antimony <sup>U</sup>                          |              | < 0.0002        | < 0.0002      |             |                 | < 0.002                     | 0.06                                                                                       | 0.7                                                              | 5                        |
| Selenium <sup>U</sup>                          |              | < 0.0002        | < 0.0002      |             |                 | 0.0020                      | 0.1                                                                                        | 0.5                                                              | 7                        |
| Zinc <sup>U</sup>                              |              | 0.024           | 0.010         |             |                 | 0.190                       | 4                                                                                          | 50                                                               | 200                      |
| Chloride <sup>U</sup>                          |              | < 1             | 2             |             |                 | 36                          | 800                                                                                        | 15000                                                            | 25000                    |
| Fluoride <sup>U</sup>                          |              | < 0.5           | < 0.5         |             |                 | < 1                         | 10                                                                                         | 150                                                              | 500                      |
| Sulphate <sup>U</sup>                          |              | 3               | 2             |             |                 | 43                          | 1000                                                                                       | 20000                                                            | 50000                    |
| TDS                                            |              | 10              | 20            |             |                 | 353                         | 4000                                                                                       | 60000                                                            | 100000                   |
| Phenol Index <sup>U</sup>                      |              | < 0.01          | < 0.01        |             |                 | < 0.5                       | 1                                                                                          | -                                                                | -                        |
| DOC <sup>U</sup>                               |              | 4.2             | 10.9          |             |                 | 190                         | 500                                                                                        | 800                                                              | 1000                     |
| Leach Test Information                         |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
| Sample Mass (kg)                               |              | 0.10            |               |             |                 |                             |                                                                                            |                                                                  |                          |
| Dry Matter (%)                                 |              | 85.8            |               |             |                 |                             |                                                                                            |                                                                  |                          |
| Moisture (%)                                   |              | 16.6            |               |             |                 |                             |                                                                                            |                                                                  |                          |
| Stage 1                                        |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
| Volume Eluate L2 (litres)                      |              |                 | 0.16          |             |                 |                             |                                                                                            |                                                                  |                          |
| Filtered Eluate VE1 (litres)                   |              |                 | 0.08          |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |
|                                                |              |                 |               |             |                 |                             |                                                                                            |                                                                  |                          |

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion  
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation  
M Denotes MCERTS accredited test  
U Denotes ISO17025 accredited test



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#### Soil Analysis Certificate - Sample Descriptions

|                                                |  |
|------------------------------------------------|--|
| DETS Report No: 23-13203                       |  |
| Wilson Bailey Geotechnical & Environmental Ltd |  |
| Site Reference: Knowle Hill Allbrook Eastleigh |  |
| Project / Job Ref: DB                          |  |
| Order No: None Supplied                        |  |
| Reporting Date: 31/10/2023                     |  |

| DETS Sample No | TP / BH No | Additional Refs | Depth (m)     | Moisture Content (%) | Sample Matrix Description                   |
|----------------|------------|-----------------|---------------|----------------------|---------------------------------------------|
| ^ 681938       | BH 2       | None Supplied   | 0.25          | 13.4                 | Brown sandy clay                            |
| ^ 681939       | BH 4       | None Supplied   | 0.25          | 10.5                 | Brown sandy clay with stones and vegetation |
| ^ 681940       | BH 6       | None Supplied   | 0.25          | 19                   | Brown sandy clay                            |
| ^ 681941       | BH 8       | None Supplied   | 0.50          | 12.8                 | Brown sandy clay with stones                |
| ^ 681942       | Topsoil TS | None Supplied   | GL - 0.25     | 17.1                 | Brown sandy clay                            |
| ^ 681943       | WAC        | None Supplied   | None Supplied | 13.7                 | Brown sandy clay                            |

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample <sup>1/5</sup>

& samples received in inappropriate containers for hydrocarbon analysis

^ no sampling date provided; unable to confirm if samples are within acceptable holding times



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# **Soil Analysis Certificate - Methodology & Miscellaneous Information**

**DETS Report No: 23-13203**

**Wilson Bailey Geotechnical & Environmental Ltd**

**Site Reference: Knowle Hill Allbrook Eastleigh**

**Project / Job Ref: DB**

**Order No: None Supplied**

**Reporting Date: 31/10/2023**

| Matrix | Analysed On | Determinand                                                                                                                                     | Brief Method Description                                                                                                                             | Method No |
|--------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Soil   | D           | Boron - Water Soluble                                                                                                                           | Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES                                                            | E012      |
| Soil   | AR          | BTEX                                                                                                                                            | Determination of BTEX by headspace GC-MS                                                                                                             | E001      |
| Soil   | D           | Cations                                                                                                                                         | Determination of cations in soil by aqua-regia digestion followed by ICP-OES                                                                         | E002      |
| Soil   | D           | Chloride - Water Soluble (2:1)                                                                                                                  | Determination of chloride by extraction with water & analysed by ion chromatography                                                                  | E009      |
| Soil   | AR          | Chromium - Hexavalent                                                                                                                           | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazide followed by colorimetry | E016      |
| Soil   | AR          | Cyanide - Complex                                                                                                                               | Determination of complex cyanide by distillation followed by colorimetry                                                                             | E015      |
| Soil   | AR          | Cyanide - Free                                                                                                                                  | Determination of free cyanide by distillation followed by colorimetry                                                                                | E015      |
| Soil   | AR          | Cyanide - Total                                                                                                                                 | Determination of total cyanide by distillation followed by colorimetry                                                                               | E015      |
| Soil   | D           | Cyclohexane Extractable Matter (CEM)                                                                                                            | Gravimetrically determined through extraction with cyclohexane                                                                                       | E011      |
| Soil   | AR          | Diesel Range Organics (C10 - C24)                                                                                                               | Determination of hexane/acetone extractable hydrocarbons by GC-FID                                                                                   | E004      |
| Soil   | AR          | Electrical Conductivity                                                                                                                         | Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement                             | E022      |
| Soil   | AR          | Electrical Conductivity                                                                                                                         | Determination of electrical conductivity by addition of water followed by electrometric measurement                                                  | E023      |
| Soil   | D           | Elemental Sulphur                                                                                                                               | Determination of elemental sulphur by solvent extraction followed by GC-MS                                                                           | E020      |
| Soil   | AR          | EPH (C10 - C40)                                                                                                                                 | Determination of acetone/hexane extractable hydrocarbons by GC-FID                                                                                   | E004      |
| Soil   | AR          | EPH Product ID                                                                                                                                  | Determination of acetone/hexane extractable hydrocarbons by GC-FID                                                                                   | E004      |
| Soil   | AR          | EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)                                                                                   | Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS                                        | E004      |
| Soil   | D           | Fluoride - Water Soluble                                                                                                                        | Determination of Fluoride by extraction with water & analysed by ion chromatography                                                                  | E009      |
| Soil   | D           | Fraction Organic Carbon (FOC)                                                                                                                   | Determination of TOC by combustion analyser.                                                                                                         | E027      |
| Soil   | D           | Organic Matter (SOM)                                                                                                                            | Determination of TOC by combustion analyser.                                                                                                         | E027      |
| Soil   | D           | TOC (Total Organic Carbon)                                                                                                                      | Determination of TOC by combustion analyser.                                                                                                         | E027      |
| Soil   | AR          | Exchangeable Ammonium                                                                                                                           | Determination of ammonium by discrete analyser.                                                                                                      | E029      |
| Soil   | D           | FOC (Fraction Organic Carbon)                                                                                                                   | Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate                     | E010      |
| Soil   | D           | Loss on Ignition @ 450°C                                                                                                                        | Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace                                       | E019      |
| Soil   | D           | Magnesium - Water Soluble                                                                                                                       | Determination of water soluble magnesium by extraction with water followed by ICP-OES                                                                | E025      |
| Soil   | D           | Metals                                                                                                                                          | Determination of metals by aqua-regia digestion followed by ICP-OES                                                                                  | E002      |
| Soil   | AR          | Mineral Oil (C10 - C40)                                                                                                                         | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge                                                  | E004      |
| Soil   | AR          | Moisture Content                                                                                                                                | Moisture content; determined gravimetrically                                                                                                         | E003      |
| Soil   | D           | Nitrate - Water Soluble (2:1)                                                                                                                   | Determination of nitrate by extraction with water & analysed by ion chromatography                                                                   | E009      |
| Soil   | D           | Organic Matter                                                                                                                                  | Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate                                 | E010      |
| Soil   | AR          | PAH - Speciated (EPA 16)                                                                                                                        | Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards                | E005      |
| Soil   | AR          | PCB - 7 Congeners                                                                                                                               | Determination of PCB by extraction with acetone and hexane followed by GC-MS                                                                         | E008      |
| Soil   | D           | Petroleum Ether Extract (PEE)                                                                                                                   | Gravimetrically determined through extraction with petroleum ether                                                                                   | E011      |
| Soil   | AR          | pH                                                                                                                                              | Determination of pH by addition of water followed by electrometric measurement                                                                       | E007      |
| Soil   | AR          | Phenols - Total (monohydric)                                                                                                                    | Determination of phenols by distillation followed by colorimetry                                                                                     | E021      |
| Soil   | D           | Phosphate - Water Soluble (2:1)                                                                                                                 | Determination of phosphate by extraction with water & analysed by ion chromatography                                                                 | E009      |
| Soil   | D           | Sulphate (as SO4) - Total                                                                                                                       | Determination of total sulphate by extraction with 10% HCl followed by ICP-OES                                                                       | E013      |
| Soil   | D           | Sulphate (as SO4) - Water Soluble (2:1)                                                                                                         | Determination of sulphate by extraction with water & analysed by ion chromatography                                                                  | E009      |
| Soil   | D           | Sulphate (as SO4) - Water Soluble (2:1)                                                                                                         | Determination of water soluble sulphate by extraction with water followed by ICP-OES                                                                 | E014      |
| Soil   | AR          | Sulphide                                                                                                                                        | Determination of sulphide by distillation followed by colorimetry                                                                                    | E018      |
| Soil   | D           | Sulphur - Total                                                                                                                                 | Determination of total sulphur by extraction with aqua-regia followed by ICP-OES                                                                     | E024      |
| Soil   | AR          | SVOC                                                                                                                                            | Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS                                               | E006      |
| Soil   | AR          | Thiocyanate (as SCN)                                                                                                                            | Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry  | E017      |
| Soil   | D           | Toluene Extractable Matter (TEM)                                                                                                                | Gravimetrically determined through extraction with toluene                                                                                           | E011      |
| Soil   | D           | Total Organic Carbon (TOC)                                                                                                                      | Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate                                 | E010      |
| Soil   | AR          | TPH CWG (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)          | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS       | E004      |
| Soil   | AR          | TPH LQM (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44) | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS       | E004      |
| Soil   | AR          | VOCs                                                                                                                                            | Determination of volatile organic compounds by headspace GC-MS                                                                                       | E001      |
| Soil   | AR          | VPH (C6-C8 & C8-C10)                                                                                                                            | Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID                                                                            | E001      |

**D Dried**

**AR As Received**



**DETS Ltd**  
**Unit 1, Rose Lane Industrial Estate**  
**Rose Lane**  
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**Kent ME17 2JN**  
**Tel : 01622 850410**



# **Water Analysis Certificate - Methodology & Miscellaneous Information**

**DETS Report No: 23-13203**

**Wilson Bailey Geotechnical & Environmental Ltd**

**Site Reference: Knowle Hill Allbrook Eastleigh**

**Project / Job Ref: DB**

**Order No: None Supplied**

**Reporting Date: 31/10/2023**

| Matrix   | Analysed On | Determinand                                                                                                                                     | Brief Method Description                                                                                                                    | Method No |
|----------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Water    | UF          | Alkalinity                                                                                                                                      | Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point                                 | E103      |
| Water    | F           | Ammoniacal Nitrogen                                                                                                                             | Determination of ammoniacal nitrogen by discrete analyser.                                                                                  | E126      |
| Water    | UF          | BTEX                                                                                                                                            | Determination of BTEX by headspace GC-MS                                                                                                    | E101      |
| Water    | F           | Cations                                                                                                                                         | Determination of cations by filtration followed by ICP-MS                                                                                   | E102      |
| Water    | UF          | Chemical Oxygen Demand (COD)                                                                                                                    | Determination using a COD reactor followed by colorimetry                                                                                   | E112      |
| Water    | F           | Chloride                                                                                                                                        | Determination of chloride by filtration & analysed by ion chromatography                                                                    | E109      |
| Water    | F           | Chromium - Hexavalent                                                                                                                           | Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by                                        | E116      |
| Water    | UF          | Cyanide - Complex                                                                                                                               | Determination of complex cyanide by distillation followed by colorimetry                                                                    | E115      |
| Water    | UF          | Cyanide - Free                                                                                                                                  | Determination of free cyanide by distillation followed by colorimetry                                                                       | E115      |
| Water    | UF          | Cyanide - Total                                                                                                                                 | Determination of total cyanide by distillation followed by colorimetry                                                                      | E115      |
| Water    | UF          | Cyclohexane Extractable Matter (CEM)                                                                                                            | Gravimetrically determined through liquid:liquid extraction with cyclohexane                                                                | E111      |
| Water    | F           | Diesel Range Organics (C10 - C24)                                                                                                               | Determination of liquid:liquid extraction with hexane followed by GC-FID                                                                    | E104      |
| Water    | F           | Dissolved Organic Content (DOC)                                                                                                                 | Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection                                  | E110      |
| Water    | UF          | Electrical Conductivity                                                                                                                         | Determination of electrical conductivity by electrometric measurement                                                                       | E123      |
| Water    | F           | EPH (C10 - C40)                                                                                                                                 | Determination of liquid:liquid extraction with hexane followed by GC-FID                                                                    | E104      |
| Water    | F           | EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)                                                                                   | Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS                         | E104      |
| Water    | F           | Fluoride                                                                                                                                        | Determination of Fluoride by filtration & analysed by ion chromatography                                                                    | E109      |
| Water    | F           | Hardness                                                                                                                                        | Determination of Ca and Mg by ICP-MS followed by calculation                                                                                | E102      |
| Leachate | F           | Leachate Preparation - NRA                                                                                                                      | Based on National Rivers Authority leaching test 1994                                                                                       | E301      |
| Leachate | F           | Leachate Preparation - WAC                                                                                                                      | Based on BS EN 12457 Pt1, 2, 3                                                                                                              | E302      |
| Water    | F           | Metals                                                                                                                                          | Determination of metals by filtration followed by ICP-MS                                                                                    | E102      |
| Water    | F           | Mineral Oil (C10 - C40)                                                                                                                         | Determination of liquid:liquid extraction with hexane followed by GC-FID                                                                    | E104      |
| Water    | F           | Nitrate                                                                                                                                         | Determination of nitrate by filtration & analysed by ion chromatography                                                                     | E109      |
| Water    | UF          | Monohydric Phenol                                                                                                                               | Determination of phenols by distillation followed by colorimetry                                                                            | E121      |
| Water    | F           | PAH - Speciated (EPA 16)                                                                                                                        | Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS                      | E105      |
| Water    | F           | PCB - 7 Congeners                                                                                                                               | Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS                      | E108      |
| Water    | UF          | Petroleum Ether Extract (PEE)                                                                                                                   | Gravimetrically determined through liquid:liquid extraction with petroleum ether                                                            | E111      |
| Water    | UF          | pH                                                                                                                                              | Determination of pH by electrometric measurement                                                                                            | E107      |
| Water    | F           | Phosphate                                                                                                                                       | Determination of phosphate by filtration & analysed by ion chromatography                                                                   | E109      |
| Water    | UF          | Redox Potential                                                                                                                                 | Determination of redox potential by electrometric measurement                                                                               | E113      |
| Water    | F           | Sulphate (as SO4)                                                                                                                               | Determination of sulphate by filtration & analysed by ion chromatography                                                                    | E109      |
| Water    | UF          | Sulphide                                                                                                                                        | Determination of sulphide by distillation followed by colorimetry                                                                           | E118      |
| Water    | F           | SVOC                                                                                                                                            | Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS    | E106      |
| Water    | UF          | Toluene Extractable Matter (TEM)                                                                                                                | Gravimetrically determined through liquid:liquid extraction with toluene                                                                    | E111      |
| Water    | UF          | Total Organic Carbon (TOC)                                                                                                                      | Low heat with persulphate addition followed by IR detection                                                                                 | E110      |
| Water    | F           | TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)          | Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS | E104      |
| Water    | F           | TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44) | Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS | E104      |
| Water    | UF          | VOCs                                                                                                                                            | Determination of volatile organic compounds by headspace GC-MS                                                                              | E101      |
| Water    | UF          | VPH (C6-C8 & C8-C10)                                                                                                                            | Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID                                                                   | E101      |

**Key**

**F Filtered**  
**UF Unfiltered**

| Parameter                    | Matrix Type | Suite Reference | Expanded Uncertainty Measurement | Unit  |
|------------------------------|-------------|-----------------|----------------------------------|-------|
| TOC                          | Soil        | BS EN 12457     | 10.4                             | %     |
| Loss on Ignition             | Soil        | BS EN 12457     | 16.9                             | %     |
| BTEX                         | Soil        | BS EN 12457     | 14.0                             | %     |
| Sum of PCBs                  | Soil        | BS EN 12457     | 21.1                             | %     |
| Mineral Oil                  | Soil        | BS EN 12457     | 9.0                              | %     |
| Total PAH                    | Soil        | BS EN 12457     | 17.9                             | %     |
| pH                           | Soil        | BS EN 12457     | 0.282                            | Units |
| Acid Neutralisation Capacity | Soil        | BS EN 12457     | 18.0                             | %     |
| Arsenic                      | Leachate    | BS EN 12457     | 19.5                             | %     |
| Barium                       | Leachate    | BS EN 12457     | 12.2                             | %     |
| Cadmium                      | Leachate    | BS EN 12457     | 17.2                             | %     |
| Chromium                     | Leachate    | BS EN 12457     | 20.7                             | %     |
| Copper                       | Leachate    | BS EN 12457     | 14.1                             | %     |
| Mercury                      | Leachate    | BS EN 12457     | 16.7                             | %     |
| Molybdenum                   | Leachate    | BS EN 12457     | 13.3                             | %     |
| Nickel                       | Leachate    | BS EN 12457     | 14.0                             | %     |
| Lead                         | Leachate    | BS EN 12457     | 12.1                             | %     |
| Antimony                     | Leachate    | BS EN 12457     | 16.1                             | %     |
| Selenium                     | Leachate    | BS EN 12457     | 15.5                             | %     |
| Zinc                         | Leachate    | BS EN 12457     | 14.0                             | %     |
| Chloride                     | Leachate    | BS EN 12457     | 15.7                             | %     |
| Fluoride                     | Leachate    | BS EN 12457     | 19.1                             | %     |
| Sulphate                     | Leachate    | BS EN 12457     | 27.6                             | %     |
| TDS                          | Leachate    | BS EN 12457     | 10.0                             | %     |
| Phenol Index                 | Leachate    | BS EN 12457     | 12.9                             | %     |
| DOC                          | Leachate    | BS EN 12457     | 20.4                             | %     |
| Clay Content                 | Soil        | BS 3882: 2015   | 15.0                             | %     |
| Silt Content                 | Soil        | BS 3882: 2015   | 14.0                             | %     |
| Sand Content                 | Soil        | BS 3882: 2015   | 13.0                             | %     |
| Loss on Ignition             | Soil        | BS 3882: 2015   | 16.9                             | %     |
| pH                           | Soil        | BS 3882: 2015   | 0.282                            | Units |
| Carbonate                    | Soil        | BS 3882: 2015   | 12.0                             | %     |
| Total Nitrogen               | Soil        | BS 3882: 2015   | 12.0                             | %     |
| Phosphorus (Extractable)     | Soil        | BS 3882: 2015   | 24.0                             | %     |
| Potassium (Extractable)      | Soil        | BS 3882: 2015   | 20.0                             | %     |
| Magnesium (Extractable)      | Soil        | BS 3882: 2015   | 26.0                             | %     |
| Zinc                         | Soil        | BS 3882: 2015   | 19.8                             | %     |
| Copper                       | Soil        | BS 3882: 2015   | 23.2                             | %     |
| Nickel                       | Soil        | BS 3882: 2015   | 32.6                             | %     |
| Available Sodium             | Soil        | BS 3882: 2015   | 23.0                             | %     |
| Available Calcium            | Soil        | BS 3882: 2015   | 23.0                             | %     |
| Electrical Conductivity      | Soil        | BS 3882: 2015   | 10.0                             | %     |



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## **DETS Report No: 23-13204**

**Site Reference:** Knowle Hill Allbrook Eastleigh  
**Project / Job Ref:** DB  
**Order No:** None Supplied  
**Sample Receipt Date:** 24/10/2023  
**Sample Scheduled Date:** 24/10/2023  
**Report Issue Number:** 1  
**Reporting Date:** 01/11/2023

**Authorised by:**

Steve Knight  
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

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

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.



**DETS Ltd**  
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| BS3882 Topsoil Suite                                                                                                                                                                                            |                |                 |               |                                                      |            |               |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|---------------|------------------------------------------------------|------------|---------------|------------|
| DETS Report No: 23-13204                                                                                                                                                                                        |                | Date Sampled    | None Supplied | Compliance with Range                                |            |               |            |
| Wilson Bailey Geotechnical & Environmental Ltd                                                                                                                                                                  |                | Time Sampled    | None Supplied | Multipurpose                                         | Acidic     | Low Fertility | Calcareous |
| Site Reference: Knowle Hill Allbrook Eastleigh                                                                                                                                                                  |                | TP / BH No      | Topsoil TS    |                                                      |            |               |            |
| Project / Job Ref: DB                                                                                                                                                                                           |                | Additional Refs | None Supplied |                                                      |            |               |            |
| Order No: None Supplied                                                                                                                                                                                         |                | Depth (m)       | GL - 0.25     |                                                      |            |               |            |
| Reporting Date: 01/11/2023                                                                                                                                                                                      |                | DETS Sample No  | 681944        |                                                      |            |               |            |
| Determinand                                                                                                                                                                                                     | Reporting Unit | RL              |               |                                                      |            |               |            |
| Soil Texture                                                                                                                                                                                                    |                |                 |               |                                                      |            |               |            |
| Clay Content <sup>(S)</sup>                                                                                                                                                                                     | %              | N/a             | 25.6          | 5 - 35                                               |            |               |            |
| Silt Content <sup>(S)</sup>                                                                                                                                                                                     | %              | N/a             | 40.7          | 0 - 65                                               |            |               |            |
| Sand Content <sup>(S)</sup>                                                                                                                                                                                     | %              | N/a             | 33.7          | 30 - 85                                              |            |               |            |
| Textural Class <sup>(S)</sup>                                                                                                                                                                                   | N/a            | N/a             | Clay Loam     | -                                                    |            |               |            |
| Loss on Ignition                                                                                                                                                                                                | %              | < 0.01          | 5.20          | Clay Content 5 - 20%                                 |            |               |            |
|                                                                                                                                                                                                                 |                |                 |               | 3 - 20                                               | 3 - 30     | 2 - 20        | 3 - 20     |
|                                                                                                                                                                                                                 |                |                 |               | Clay Content 20 - 35%                                |            |               |            |
|                                                                                                                                                                                                                 |                |                 |               | 5 - 20                                               | 5 - 30     | 2 - 20        | 5 - 20     |
| Coarse Fragment Content                                                                                                                                                                                         |                |                 |               |                                                      |            |               |            |
| >2mm <sup>(S)</sup>                                                                                                                                                                                             | %              | N/a             | 14.0          | 0 - 30                                               | 0 - 30     | 0 - 30        | 0 - 30     |
| >20mm <sup>(S)</sup>                                                                                                                                                                                            | %              | N/a             | 2.0           | 0 - 10                                               | 0 - 10     | 0 - 10        | 0 - 10     |
| >50mm <sup>(S)</sup>                                                                                                                                                                                            | %              | N/a             | 0.0           | 0                                                    | 0          | 0             | 0          |
| pH <sup>MU</sup>                                                                                                                                                                                                | pH Units       | N/a             | 6.3           | 5.5 - 8.5                                            | 3.5 - 5.5  | 3.5 - 9.0     | 7.5 - 9.0  |
| Carbonate                                                                                                                                                                                                       | %              | < 1.4           | < 1.4         |                                                      |            |               | > 1        |
| Available Plant Nutrients                                                                                                                                                                                       |                |                 |               |                                                      |            |               |            |
| Total Nitrogen <sup>(S)</sup>                                                                                                                                                                                   | %              | < 0.01          | 0.55          | ≥ 0.15                                               | ≥ 0.15     |               | ≥ 0.15     |
| Phosphorus (Extractable) <sup>(S)</sup>                                                                                                                                                                         | mg/l           | < 3             | < 3           | 16 - 140                                             | 16 - 140   | ≤ 15          | 16 - 140   |
| Potassium (Extractable) <sup>(S)</sup>                                                                                                                                                                          | mg/l           | < 20            | 51            | 121 - 1500                                           | 121 - 1500 |               | 121 - 1500 |
| Magnesium (Extractable) <sup>(S)</sup>                                                                                                                                                                          | mg/l           | < 1             | 170           | 51 - 600                                             | 51 - 600   |               | 51 - 600   |
| Carbon / Nitrogen Ratio <sup>(S)</sup>                                                                                                                                                                          | :1             | < 0.1           | 5.3           | < 20 : 1                                             | < 20 : 1   | < 20 : 1      | < 20 : 1   |
| Exchangeable Sodium <sup>(S)</sup>                                                                                                                                                                              | %              | < 0.1           | < 0.1         |                                                      |            |               |            |
| Phytotoxic Elements (by soil pH)                                                                                                                                                                                |                |                 |               | Multipurpose & Specific Purpose Topsoils at pH range |            |               |            |
|                                                                                                                                                                                                                 |                |                 |               | < 6.0                                                | 6.0 - 7.0  |               | > 7.0      |
| Zinc <sup>MU</sup>                                                                                                                                                                                              | mg/kg          | < 3             | 47            | < 200                                                | < 200      |               | < 300      |
| Copper <sup>MU</sup>                                                                                                                                                                                            | mg/kg          | < 4             | 12            | < 100                                                | < 135      |               | < 200      |
| Nickel <sup>MU</sup>                                                                                                                                                                                            | mg/kg          | < 3             | 10            | < 60                                                 | < 75       |               | < 110      |
| Visible Contaminants (Air Dried Soil)                                                                                                                                                                           |                |                 |               |                                                      |            |               |            |
| >2mm                                                                                                                                                                                                            | %              | N/a             | 0.0           | < 0.5                                                |            |               |            |
| Plastics                                                                                                                                                                                                        | %              | N/a             | 0.00          | < 0.25                                               |            |               |            |
| Sharps                                                                                                                                                                                                          | %              | N/a             | 0.0           | 0                                                    |            |               |            |
| Additional Analytes                                                                                                                                                                                             |                |                 |               |                                                      |            |               |            |
| Available Sodium <sup>(S)</sup>                                                                                                                                                                                 | mg/l           | < 1             | 110           |                                                      |            |               |            |
| Available Calcium <sup>(S)</sup>                                                                                                                                                                                | mg/l           | < 1             | 2000          |                                                      |            |               |            |
| Electrical Conductivity                                                                                                                                                                                         | uS/cm          | < 5             | 2100          | 3300                                                 |            |               |            |
| OVERALL COMPLIANCY                                                                                                                                                                                              |                |                 |               | N                                                    | N          | Y             | N          |
| Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion |                |                 |               |                                                      |            |               |            |
| Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation                                                                                      |                |                 |               |                                                      |            |               |            |
| M Denotes MCERTS accredited test                                                                                                                                                                                |                |                 |               |                                                      |            |               |            |
| U Denotes ISO17025 accredited test                                                                                                                                                                              |                |                 |               |                                                      |            |               |            |
| Subcontracted analysis <sup>(S)</sup>                                                                                                                                                                           |                |                 |               |                                                      |            |               |            |



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#### Soil Analysis Certificate - Sample Descriptions

|                                                |  |
|------------------------------------------------|--|
| DETS Report No: 23-13204                       |  |
| Wilson Bailey Geotechnical & Environmental Ltd |  |
| Site Reference: Knowle Hill Allbrook Eastleigh |  |
| Project / Job Ref: DB                          |  |
| Order No: None Supplied                        |  |
| Reporting Date: 01/11/2023                     |  |

| DETS Sample No | TP / BH No | Additional Refs | Depth (m) | Moisture Content (%) | Sample Matrix Description |
|----------------|------------|-----------------|-----------|----------------------|---------------------------|
| ^ 681944       | Topsoil TS | None Supplied   | GL - 0.25 | 17.1                 | Brown sandy clay          |

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample <sup>1/s</sup>

Unsuitable Sample <sup>u/s</sup>

^ no sampling date provided; unable to confirm if samples are within acceptable holding times



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# **Soil Analysis Certificate - Methodology & Miscellaneous Information**

**DETS Report No: 23-13204**

**Wilson Bailey Geotechnical & Environmental Ltd**

**Site Reference: Knowle Hill Allbrook Eastleigh**

**Project / Job Ref: DB**

**Order No: None Supplied**

**Reporting Date: 01/11/2023**

| Matrix | Analysed On | Determinand                                                                                                                                     | Brief Method Description                                                                                                                             | Method No |
|--------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Soil   | D           | Boron - Water Soluble                                                                                                                           | Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES                                                            | E012      |
| Soil   | AR          | BTEX                                                                                                                                            | Determination of BTEX by headspace GC-MS                                                                                                             | E001      |
| Soil   | D           | Cations                                                                                                                                         | Determination of cations in soil by aqua-regia digestion followed by ICP-OES                                                                         | E002      |
| Soil   | D           | Chloride - Water Soluble (2:1)                                                                                                                  | Determination of chloride by extraction with water & analysed by ion chromatography                                                                  | E009      |
| Soil   | AR          | Chromium - Hexavalent                                                                                                                           | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazide followed by colorimetry | E016      |
| Soil   | AR          | Cyanide - Complex                                                                                                                               | Determination of complex cyanide by distillation followed by colorimetry                                                                             | E015      |
| Soil   | AR          | Cyanide - Free                                                                                                                                  | Determination of free cyanide by distillation followed by colorimetry                                                                                | E015      |
| Soil   | AR          | Cyanide - Total                                                                                                                                 | Determination of total cyanide by distillation followed by colorimetry                                                                               | E015      |
| Soil   | D           | Cyclohexane Extractable Matter (CEM)                                                                                                            | Gravimetrically determined through extraction with cyclohexane                                                                                       | E011      |
| Soil   | AR          | Diesel Range Organics (C10 - C24)                                                                                                               | Determination of hexane/acetone extractable hydrocarbons by GC-FID                                                                                   | E004      |
| Soil   | AR          | Electrical Conductivity                                                                                                                         | Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement                             | E022      |
| Soil   | AR          | Electrical Conductivity                                                                                                                         | Determination of electrical conductivity by addition of water followed by electrometric measurement                                                  | E023      |
| Soil   | D           | Elemental Sulphur                                                                                                                               | Determination of elemental sulphur by solvent extraction followed by GC-MS                                                                           | E020      |
| Soil   | AR          | EPH (C10 - C40)                                                                                                                                 | Determination of acetone/hexane extractable hydrocarbons by GC-FID                                                                                   | E004      |
| Soil   | AR          | EPH Product ID                                                                                                                                  | Determination of acetone/hexane extractable hydrocarbons by GC-FID                                                                                   | E004      |
| Soil   | AR          | EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)                                                                                   | Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS                                        | E004      |
| Soil   | D           | Fluoride - Water Soluble                                                                                                                        | Determination of Fluoride by extraction with water & analysed by ion chromatography                                                                  | E009      |
| Soil   | D           | Fraction Organic Carbon (FOC)                                                                                                                   | Determination of TOC by combustion analyser.                                                                                                         | E027      |
| Soil   | D           | Organic Matter (SOM)                                                                                                                            | Determination of TOC by combustion analyser.                                                                                                         | E027      |
| Soil   | D           | TOC (Total Organic Carbon)                                                                                                                      | Determination of TOC by combustion analyser.                                                                                                         | E027      |
| Soil   | AR          | Exchangeable Ammonium                                                                                                                           | Determination of ammonium by discrete analyser.                                                                                                      | E029      |
| Soil   | D           | FOC (Fraction Organic Carbon)                                                                                                                   | Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate                     | E010      |
| Soil   | D           | Loss on Ignition @ 450°C                                                                                                                        | Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace                                       | E019      |
| Soil   | D           | Magnesium - Water Soluble                                                                                                                       | Determination of water soluble magnesium by extraction with water followed by ICP-OES                                                                | E025      |
| Soil   | D           | Metals                                                                                                                                          | Determination of metals by aqua-regia digestion followed by ICP-OES                                                                                  | E002      |
| Soil   | AR          | Mineral Oil (C10 - C40)                                                                                                                         | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge                                                  | E004      |
| Soil   | AR          | Moisture Content                                                                                                                                | Moisture content; determined gravimetrically                                                                                                         | E003      |
| Soil   | D           | Nitrate - Water Soluble (2:1)                                                                                                                   | Determination of nitrate by extraction with water & analysed by ion chromatography                                                                   | E009      |
| Soil   | D           | Organic Matter                                                                                                                                  | Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate                                 | E010      |
| Soil   | AR          | PAH - Speciated (EPA 16)                                                                                                                        | Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards                | E005      |
| Soil   | AR          | PCB - 7 Congeners                                                                                                                               | Determination of PCB by extraction with acetone and hexane followed by GC-MS                                                                         | E008      |
| Soil   | D           | Petroleum Ether Extract (PEE)                                                                                                                   | Gravimetrically determined through extraction with petroleum ether                                                                                   | E011      |
| Soil   | AR          | pH                                                                                                                                              | Determination of pH by addition of water followed by electrometric measurement                                                                       | E007      |
| Soil   | AR          | Phenols - Total (monohydric)                                                                                                                    | Determination of phenols by distillation followed by colorimetry                                                                                     | E021      |
| Soil   | D           | Phosphate - Water Soluble (2:1)                                                                                                                 | Determination of phosphate by extraction with water & analysed by ion chromatography                                                                 | E009      |
| Soil   | D           | Sulphate (as SO4) - Total                                                                                                                       | Determination of total sulphate by extraction with 10% HCl followed by ICP-OES                                                                       | E013      |
| Soil   | D           | Sulphate (as SO4) - Water Soluble (2:1)                                                                                                         | Determination of sulphate by extraction with water & analysed by ion chromatography                                                                  | E009      |
| Soil   | D           | Sulphate (as SO4) - Water Soluble (2:1)                                                                                                         | Determination of water soluble sulphate by extraction with water followed by ICP-OES                                                                 | E014      |
| Soil   | AR          | Sulphide                                                                                                                                        | Determination of sulphide by distillation followed by colorimetry                                                                                    | E018      |
| Soil   | D           | Sulphur - Total                                                                                                                                 | Determination of total sulphur by extraction with aqua-regia followed by ICP-OES                                                                     | E024      |
| Soil   | AR          | SVOC                                                                                                                                            | Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS                                               | E006      |
| Soil   | AR          | Thiocyanate (as SCN)                                                                                                                            | Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry  | E017      |
| Soil   | D           | Toluene Extractable Matter (TEM)                                                                                                                | Gravimetrically determined through extraction with toluene                                                                                           | E011      |
| Soil   | D           | Total Organic Carbon (TOC)                                                                                                                      | Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate                                 | E010      |
| Soil   | AR          | TPH CWG (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)          | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS       | E004      |
| Soil   | AR          | TPH LQM (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44) | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS       | E004      |
| Soil   | AR          | VOCs                                                                                                                                            | Determination of volatile organic compounds by headspace GC-MS                                                                                       | E001      |
| Soil   | AR          | VPH (C6-C8 & C8-C10)                                                                                                                            | Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID                                                                            | E001      |

**D Dried**

**AR As Received**

| Parameter                    | Matrix Type | Suite Reference | Expanded Uncertainty Measurement | Unit  |
|------------------------------|-------------|-----------------|----------------------------------|-------|
| TOC                          | Soil        | BS EN 12457     | 10.4                             | %     |
| Loss on Ignition             | Soil        | BS EN 12457     | 16.9                             | %     |
| BTEX                         | Soil        | BS EN 12457     | 14.0                             | %     |
| Sum of PCBs                  | Soil        | BS EN 12457     | 21.1                             | %     |
| Mineral Oil                  | Soil        | BS EN 12457     | 9.0                              | %     |
| Total PAH                    | Soil        | BS EN 12457     | 17.9                             | %     |
| pH                           | Soil        | BS EN 12457     | 0.282                            | Units |
| Acid Neutralisation Capacity | Soil        | BS EN 12457     | 18.0                             | %     |
| Arsenic                      | Leachate    | BS EN 12457     | 19.5                             | %     |
| Barium                       | Leachate    | BS EN 12457     | 12.2                             | %     |
| Cadmium                      | Leachate    | BS EN 12457     | 17.2                             | %     |
| Chromium                     | Leachate    | BS EN 12457     | 20.7                             | %     |
| Copper                       | Leachate    | BS EN 12457     | 14.1                             | %     |
| Mercury                      | Leachate    | BS EN 12457     | 16.7                             | %     |
| Molybdenum                   | Leachate    | BS EN 12457     | 13.3                             | %     |
| Nickel                       | Leachate    | BS EN 12457     | 14.0                             | %     |
| Lead                         | Leachate    | BS EN 12457     | 12.1                             | %     |
| Antimony                     | Leachate    | BS EN 12457     | 16.1                             | %     |
| Selenium                     | Leachate    | BS EN 12457     | 15.5                             | %     |
| Zinc                         | Leachate    | BS EN 12457     | 14.0                             | %     |
| Chloride                     | Leachate    | BS EN 12457     | 15.7                             | %     |
| Fluoride                     | Leachate    | BS EN 12457     | 19.1                             | %     |
| Sulphate                     | Leachate    | BS EN 12457     | 27.6                             | %     |
| TDS                          | Leachate    | BS EN 12457     | 10.0                             | %     |
| Phenol Index                 | Leachate    | BS EN 12457     | 12.9                             | %     |
| DOC                          | Leachate    | BS EN 12457     | 20.4                             | %     |
| Clay Content                 | Soil        | BS 3882: 2015   | 15.0                             | %     |
| Silt Content                 | Soil        | BS 3882: 2015   | 14.0                             | %     |
| Sand Content                 | Soil        | BS 3882: 2015   | 13.0                             | %     |
| Loss on Ignition             | Soil        | BS 3882: 2015   | 16.9                             | %     |
| pH                           | Soil        | BS 3882: 2015   | 0.282                            | Units |
| Carbonate                    | Soil        | BS 3882: 2015   | 12.0                             | %     |
| Total Nitrogen               | Soil        | BS 3882: 2015   | 12.0                             | %     |
| Phosphorus (Extractable)     | Soil        | BS 3882: 2015   | 24.0                             | %     |
| Potassium (Extractable)      | Soil        | BS 3882: 2015   | 20.0                             | %     |
| Magnesium (Extractable)      | Soil        | BS 3882: 2015   | 26.0                             | %     |
| Zinc                         | Soil        | BS 3882: 2015   | 19.8                             | %     |
| Copper                       | Soil        | BS 3882: 2015   | 23.2                             | %     |
| Nickel                       | Soil        | BS 3882: 2015   | 32.6                             | %     |
| Available Sodium             | Soil        | BS 3882: 2015   | 23.0                             | %     |
| Available Calcium            | Soil        | BS 3882: 2015   | 23.0                             | %     |
| Electrical Conductivity      | Soil        | BS 3882: 2015   | 10.0                             | %     |

## Certificate of Analysis

*Certificate Number* 25-29977

*Issued:* 13-Jan-26

*Client* Wilson Bailey Geotechnical & Environmental Ltd  
Northdown Farmhouse  
Donhead St Mary  
Wiltshire  
SP7 9DD

*Our Reference* 25-29977

*Client Reference* ~ (not supplied)

*Order No* ~ (not supplied)

*Contract Title* ~ Allbrook Knowle Hill

*Description* 6 Soil samples.

*Date Received* 22-Dec-25

*Date Started* 22-Dec-25

*Date Completed* 13-Jan-26

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

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

*Approved By*



Louise Cook  
Contracts Manager



Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY  
Tel: 01207 582333 • email: [info-dets@normecgroup.com](mailto:info-dets@normecgroup.com) • [normecdets.com](http://normecdets.com)

## Summary of Chemical Analysis

### Matrix Descriptions

*Our Ref* 25-29977

*Client Ref* ~

*Contract Title* ~ Allbrook Knowle Hill

| Sample ID | Depth     | Lab No  | Completed  | Matrix Description         |
|-----------|-----------|---------|------------|----------------------------|
| HJP1      | 0.25-0.50 | 2620076 | 13/01/2026 | Brown sandy CLAY           |
| HP2       | 0.25-0.50 | 2620077 | 13/01/2026 | Brown gravelly, sandy CLAY |
| HP3       | 0.25-0.50 | 2620078 | 13/01/2026 | Brown sandy CLAY           |
| HP4       | 0.25-0.50 | 2620079 | 13/01/2026 | Brown sandy CLAY           |
| HP5       | 0.25-0.50 | 2620080 | 13/01/2026 | Brown sandy CLAY           |
| HP6       | 0.25-0.50 | 2620081 | 13/01/2026 | Brown sandy CLAY           |

# Summary of Chemical Analysis

## Soil Samples

Our Ref 25-29977

Client Ref ~

Contract Title ~ Allbrook Knowle Hill

| Lab No          | 2620076   | 2620077   | 2620078   | 2620079   | 2620080   | 2620081   |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sample ID ~     | HJP1      | HP2       | HP3       | HP4       | HP5       | HP6       |
| Depth ~         | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 |
| Other ID ~      |           |           |           |           |           |           |
| Sample Type ~   | SOIL      | SOIL      | SOIL      | SOIL      | SOIL      | SOIL      |
| Sampling Date ~ | n/s       | n/s       | n/s       | n/s       | n/s       | n/s       |
| Sampling Time ~ | n/s       | n/s       | n/s       | n/s       | n/s       | n/s       |

| Test                             | Method      | LOD  | Units |         |         |         |         |         |         |
|----------------------------------|-------------|------|-------|---------|---------|---------|---------|---------|---------|
| <b>Preparation</b>               |             |      |       |         |         |         |         |         |         |
| Moisture Content                 | DETSC 1004  | 0.1  | %     | 21      | 22      | 23      | 22      | 23      | 28      |
| <b>Metals</b>                    |             |      |       |         |         |         |         |         |         |
| Arsenic                          | DETSC 2301# | 0.2  | mg/kg | 11      | 8.5     | 5.9     | 12      | 8.9     | 5.4     |
| Boron, Water Soluble (2.5:1)     | DETSC 2311# | 0.2  | mg/kg | 0.3     | 0.4     | 0.5     | 0.3     | 0.4     | 0.8     |
| Cadmium                          | DETSC 2301# | 0.1  | mg/kg | 0.2     | 0.2     | 1.1     | < 0.1   | 0.2     | 1.1     |
| Chromium                         | DETSC 2301# | 0.15 | mg/kg | 37      | 37      | 26      | 45      | 38      | 22      |
| Chromium, Hexavalent             | DETSC 2204* | 1    | mg/kg | < 1.0   | < 1.0   | < 1.0   | < 1.0   | < 1.0   | < 1.0   |
| Copper                           | DETSC 2301# | 0.2  | mg/kg | 21      | 25      | 11      | 19      | 24      | 12      |
| Lead                             | DETSC 2301# | 0.3  | mg/kg | 14      | 14      | 17      | 14      | 13      | 16      |
| Mercury                          | DETSC 2325# | 0.05 | mg/kg | < 0.05  | < 0.05  | < 0.05  | < 0.05  | < 0.05  | < 0.05  |
| Nickel                           | DETSC 2301# | 1    | mg/kg | 30      | 34      | 25      | 23      | 33      | 21      |
| Selenium                         | DETSC 2301# | 0.5  | mg/kg | < 0.5   | < 0.5   | < 0.5   | < 0.5   | < 0.5   | < 0.5   |
| Zinc                             | DETSC 2301# | 1    | mg/kg | 68      | 70      | 76      | 62      | 71      | 75      |
| <b>Inorganics</b>                |             |      |       |         |         |         |         |         |         |
| pH                               | DETSC 2008# |      | pH    | 8.1     | 8.3     | 8.4     | 8.0     | 8.3     | 8.5     |
| Total Organic Carbon             | DETSC 2084# | 0.5  | %     | 0.9     | 0.7     | 3.0     | < 0.5   | 0.7     | 3.0     |
| <b>Petroleum Hydrocarbons</b>    |             |      |       |         |         |         |         |         |         |
| Aliphatic C5-C6                  | DETSC 3321* | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Aliphatic C6-C8                  | DETSC 3321* | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Aliphatic C8-C10                 | DETSC 3321* | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Aliphatic >EC10-EC12 Cleanup     | DETSC 3521* | 1.5  | mg/kg | < 1.50  | < 1.50  | < 1.50  | < 1.50  | < 1.50  | < 1.50  |
| Aliphatic >EC12-EC16 Cleanup     | DETSC 3521* | 1.2  | mg/kg | < 1.20  | < 1.20  | < 1.20  | < 1.20  | < 1.20  | < 1.20  |
| Aliphatic >EC16-EC21 Cleanup     | DETSC 3521* | 1.5  | mg/kg | < 1.50  | < 1.50  | < 1.50  | < 1.50  | < 1.50  | < 1.50  |
| Aliphatic >EC21-EC35 Cleanup     | DETSC 3521* | 3.4  | mg/kg | 31.06   | < 3.40  | < 3.40  | < 3.40  | < 3.40  | < 3.40  |
| Aliphatic C5-C35 Cleanup         | DETSC 3521* | 10   | mg/kg | 31.06   | < 10.00 | < 10.00 | < 10.00 | < 10.00 | < 10.00 |
| Aromatic C5-C7                   | DETSC 3321* | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Aromatic C7-C8                   | DETSC 3321* | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Aromatic C8-C10                  | DETSC 3321* | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Aromatic >EC10-EC12 Cleanup      | DETSC 3521* | 0.9  | mg/kg | < 0.90  | < 0.90  | < 0.90  | < 0.90  | < 0.90  | < 0.90  |
| Aromatic >EC12-EC16 Cleanup      | DETSC 3521* | 0.5  | mg/kg | < 0.50  | < 0.50  | < 0.50  | < 0.50  | < 0.50  | < 0.50  |
| Aromatic >EC16-EC21 Cleanup      | DETSC 3521* | 0.6  | mg/kg | 2.68    | 0.81    | 0.92    | < 0.60  | 0.79    | < 0.60  |
| Aromatic >EC21-EC35 Cleanup      | DETSC 3521* | 1.4  | mg/kg | 2.44    | < 1.40  | < 1.40  | < 1.40  | 2.93    | 2.45    |
| Aromatic C5-C35 Cleanup          | DETSC 3521* | 10   | mg/kg | < 10.00 | < 10.00 | < 10.00 | < 10.00 | < 10.00 | < 10.00 |
| TPH Ali/Aro Total C5-C35 Cleanup | DETSC 3521* | 10   | mg/kg | 36.17   | < 10.00 | < 10.00 | < 10.00 | < 10.00 | < 10.00 |
| Benzene                          | DETSC 3321# | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Ethylbenzene                     | DETSC 3321# | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| Toluene                          | DETSC 3321# | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| m+p Xylene                       | DETSC 3321# | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| o Xylene                         | DETSC 3321# | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |
| MTBE                             | DETSC 3321  | 0.01 | mg/kg | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  | < 0.01  |

# Summary of Chemical Analysis

## Soil Samples

Our Ref 25-29977

Client Ref ~

Contract Title ~ Allbrook Knowle Hill

|                 |           |           |           |           |           |           |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lab No          | 2620076   | 2620077   | 2620078   | 2620079   | 2620080   | 2620081   |
| Sample ID ~     | HJP1      | HP2       | HP3       | HP4       | HP5       | HP6       |
| Depth ~         | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 | 0.25-0.50 |
| Other ID ~      |           |           |           |           |           |           |
| Sample Type ~   | SOIL      | SOIL      | SOIL      | SOIL      | SOIL      | SOIL      |
| Sampling Date ~ | n/s       | n/s       | n/s       | n/s       | n/s       | n/s       |
| Sampling Time ~ | n/s       | n/s       | n/s       | n/s       | n/s       | n/s       |

| Test                    | Method      | LOD | Units |        |        |        |        |        |        |
|-------------------------|-------------|-----|-------|--------|--------|--------|--------|--------|--------|
| <b>PAHs</b>             |             |     |       |        |        |        |        |        |        |
| Naphthalene             | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Acenaphthylene          | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Acenaphthene            | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Fluorene                | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Phenanthrene            | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Anthracene              | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Fluoranthene            | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Pyrene                  | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Benzo(a)anthracene      | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Chrysene                | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Benzo(b)fluoranthene    | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Benzo(k)fluoranthene    | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Benzo(a)pyrene          | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Dibenzo(a,h)anthracene  | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Benzo(g,h,i)perylene    | DETSC 3301  | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| PAH 16 Total            | DETSC 3301  | 1.6 | mg/kg | < 1.6  | < 1.6  | < 1.6  | < 1.6  | < 1.6  | < 1.6  |
| <b>Phenols</b>          |             |     |       |        |        |        |        |        |        |
| Phenol - Monohydric     | DETSC 2130# | 0.3 | mg/kg | < 0.3  | < 0.3  | < 0.3  | < 0.3  | < 0.3  | < 0.3  |

## Summary of Asbestos Analysis Soil Samples

Our Ref 25-29977

Client Ref ~

Contract Title ~ Allbrook Knowle Hill

| Lab No  | Sample ID      | Material Type | Result | Comment* | Analyst     |
|---------|----------------|---------------|--------|----------|-------------|
| 2620076 | HJP1 0.25-0.50 | SOIL          | NAD    | none     | D Wilkinson |
| 2620077 | HP2 0.25-0.50  | SOIL          | NAD    | none     | D Wilkinson |
| 2620078 | HP3 0.25-0.50  | SOIL          | NAD    | none     | D Wilkinson |
| 2620079 | HP4 0.25-0.50  | SOIL          | NAD    | none     | D Wilkinson |
| 2620080 | HP5 0.25-0.50  | SOIL          | NAD    | none     | D Wilkinson |
| 2620081 | HP6 0.25-0.50  | SOIL          | NAD    | none     | D Wilkinson |

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

## Information in Support of the Analytical Results

Our Ref 25-29977

Client Ref ~

Contract ~ Allbrook Knowle Hill

### Containers Received & Deviating Samples

| Lab No  | Sample ID ~         | Date Sampled ~ | Containers Received     | Holding time exceeded for tests                                                                                                                                                                                                                                                                                                                                                                         | Incorrect container for tests | Headspace in container for tests |
|---------|---------------------|----------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------|
| 2620076 | HJP1 0.25-0.50 SOIL |                | GJ 250ml ( (Headspace)) | Sample date not supplied, Boron (365 days), BTEX / C5-C10 (14 days), Chromium, Hexavalent (365 days), EPH/Aliphatic/Aromatic + Cleanup (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Kone Cr6 (30 days), Naphthalene (14 days), Organic Matter (Auto) (28 days), PAH FID (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days) |                               | BTEX/C5-10, HS                   |
| 2620077 | HP2 0.25-0.50 SOIL  |                | GJ 250ml ( (Headspace)) | Sample date not supplied, Boron (365 days), BTEX / C5-C10 (14 days), Chromium, Hexavalent (365 days), EPH/Aliphatic/Aromatic + Cleanup (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Kone Cr6 (30 days), Naphthalene (14 days), Organic Matter (Auto) (28 days), PAH FID (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days) |                               | BTEX/C5-10, HS                   |
| 2620078 | HP3 0.25-0.50 SOIL  |                | GJ 250ml ( (Headspace)) | Sample date not supplied, Boron (365 days), BTEX / C5-C10 (14 days), Chromium, Hexavalent (365 days), EPH/Aliphatic/Aromatic + Cleanup (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Kone Cr6 (30 days), Naphthalene (14 days), Organic Matter (Auto) (28 days), PAH FID (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days) |                               | BTEX/C5-10, HS                   |
| 2620079 | HP4 0.25-0.50 SOIL  |                | GJ 250ml ( (Headspace)) | Sample date not supplied, Boron (365 days), BTEX / C5-C10 (14 days), Chromium, Hexavalent (365 days), EPH/Aliphatic/Aromatic + Cleanup (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Kone Cr6 (30 days), Naphthalene (14 days), Organic Matter (Auto) (28 days), PAH FID (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days) |                               | BTEX/C5-10, HS                   |
| 2620080 | HP5 0.25-0.50 SOIL  |                | GJ 250ml ( (Headspace)) | Sample date not supplied, Boron (365 days), BTEX / C5-C10 (14 days), Chromium, Hexavalent (365 days), EPH/Aliphatic/Aromatic + Cleanup (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Kone Cr6 (30 days), Naphthalene (14 days), Organic Matter (Auto) (28 days), PAH FID (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days) |                               | BTEX/C5-10, HS                   |

## Information in Support of the Analytical Results

Our Ref 25-29977

Client Ref ~

Contract ~ Allbrook Knowle Hill

|         |                       |  |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                |
|---------|-----------------------|--|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------|
| 2620081 | HP6 0.25-0.50<br>SOIL |  | GJ 250ml ( (Headspace)) | Sample date not supplied, Boron (365 days),<br>BTEX / C5-C10 (14 days), Chromium,<br>Hexavalent (365 days),<br>EPH/Aliphatic/Aromatic + Cleanup (14 days),<br>Mercury (28 days), ICP WS Boron (182 days),<br>Metals ICP (182 days), Metals ICP Prep (182<br>days), Kone Cr6 (30 days), Naphthalene (14<br>days), Organic Matter (Auto) (28 days), PAH<br>FID (14 days), pH + Conductivity (7 days),<br>Cyanide/Mono pHoh (14 days) |  | BTEX/C5-10, HS |
|---------|-----------------------|--|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------|

Key: G-Glass J-Jar

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

### Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

### Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

## Appendix A - Details of Analysis

| Method    | Parameter                                   | Units    | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|-----------|---------------------------------------------|----------|--------------------|--------------------|----------------|------|--------|
| DETS 2002 | Organic matter                              | %        | 0.1                | Air Dried          | No             | Yes  | Yes    |
| DETS 2003 | Loss on ignition                            | %        | 0.01               | Air Dried          | No             | Yes  | Yes    |
| DETS 2008 | pH                                          | pH Units | 1                  | Air Dried          | No             | Yes  | Yes    |
| DETS 2076 | Sulphate Aqueous Extract as SO <sub>4</sub> | mg/l     | 10                 | Air Dried          | No             | Yes  | Yes    |
| DETS 2084 | Total Organic Carbon                        | %        | 0.5                | Air Dried          | No             | Yes  | Yes    |
| DETS 2119 | Ammoniacal Nitrogen as N                    | mg/kg    | 0.5                | Air Dried          | No             | Yes  | Yes    |
| DETS 2130 | Cyanide free                                | mg/kg    | 0.1                | Air Dried          | No             | Yes  | Yes    |
| DETS 2130 | Cyanide total                               | mg/kg    | 0.1                | Air Dried          | No             | Yes  | Yes    |
| DETS 2130 | Phenol - Monohydric                         | mg/kg    | 0.3                | Air Dried          | No             | Yes  | Yes    |
| DETS 2130 | Thiocyanate                                 | mg/kg    | 0.6                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Arsenic                                     | mg/kg    | 0.2                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Barium                                      | mg/kg    | 1.5                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Beryllium                                   | mg/kg    | 0.2                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Cadmium Available                           | mg/kg    | 0.1                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Cadmium                                     | mg/kg    | 0.1                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Cobalt                                      | mg/kg    | 0.7                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Chromium                                    | mg/kg    | 0.15               | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Copper                                      | mg/kg    | 0.2                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Manganese                                   | mg/kg    | 20                 | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Molybdenum                                  | mg/kg    | 0.4                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Nickel                                      | mg/kg    | 1                  | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Lead                                        | mg/kg    | 0.3                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Selenium                                    | mg/kg    | 0.5                | Air Dried          | No             | Yes  | Yes    |
| DETS 2301 | Zinc                                        | mg/kg    | 1                  | Air Dried          | No             | Yes  | Yes    |
| DETS 2311 | Boron (water soluble)                       | mg/kg    | 0.2                | Air Dried          | No             | Yes  | Yes    |
| DETS 2321 | Total Sulphate as SO <sub>4</sub>           | %        | 0.01               | Air Dried          | No             | Yes  | Yes    |
| DETS 2325 | Mercury                                     | mg/kg    | 0.05               | Air Dried          | No             | Yes  | Yes    |
| DETS 3049 | Sulphur (free)                              | mg/kg    | 0.75               | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Ali/Aro C10-C35                             | mg/kg    | 10                 | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aliphatic C10-C12                           | mg/kg    | 1.5                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aliphatic C10-C35                           | mg/kg    | 10                 | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aliphatic C12-C16                           | mg/kg    | 1.2                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aliphatic C16-C21                           | mg/kg    | 1.5                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aliphatic C21-C35                           | mg/kg    | 3.4                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aromatic C10-C12                            | mg/kg    | 0.9                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aromatic C10-C35                            | mg/kg    | 10                 | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aromatic C12-C16                            | mg/kg    | 0.5                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aromatic C16-C21                            | mg/kg    | 0.6                | As Received        | No             | Yes  | Yes    |
| DETS 3072 | Aromatic C21-C35                            | mg/kg    | 1.4                | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Acenaphthene                                | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Acenaphthylene                              | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Benzo(a)pyrene                              | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Benzo(a)anthracene                          | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Benzo(b)fluoranthene                        | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Benzo(k)fluoranthene                        | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Benzo(g,h,i)perylene                        | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Dibenzo(a,h)anthracene                      | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |
| DETS 3303 | Fluoranthene                                | mg/kg    | 0.03               | As Received        | No             | Yes  | Yes    |

## Appendix A - Details of Analysis

| Method     | Parameter                              | Units | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|------------|----------------------------------------|-------|--------------------|--------------------|----------------|------|--------|
| DETSC 3303 | Indeno(1,2,3-c,d)pyrene                | mg/kg | 0.03               | As Received        | No             | Yes  | Yes    |
| DETSC 3303 | Naphthalene                            | mg/kg | 0.03               | As Received        | No             | Yes  | Yes    |
| DETSC 3303 | Phenanthrene                           | mg/kg | 0.03               | As Received        | No             | Yes  | Yes    |
| DETSC 3303 | Pyrene                                 | mg/kg | 0.03               | As Received        | No             | Yes  | Yes    |
| DETSC 3311 | C10-C24 Diesel Range Organics (DRO)    | mg/kg | 10                 | As Received        | No             | Yes  | Yes    |
| DETSC 3311 | C24-C40 Lube Oil Range Organics (LORO) | mg/kg | 10                 | As Received        | No             | Yes  | Yes    |
| DETSC 3311 | EPH (C10-C40)                          | mg/kg | 10                 | As Received        | No             | Yes  | Yes    |
| DETSC 3321 | Benzene                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3321 | Ethylbenzene                           | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3321 | Toluene                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3321 | Xylene                                 | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3321 | m+p Xylene                             | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3321 | o Xylene                               | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 28 + PCB 31                        | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 52                                 | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 101                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 118                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 153                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 138                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB 180                                | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3401 | PCB Total                              | mg/kg | 0.01               | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Ali/Aro C10-C35                        | mg/kg | 10                 | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aliphatic C10-C12                      | mg/kg | 1.5                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aliphatic C10-C35                      | mg/kg | 10                 | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aliphatic C12-C16                      | mg/kg | 1.2                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aliphatic C16-C21                      | mg/kg | 1.5                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aliphatic C21-C35                      | mg/kg | 3.4                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aromatic C10-C12                       | mg/kg | 0.9                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aromatic C10-C35                       | mg/kg | 10                 | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aromatic C12-C16                       | mg/kg | 0.5                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aromatic C16-C21                       | mg/kg | 0.6                | As Received        | No             | Yes  | Yes    |
| DETSC 3521 | Aromatic C21-C35                       | mg/kg | 1.4                | As Received        | No             | Yes  | Yes    |

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

## Appendix A - Details of Analysis

| Method | Parameter | Units | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|--------|-----------|-------|--------------------|--------------------|----------------|------|--------|
|--------|-----------|-------|--------------------|--------------------|----------------|------|--------|

### Key:

~ Sample details are provided by the client and can affect the validity of the results

\* -not accredited.

# -MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

### End of Report

## Land at Knowle Hill, Allbrook, Eastleigh

### Order Details

**Date:** 26/04/2025  
**Your ref:** Bargate  
**Our Ref:** GS-5RW-IK9-51P-81A

### Site Details

**Location:** 445588 121325  
**Area:** 2.83 ha  
**Authority:** [Eastleigh Borough Council](#) ↗



[Summary of findings](#)

[p.2 >](#) [Aerial image](#)

[p.9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#) [Insight User Guide](#) ↗

Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com) ↗

01273 257 755

## Summary of findings

| Page                    | Section                  | <a href="#">Past land use &gt;</a>                            | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|-------------------------|--------------------------|---------------------------------------------------------------|---------|-------|---------|----------|-----------|
| <a href="#">15 &gt;</a> | <a href="#">1.1 &gt;</a> | <a href="#">Historical industrial land uses &gt;</a>          | 0       | 8     | 33      | 32       | -         |
| <a href="#">18 &gt;</a> | <a href="#">1.2 &gt;</a> | <a href="#">Historical tanks &gt;</a>                         | 0       | 1     | 2       | 0        | -         |
| <a href="#">19 &gt;</a> | <a href="#">1.3 &gt;</a> | <a href="#">Historical energy features &gt;</a>               | 0       | 0     | 3       | 4        | -         |
| 19                      | 1.4                      | Historical petrol stations                                    | 0       | 0     | 0       | 0        | -         |
| 20                      | 1.5                      | Historical garages                                            | 0       | 0     | 0       | 0        | -         |
| 20                      | 1.6                      | Historical military land                                      | 0       | 0     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Past land use - un-grouped &gt;</a>               | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">21 &gt;</a> | <a href="#">2.1 &gt;</a> | <a href="#">Historical industrial land uses &gt;</a>          | 0       | 9     | 38      | 35       | -         |
| <a href="#">25 &gt;</a> | <a href="#">2.2 &gt;</a> | <a href="#">Historical tanks &gt;</a>                         | 0       | 1     | 4       | 0        | -         |
| <a href="#">25 &gt;</a> | <a href="#">2.3 &gt;</a> | <a href="#">Historical energy features &gt;</a>               | 0       | 0     | 5       | 6        | -         |
| 26                      | 2.4                      | Historical petrol stations                                    | 0       | 0     | 0       | 0        | -         |
| 26                      | 2.5                      | Historical garages                                            | 0       | 0     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Waste and landfill &gt;</a>                       | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 27                      | 3.1                      | Active or recent landfill                                     | 0       | 0     | 0       | 0        | -         |
| 27                      | 3.2                      | Historical landfill (BGS records)                             | 0       | 0     | 0       | 0        | -         |
| <a href="#">28 &gt;</a> | <a href="#">3.3 &gt;</a> | <a href="#">Historical landfill (LA/mapping records) &gt;</a> | 0       | 1     | 0       | 0        | -         |
| <a href="#">28 &gt;</a> | <a href="#">3.4 &gt;</a> | <a href="#">Historical landfill (EA/NRW records) &gt;</a>     | 0       | 1     | 0       | 0        | -         |
| 28                      | 3.5                      | Historical waste sites                                        | 0       | 0     | 0       | 0        | -         |
| 29                      | 3.6                      | Licensed waste sites                                          | 0       | 0     | 0       | 0        | -         |
| <a href="#">29 &gt;</a> | <a href="#">3.7 &gt;</a> | <a href="#">Waste exemptions &gt;</a>                         | 0       | 2     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Current industrial land use &gt;</a>              | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">30 &gt;</a> | <a href="#">4.1 &gt;</a> | <a href="#">Recent industrial land uses &gt;</a>              | 0       | 1     | 5       | -        | -         |
| 31                      | 4.2                      | Current or recent petrol stations                             | 0       | 0     | 0       | 0        | -         |
| 31                      | 4.3                      | Electricity cables                                            | 0       | 0     | 0       | 0        | -         |
| 31                      | 4.4                      | Gas pipelines                                                 | 0       | 0     | 0       | 0        | -         |
| 31                      | 4.5                      | Sites determined as Contaminated Land                         | 0       | 0     | 0       | 0        | -         |



| 32             | 4.6              | Control of Major Accident Hazards (COMAH)                     | 0                        | 0     | 0       | 0        | -         |
|----------------|------------------|---------------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 32             | 4.7              | Regulated explosive sites                                     | 0                        | 0     | 0       | 0        | -         |
| 32             | 4.8              | Hazardous substance storage/usage                             | 0                        | 0     | 0       | 0        | -         |
| 32             | 4.9              | Historical licensed industrial activities (IPC)               | 0                        | 0     | 0       | 0        | -         |
| 32             | 4.10             | Licensed industrial activities (Part A(1))                    | 0                        | 0     | 0       | 0        | -         |
| 33             | 4.11             | Licensed pollutant release (Part A(2)/B)                      | 0                        | 0     | 0       | 0        | -         |
| 33             | 4.12             | Radioactive Substance Authorisations                          | 0                        | 0     | 0       | 0        | -         |
| <b>33 &gt;</b> | <b>4.13 &gt;</b> | <b><u>Licensed Discharges to controlled waters</u> &gt;</b>   | 0                        | 0     | 2       | 9        | -         |
| 35             | 4.14             | Pollutant release to surface waters (Red List)                | 0                        | 0     | 0       | 0        | -         |
| 35             | 4.15             | Pollutant release to public sewer                             | 0                        | 0     | 0       | 0        | -         |
| 35             | 4.16             | List 1 Dangerous Substances                                   | 0                        | 0     | 0       | 0        | -         |
| 35             | 4.17             | List 2 Dangerous Substances                                   | 0                        | 0     | 0       | 0        | -         |
| <b>36 &gt;</b> | <b>4.18 &gt;</b> | <b><u>Pollution Incidents (EA/NRW)</u> &gt;</b>               | 0                        | 0     | 0       | 3        | -         |
| 36             | 4.19             | Pollution inventory substances                                | 0                        | 0     | 0       | 0        | -         |
| 36             | 4.20             | Pollution inventory waste transfers                           | 0                        | 0     | 0       | 0        | -         |
| 37             | 4.21             | Pollution inventory radioactive waste                         | 0                        | 0     | 0       | 0        | -         |
| Page           | Section          | <b><u>Hydrogeology</u> &gt;</b>                               | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>38 &gt;</b> | <b>5.1 &gt;</b>  | <b><u>Superficial aquifer</u> &gt;</b>                        | Identified (within 500m) |       |         |          |           |
| <b>40 &gt;</b> | <b>5.2 &gt;</b>  | <b><u>Bedrock aquifer</u> &gt;</b>                            | Identified (within 500m) |       |         |          |           |
| <b>42 &gt;</b> | <b>5.3 &gt;</b>  | <b><u>Groundwater vulnerability</u> &gt;</b>                  | Identified (within 50m)  |       |         |          |           |
| 43             | 5.4              | Groundwater vulnerability- soluble rock risk                  | None (within 0m)         |       |         |          |           |
| 43             | 5.5              | Groundwater vulnerability- local information                  | None (within 0m)         |       |         |          |           |
| <b>44 &gt;</b> | <b>5.6 &gt;</b>  | <b><u>Groundwater abstractions</u> &gt;</b>                   | 0                        | 0     | 0       | 0        | 6         |
| <b>46 &gt;</b> | <b>5.7 &gt;</b>  | <b><u>Surface water abstractions</u> &gt;</b>                 | 0                        | 0     | 0       | 1        | 1         |
| <b>47 &gt;</b> | <b>5.8 &gt;</b>  | <b><u>Potable abstractions</u> &gt;</b>                       | 0                        | 0     | 0       | 0        | 3         |
| 47             | 5.9              | Source Protection Zones                                       | 0                        | 0     | 0       | 0        | -         |
| <b>48 &gt;</b> | <b>5.10 &gt;</b> | <b><u>Source Protection Zones (confined aquifer)</u> &gt;</b> | 0                        | 0     | 0       | 2        | -         |
| Page           | Section          | <b><u>Hydrology</u> &gt;</b>                                  | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>49 &gt;</b> | <b>6.1 &gt;</b>  | <b><u>Water Network (OS MasterMap)</u> &gt;</b>               | 0                        | 0     | 10      | -        | -         |



| 50 > | 6.2 >   | <a href="#">Surface water features &gt;</a>                      | 0                                       | 0     | 13      | -        | -         |
|------|---------|------------------------------------------------------------------|-----------------------------------------|-------|---------|----------|-----------|
| 51 > | 6.3 >   | <a href="#">WFD Surface water body catchments &gt;</a>           | 1                                       | -     | -       | -        | -         |
| 51 > | 6.4 >   | <a href="#">WFD Surface water bodies &gt;</a>                    | 0                                       | 0     | 1       | -        | -         |
| 51   | 6.5     | WFD Groundwater bodies                                           | 0                                       | -     | -       | -        | -         |
| Page | Section | <a href="#">River and coastal flooding &gt;</a>                  | On site                                 | 0-50m | 50-250m | 250-500m | 500-2000m |
| 53   | 7.1     | Risk of flooding from rivers and the sea                         | None (within 50m)                       |       |         |          |           |
| 54 > | 7.2 >   | <a href="#">Historical Flood Events &gt;</a>                     | 0                                       | 0     | 8       | -        | -         |
| 54   | 7.3     | Flood Defences                                                   | 0                                       | 0     | 0       | -        | -         |
| 55   | 7.4     | Areas Benefiting from Flood Defences                             | 0                                       | 0     | 0       | -        | -         |
| 55   | 7.5     | Flood Storage Areas                                              | 0                                       | 0     | 0       | -        | -         |
| 56   | 7.6     | Flood Zone 2                                                     | None (within 50m)                       |       |         |          |           |
| 56   | 7.7     | Flood Zone 3                                                     | None (within 50m)                       |       |         |          |           |
| Page | Section | <a href="#">Surface water flooding &gt;</a>                      |                                         |       |         |          |           |
| 57 > | 8.1 >   | <a href="#">Surface water flooding &gt;</a>                      | 1 in 100 year, 0.3m - 1.0m (within 50m) |       |         |          |           |
| Page | Section | <a href="#">Groundwater flooding &gt;</a>                        |                                         |       |         |          |           |
| 59 > | 9.1 >   | <a href="#">Groundwater flooding &gt;</a>                        | Moderate (within 50m)                   |       |         |          |           |
| Page | Section | <a href="#">Environmental designations &gt;</a>                  | On site                                 | 0-50m | 50-250m | 250-500m | 500-2000m |
| 60 > | 10.1 >  | <a href="#">Sites of Special Scientific Interest (SSSI) &gt;</a> | 0                                       | 0     | 1       | 0        | 1         |
| 61   | 10.2    | Conserved wetland sites (Ramsar sites)                           | 0                                       | 0     | 0       | 0        | 0         |
| 61 > | 10.3 >  | <a href="#">Special Areas of Conservation (SAC) &gt;</a>         | 0                                       | 0     | 1       | 0        | 0         |
| 62   | 10.4    | Special Protection Areas (SPA)                                   | 0                                       | 0     | 0       | 0        | 0         |
| 62   | 10.5    | National Nature Reserves (NNR)                                   | 0                                       | 0     | 0       | 0        | 0         |
| 62   | 10.6    | Local Nature Reserves (LNR)                                      | 0                                       | 0     | 0       | 0        | 0         |
| 62 > | 10.7 >  | <a href="#">Designated Ancient Woodland &gt;</a>                 | 0                                       | 1     | 0       | 5        | 23        |
| 64   | 10.8    | Biosphere Reserves                                               | 0                                       | 0     | 0       | 0        | 0         |
| 64   | 10.9    | Forest Parks                                                     | 0                                       | 0     | 0       | 0        | 0         |
| 64   | 10.10   | Marine Conservation Zones                                        | 0                                       | 0     | 0       | 0        | 0         |
| 64   | 10.11   | Green Belt                                                       | 0                                       | 0     | 0       | 0        | 0         |
| 64   | 10.12   | Proposed Ramsar sites                                            | 0                                       | 0     | 0       | 0        | 0         |



| 65                   | 10.13                   | Possible Special Areas of Conservation (pSAC)      | 0                        | 0     | 0       | 0        | 0         |
|----------------------|-------------------------|----------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 65                   | 10.14                   | Potential Special Protection Areas (pSPA)          | 0                        | 0     | 0       | 0        | 0         |
| 65                   | 10.15                   | Nitrate Sensitive Areas                            | 0                        | 0     | 0       | 0        | 0         |
| <a href="#">65</a> > | <a href="#">10.16</a> > | <a href="#">Nitrate Vulnerable Zones</a> >         | 1                        | 0     | 0       | 0        | 3         |
| <a href="#">67</a> > | <a href="#">10.17</a> > | <a href="#">SSSI Impact Risk Zones</a> >           | 3                        | -     | -       | -        | -         |
| <a href="#">70</a> > | <a href="#">10.18</a> > | <a href="#">SSSI Units</a> >                       | 0                        | 0     | 2       | 2        | 15        |
| Page                 | Section                 | Visual and cultural designations                   | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 80                   | 11.1                    | World Heritage Sites                               | 0                        | 0     | 0       | -        | -         |
| 80                   | 11.2                    | Area of Outstanding Natural Beauty                 | 0                        | 0     | 0       | -        | -         |
| 80                   | 11.3                    | National Parks                                     | 0                        | 0     | 0       | -        | -         |
| 80                   | 11.4                    | Listed Buildings                                   | 0                        | 0     | 0       | -        | -         |
| 81                   | 11.5                    | Conservation Areas                                 | 0                        | 0     | 0       | -        | -         |
| 81                   | 11.6                    | Scheduled Ancient Monuments                        | 0                        | 0     | 0       | -        | -         |
| 81                   | 11.7                    | Registered Parks and Gardens                       | 0                        | 0     | 0       | -        | -         |
| Page                 | Section                 | <a href="#">Agricultural designations</a> >        | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">82</a> > | <a href="#">12.1</a> >  | <a href="#">Agricultural Land Classification</a> > | Grade 4 (within 250m)    |       |         |          |           |
| 83                   | 12.2                    | Open Access Land                                   | 0                        | 0     | 0       | -        | -         |
| <a href="#">83</a> > | <a href="#">12.3</a> >  | <a href="#">Tree Felling Licences</a> >            | 0                        | 0     | 1       | -        | -         |
| 83                   | 12.4                    | Environmental Stewardship Schemes                  | 0                        | 0     | 0       | -        | -         |
| 84                   | 12.5                    | Countryside Stewardship Schemes                    | 0                        | 0     | 0       | -        | -         |
| Page                 | Section                 | <a href="#">Habitat designations</a> >             | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">85</a> > | <a href="#">13.1</a> >  | <a href="#">Priority Habitat Inventory</a> >       | 0                        | 8     | 17      | -        | -         |
| <a href="#">87</a> > | <a href="#">13.2</a> >  | <a href="#">Habitat Networks</a> >                 | 1                        | 0     | 4       | -        | -         |
| 87                   | 13.3                    | Open Mosaic Habitat                                | 0                        | 0     | 0       | -        | -         |
| 87                   | 13.4                    | Limestone Pavement Orders                          | 0                        | 0     | 0       | -        | -         |
| Page                 | Section                 | <a href="#">Geology 1:10,000 scale</a> >           | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">88</a> > | <a href="#">14.1</a> >  | <a href="#">10k Availability</a> >                 | Identified (within 500m) |       |         |          |           |
| <a href="#">89</a> > | <a href="#">14.2</a> >  | <a href="#">Artificial and made ground (10k)</a> > | 0                        | 2     | 1       | 6        | -         |
| <a href="#">91</a> > | <a href="#">14.3</a> >  | <a href="#">Superficial geology (10k)</a> >        | 1                        | 0     | 2       | 2        | -         |

| 92                       | 14.4                      | Landslip (10k)                                            | 0                        | 0     | 0       | 0        | -         |
|--------------------------|---------------------------|-----------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| <a href="#">93 &gt;</a>  | <a href="#">14.5 &gt;</a> | <a href="#">Bedrock geology (10k) &gt;</a>                | 1                        | 2     | 0       | 0        | -         |
| 94                       | 14.6                      | Bedrock faults and other linear features (10k)            | 0                        | 0     | 0       | 0        | -         |
| Page                     | Section                   | <a href="#">Geology 1:50,000 scale &gt;</a>               | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">95 &gt;</a>  | <a href="#">15.1 &gt;</a> | <a href="#">50k Availability &gt;</a>                     | Identified (within 500m) |       |         |          |           |
| <a href="#">96 &gt;</a>  | <a href="#">15.2 &gt;</a> | <a href="#">Artificial and made ground (50k) &gt;</a>     | 0                        | 2     | 1       | 1        | -         |
| <a href="#">97 &gt;</a>  | <a href="#">15.3 &gt;</a> | <a href="#">Artificial ground permeability (50k) &gt;</a> | 0                        | 1     | -       | -        | -         |
| <a href="#">98 &gt;</a>  | <a href="#">15.4 &gt;</a> | <a href="#">Superficial geology (50k) &gt;</a>            | 1                        | 0     | 2       | 2        | -         |
| <a href="#">99 &gt;</a>  | <a href="#">15.5 &gt;</a> | <a href="#">Superficial permeability (50k) &gt;</a>       | Identified (within 50m)  |       |         |          |           |
| 99                       | 15.6                      | Landslip (50k)                                            | 0                        | 0     | 0       | 0        | -         |
| 99                       | 15.7                      | Landslip permeability (50k)                               | None (within 50m)        |       |         |          |           |
| <a href="#">100 &gt;</a> | <a href="#">15.8 &gt;</a> | <a href="#">Bedrock geology (50k) &gt;</a>                | 1                        | 0     | 2       | 0        | -         |
| <a href="#">101 &gt;</a> | <a href="#">15.9 &gt;</a> | <a href="#">Bedrock permeability (50k) &gt;</a>           | Identified (within 50m)  |       |         |          |           |
| 101                      | 15.10                     | Bedrock faults and other linear features (50k)            | 0                        | 0     | 0       | 0        | -         |
| Page                     | Section                   | <a href="#">Boreholes &gt;</a>                            | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">102 &gt;</a> | <a href="#">16.1 &gt;</a> | <a href="#">BGS Boreholes &gt;</a>                        | 0                        | 1     | 5       | -        | -         |
| Page                     | Section                   | <a href="#">Natural ground subsidence &gt;</a>            |                          |       |         |          |           |
| <a href="#">104 &gt;</a> | <a href="#">17.1 &gt;</a> | <a href="#">Shrink swell clays &gt;</a>                   | Low (within 50m)         |       |         |          |           |
| <a href="#">105 &gt;</a> | <a href="#">17.2 &gt;</a> | <a href="#">Running sands &gt;</a>                        | Very low (within 50m)    |       |         |          |           |
| <a href="#">106 &gt;</a> | <a href="#">17.3 &gt;</a> | <a href="#">Compressible deposits &gt;</a>                | Very low (within 50m)    |       |         |          |           |
| <a href="#">108 &gt;</a> | <a href="#">17.4 &gt;</a> | <a href="#">Collapsible deposits &gt;</a>                 | Very low (within 50m)    |       |         |          |           |
| <a href="#">109 &gt;</a> | <a href="#">17.5 &gt;</a> | <a href="#">Landslides &gt;</a>                           | Low (within 50m)         |       |         |          |           |
| <a href="#">111 &gt;</a> | <a href="#">17.6 &gt;</a> | <a href="#">Ground dissolution of soluble rocks &gt;</a>  | Negligible (within 50m)  |       |         |          |           |
| Page                     | Section                   | <a href="#">Mining and ground workings &gt;</a>           | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">113 &gt;</a> | <a href="#">18.1 &gt;</a> | <a href="#">BritPits &gt;</a>                             | 0                        | 0     | 4       | 1        | -         |
| <a href="#">114 &gt;</a> | <a href="#">18.2 &gt;</a> | <a href="#">Surface ground workings &gt;</a>              | 0                        | 8     | 39      | -        | -         |
| 116                      | 18.3                      | Underground workings                                      | 0                        | 0     | 0       | 0        | 0         |
| 117                      | 18.4                      | Underground mining extents                                | 0                        | 0     | 0       | 0        | -         |
| <a href="#">117 &gt;</a> | <a href="#">18.5 &gt;</a> | <a href="#">Historical Mineral Planning Areas &gt;</a>    | 1                        | 0     | 0       | 1        | -         |

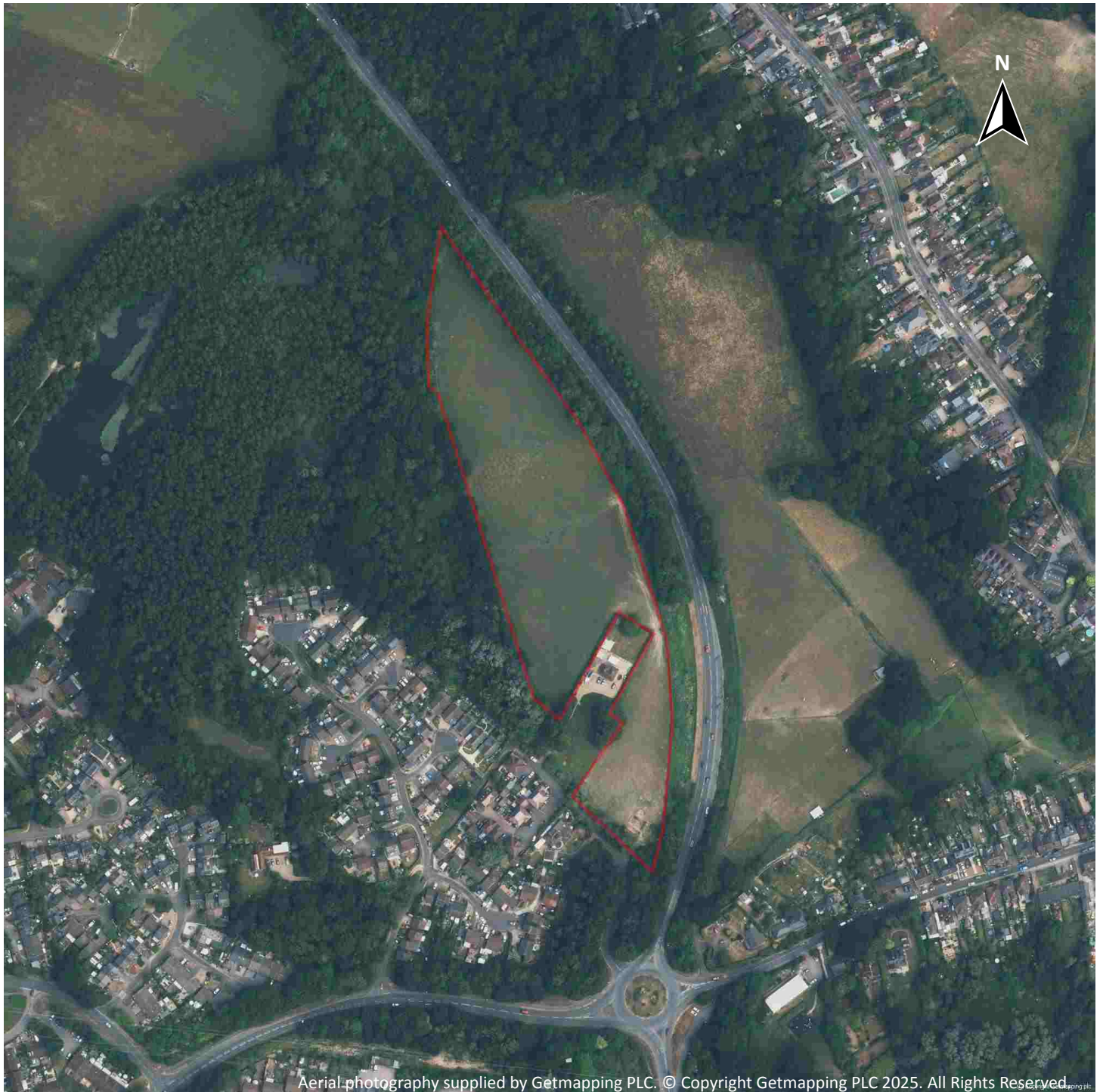


| <a href="#">117 &gt;</a> | <a href="#">18.6 &gt;</a> | <a href="#">Non-coal mining &gt;</a>                         | 1                        | 0     | 0       | 0        | 2         |
|--------------------------|---------------------------|--------------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 118                      | 18.7                      | JPB mining areas                                             | None (within 0m)         |       |         |          |           |
| 118                      | 18.8                      | The Coal Authority non-coal mining                           | 0                        | 0     | 0       | 0        | -         |
| 118                      | 18.9                      | Researched mining                                            | 0                        | 0     | 0       | 0        | -         |
| 119                      | 18.10                     | Mining record office plans                                   | 0                        | 0     | 0       | 0        | -         |
| 119                      | 18.11                     | BGS mine plans                                               | 0                        | 0     | 0       | 0        | -         |
| 119                      | 18.12                     | Coal mining                                                  | None (within 0m)         |       |         |          |           |
| 119                      | 18.13                     | Brine areas                                                  | None (within 0m)         |       |         |          |           |
| 119                      | 18.14                     | Gypsum areas                                                 | None (within 0m)         |       |         |          |           |
| 120                      | 18.15                     | Tin mining                                                   | None (within 0m)         |       |         |          |           |
| 120                      | 18.16                     | Clay mining                                                  | None (within 0m)         |       |         |          |           |
| Page                     | Section                   | Ground cavities and sinkholes                                | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 121                      | 19.1                      | Natural cavities                                             | 0                        | 0     | 0       | 0        | -         |
| 121                      | 19.2                      | Mining cavities                                              | 0                        | 0     | 0       | 0        | 0         |
| 121                      | 19.3                      | Reported recent incidents                                    | 0                        | 0     | 0       | 0        | -         |
| 121                      | 19.4                      | Historical incidents                                         | 0                        | 0     | 0       | 0        | -         |
| Page                     | Section                   | <a href="#">Radon &gt;</a>                                   |                          |       |         |          |           |
| <a href="#">123 &gt;</a> | <a href="#">20.1 &gt;</a> | <a href="#">Radon &gt;</a>                                   | Less than 1% (within 0m) |       |         |          |           |
| Page                     | Section                   | <a href="#">Soil chemistry &gt;</a>                          | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">125 &gt;</a> | <a href="#">21.1 &gt;</a> | <a href="#">BGS Estimated Background Soil Chemistry &gt;</a> | 3                        | 2     | -       | -        | -         |
| 125                      | 21.2                      | BGS Estimated Urban Soil Chemistry                           | 0                        | 0     | -       | -        | -         |
| 125                      | 21.3                      | BGS Measured Urban Soil Chemistry                            | 0                        | 0     | -       | -        | -         |
| Page                     | Section                   | <a href="#">Railway infrastructure and projects &gt;</a>     | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 126                      | 22.1                      | Underground railways (London)                                | 0                        | 0     | 0       | -        | -         |
| 126                      | 22.2                      | Underground railways (Non-London)                            | 0                        | 0     | 0       | -        | -         |
| 127                      | 22.3                      | Railway tunnels                                              | 0                        | 0     | 0       | -        | -         |
| <a href="#">127 &gt;</a> | <a href="#">22.4 &gt;</a> | <a href="#">Historical railway and tunnel features &gt;</a>  | 0                        | 0     | 8       | -        | -         |
| 127                      | 22.5                      | Royal Mail tunnels                                           | 0                        | 0     | 0       | -        | -         |
| 128                      | 22.6                      | Historical railways                                          | 0                        | 0     | 0       | -        | -         |



|     |      |             |   |   |   |   |   |
|-----|------|-------------|---|---|---|---|---|
| 128 | 22.7 | Railways    | 0 | 0 | 0 | - | - |
| 128 | 22.8 | Crossrail 2 | 0 | 0 | 0 | 0 | - |
| 128 | 22.9 | HS2         | 0 | 0 | 0 | 0 | - |

## Recent aerial photograph



Capture Date: 25/06/2023

Site Area: 2.83ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

01273 257 755

Date: 26 April 2025

## Recent site history - 2020 aerial photograph



Capture Date: 05/04/2020

Site Area: 2.83ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

01273 257 755

Date: 26 April 2025

## Recent site history - 2013 aerial photograph



Capture Date: 03/06/2013

Site Area: 2.83ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

01273 257 755

Date: 26 April 2025

## Recent site history - 2005 aerial photograph



Capture Date: 27/05/2005

Site Area: 2.83ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

01273 257 755

Date: 26 April 2025

## Recent site history - 1999 aerial photograph



Capture Date: 30/04/1999

Site Area: 2.83ha



Contact us with any questions at:

[info@groundsure.com](mailto:info@groundsure.com)

01273 257 755

Date: 26 April 2025

This is a topographic map of the Allbrook area in Lancashire. A red-outlined site is located on a hillside, with a red line indicating a boundary or path. The map shows contour lines, a river (Allbrook), and surrounding residential areas. A north arrow is in the top right corner.

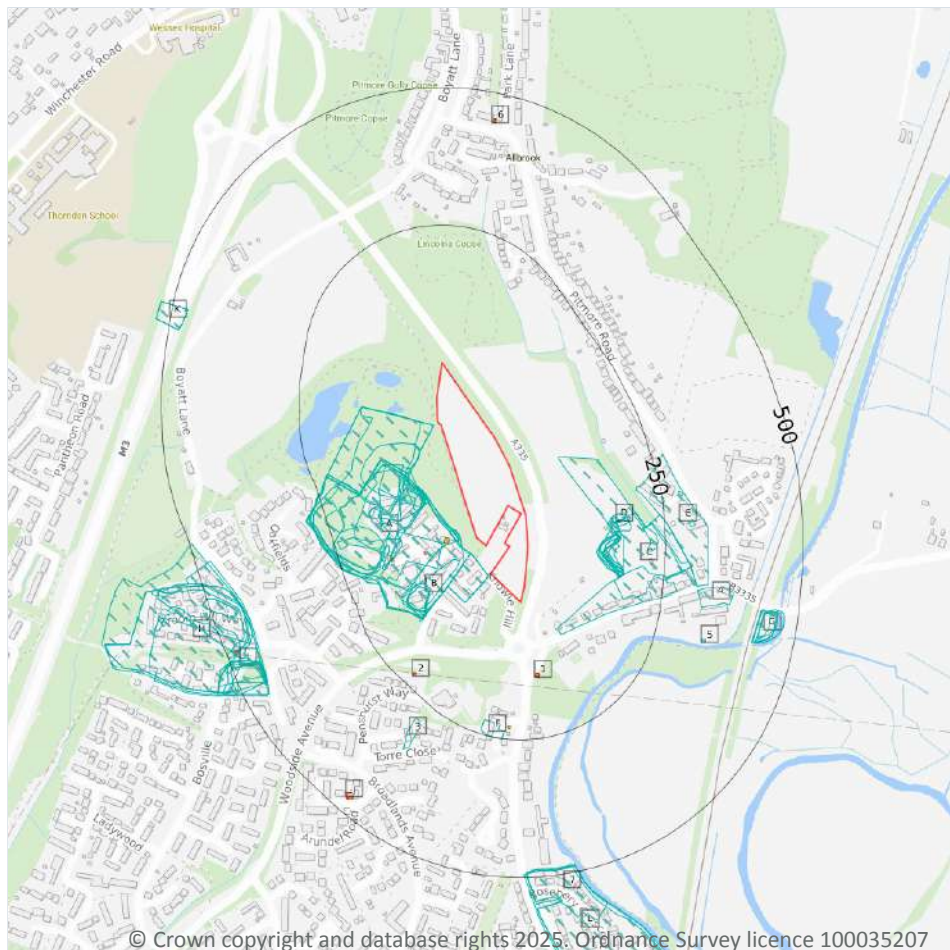
Key features on the map include:

- Site Boundary:** A red-outlined area on a hillside, with a red line indicating a boundary or path.
- Topography:** Contour lines showing the elevation of the land.
- Water Features:** A river (Allbrook) flowing through the area, and several small ponds or lakes.
- Residential Areas:** Clusters of buildings, likely houses, in the lower left and right.
- Infrastructure:** Roads and paths are visible, including a road labeled "12.5" and a path labeled "25".
- North Arrow:** Located in the top right corner, pointing towards the top of the map.

The map is titled "ALLBROOK" in the center. The copyright notice at the bottom reads: "© Crown copyright and database rights 2025. Ordnance Survey licence 100035207".



## 1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

### 1.1 Historical industrial land uses

Records within 500m

73

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

| ID | Location | Land use          | Dates present | Group ID |
|----|----------|-------------------|---------------|----------|
| A  | 5m S     | Unspecified Works | 1957          | 1891010  |



| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| A  | 5m S     | Brick and Tile Works        | 1968          | 1900939  |
| A  | 27m S    | Brick Works                 | 1908          | 1966425  |
| A  | 29m S    | Unspecified Ground Workings | 1908          | 1880223  |
| A  | 30m NW   | Clay Pit                    | 1968          | 1887183  |
| A  | 30m SW   | Brick Works                 | 1895 - 1897   | 1933188  |
| A  | 32m S    | Brick Works                 | 1931          | 1977524  |
| A  | 32m S    | Brick Works                 | 1938          | 1980428  |
| B  | 52m S    | Unspecified Heap            | 1957 - 1968   | 1990118  |
| A  | 52m NW   | Unspecified Pit             | 1957          | 1992740  |
| A  | 63m SW   | Unspecified Kilns           | 1968          | 1886442  |
| A  | 68m W    | Unspecified Ground Workings | 1931          | 1918246  |
| A  | 68m W    | Unspecified Ground Workings | 1938          | 1928621  |
| A  | 69m W    | Unspecified Ground Workings | 1897          | 1971193  |
| A  | 70m W    | Unspecified Pit             | 1895          | 1919039  |
| A  | 71m W    | Unspecified Ground Workings | 1908          | 1946237  |
| A  | 72m W    | Unspecified Heap            | 1957          | 1917822  |
| A  | 74m W    | Unspecified Heap            | 1980          | 1915519  |
| C  | 82m SE   | Brick Works                 | 1897          | 1942996  |
| A  | 87m W    | Railway Sidings             | 1957          | 1887622  |
| B  | 114m SW  | Unspecified Pit             | 1931          | 1936833  |
| B  | 117m SW  | Unspecified Pit             | 1938          | 1962387  |
| B  | 117m SW  | Sand Pit                    | 1895 - 1897   | 1931660  |
| B  | 117m SW  | Old Sand Pit                | 1908          | 1887280  |
| C  | 125m SE  | Unspecified Ground Workings | 1957 - 1980   | 1966954  |
| C  | 128m SE  | Brick Works                 | 1908          | 1954187  |
| C  | 128m SE  | Unspecified Ground Workings | 1908          | 1962410  |
| C  | 129m SE  | Unspecified Ground Workings | 1938          | 1993441  |
| C  | 130m SE  | Unspecified Ground Workings | 1931          | 1930269  |



| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| A  | 131m SW  | Railway Sidings             | 1938          | 1887623  |
| C  | 134m SE  | Brick Works                 | 1895          | 1959877  |
| C  | 135m SE  | Unspecified Ground Workings | 1897          | 1920318  |
| A  | 144m SW  | Unspecified Ground Workings | 1957          | 1955385  |
| C  | 146m SE  | Unspecified Disused Pit     | 1895          | 1898976  |
| D  | 153m E   | Unspecified Pit             | 1938          | 1981821  |
| D  | 155m E   | Unspecified Pit             | 1931          | 1975977  |
| A  | 164m SW  | Unspecified Ground Workings | 1980          | 1963257  |
| E  | 205m E   | Brick Works                 | 1868          | 1965502  |
| C  | 210m E   | Unspecified Ground Workings | 1957 - 1968   | 1977799  |
| F  | 224m S   | Hospital                    | 1968          | 1890046  |
| E  | 237m E   | Clay Pits                   | 1868          | 1881883  |
| E  | 279m E   | Clay Pits                   | 1868          | 1881884  |
| 3  | 283m S   | Refuse Heap                 | 1868          | 1888566  |
| E  | 294m E   | Unspecified Kiln            | 1868          | 1911335  |
| 4  | 315m SE  | Timber Yards                | 1868          | 1901436  |
| 5  | 336m SE  | Boat House                  | 1908          | 1894653  |
| G  | 425m SE  | Sawmills                    | 1895 - 1897   | 1926114  |
| G  | 426m SE  | Sawmills                    | 1908          | 1951281  |
| G  | 431m SE  | Sawmills                    | 1868          | 1926435  |
| G  | 431m SE  | Sawmills                    | 1931          | 1970689  |
| G  | 432m SE  | Sawmills                    | 1938          | 1926950  |
| H  | 437m SW  | Brick Works                 | 1931          | 1972084  |
| H  | 439m SW  | Brick Works                 | 1908          | 1922119  |
| H  | 440m SW  | Unspecified Pit             | 1968          | 1924834  |
| H  | 440m SW  | Unspecified Pit             | 1957          | 1979394  |
| H  | 442m SW  | Unspecified Ground Workings | 1931          | 1996224  |
| H  | 443m SW  | Brick Works                 | 1938          | 1969402  |



| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| I  | 445m SW  | Unspecified Ground Workings | 1931          | 1880224  |
| H  | 445m SW  | Brick Works                 | 1895 - 1897   | 1960571  |
| I  | 447m SW  | Unspecified Pit             | 1938          | 1926715  |
| I  | 449m SW  | Unspecified Heap            | 1957          | 1895235  |
| I  | 450m SW  | Unspecified Pit             | 1908          | 1920581  |
| I  | 451m SW  | Unspecified Pit             | 1968          | 1947905  |
| I  | 451m SW  | Unspecified Pit             | 1895 - 1897   | 1969205  |
| H  | 454m SW  | Unspecified Heap            | 1931          | 1971780  |
| H  | 456m SW  | Unspecified Heap            | 1938          | 1961923  |
| H  | 469m SW  | Unspecified Ground Workings | 1908          | 1965365  |
| K  | 471m NW  | Cuttings                    | 1968          | 1947131  |
| K  | 471m NW  | Cuttings                    | 1980          | 1958154  |
| L  | 486m S   | Nurseries                   | 1931          | 1927638  |
| L  | 486m S   | Nursery                     | 1938          | 1933167  |
| L  | 488m S   | Nursery                     | 1957          | 1926545  |
| 7  | 489m S   | Nursery                     | 1908          | 1959372  |

This data is sourced from Ordnance Survey / Groundsure.

## 1.2 Historical tanks

### Records within 500m

**3**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

| ID | Location | Land use         | Dates present | Group ID |
|----|----------|------------------|---------------|----------|
| A  | 48m SW   | Tanks            | 1967          | 317879   |
| A  | 155m SW  | Unspecified Tank | 1950          | 336502   |



| ID | Location | Land use         | Dates present | Group ID |
|----|----------|------------------|---------------|----------|
| F  | 225m S   | Unspecified Tank | 1932 - 1939   | 336820   |

*This data is sourced from Ordnance Survey / Groundsure.*

### 1.3 Historical energy features

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>7</b> |
|----------------------------|----------|

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

| ID | Location | Land use               | Dates present | Group ID |
|----|----------|------------------------|---------------|----------|
| A  | 93m SW   | Electricity Substation | 1986 - 1993   | 221171   |
| 1  | 132m S   | Electricity Substation | 1987 - 1993   | 231435   |
| 2  | 224m S   | Electricity Substation | 1993          | 209045   |
| 6  | 446m N   | Electricity Substation | 1988 - 1993   | 224197   |
| J  | 461m SW  | Electricity Substation | 1986          | 215431   |
| J  | 472m SW  | Electricity Substation | 1993          | 219004   |
| I  | 480m SW  | Electricity Substation | 1986 - 1993   | 219812   |

*This data is sourced from Ordnance Survey / Groundsure.*

### 1.4 Historical petrol stations

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.5 Historical garages

Records within 500m

0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.6 Historical military land

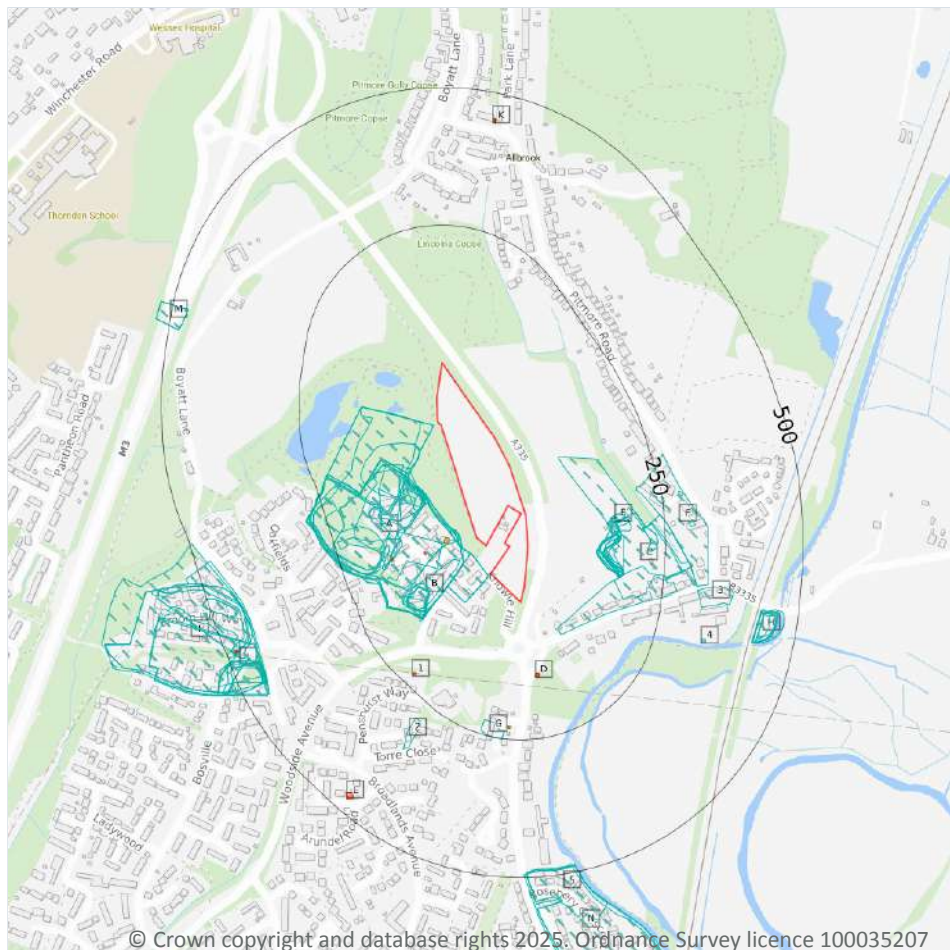
Records within 500m

0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

*This data is sourced from Ordnance Survey / Groundsure / other sources.*

## 2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

### 2.1 Historical industrial land uses

Records within 500m

82

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 21](#) >

| ID | Location | Land Use             | Date | Group ID |
|----|----------|----------------------|------|----------|
| A  | 5m S     | Brick and Tile Works | 1968 | 1900939  |
| A  | 5m S     | Unspecified Works    | 1957 | 1891010  |
| A  | 27m S    | Brick Works          | 1908 | 1966425  |



| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| A  | 29m S    | Unspecified Ground Workings | 1908 | 1880223  |
| A  | 30m NW   | Clay Pit                    | 1968 | 1887183  |
| A  | 30m SW   | Brick Works                 | 1897 | 1933188  |
| A  | 30m S    | Brick Works                 | 1895 | 1933188  |
| A  | 32m S    | Brick Works                 | 1931 | 1977524  |
| A  | 32m S    | Brick Works                 | 1938 | 1980428  |
| B  | 52m S    | Unspecified Heap            | 1968 | 1990118  |
| A  | 52m NW   | Unspecified Pit             | 1957 | 1992740  |
| A  | 63m SW   | Unspecified Kilns           | 1968 | 1886442  |
| A  | 68m W    | Unspecified Ground Workings | 1931 | 1918246  |
| A  | 68m W    | Unspecified Ground Workings | 1938 | 1928621  |
| A  | 69m W    | Unspecified Ground Workings | 1897 | 1971193  |
| A  | 70m W    | Unspecified Pit             | 1895 | 1919039  |
| A  | 71m W    | Unspecified Ground Workings | 1908 | 1946237  |
| A  | 72m W    | Unspecified Heap            | 1957 | 1917822  |
| A  | 74m W    | Unspecified Heap            | 1980 | 1915519  |
| C  | 82m SE   | Brick Works                 | 1897 | 1942996  |
| A  | 87m W    | Railway Sidings             | 1957 | 1887622  |
| B  | 114m SW  | Unspecified Pit             | 1931 | 1936833  |
| B  | 117m SW  | Unspecified Pit             | 1938 | 1962387  |
| B  | 117m SW  | Sand Pit                    | 1897 | 1931660  |
| B  | 117m SW  | Old Sand Pit                | 1908 | 1887280  |
| B  | 118m SW  | Sand Pit                    | 1895 | 1931660  |
| C  | 125m SE  | Unspecified Ground Workings | 1968 | 1966954  |
| C  | 125m SE  | Unspecified Ground Workings | 1980 | 1966954  |
| C  | 125m SE  | Unspecified Ground Workings | 1957 | 1966954  |
| C  | 128m SE  | Unspecified Ground Workings | 1908 | 1962410  |
| C  | 128m SE  | Brick Works                 | 1908 | 1954187  |



| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| C  | 129m SE  | Unspecified Ground Workings | 1938 | 1993441  |
| B  | 130m SW  | Unspecified Heap            | 1957 | 1990118  |
| C  | 130m SE  | Unspecified Ground Workings | 1931 | 1930269  |
| A  | 131m SW  | Railway Sidings             | 1938 | 1887623  |
| C  | 134m SE  | Brick Works                 | 1895 | 1959877  |
| C  | 135m SE  | Unspecified Ground Workings | 1897 | 1920318  |
| A  | 144m SW  | Unspecified Ground Workings | 1957 | 1955385  |
| C  | 146m SE  | Unspecified Disused Pit     | 1895 | 1898976  |
| E  | 153m E   | Unspecified Pit             | 1938 | 1981821  |
| E  | 155m E   | Unspecified Pit             | 1931 | 1975977  |
| A  | 164m SW  | Unspecified Ground Workings | 1980 | 1963257  |
| F  | 205m E   | Brick Works                 | 1868 | 1965502  |
| C  | 210m E   | Unspecified Ground Workings | 1968 | 1977799  |
| C  | 210m E   | Unspecified Ground Workings | 1957 | 1977799  |
| G  | 224m S   | Hospital                    | 1968 | 1890046  |
| F  | 237m E   | Clay Pits                   | 1868 | 1881883  |
| F  | 279m E   | Clay Pits                   | 1868 | 1881884  |
| 2  | 283m S   | Refuse Heap                 | 1868 | 1888566  |
| F  | 294m E   | Unspecified Kiln            | 1868 | 1911335  |
| 3  | 315m SE  | Timber Yards                | 1868 | 1901436  |
| 4  | 336m SE  | Boat House                  | 1908 | 1894653  |
| H  | 425m SE  | Sawmills                    | 1895 | 1926114  |
| H  | 426m SE  | Sawmills                    | 1908 | 1951281  |
| H  | 426m SE  | Sawmills                    | 1897 | 1926114  |
| H  | 431m SE  | Sawmills                    | 1868 | 1926435  |
| H  | 431m SE  | Sawmills                    | 1931 | 1970689  |
| H  | 432m SE  | Sawmills                    | 1938 | 1926950  |
| I  | 437m SW  | Brick Works                 | 1931 | 1972084  |



| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| I  | 439m SW  | Brick Works                 | 1908 | 1922119  |
| I  | 440m SW  | Unspecified Pit             | 1968 | 1924834  |
| I  | 440m SW  | Unspecified Pit             | 1957 | 1979394  |
| I  | 442m SW  | Unspecified Ground Workings | 1931 | 1996224  |
| I  | 443m SW  | Brick Works                 | 1938 | 1969402  |
| J  | 445m SW  | Unspecified Ground Workings | 1931 | 1880224  |
| I  | 445m SW  | Brick Works                 | 1897 | 1960571  |
| I  | 447m SW  | Brick Works                 | 1895 | 1960571  |
| J  | 447m SW  | Unspecified Pit             | 1938 | 1926715  |
| J  | 449m SW  | Unspecified Heap            | 1957 | 1895235  |
| J  | 450m SW  | Unspecified Pit             | 1908 | 1920581  |
| J  | 451m SW  | Unspecified Pit             | 1968 | 1947905  |
| J  | 451m SW  | Unspecified Pit             | 1897 | 1969205  |
| I  | 454m SW  | Unspecified Heap            | 1931 | 1971780  |
| J  | 455m SW  | Unspecified Pit             | 1895 | 1969205  |
| I  | 456m SW  | Unspecified Heap            | 1938 | 1961923  |
| I  | 469m SW  | Unspecified Ground Workings | 1908 | 1965365  |
| M  | 471m NW  | Cuttings                    | 1968 | 1947131  |
| M  | 471m NW  | Cuttings                    | 1980 | 1958154  |
| N  | 486m S   | Nurseries                   | 1931 | 1927638  |
| N  | 486m S   | Nursery                     | 1938 | 1933167  |
| N  | 488m S   | Nursery                     | 1957 | 1926545  |
| 5  | 489m S   | Nursery                     | 1908 | 1959372  |

*This data is sourced from Ordnance Survey / Groundsure.*



## 2.2 Historical tanks

### Records within 500m

5

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 21 >](#)

| ID | Location | Land Use         | Date | Group ID |
|----|----------|------------------|------|----------|
| A  | 48m SW   | Tanks            | 1967 | 317879   |
| A  | 155m SW  | Unspecified Tank | 1950 | 336502   |
| A  | 155m SW  | Unspecified Tank | 1950 | 336502   |
| G  | 225m S   | Unspecified Tank | 1932 | 336820   |
| G  | 225m S   | Unspecified Tank | 1939 | 336820   |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.3 Historical energy features

### Records within 500m

11

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 21 >](#)

| ID | Location | Land Use               | Date | Group ID |
|----|----------|------------------------|------|----------|
| A  | 93m SW   | Electricity Substation | 1993 | 221171   |
| A  | 94m SW   | Electricity Substation | 1986 | 221171   |
| D  | 132m S   | Electricity Substation | 1987 | 231435   |
| D  | 133m S   | Electricity Substation | 1993 | 231435   |
| 1  | 224m S   | Electricity Substation | 1993 | 209045   |
| K  | 446m N   | Electricity Substation | 1993 | 224197   |
| K  | 447m N   | Electricity Substation | 1988 | 224197   |
| L  | 461m SW  | Electricity Substation | 1986 | 215431   |
| L  | 472m SW  | Electricity Substation | 1993 | 219004   |



| ID | Location | Land Use               | Date | Group ID |
|----|----------|------------------------|------|----------|
| J  | 480m SW  | Electricity Substation | 1993 | 219812   |
| J  | 480m SW  | Electricity Substation | 1986 | 219812   |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.4 Historical petrol stations

**Records within 500m**

**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.5 Historical garages

**Records within 500m**

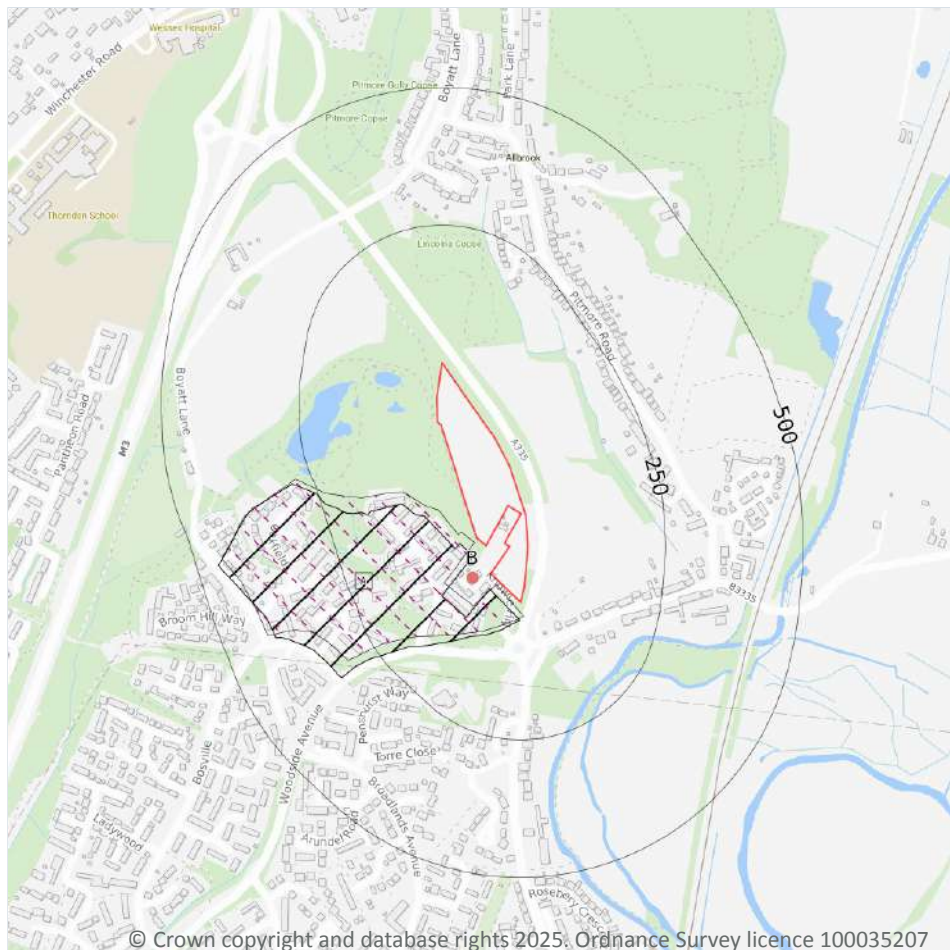
**0**

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*



## 3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- Waste exemptions

### 3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

*This data is sourced from the British Geological Survey.*



### 3.3 Historical landfill (LA/mapping records)

#### Records within 500m

1

Landfill sites identified from Local Authority records and high detail historical mapping.

Features are displayed on the Waste and landfill map on [page 27 >](#)

| ID | Location | Site address        | Source                        | Data type |
|----|----------|---------------------|-------------------------------|-----------|
| A  | 7m S     | Allbrook Brickworks | Eastleigh Env Health Services | Polygon   |

*This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.*

### 3.4 Historical landfill (EA/NRW records)

#### Records within 500m

1

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on [page 27 >](#)

| ID | Location | Details                                                                                                                                           |                                                                                                                                                                                                 |                                                                                                                      |
|----|----------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| A  | 21m S    | Site Address: Allbrook Brickworks, Allbrook Hill, Eastleigh, Hampshire<br>Licence Holder Address: Rivermead House, Abbey Meads, Romsey, Hampshire | Waste Licence: Yes<br>Site Reference: 9/4, FEA2<br>Waste Type: Inert<br>Environmental Permitting Regulations (Waste) Reference: -<br>Licence Issue: 07/11/1977<br>Licence Surrender: 30/11/1981 | Operator: -<br>Licence Holder: Chamberlayne McLean Limited<br>First Recorded 01/09/1977<br>Last Recorded: 30/11/1981 |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.5 Historical waste sites

#### Records within 500m

0

Waste site records derived from Local Authority planning records and high detail historical mapping.

*This data is sourced from Ordnance Survey/Groundsure and Local Authority records.*



### 3.6 Licensed waste sites

**Records within 500m****0**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.7 Waste exemptions

**Records within 500m****2**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

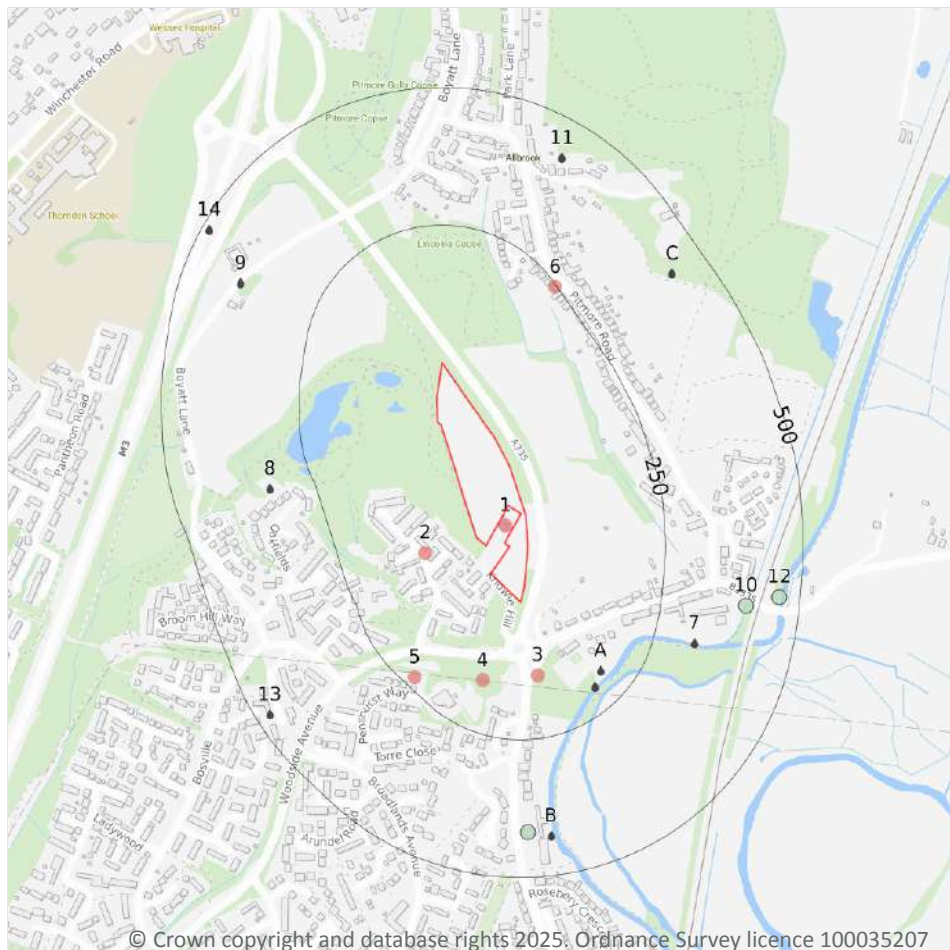
Features are displayed on the Waste and landfill map on [page 27 >](#)

| ID | Location | Site                                              | Reference | Category                 | Sub-Category  | Description                                             |
|----|----------|---------------------------------------------------|-----------|--------------------------|---------------|---------------------------------------------------------|
| B  | 35m S    | Westfield House, Knowle Hill, Eastleigh, So50 4lz | WEX098995 | Treating waste exemption | Not on a farm | Preparatory treatments (baling, sorting, shredding etc) |
| B  | 35m S    | Westfield House, Knowle Hill, Eastleigh, So50 4lz | WEX098995 | Storing waste exemption  | Not on a farm | Storage of waste in a secure place                      |

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

### 4.1 Recent industrial land uses

Records within 250m

6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 30 >](#)

| ID | Location | Company                      | Address                                                      | Activity                            | Category                      |
|----|----------|------------------------------|--------------------------------------------------------------|-------------------------------------|-------------------------------|
| 1  | 13m SE   | Associated Polymer Resources | Westfield House, Knowle Hill, Eastleigh, Hampshire, SO50 4LZ | Recycling, Reclamation and Disposal | Recycling Services            |
| 2  | 97m SW   | Electricity Sub Station      | Hampshire, SO50                                              | Electrical Features                 | Infrastructure and Facilities |



| ID | Location | Company                 | Address                                           | Activity                            | Category                      |
|----|----------|-------------------------|---------------------------------------------------|-------------------------------------|-------------------------------|
| 3  | 136m S   | Electricity Sub Station | Hampshire, SO50                                   | Electrical Features                 | Infrastructure and Facilities |
| 4  | 159m S   | Pylon                   | Hampshire, SO50                                   | Electrical Features                 | Infrastructure and Facilities |
| 5  | 231m S   | Electricity Sub Station | Hampshire, SO50                                   | Electrical Features                 | Infrastructure and Facilities |
| 6  | 247m N   | Taylor Labels           | 114, Pitmore Road, Eastleigh, Hampshire, SO50 4LT | Stationery, Stamps, Tags and Labels | Industrial Products           |

*This data is sourced from Ordnance Survey.*

## 4.2 Current or recent petrol stations

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

Open, closed, under development and obsolete petrol stations.

*This data is sourced from Experian.*

## 4.3 Electricity cables

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*

## 4.4 Gas pipelines

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

## 4.5 Sites determined as Contaminated Land

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

*This data is sourced from Local Authority records.*

## 4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

*This data is sourced from the Health and Safety Executive.*

## 4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

*This data is sourced from the Health and Safety Executive.*

## 4.8 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

*This data is sourced from Local Authority records.*

## 4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



#### 4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

*This data is sourced from Local Authority records.*

#### 4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.13 Licensed Discharges to controlled waters

Records within 500m

11

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on [page 30 >](#)

| ID | Location | Address                                                                                          | Details                                                                                                                                    |                                                                                                                                                               |
|----|----------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A  | 191m SE  | LANDSOUTHEASTOFALLBROOKHILL, LANDSOUTHEASTOFALLBROOKHILL, A335&NORTHERNRD JCT, ROMSEY, HAMPSHIRE | Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER<br>Permit Number: N01290<br>Permit Version: 1<br>Receiving Water: FRESHWATER RIVER | Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY)<br>Issue date: 29/07/1977<br>Effective Date: 29/07/1977<br>Revocation Date: 01/07/1991 |
| A  | 205m SE  | OUTFALLPOFTHM3MOTORWAY, OUTFALLPOFTHM3MOTORWAY, ALLBROOKHILL, ALLBROOK, EASTLEIGH, HAMPSHIRE     | Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER<br>Permit Number: P01725<br>Permit Version: 1<br>Receiving Water: FRESHWATER RIVER | Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995<br>Issue date: 05/07/1988<br>Effective Date: 05/07/1988<br>Revocation Date: 31/03/1997                  |
| 7  | 323m SE  | EDMUNDNUTTALL LTD, EDMUNDNUTTALL LTD, ALLBROOK PLANT DEPT, ALLBROOKHILL, ALLBROOK, SO504LY       | Effluent Type: TRADE DISCHARGES - SITE DRAINAGE<br>Permit Number: P07187<br>Permit Version: 1<br>Receiving Water: FRESHWATER RIVER         | Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995)<br>Issue date: 08/09/1998<br>Effective Date: 08/09/1998<br>Revocation Date: -         |



| ID | Location | Address                                                                              | Details                                                                                                                                                                   |                                                                                                                                                                  |
|----|----------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | 328m W   | THEFORMERALLBROOKBRICKWORKS,THEFORMERALLBROOKBRICKWORKS,ALLBROOK,EASTLEIGH,HAMPSHIRE | Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER<br>Permit Number: P02537<br>Permit Version: 1<br>Receiving Water: FRESHWATER RIVER                                | Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY)<br>Issue date: 24/08/1989<br>Effective Date: 24/08/1989<br>Revocation Date: -             |
| 9  | 394m NW  | LINCOLNS,BOYATTLANE,EASTLEIGH,HAMPSHIRE,SO504LJ                                      | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: EPRAP3420ST<br>Permit Version: 1<br>Receiving Water: TRIB OF RIVER ITCHEN | Status: NEW ISSUED UNDER EPR 2010<br>Issue date: 13/04/2023<br>Effective Date: 13/04/2023<br>Revocation Date: -                                                  |
| B  | 428m S   | HAMFARMPUBLICHOUSE,HAMFARMPUBLICHOUSE,TWYFORDROAD,EASTLEIGH,HAMPSHIRE                | Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER<br>Permit Number: P02617<br>Permit Version: 1<br>Receiving Water: FRESHWATER RIVER                                | Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995<br>Issue date: 30/10/1989<br>Effective Date: 30/10/1989<br>Revocation Date: 31/03/1997                     |
| 11 | 431m N   | HOUSEADJACENTTO143PITMORERD,HOUSEADJACENTTO143PITMORERD,ALLBROOK,EASTLEIGH,HAMPSHIRE | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: N02531<br>Permit Version: 1<br>Receiving Water: INTO LAND                 | Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995<br>Issue date: 13/04/1981<br>Effective Date: 13/04/1981<br>Revocation Date: 31/03/1997                     |
| C  | 435m NE  | OTTERBOURNEGRANGE,OTTERBOURNEGRANGE,OTTERBOURNE,WINCHESTER,HAMPSHIRE                 | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: P02918<br>Permit Version: 1<br>Receiving Water: INTO LAND                 | Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY)<br>Issue date: 22/08/1990<br>Effective Date: 22/08/1990<br>Revocation Date: 20/12/2012 |
| C  | 435m NE  | OTTERBOURNEGRANGE,OTTERBOURNEGRANGE,OTTERBOURNE,WINCHESTER,HAMPSHIRE                 | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: P02918<br>Permit Version: 2<br>Receiving Water: INTO LAND                 | Status: VARIED UNDER EPR 2010<br>Issue date: 21/12/2012<br>Effective Date: 21/12/2012<br>Revocation Date: -                                                      |
| 13 | 476m SW  | BOYATTFARM,BOYATTFARM,BOYATTLANE,EASTLEIGH,HAMPSHIRE                                 | Effluent Type: UNSPECIFIED<br>Permit Number: H01875<br>Permit Version: 1<br>Receiving Water: FRESHWATER RIVER                                                             | Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY)<br>Issue date: 17/04/1964<br>Effective Date: 17/04/1964<br>Revocation Date: 01/07/1991    |



| ID | Location | Address                                                           | Details                                                                                                          |                                                                                                                                                 |
|----|----------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | 487m NW  | LINCOLNSFARM,LINCOLNSFARM,B<br>OYATTLANE,OTTERBOURNEHAMPS<br>HIRE | Effluent Type: UNSPECIFIED<br>Permit Number: H01876<br>Permit Version: 1<br>Receiving Water: FRESHWATER<br>RIVER | Status: LAPSED UNDER SCHEDULE<br>23 ENVIRONMENT ACT 1995<br>Issue date: 17/04/1964<br>Effective Date: 17/04/1964<br>Revocation Date: 31/03/1997 |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.14 Pollutant release to surface waters (Red List)

|                     |   |
|---------------------|---|
| Records within 500m | 0 |
|---------------------|---|

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.15 Pollutant release to public sewer

|                     |   |
|---------------------|---|
| Records within 500m | 0 |
|---------------------|---|

Discharges of Special Category Effluents to the public sewer.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.16 List 1 Dangerous Substances

|                     |   |
|---------------------|---|
| Records within 500m | 0 |
|---------------------|---|

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

#### 4.17 List 2 Dangerous Substances

|                     |   |
|---------------------|---|
| Records within 500m | 0 |
|---------------------|---|

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 4.18 Pollution Incidents (EA/NRW)

### Records within 500m

**3**

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 30](#) >

| ID | Location | Details                                                                                                                                                       |                                                                                                                     |
|----|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 10 | 403m SE  | Incident Date: 08/01/2004<br>Incident Identification: 209792<br>Pollutant: Pollutant Not Identified<br>Pollutant Description: Not Identified                  | Water Impact: Category 2 (Significant)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| B  | 419m S   | Incident Date: 17/10/2002<br>Incident Identification: 115225<br>Pollutant: Oils and Fuel<br>Pollutant Description: Diesel                                     | Water Impact: Category 4 (No Impact)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact)   |
| 12 | 463m E   | Incident Date: 08/09/2003<br>Incident Identification: 188318<br>Pollutant: Inert Materials and Wastes<br>Pollutant Description: Other Inert Material or Waste | Water Impact: Category 3 (Minor)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact)       |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.19 Pollution inventory substances

### Records within 500m

**0**

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

## 4.20 Pollution inventory waste transfers

### Records within 500m

**0**

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*



## 4.21 Pollution inventory radioactive waste

Records within 500m

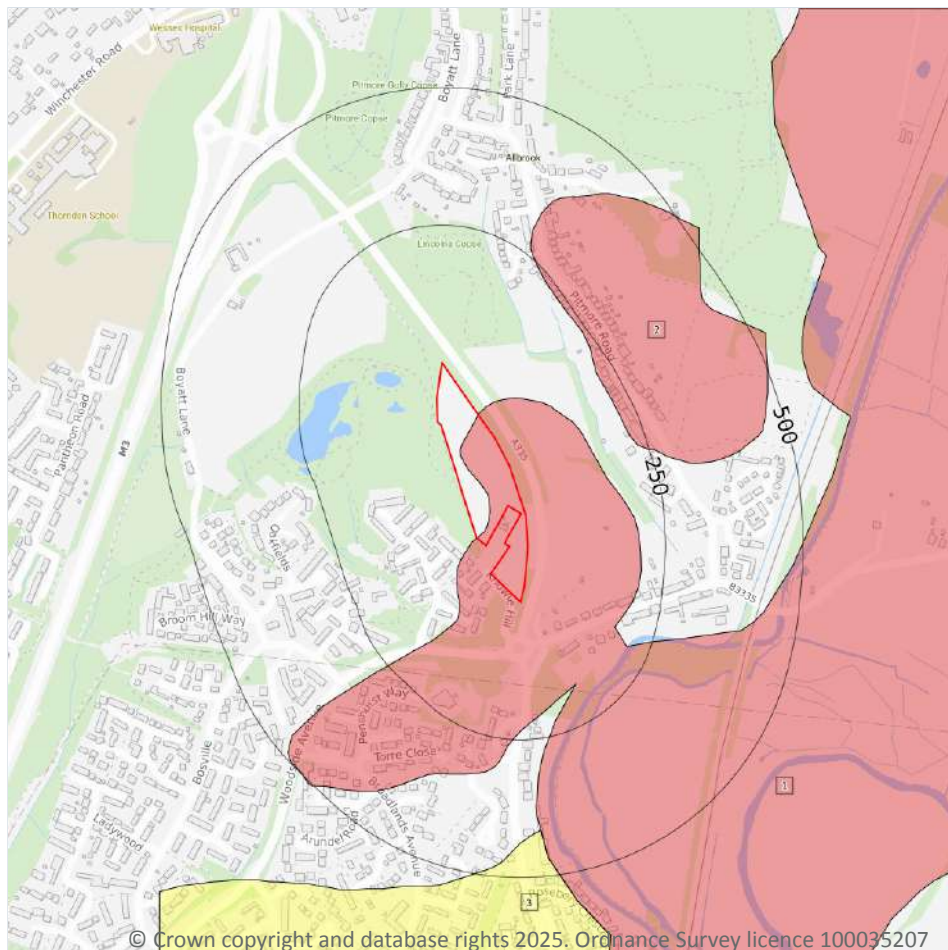
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*



## 5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
  - Secondary A
  - Secondary B
  - Secondary Undifferentiated
  - Unproductive
  - Unknown

### 5.1 Superficial aquifer

Records within 500m

3

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 38](#) >

| ID | Location | Designation | Description                                                                                                                                                                                                                            |
|----|----------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | Secondary A | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers |
| 2  | 219m NE  | Secondary A | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers |

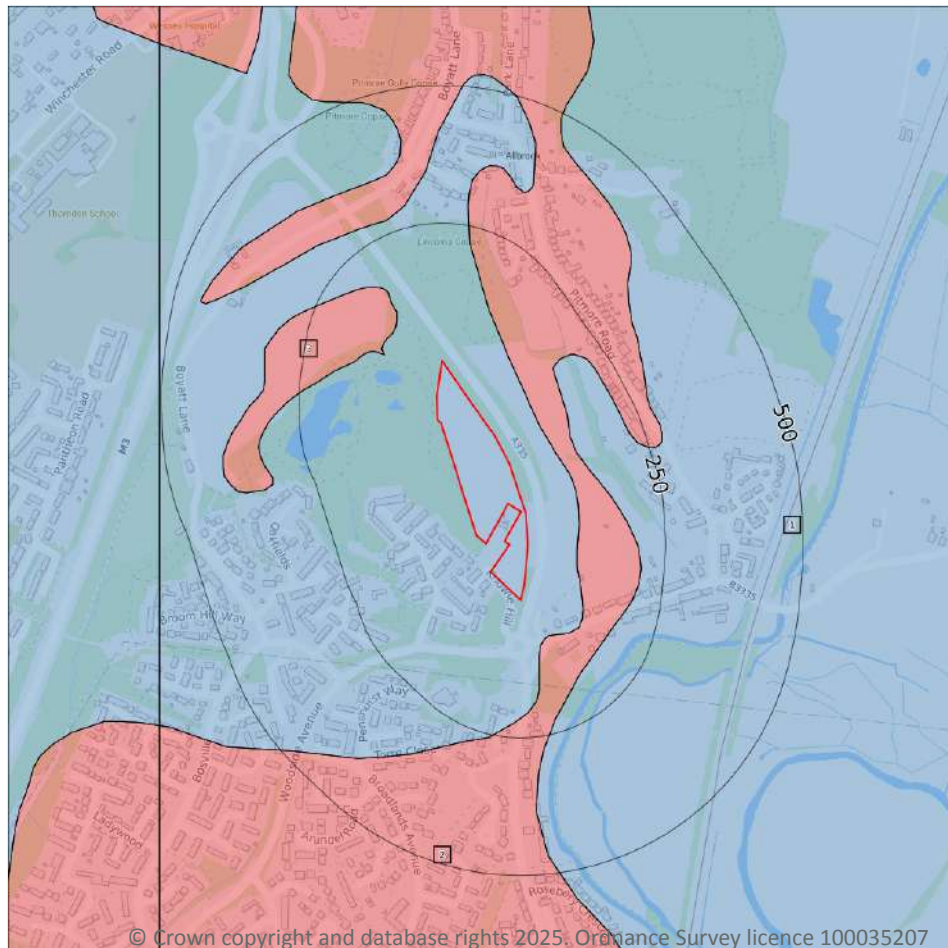


| ID | Location | Designation                   | Description                                                                                                                                                                                                                                             |
|----|----------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | 415m S   | Secondary<br>Undifferentiated | Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*



## Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
  - Secondary A
  - Secondary B
  - Secondary Undifferentiated
  - Unproductive

### 5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 40](#) >

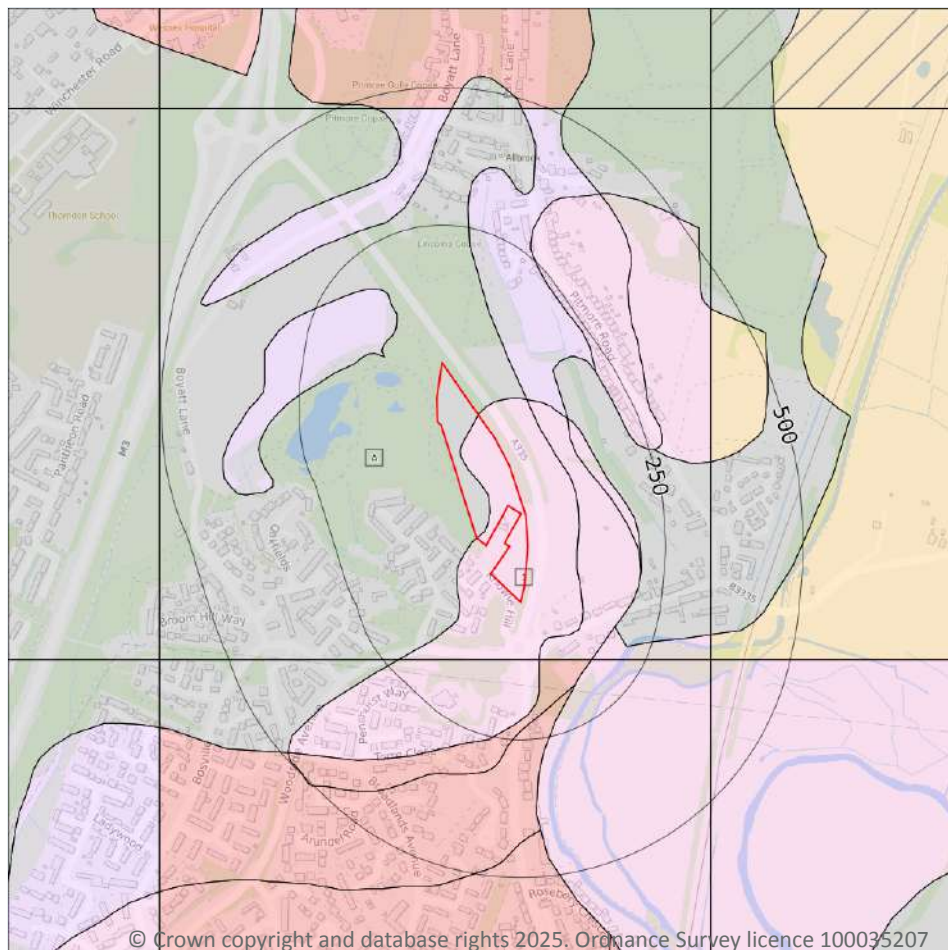
| ID | Location | Designation  | Description                                                                                                                                                                                                                            |
|----|----------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | Unproductive | These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow                                                                                                    |
| 2  | 81m NE   | Secondary A  | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers |

| ID | Location | Designation | Description                                                                                                                                                                                                                            |
|----|----------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | 103m NW  | Secondary A | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*



## Groundwater vulnerability



— Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

### 5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 42](#) >



| ID | Location | Summary                                                                                                                                                                                            | Soil / surface                                                                                           | Superficial geology                                                                                                                                            | Bedrock geology                                                                                                  |
|----|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | <b>Summary Classification:</b><br>Secondary superficial aquifer<br>- Medium Vulnerability<br><b>Combined classification:</b><br>Unproductive Bedrock<br>Aquifer, Productive<br>Superficial Aquifer | <b>Leaching class:</b> Low<br><b>Infiltration value:</b> 40-70%<br><b>Dilution value:</b> 300-550mm/year | <b>Vulnerability:</b> Medium<br><b>Aquifer type:</b> Secondary<br><b>Thickness:</b> <3m<br><b>Patchiness value:</b> <90%<br><b>Recharge potential:</b> No Data | <b>Vulnerability:</b><br>Unproductive<br><b>Aquifer type:</b><br>Unproductive<br><b>Flow mechanism:</b><br>Mixed |
| A  | On site  | <b>Summary Classification:</b><br>Unproductive aquifer (may have productive aquifer beneath)<br><b>Combined classification:</b><br>Unproductive Bedrock<br>Aquifer, No Superficial<br>Aquifer      | <b>Leaching class:</b> Low<br><b>Infiltration value:</b> 40-70%<br><b>Dilution value:</b> 300-550mm/year | <b>Vulnerability:</b> -<br><b>Aquifer type:</b> -<br><b>Thickness:</b> <3m<br><b>Patchiness value:</b> <90%<br><b>Recharge potential:</b> No Data              | <b>Vulnerability:</b><br>Unproductive<br><b>Aquifer type:</b><br>Unproductive<br><b>Flow mechanism:</b><br>Mixed |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*

## 5.4 Groundwater vulnerability- soluble rock risk

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

*This data is sourced from the British Geological Survey and the Environment Agency.*

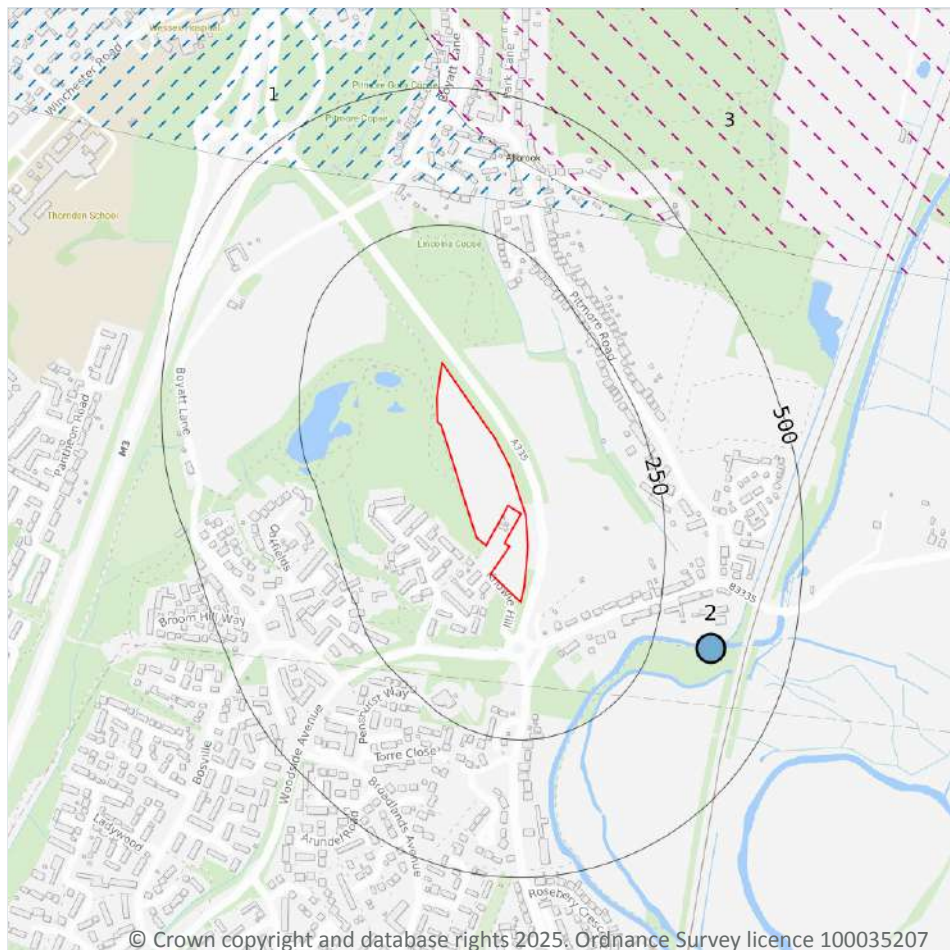
## 5.5 Groundwater vulnerability- local information

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk) ↗.

*This data is sourced from the British Geological Survey and the Environment Agency.*

## Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1  
Inner catchment
- Source Protection Zone 2  
Outer catchment
- Source Protection Zone 3  
Total catchment
- Source Protection Zone 4  
Zone of Special Interest
- Source Protection Zone 1c  
Inner catchment - confined aquifer
- Source Protection Zone 2c  
Outer catchment - confined aquifer
- Source Protection Zone 3c  
Total catchment - confined aquifer
- Drinking water abstraction licences  
Polygon features
- Drinking water abstraction licences  
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

### 5.6 Groundwater abstractions

#### Records within 2000m

6

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 44](#) >

| ID | Location | Details                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                          |
|----|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 1288m N  | Status: Active<br>Licence No: 11/42/22.7/94<br>Details: Make-Up Or Top Up Water<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT F<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446090<br>Northing: 122690       | Annual Volume (m <sup>3</sup> ): 21230240<br>Max Daily Volume (m <sup>3</sup> ): 71601<br>Original Application No: NPS/WR/020890<br>Original Start Date: 23/04/1971<br>Expiry Date: 31/03/2025<br>Issue No: 101<br>Version Start Date: 15/03/2019<br>Version End Date: - |
| -  | 1288m N  | Status: Active<br>Licence No: 11/42/22.7/94<br>Details: Potable Water Supply - Direct<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT F<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446090<br>Northing: 122690 | Annual Volume (m <sup>3</sup> ): 21230240<br>Max Daily Volume (m <sup>3</sup> ): 71601<br>Original Application No: NPS/WR/020890<br>Original Start Date: 23/04/1971<br>Expiry Date: 31/03/2025<br>Issue No: 101<br>Version Start Date: 15/03/2019<br>Version End Date: - |
| -  | 1451m NE | Status: Active<br>Licence No: 11/42/22.7/94<br>Details: Make-Up Or Top Up Water<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT E<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446680<br>Northing: 122400       | Annual Volume (m <sup>3</sup> ): 21230240<br>Max Daily Volume (m <sup>3</sup> ): 71601<br>Original Application No: NPS/WR/020890<br>Original Start Date: 23/04/1971<br>Expiry Date: 31/03/2025<br>Issue No: 101<br>Version Start Date: 15/03/2019<br>Version End Date: - |
| -  | 1451m NE | Status: Active<br>Licence No: 11/42/22.7/94<br>Details: Potable Water Supply - Direct<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT E<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446680<br>Northing: 122400 | Annual Volume (m <sup>3</sup> ): 21230240<br>Max Daily Volume (m <sup>3</sup> ): 71601<br>Original Application No: NPS/WR/020890<br>Original Start Date: 23/04/1971<br>Expiry Date: 31/03/2025<br>Issue No: 101<br>Version Start Date: 15/03/2019<br>Version End Date: - |
| -  | 1813m NE | Status: Historical<br>Licence No: 11/42/22.7/94<br>Details: Make-Up Or Top Up Water<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT J<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446650<br>Northing: 122950   | Annual Volume (m <sup>3</sup> ): 21229820<br>Max Daily Volume (m <sup>3</sup> ): 71600<br>Original Application No: -<br>Original Start Date: 23/04/1971<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 11/06/2009<br>Version End Date: -                      |



| ID | Location | Details                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                     |
|----|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 1813m NE | Status: Historical<br>Licence No: 11/42/22.7/94<br>Details: Potable Water Supply - Direct<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT J<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446650<br>Northing: 122950 | Annual Volume (m <sup>3</sup> ): 21229820<br>Max Daily Volume (m <sup>3</sup> ): 71600<br>Original Application No: -<br>Original Start Date: 23/04/1971<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 11/06/2009<br>Version End Date: - |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.7 Surface water abstractions

### Records within 2000m

2

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 44 >](#)

| ID | Location | Details                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                 |
|----|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | 355m SE  | Status: Active<br>Licence No: 31/110<br>Details: Transfer Between Sources (Post Water Act 2003)<br>Direct Source: Southern Region Surface Waters<br>Point: BLACK DYKE, POINT A ON LICENCE MAP<br>Data Type: Point<br>Name: Russell<br>Easting: 446000<br>Northing: 121020      | Annual Volume (m <sup>3</sup> ): 365000<br>Max Daily Volume (m <sup>3</sup> ): 1000<br>Original Application No: 169/0038H<br>Original Start Date: 20/02/2009<br>Expiry Date: 31/03/2025<br>Issue No: 1<br>Version Start Date: 16/04/2019<br>Version End Date: - |
| -  | 1909m NE | Status: Active<br>Licence No: SO/042/0031/023<br>Details: Transfer Between Sources (Post Water Act 2003)<br>Direct Source: Southern Region Surface Waters<br>Point: ITCHEN NAVIGATION AT BRAMBRIDGE<br>Data Type: Point<br>Name: Bronks<br>Easting: 446969<br>Northing: 122772 | Annual Volume (m <sup>3</sup> ): -<br>Max Daily Volume (m <sup>3</sup> ): -<br>Original Application No: NPS/WR/010253<br>Original Start Date: 24/07/2012<br>Expiry Date: 31/03/2025<br>Issue No: 1<br>Version Start Date: 01/04/2021<br>Version End Date: -     |

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 5.8 Potable abstractions

### Records within 2000m

**3**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 44 >](#)

| ID | Location | Details                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                          |
|----|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -  | 1288m N  | Status: Active<br>Licence No: 11/42/22.7/94<br>Details: Potable Water Supply - Direct<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT F<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446090<br>Northing: 122690     | Annual Volume (m <sup>3</sup> ): 21230240<br>Max Daily Volume (m <sup>3</sup> ): 71601<br>Original Application No: NPS/WR/020890<br>Original Start Date: 23/04/1971<br>Expiry Date: 31/03/2025<br>Issue No: 101<br>Version Start Date: 15/03/2019<br>Version End Date: - |
| -  | 1451m NE | Status: Active<br>Licence No: 11/42/22.7/94<br>Details: Potable Water Supply - Direct<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT E<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446680<br>Northing: 122400     | Annual Volume (m <sup>3</sup> ): 21230240<br>Max Daily Volume (m <sup>3</sup> ): 71601<br>Original Application No: NPS/WR/020890<br>Original Start Date: 23/04/1971<br>Expiry Date: 31/03/2025<br>Issue No: 101<br>Version Start Date: 15/03/2019<br>Version End Date: - |
| -  | 1813m NE | Status: Historical<br>Licence No: 11/42/22.7/94<br>Details: Potable Water Supply - Direct<br>Direct Source: Southern Region Groundwater<br>Point: OTTERBOURNE PS POINT J<br>Data Type: Point<br>Name: Southern Water Services Ltd<br>Easting: 446650<br>Northing: 122950 | Annual Volume (m <sup>3</sup> ): 21229820<br>Max Daily Volume (m <sup>3</sup> ): 71600<br>Original Application No: -<br>Original Start Date: 23/04/1971<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 11/06/2009<br>Version End Date: -                      |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.9 Source Protection Zones

### Records within 500m

**0**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 5.10 Source Protection Zones (confined aquifer)

### Records within 500m

**2**

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

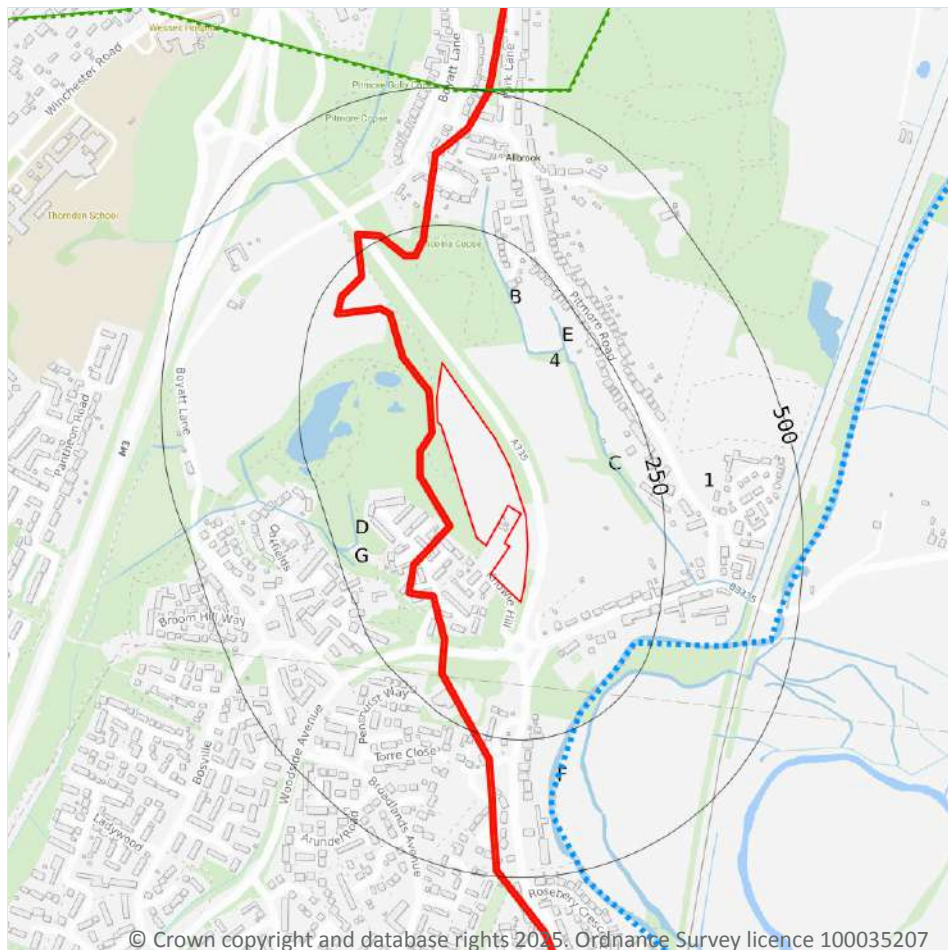
Features are displayed on the Abstractions and Source Protection Zones map on [page 44](#) >

| ID | Location | Type | Description                             |
|----|----------|------|-----------------------------------------|
| 1  | 308m N   | 2c   | Outer catchment within confined aquifer |
| 3  | 390m N   | 1c   | Inner catchment within confined aquifer |

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 6 Hydrology



### 6.1 Water Network (OS MasterMap)

Records within 250m

10

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on [page 49](#) >

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|------|
| B  | 139m N   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name                  |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|-----------------------|
| 4  | 140m N   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |
| C  | 171m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |
| D  | 198m W   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |
| E  | 198m NE  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |
| F  | 208m SE  | Canal. A manmade watercourse for inland navigation. | On ground surface | Watercourse contains water year round (in normal circumstances) | The Itchen Navigation |
| G  | 210m SW  | Inland river not influenced by normal tidal action. | Underground       | Watercourse contains water year round (in normal circumstances) | -                     |
| F  | 225m SE  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |
| G  | 225m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |
| G  | 230m SW  | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -                     |

*This data is sourced from the Ordnance Survey.*

## 6.2 Surface water features

### Records within 250m

**13**

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on [page 49 >](#)

*This data is sourced from the Ordnance Survey.*



### 6.3 WFD Surface water body catchments

#### Records on site

**1**

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 49 >](#)

| ID | Location | Type  | Water body catchment | Water body ID  | Operational catchment | Management catchment |
|----|----------|-------|----------------------|----------------|-----------------------|----------------------|
| 1  | On site  | River | Itchen               | GB107042022580 | Itchen                | Test and Itchen      |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 6.4 WFD Surface water bodies

#### Records identified

**2**

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 49 >](#)

| ID | Location | Type  | Name                  | Water body ID                    | Overall rating | Chemical rating | Ecological rating | Year |
|----|----------|-------|-----------------------|----------------------------------|----------------|-----------------|-------------------|------|
| 7  | 211m SE  | Canal | The Itchen Navigation | <a href="#">GB70710008 ↗</a>     | Moderate       | Fail            | Good              | 2019 |
| -  | 556m SE  | River | Itchen                | <a href="#">GB107042022580 ↗</a> | Moderate       | Fail            | Good              | 2019 |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 6.5 WFD Groundwater bodies

#### Records on site

**0**

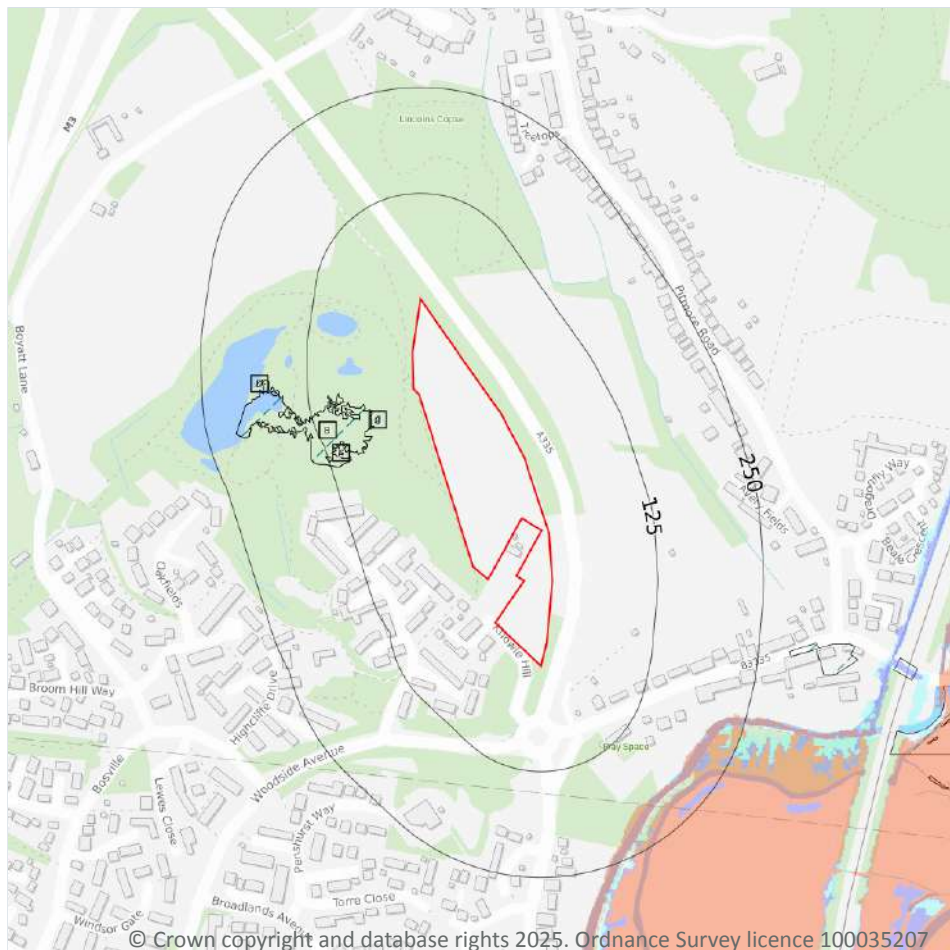
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.



*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 7 River and coastal flooding



— Site Outline  
Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

### 7.1 Risk of flooding from rivers and the sea

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 7.2 Historical Flood Events

### Records within 250m

**8**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

Features are displayed on the River and coastal flooding map on [page 53](#) >

| ID | Location | Event name                                     | Date of flood            | Flood source | Flood cause                  | Type of flood |
|----|----------|------------------------------------------------|--------------------------|--------------|------------------------------|---------------|
| A  | 52m NW   | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| A  | 52m NW   | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| B  | 56m NW   | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| B  | 56m NW   | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| C  | 106m W   | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| C  | 106m W   | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| D  | 178m NW  | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |
| D  | 178m NW  | Winter 13/14 East Hampshire Aerial Photography | 2014-03-05<br>2014-03-05 | Other        | Groundwater/high water table | Fluvial       |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.3 Flood Defences

### Records within 250m

**0**

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## River and coastal flooding - Flood Zones

### 7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 7.7 Flood Zone 3

Records within 50m

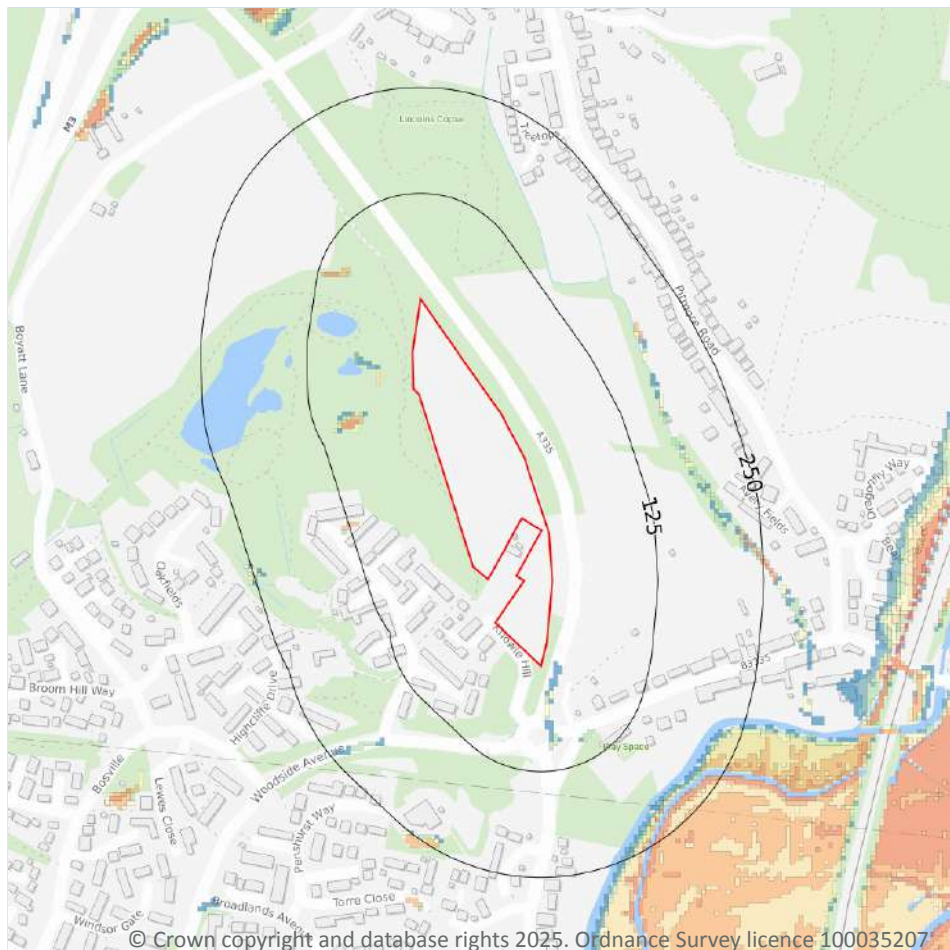
0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

### 8.1 Surface water flooding

**Highest risk on site**

**Negligible**

**Highest risk within 50m**

**1 in 100 year, 0.3m - 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 57 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

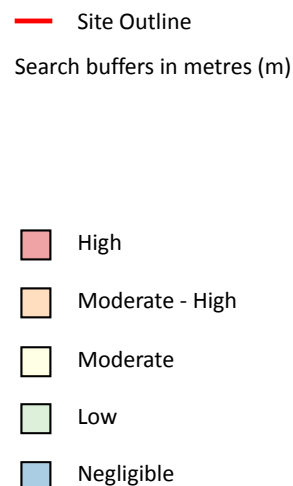
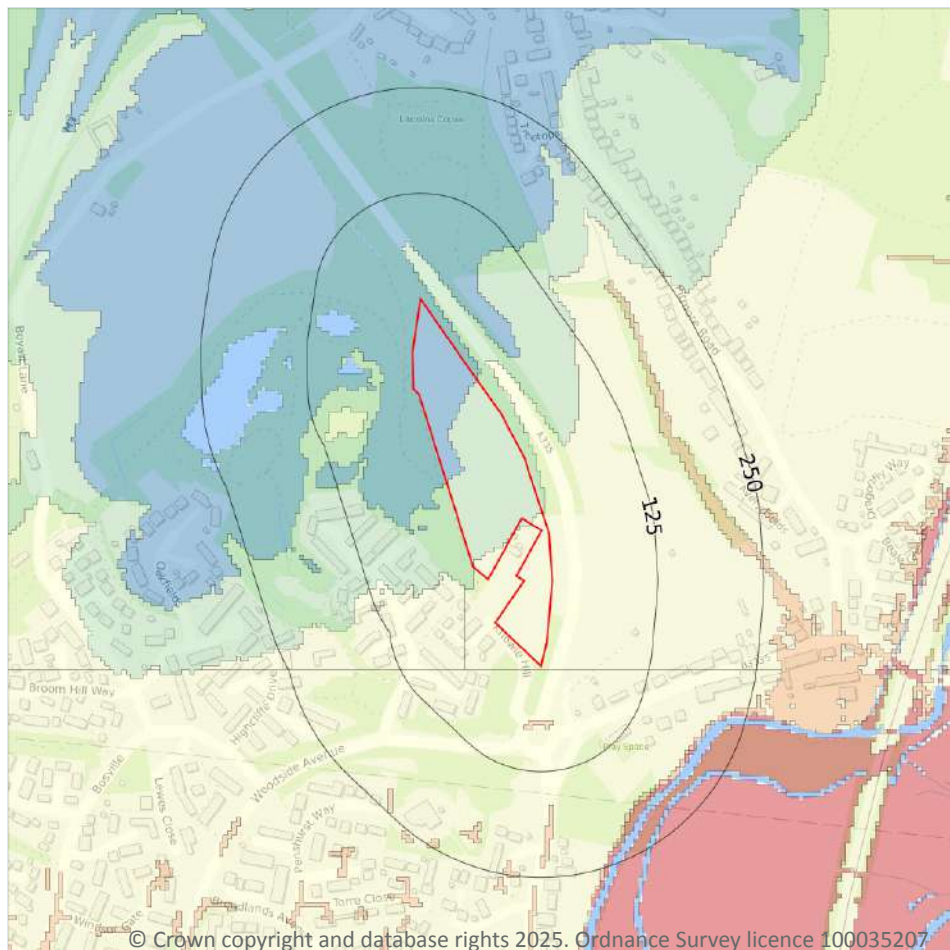
The table below shows the maximum flood depths for a range of return periods for the site.

| Return period  | Maximum modelled depth |
|----------------|------------------------|
| 1 in 1000 year | Negligible             |
| 1 in 250 year  | Negligible             |
| 1 in 100 year  | Negligible             |
| 1 in 30 year   | Negligible             |

*This data is sourced from Ambiental Risk Analytics.*



## 9 Groundwater flooding



### 9.1 Groundwater flooding

**Highest risk on site**

**Moderate**

**Highest risk within 50m**

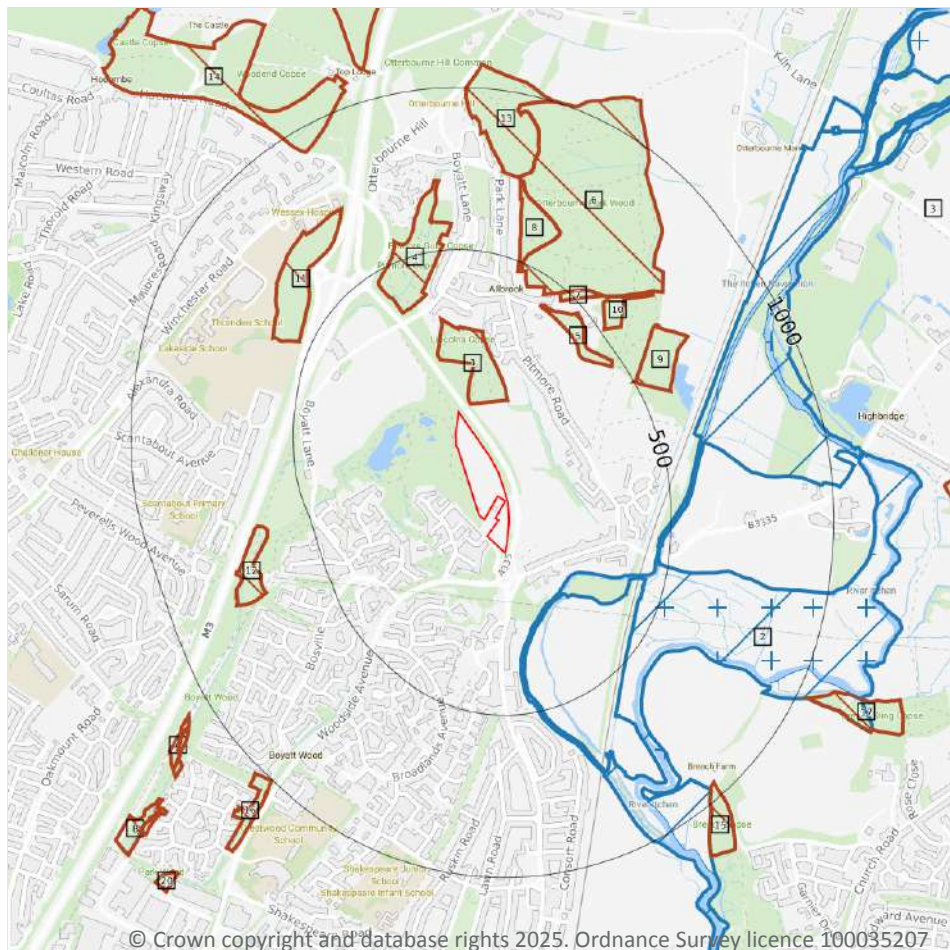
**Moderate**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 59](#) >

*This data is sourced from Ambiantal Risk Analytics.*

## 10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Special Areas of Conservation (SAC)
- Designated Ancient Woodland

### 10.1 Sites of Special Scientific Interest (SSSI)

#### Records within 2000m

2

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 60](#) >

| ID | Location | Name         | Data source     |
|----|----------|--------------|-----------------|
| 2  | 203m SE  | River Itchen | Natural England |



| ID | Location | Name         | Data source     |
|----|----------|--------------|-----------------|
| 21 | 1411m NE | River Itchen | Natural England |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.2 Conserved wetland sites (Ramsar sites)

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>0</b> |
|-----------------------------|----------|

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.3 Special Areas of Conservation (SAC)

|                             |          |
|-----------------------------|----------|
| <b>Records within 2000m</b> | <b>1</b> |
|-----------------------------|----------|

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on [page 60 >](#)

| ID | Location | Name         | Features of interest                                                                                                                                                                                                                    | Habitat description                                                                                                                                                                                                                                                                                           | Data source     |
|----|----------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 3  | 203m SE  | River Itchen | Rivers with floating vegetation often dominated by water-crowfoot; Sea lamprey; Brook lamprey; River lamprey; Atlantic salmon; Bullhead; Desmoulin's whorl snail; Southern damselfly; White-clawed (or Atlantic stream) crayfish; Otter | Mixed woodland; Humid grassland, Mesophile grassland; Broad-leaved deciduous woodland; Improved grassland; Bogs, Marshes, Water fringed vegetation, Fens; Inland water bodies (Standing water, Running water); Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas) | Natural England |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.6 Local Nature Reserves (LNR)

Records within 2000m

0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.7 Designated Ancient Woodland

Records within 2000m

29

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on [page 60](#) >

| ID | Location | Name                  | Woodland Type                   |
|----|----------|-----------------------|---------------------------------|
| 1  | 45m N    | Lincolns Copse        | Ancient & Semi-Natural Woodland |
| 4  | 352m NW  | Pitmore Copse         | Ancient & Semi-Natural Woodland |
| 5  | 406m NE  | Unknown               | Ancient & Semi-Natural Woodland |
| 6  | 441m N   | Otterbourne Park Wood | Ancient & Semi-Natural Woodland |



| ID | Location | Name                      | Woodland Type                   |
|----|----------|---------------------------|---------------------------------|
| 7  | 466m NE  | Unknown                   | Ancient & Semi-Natural Woodland |
| 8  | 471m N   | Unknown                   | Ancient & Semi-Natural Woodland |
| 9  | 504m NE  | Unknown                   | Ancient Replanted Woodland      |
| 10 | 514m NE  | Unknown                   | Ancient & Semi-Natural Woodland |
| 11 | 536m NW  | Unknown                   | Ancient & Semi-Natural Woodland |
| 12 | 636m W   | Unknown                   | Ancient & Semi-Natural Woodland |
| 13 | 747m N   | Unknown                   | Ancient & Semi-Natural Woodland |
| 14 | 929m NW  | Castle/woodend Copses     | Ancient & Semi-Natural Woodland |
| 15 | 956m SE  | Breach Copse              | Ancient & Semi-Natural Woodland |
| 16 | 1004m SW | Unknown                   | Ancient & Semi-Natural Woodland |
| 17 | 1033m SE | Breach Sling Copse        | Ancient & Semi-Natural Woodland |
| A  | 1072m SW | Unknown                   | Ancient & Semi-Natural Woodland |
| A  | 1092m SW | Unknown                   | Ancient & Semi-Natural Woodland |
| 18 | 1094m N  | Freemantles/gt. Moorlands | Ancient & Semi-Natural Woodland |
| B  | 1289m SW | Unknown                   | Ancient & Semi-Natural Woodland |
| B  | 1301m SW | Unknown                   | Ancient & Semi-Natural Woodland |
| 19 | 1346m E  | Lord's Wood               | Ancient & Semi-Natural Woodland |
| 20 | 1409m SW | Unknown                   | Ancient & Semi-Natural Woodland |
| -  | 1515m E  | Lord's Wood               | Ancient & Semi-Natural Woodland |
| -  | 1520m E  | Lord's Wood               | Ancient & Semi-Natural Woodland |
| -  | 1569m E  | Lord's Wood               | Ancient & Semi-Natural Woodland |
| -  | 1579m E  | Lord's Wood               | Ancient & Semi-Natural Woodland |
| -  | 1586m E  | Lord's Wood               | Ancient & Semi-Natural Woodland |
| -  | 1742m N  | Unknown                   | Ancient & Semi-Natural Woodland |
| -  | 1788m N  | Unknown                   | Ancient & Semi-Natural Woodland |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*



## 10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

*This data is sourced from the Forestry Commission.*

## 10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

*This data is sourced from the Ministry of Housing, Communities and Local Government.*

## 10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*



### 10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

*This data is sourced from Natural England and Natural Resources Wales.*

### 10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

### 10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

*This data is sourced from Natural England.*

### 10.16 Nitrate Vulnerable Zones

Records within 2000m

4

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

| Location | Name                                | Type            | NVZ ID | Status   |
|----------|-------------------------------------|-----------------|--------|----------|
| On site  | Hamble Estuary Eutrophic NVZ (TraC) | Eutrophic Water | 3      | Existing |

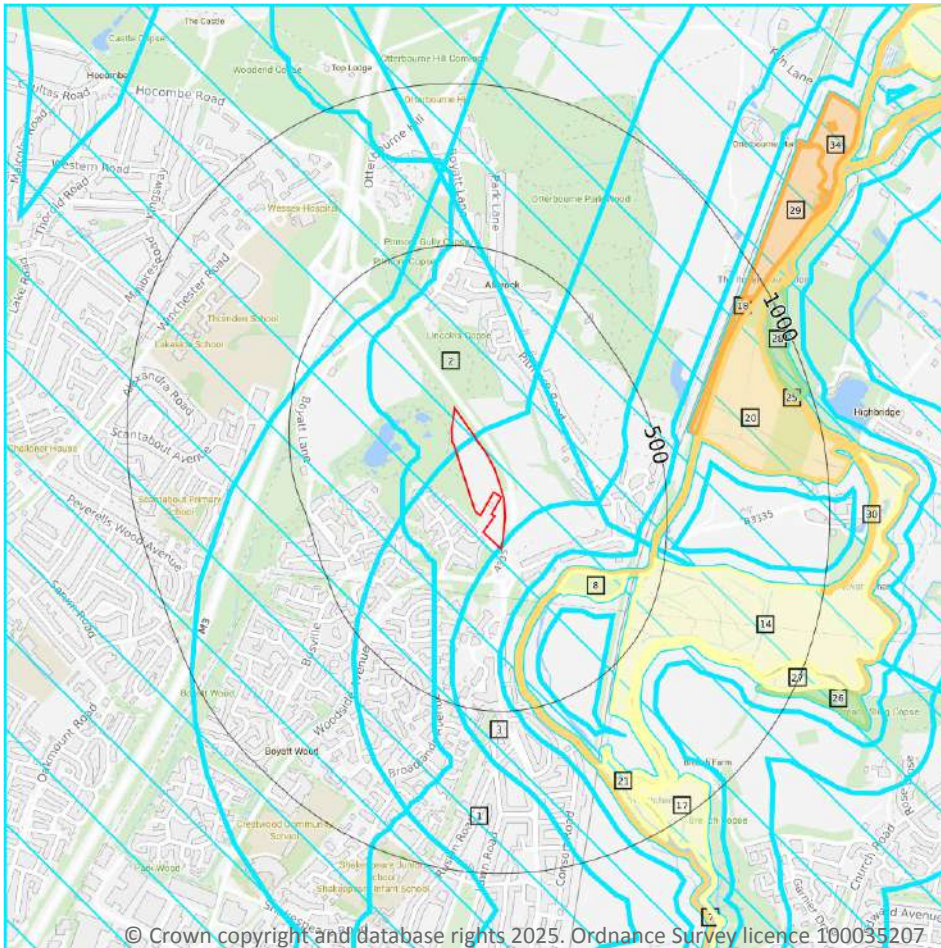


| Location | Name                                | Type            | NVZ ID | Status   |
|----------|-------------------------------------|-----------------|--------|----------|
| 1029m NE | Hampshire Chalk                     | Groundwater     | 143    | Existing |
| 1405m SE | Bow Lake NVZ                        | Surface Water   | 811    | Existing |
| 1412m W  | Hamble Estuary Eutrophic NVZ (TraC) | Eutrophic Water | 3      | Existing |

*This data is sourced from Natural England and Natural Resources Wales.*



## SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

### 10.17 SSSI Impact Risk Zones

#### Records on site

3

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 67](#) >

| ID | Location | Type of developments requiring consultation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | <p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Wind and Solar - Solar schemes with footprint &gt; 0.5ha, all wind turbines.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil &amp; gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or footprint exceeds 0.2ha.</p> <p>Residential - Residential development of 100 units or more.</p> <p>Rural residential - Any residential development of 10 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock &amp; poultry units, slurry lagoons &amp; digestate stores, manure stores).</p> <p>Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.</p> <p>Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or any development needing its own water supply .</p> <p>Notes: Strategic solutions for recreational impacts are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements. NUTRIENT IMPACT AREA. For new development with overnight accommodation Reg 63 of the Conservation of Habitats and Species Regulations 2017 must be applied and additional measures required. LPA to refer to Natural England's Nutrient Neutrality advice.</p> |



| ID | Location | Type of developments requiring consultation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | On site  | <p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Wind and Solar - Wind turbines.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil &amp; gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or footprint exceeds 0.2ha.</p> <p>Residential - Residential development of 100 units or more.</p> <p>Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock &amp; poultry units with floorspace &gt; 500m<sup>2</sup>, slurry lagoons &amp; digestate stores &gt; 200m<sup>2</sup>, manure stores &gt; 250t).</p> <p>Combustion - General combustion processes &gt;20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste of more than 2m<sup>3</sup>/day to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or any development needing its own water supply .</p> <p>Notes: Strategic solutions for recreational impacts are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements. NUTRIENT IMPACT AREA. For new development with overnight accommodation Reg 63 of the Conservation of Habitats and Species Regulations 2017 must be applied and additional measures required. LPA to refer to Natural England's Nutrient Neutrality advice.</p> |



| ID | Location | Type of developments requiring consultation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | On site  | <p>All applications - All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.</p> <p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Wind and Solar - Solar schemes with footprint &gt; 0.5ha, all wind turbines.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil &amp; gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or footprint exceeds 0.2ha.</p> <p>Residential - Residential development of 10 units or more.</p> <p>Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.</p> <p>Air pollution - Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock &amp; poultry units, slurry lagoons &amp; digestate stores, manure stores).</p> <p>Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.</p> <p>Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is &gt; 1,000m<sup>2</sup> or any development needing its own water supply .</p> <p>Notes: Strategic solutions for recreational impacts are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements. NUTRIENT IMPACT AREA. For new development with overnight accommodation Reg 63 of the Conservation of Habitats and Species Regulations 2017 must be applied and additional measures required. LPA to refer to Natural England's Nutrient Neutrality advice.</p> |

*This data is sourced from Natural England.*

## 10.18 SSSI Units

Records within 2000m

19

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on [page 67](#) >



ID: 7  
 Location: 203m SE  
 SSSI name: River Itchen  
 Unit name: Lower Itchen (Highbridge To Wood Mill)  
 Broad habitat: Rivers And Streams  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name                                                             | Feature condition         | Date of assessment |
|--------------------------------------------------------------------------|---------------------------|--------------------|
| Atlantic salmon, <i>Salmo salar</i>                                      | Unfavourable - No change  | 07/05/2015         |
| Brook lamprey, <i>Lampetra planeri</i>                                   | Unfavourable - No change  | 13/02/2019         |
| Bullhead, <i>Cottus gobio</i>                                            | Favourable                | 07/05/2015         |
| H3260 Water courses of plain to montane levels with <i>R. fluitantis</i> | Unfavourable - No change  | 30/03/2010         |
| Invert. assemblage W314 reed-fen & pools                                 | -                         | -                  |
| Otter, <i>Lutra lutra</i>                                                | Not Recorded              | 01/01/1900         |
| Rivers and Streams                                                       | Not Recorded              | 01/01/1900         |
| S1044 Southern damselfly, <i>Coenagrion mercuriale</i>                   | Unfavourable - Recovering | 15/01/2007         |
| S1096 Brook lamprey, <i>Lampetra planeri</i>                             | Unfavourable - No change  | 13/02/2019         |
| S1106 Atlantic salmon, <i>Salmo salar</i>                                | Unfavourable - No change  | 15/01/2007         |
| S1163 Bullhead, <i>Cottus gobio</i>                                      | Favourable                | 15/01/2007         |
| S1355 Otter, <i>Lutra lutra</i>                                          | Unfavourable - Recovering | 30/03/2010         |

ID: 8  
 Location: 218m SE  
 SSSI name: River Itchen  
 Unit name: Former Unit 8  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - Recovering  
 Reportable features:

| Feature name                             | Feature condition         | Date of assessment |
|------------------------------------------|---------------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools | -                         | -                  |
| Lowland neutral grassland (MG8)          | Unfavourable - Recovering | 19/06/2012         |

ID: 14  
 Location: 437m SE  
 SSSI name: River Itchen  
 Unit name: 87  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - Recovering  
 Reportable features:

| Feature name                                                                             | Feature condition         | Date of assessment |
|------------------------------------------------------------------------------------------|---------------------------|--------------------|
| Assemblages of breeding birds - Lowland open waters and their margins                    | Unfavourable - Recovering | 14/06/2011         |
| Floodplain fen (lowland)                                                                 | Unfavourable - Recovering | 14/06/2011         |
| Invert. assemblage W314 reed-fen & pools                                                 | -                         | -                  |
| Nationally rare and scarce dragonfly species - Coenagrion mercuriale, Southern Damselfly | Unfavourable - Recovering | 14/06/2011         |
| S1044 Southern damselfly, Coenagrion mercuriale                                          | Unfavourable - Recovering | 14/06/2011         |
| S1355 Otter, Lutra lutra                                                                 | Favourable                | 14/06/2011         |

ID: 15  
 Location: 462m SE  
 SSSI name: River Itchen  
 Unit name: Middle Itchen (Easton To Highbridge)  
 Broad habitat: Rivers And Streams  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name                                                      | Feature condition        | Date of assessment |
|-------------------------------------------------------------------|--------------------------|--------------------|
| Atlantic salmon, Salmo salar                                      | Unfavourable - No change | 07/05/2015         |
| Brook lamprey, Lampetra planeri                                   | Unfavourable - No change | 13/02/2019         |
| Bullhead, Cottus gobio                                            | Favourable               | 07/05/2015         |
| H3260 Water courses of plain to montane levels with R. fluitantis | Unfavourable - No change | 30/03/2010         |
| Invert. assemblage W314 reed-fen & pools                          | -                        | -                  |
| Otter, Lutra lutra                                                | Not Recorded             | 01/01/1900         |
| Rivers and Streams                                                | Not Recorded             | 01/01/1900         |
| S1044 Southern damselfly, Coenagrion mercuriale                   | Unfavourable - No change | 15/01/2007         |
| S1096 Brook lamprey, Lampetra planeri                             | Unfavourable - No change | 13/02/2019         |

| Feature name                              | Feature condition         | Date of assessment |
|-------------------------------------------|---------------------------|--------------------|
| S1106 Atlantic salmon, <i>Salmo salar</i> | Unfavourable - No change  | 15/01/2007         |
| S1163 Bullhead, <i>Cottus gobio</i>       | Favourable                | 15/01/2007         |
| S1355 Otter, <i>Lutra lutra</i>           | Unfavourable - Recovering | 30/03/2010         |

ID: 17  
 Location: 563m SE  
 SSSI name: River Itchen  
 Unit name: Breach Farm  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - Recovering  
 Reportable features:

| Feature name                                                          | Feature condition         | Date of assessment |
|-----------------------------------------------------------------------|---------------------------|--------------------|
| Assemblages of breeding birds - Lowland open waters and their margins | Unfavourable - Recovering | 14/06/2011         |
| Invert. assemblage W314 reed-fen & pools                              | -                         | -                  |
| Lowland mire grassland and rush pasture                               | Unfavourable - Recovering | 14/06/2011         |
| S1044 Southern damselfly, <i>Coenagrion mercuriale</i>                | Unfavourable - Recovering | 14/06/2011         |
| S1355 Otter, <i>Lutra lutra</i>                                       | Unfavourable - Recovering | 14/06/2011         |
| Wet woodland                                                          | Favourable                | 14/06/2011         |

ID: 18  
 Location: 610m E  
 SSSI name: River Itchen  
 Unit name: Formerly Part Of Unit 85  
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland  
 Condition: Unfavourable - Declining  
 Reportable features:

| Feature name                             | Feature condition        | Date of assessment |
|------------------------------------------|--------------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools | -                        | -                  |
| Wet woodland                             | Unfavourable - Declining | 26/09/2008         |



ID: 20  
 Location: 630m E  
 SSSI name: River Itchen  
 Unit name: Former Unit 9  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name                                                          | Feature condition        | Date of assessment |
|-----------------------------------------------------------------------|--------------------------|--------------------|
| Assemblages of breeding birds - Lowland open waters and their margins | Unfavourable - No change | 03/07/2012         |
| Floodplain fen (lowland)                                              | Unfavourable - No change | 03/07/2012         |
| Invert. assemblage W314 reed-fen & pools                              | -                        | -                  |
| Lowland neutral grassland (MG8)                                       | Unfavourable - No change | 03/07/2012         |

ID: 21  
 Location: 693m SE  
 SSSI name: River Itchen  
 Unit name: 90  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - Recovering  
 Reportable features:

| Feature name                                    | Feature condition         | Date of assessment |
|-------------------------------------------------|---------------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools        | -                         | -                  |
| Lowland neutral grassland (MG8)                 | Unfavourable - Recovering | 19/06/2012         |
| S1044 Southern damselfly, Coenagrion mercuriale | Unfavourable - Recovering | 19/06/2012         |
| S1355 Otter, Lutra lutra                        | Unfavourable - Recovering | 19/06/2012         |

ID: 25  
 Location: 901m E  
 SSSI name: River Itchen  
 Unit name: Middle Itchen (Easton To Highbridge)  
 Broad habitat: Rivers And Streams  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name                 | Feature condition        | Date of assessment |
|------------------------------|--------------------------|--------------------|
| Atlantic salmon, Salmo salar | Unfavourable - No change | 07/05/2015         |



| Feature name                                                      | Feature condition         | Date of assessment |
|-------------------------------------------------------------------|---------------------------|--------------------|
| Brook lamprey, Lampetra planeri                                   | Unfavourable - No change  | 13/02/2019         |
| Bullhead, Cottus gobio                                            | Favourable                | 07/05/2015         |
| H3260 Water courses of plain to montane levels with R. fluitantis | Unfavourable - No change  | 30/03/2010         |
| Invert. assemblage W314 reed-fen & pools                          | -                         | -                  |
| Otter, Lutra lutra                                                | Not Recorded              | 01/01/1900         |
| Rivers and Streams                                                | Not Recorded              | 01/01/1900         |
| S1044 Southern damselfly, Coenagrion mercuriale                   | Unfavourable - No change  | 15/01/2007         |
| S1096 Brook lamprey, Lampetra planeri                             | Unfavourable - No change  | 13/02/2019         |
| S1106 Atlantic salmon, Salmo salar                                | Unfavourable - No change  | 15/01/2007         |
| S1163 Bullhead, Cottus gobio                                      | Favourable                | 15/01/2007         |
| S1355 Otter, Lutra lutra                                          | Unfavourable - Recovering | 30/03/2010         |

ID: 26  
 Location: 903m SE  
 SSSI name: River Itchen  
 Unit name: Woodland Formerly Part Of Unit 88  
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland  
 Condition: Favourable  
 Reportable features:

| Feature name                             | Feature condition | Date of assessment |
|------------------------------------------|-------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools | -                 | -                  |
| Lowland mixed deciduous woodland         | Favourable        | 20/05/2013         |

ID: 27  
 Location: 912m SE  
 SSSI name: River Itchen  
 Unit name: Unit 134 (Fen Formerly Part Of Unit 88)  
 Broad habitat: Fen, Marsh And Swamp - Lowland  
 Condition: Unfavourable - Recovering  
 Reportable features:

| Feature name             | Feature condition         | Date of assessment |
|--------------------------|---------------------------|--------------------|
| Floodplain fen (lowland) | Unfavourable - Recovering | 27/06/2011         |



| Feature name                             | Feature condition | Date of assessment |
|------------------------------------------|-------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools | -                 | -                  |

ID: 28  
 Location: 920m E  
 SSSI name: River Itchen  
 Unit name: Woodland Formerly Part Of 86  
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland  
 Condition: Favourable  
 Reportable features:

| Feature name | Feature condition | Date of assessment |
|--------------|-------------------|--------------------|
| Wet woodland | Favourable        | 20/05/2013         |

ID: 29  
 Location: 929m NE  
 SSSI name: River Itchen  
 Unit name: Brambridge Meadows  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - Declining  
 Reportable features:

| Feature name                             | Feature condition        | Date of assessment |
|------------------------------------------|--------------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools | -                        | -                  |
| Lowland neutral grassland (MG8)          | Unfavourable - Declining | 07/10/2013         |

ID: 30  
 Location: 994m E  
 SSSI name: River Itchen  
 Unit name: Lower Itchen (Highbridge To Wood Mill)  
 Broad habitat: Rivers And Streams  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name                           | Feature condition        | Date of assessment |
|----------------------------------------|--------------------------|--------------------|
| Atlantic salmon, <i>Salmo salar</i>    | Unfavourable - No change | 07/05/2015         |
| Brook lamprey, <i>Lampetra planeri</i> | Unfavourable - No change | 13/02/2019         |
| Bullhead, <i>Cottus gobio</i>          | Favourable               | 07/05/2015         |



| Feature name                                                             | Feature condition         | Date of assessment |
|--------------------------------------------------------------------------|---------------------------|--------------------|
| H3260 Water courses of plain to montane levels with <i>R. fluitantis</i> | Unfavourable - No change  | 30/03/2010         |
| Invert. assemblage W314 reed-fen & pools                                 | -                         | -                  |
| Otter, <i>Lutra lutra</i>                                                | Not Recorded              | 01/01/1900         |
| Rivers and Streams                                                       | Not Recorded              | 01/01/1900         |
| S1044 Southern damselfly, <i>Coenagrion mercuriale</i>                   | Unfavourable - Recovering | 15/01/2007         |
| S1096 Brook lamprey, <i>Lampetra planeri</i>                             | Unfavourable - No change  | 13/02/2019         |
| S1106 Atlantic salmon, <i>Salmo salar</i>                                | Unfavourable - No change  | 15/01/2007         |
| S1163 Bullhead, <i>Cottus gobio</i>                                      | Favourable                | 15/01/2007         |
| S1355 Otter, <i>Lutra lutra</i>                                          | Unfavourable - Recovering | 30/03/2010         |

ID: 34  
 Location: 1255m NE  
 SSSI name: River Itchen  
 Unit name: Otterbourne Meadows S Of Kiln Lane  
 Broad habitat: Neutral Grassland - Lowland  
 Condition: Unfavourable - Declining  
 Reportable features:

| Feature name                                                                                     | Feature condition        | Date of assessment |
|--------------------------------------------------------------------------------------------------|--------------------------|--------------------|
| Floodplain fen (lowland)                                                                         | Not Recorded             | 01/01/1900         |
| Invert. assemblage W314 reed-fen & pools                                                         | -                        | -                  |
| Lowland neutral grassland (MG8)                                                                  | Unfavourable - Declining | 03/02/2011         |
| Nationally rare and scarce dragonfly species - <i>Coenagrion mercuriale</i> , Southern Damselfly | Unfavourable - Declining | 02/04/2009         |

ID: -  
 Location: 1477m S  
 SSSI name: River Itchen  
 Unit name: 91  
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland  
 Condition: Unfavourable - No change  
 Reportable features:



| Feature name | Feature condition        | Date of assessment |
|--------------|--------------------------|--------------------|
| Wet woodland | Unfavourable - No change | 01/10/2010         |

ID: -  
 Location: 1482m S  
 SSSI name: River Itchen  
 Unit name: Lower Itchen (Highbridge To Wood Mill)  
 Broad habitat: Rivers And Streams  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name                                                             | Feature condition         | Date of assessment |
|--------------------------------------------------------------------------|---------------------------|--------------------|
| Atlantic salmon, <i>Salmo salar</i>                                      | Unfavourable - No change  | 07/05/2015         |
| Brook lamprey, <i>Lampetra planeri</i>                                   | Unfavourable - No change  | 13/02/2019         |
| Bullhead, <i>Cottus gobio</i>                                            | Favourable                | 07/05/2015         |
| H3260 Water courses of plain to montane levels with <i>R. fluitantis</i> | Unfavourable - No change  | 30/03/2010         |
| Invert. assemblage W314 reed-fen & pools                                 | -                         | -                  |
| Otter, <i>Lutra lutra</i>                                                | Not Recorded              | 01/01/1900         |
| Rivers and Streams                                                       | Not Recorded              | 01/01/1900         |
| S1044 Southern damselfly, <i>Coenagrion mercuriale</i>                   | Unfavourable - Recovering | 15/01/2007         |
| S1096 Brook lamprey, <i>Lampetra planeri</i>                             | Unfavourable - No change  | 13/02/2019         |
| S1106 Atlantic salmon, <i>Salmo salar</i>                                | Unfavourable - No change  | 15/01/2007         |
| S1163 Bullhead, <i>Cottus gobio</i>                                      | Favourable                | 15/01/2007         |
| S1355 Otter, <i>Lutra lutra</i>                                          | Unfavourable - Recovering | 30/03/2010         |

ID: -  
 Location: 1494m SE  
 SSSI name: River Itchen  
 Unit name: 91  
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland  
 Condition: Unfavourable - No change  
 Reportable features:

| Feature name | Feature condition        | Date of assessment |
|--------------|--------------------------|--------------------|
| Wet woodland | Unfavourable - No change | 01/10/2010         |



ID: 40  
Location: 1759m NE  
SSSI name: River Itchen  
Unit name: Otterbourne Meadows N Of Kiln Lane  
Broad habitat: Neutral Grassland - Lowland  
Condition: Unfavourable - Recovering  
Reportable features:

| Feature name                                    | Feature condition         | Date of assessment |
|-------------------------------------------------|---------------------------|--------------------|
| Invert. assemblage W314 reed-fen & pools        | -                         | -                  |
| Lowland neutral grassland (MG8)                 | Unfavourable - Recovering | 12/07/2012         |
| S1044 Southern damselfly, Coenagrion mercuriale | Unfavourable - Recovering | 12/07/2012         |
| S1355 Otter, Lutra lutra                        | Unfavourable - Recovering | 12/07/2012         |

*This data is sourced from Natural England and Natural Resources Wales.*



## 11 Visual and cultural designations

### 11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

### 11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

### 11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

*This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.*

### 11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.7 Registered Parks and Gardens

Records within 250m

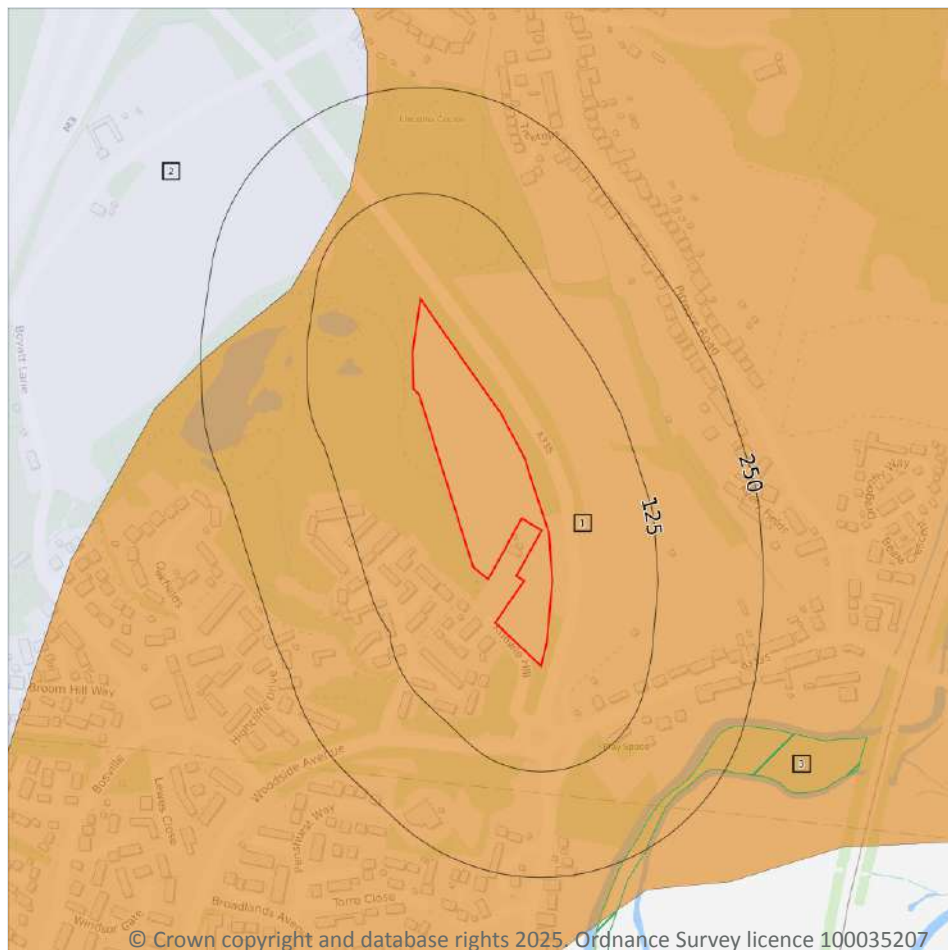
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*



## 12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

### 12.1 Agricultural Land Classification

Records within 250m

2

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 82](#) >

| ID | Location | Classification | Description                                                                                                                                                                                                                                                                                     |
|----|----------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | Grade 3        | Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2. |

| ID | Location | Classification | Description                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----|----------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | 138m NW  | Grade 4        | Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land. |

*This data is sourced from Natural England.*

## 12.2 Open Access Land

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>0</b> |
|----------------------------|----------|

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

*This data is sourced from Natural England and Natural Resources Wales.*

## 12.3 Tree Felling Licences

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>1</b> |
|----------------------------|----------|

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

Features are displayed on the Agricultural designations map on [page 82](#) >

| ID | Location | Description                         | Reference     | Application date |
|----|----------|-------------------------------------|---------------|------------------|
| 3  | 213m SE  | Selective Fell/Thin (Unconditional) | 019/136/08-09 | 10/09/2008       |

*This data is sourced from the Forestry Commission.*

## 12.4 Environmental Stewardship Schemes

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>0</b> |
|----------------------------|----------|

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

*This data is sourced from Natural England.*



## 12.5 Countryside Stewardship Schemes

Records within 250m

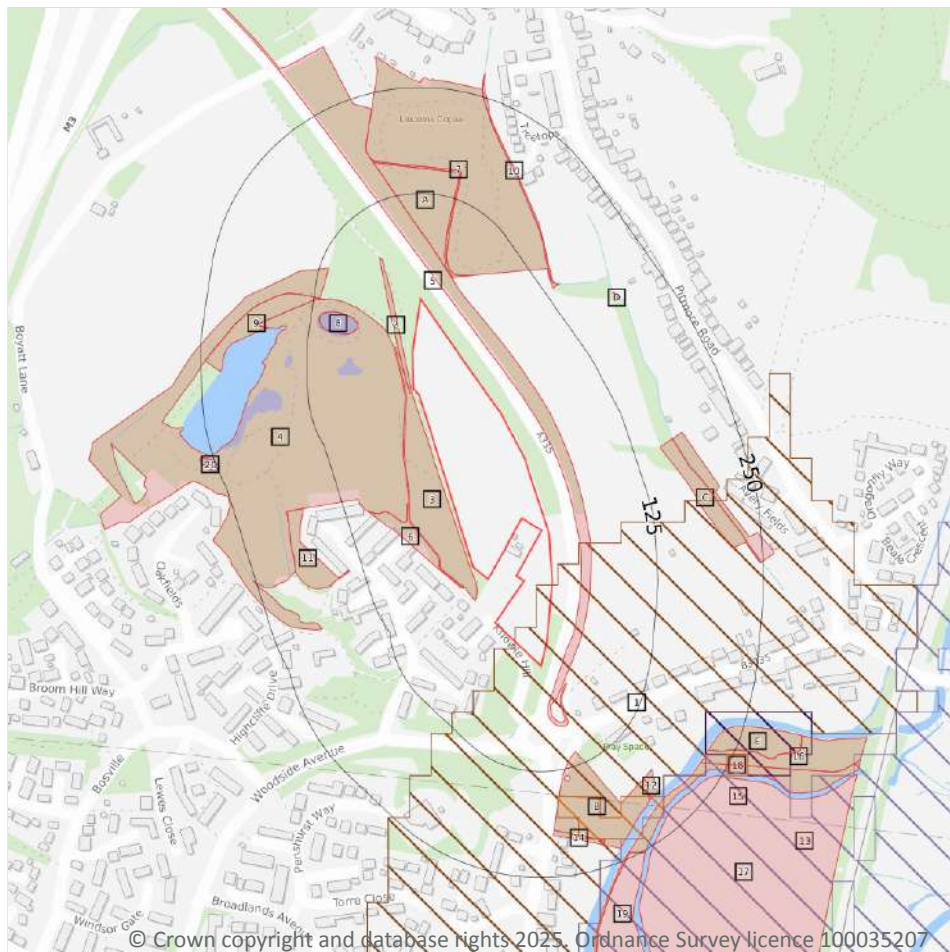
0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

*This data is sourced from Natural England.*



## 13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

### 13.1 Priority Habitat Inventory

Records within 250m

25

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on [page 85](#) >

| ID | Location | Main Habitat                                    | Other habitats                  |
|----|----------|-------------------------------------------------|---------------------------------|
| 2  | 3m NW    | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%) |
| 3  | 4m S     | No main habitat but additional habitats present | Additional: DWOOD (INV 50%)     |
| 4  | 11m NW   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%) |



| ID | Location | Main Habitat                                    | Other habitats                                                                   |
|----|----------|-------------------------------------------------|----------------------------------------------------------------------------------|
| 5  | 23m S    | No main habitat but additional habitats present | Additional: DWOOD (INV 50%)                                                      |
| 6  | 26m S    | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| A  | 44m N    | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| A  | 45m N    | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 7  | 48m N    | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 8  | 68m NW   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| B  | 109m S   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 9  | 113m NW  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 10 | 139m N   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 11 | 141m SW  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| C  | 157m E   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| C  | 173m E   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 12 | 179m SE  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| D  | 190m NE  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| D  | 191m NE  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 14 | 195m S   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |
| 15 | 213m SE  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%); LFENS (FEP + HLS); Additional: LMEAD (ENSIS L2) |
| 16 | 221m SE  | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%); LFENS (FEP + HLS); Additional: LMEAD (ENSIS L2) |
| E  | 221m SE  | Lowland fens                                    | Main habitat: LFENS (FEP + HLS); Additional: LMEAD (ENSIS L2)                    |
| 17 | 228m SE  | Good quality semi-improved grassland            | Main habitat: CFPGM (INV > 50%); LMEAD (INV > 50%); LFENS (FEP + HLS)            |
| 19 | 244m S   | Good quality semi-improved grassland            | Main habitat: CFPGM (INV > 50%); LMEAD (INV > 50%); LFENS (FEP + HLS)            |
| 20 | 247m W   | Deciduous woodland                              | Main habitat: DWOOD (INV > 50%)                                                  |

*This data is sourced from Natural England.*



## 13.2 Habitat Networks

Records within 250m

5

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

Features are displayed on the Habitat designations map on [page 85 >](#)

| ID | Location | Type                       | Habitat       |
|----|----------|----------------------------|---------------|
| 1  | On site  | Network Enhancement Zone 2 | Not specified |
| B  | 156m S   | Network Enhancement Zone 1 | Not specified |
| 13 | 194m SE  | Restorable Habitat         | Not specified |
| E  | 202m SE  | Primary Habitat            | Lowland fens  |
| 18 | 243m SE  | Network Enhancement Zone 1 | Not specified |

*This data is sourced from Natural England.*

## 13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

*This data is sourced from Natural England.*

## 13.4 Limestone Pavement Orders

Records within 250m

0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

*This data is sourced from Natural England.*



## 14 Geology 1:10,000 scale - Availability



— Site Outline  
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

### 14.1 10k Availability

#### Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

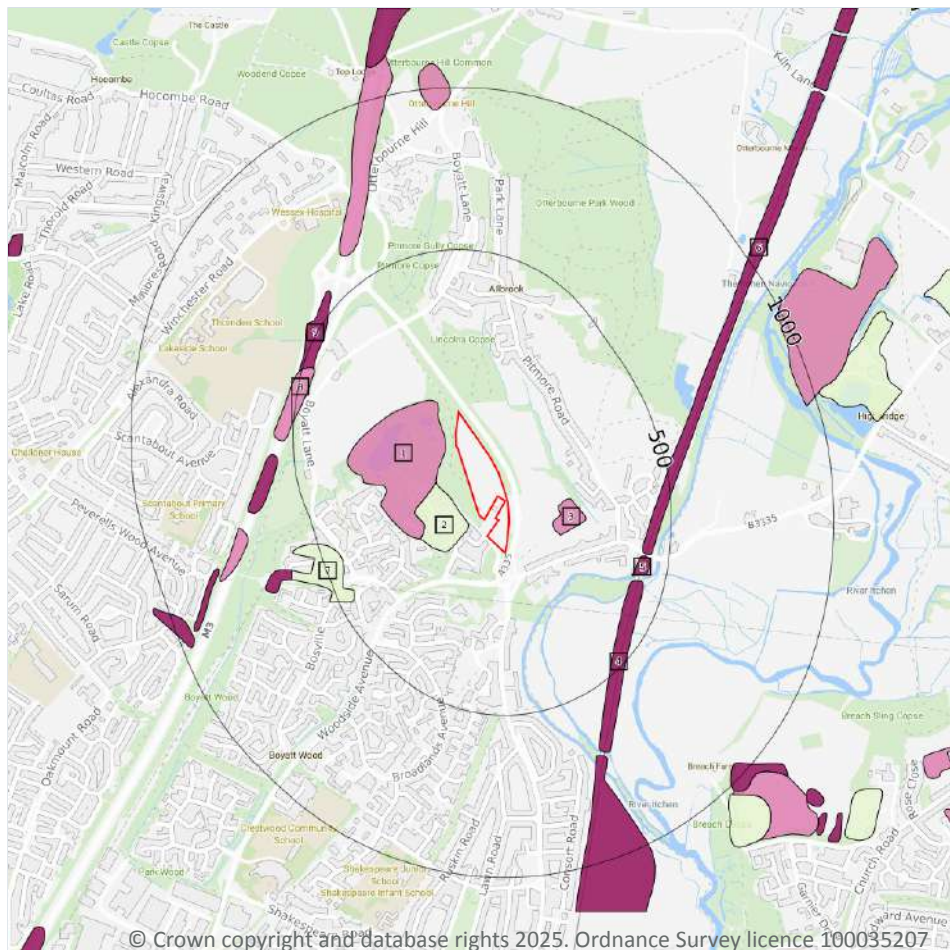
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 88](#) >

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No. |
|----|----------|------------|-------------|---------|---------------|-----------|
| 1  | On site  | Full       | Full        | Full    | No coverage   | SU42SE    |

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Artificial and made ground



— Site Outline  
Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

### 14.2 Artificial and made ground (10k)

Records within 500m

9

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 89](#) >

| ID | Location | LEX Code   | Description               | Rock description   |
|----|----------|------------|---------------------------|--------------------|
| 1  | 32m NW   | WGR-VOID   | Worked Ground (Undivided) | Void               |
| 2  | 42m S    | WMGR-ARTDP | Infilled Ground           | Artificial Deposit |
| 3  | 134m SE  | WGR-VOID   | Worked Ground (Undivided) | Void               |
| 4  | 396m SE  | MGR-ARTDP  | Made Ground (Undivided)   | Artificial Deposit |

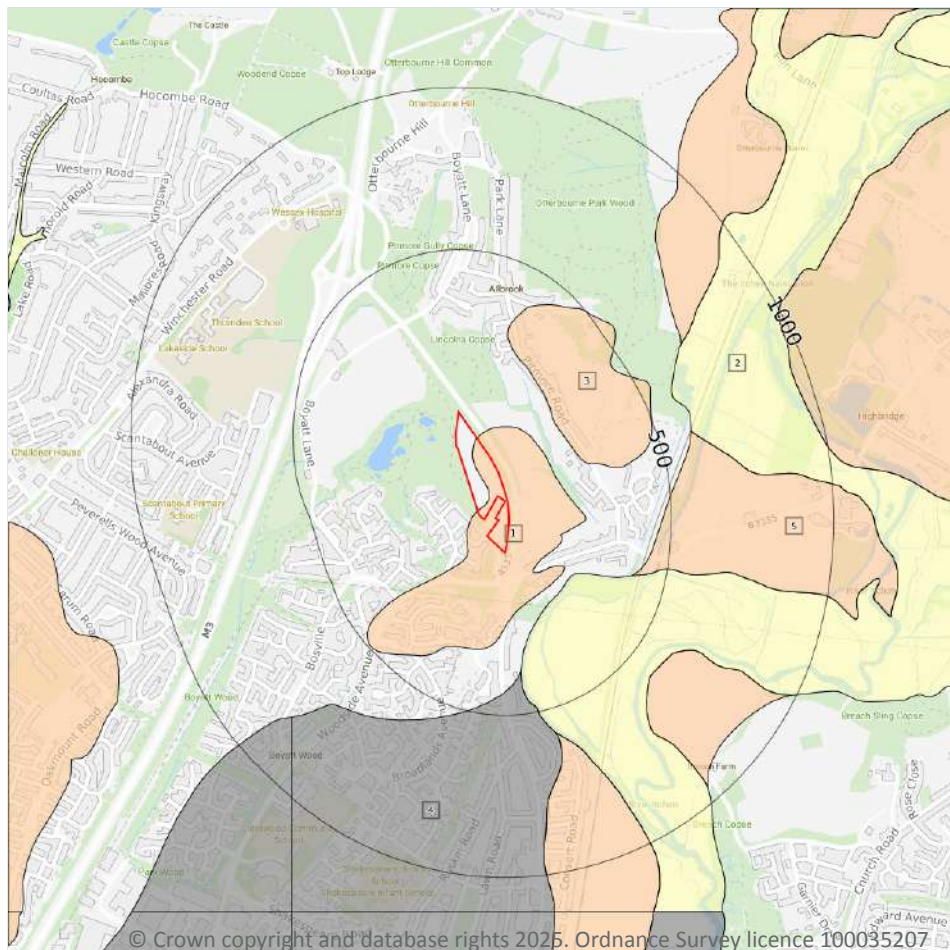


| ID | Location | LEX Code   | Description               | Rock description   |
|----|----------|------------|---------------------------|--------------------|
| 5  | 397m SE  | MGR-ARTDP  | Made Ground (Undivided)   | Artificial Deposit |
| 6  | 416m SE  | MGR-ARTDP  | Made Ground (Undivided)   | Artificial Deposit |
| 7  | 442m SW  | WMGR-ARTDP | Infilled Ground           | Artificial Deposit |
| 8  | 462m NW  | WGR-VOID   | Worked Ground (Undivided) | Void               |
| 9  | 467m NW  | MGR-ARTDP  | Made Ground (Undivided)   | Artificial Deposit |

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Superficial



**Site Outline**

Search buffers in metres (m)

**Landslip (10k)**

**Superficial geology (10k)**  
Please see table for more details.

### 14.3 Superficial geology (10k)

#### Records within 500m

5

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 91](#) >

| ID | Location | LEX Code | Description                                                 | Rock description    |
|----|----------|----------|-------------------------------------------------------------|---------------------|
| 1  | On site  | RTDU-XSV | River Terrace Deposits (undifferentiated) - Sand And Gravel | Sand And Gravel     |
| 2  | 205m SE  | ALV-XSZC | Alluvium - Sand, Silt And Clay                              | Sand, Silt And Clay |
| 3  | 225m NE  | RTDU-XSV | River Terrace Deposits (undifferentiated) - Sand And Gravel | Sand And Gravel     |



| ID | Location | LEX Code | Description                                                                           | Rock description |
|----|----------|----------|---------------------------------------------------------------------------------------|------------------|
| 4  | 370m S   | RTDU-Z   | River Terrace Deposits (undifferentiated) - Silt (unlithified Deposits Coding Scheme) | Silt             |
| 5  | 397m SE  | RTD1-XSV | River Terrace Deposits, 1 - Sand And Gravel                                           | Sand And Gravel  |

*This data is sourced from the British Geological Survey.*

## 14.4 Landslip (10k)

### Records within 500m

**0**

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- .... Bedrock faults and other linear features (10k)
- Bedrock geology (10k)  
Please see table for more details.

### 14.5 Bedrock geology (10k)

#### Records within 500m

3

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 93](#) >

| ID | Location | LEX Code  | Description                                 | Rock age                    |
|----|----------|-----------|---------------------------------------------|-----------------------------|
| 1  | On site  | LC-CLSISA | London Clay Formation - Clay, Silt And Sand | Eocene Epoch                |
| 2  | 32m NW   | WTT-SSCL  | Wittering Formation - Sand, Silt And Clay   | Lutetian Age - Ypresian Age |
| 3  | 44m S    | WHI-SV    | Whitecliff Sand Member - Gravelly Sand      | Palaeogene Period           |

This data is sourced from the British Geological Survey.



## 14.6 Bedrock faults and other linear features (10k)

Records within 500m

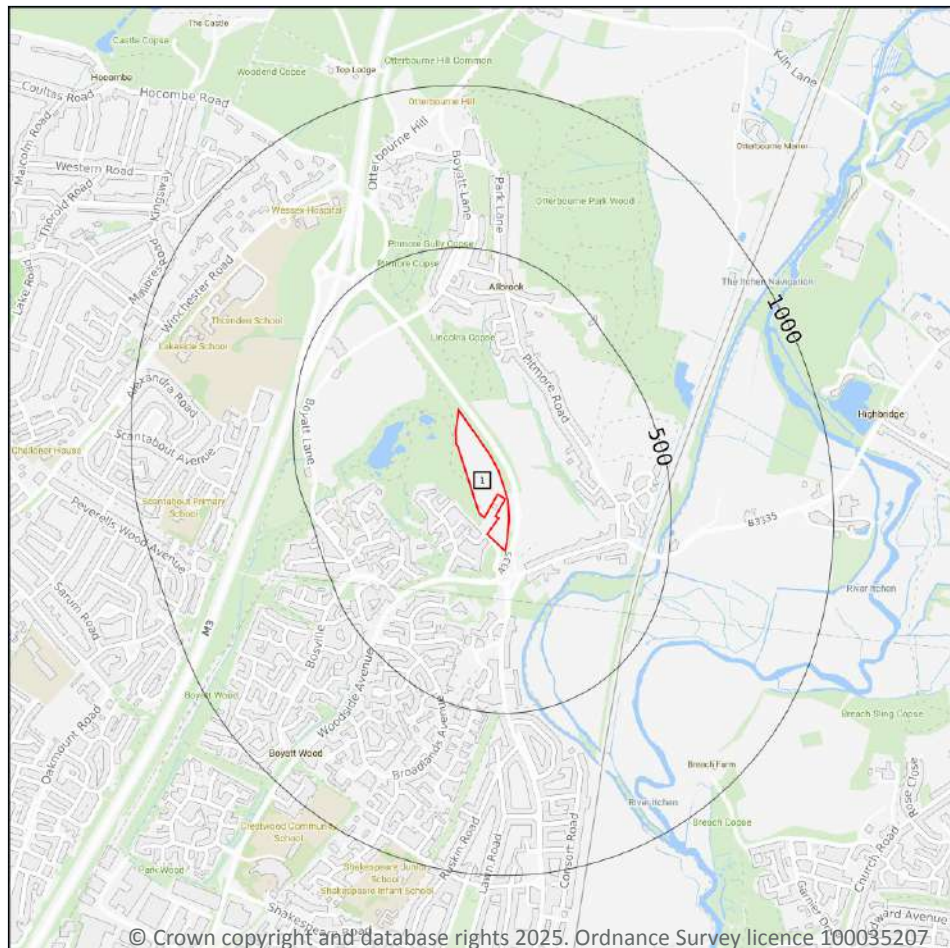
0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

*This data is sourced from the British Geological Survey.*



## 15 Geology 1:50,000 scale - Availability



— Site Outline  
Search buffers in metres (m)

☐ Geological map tile

### 15.1 50k Availability

#### Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

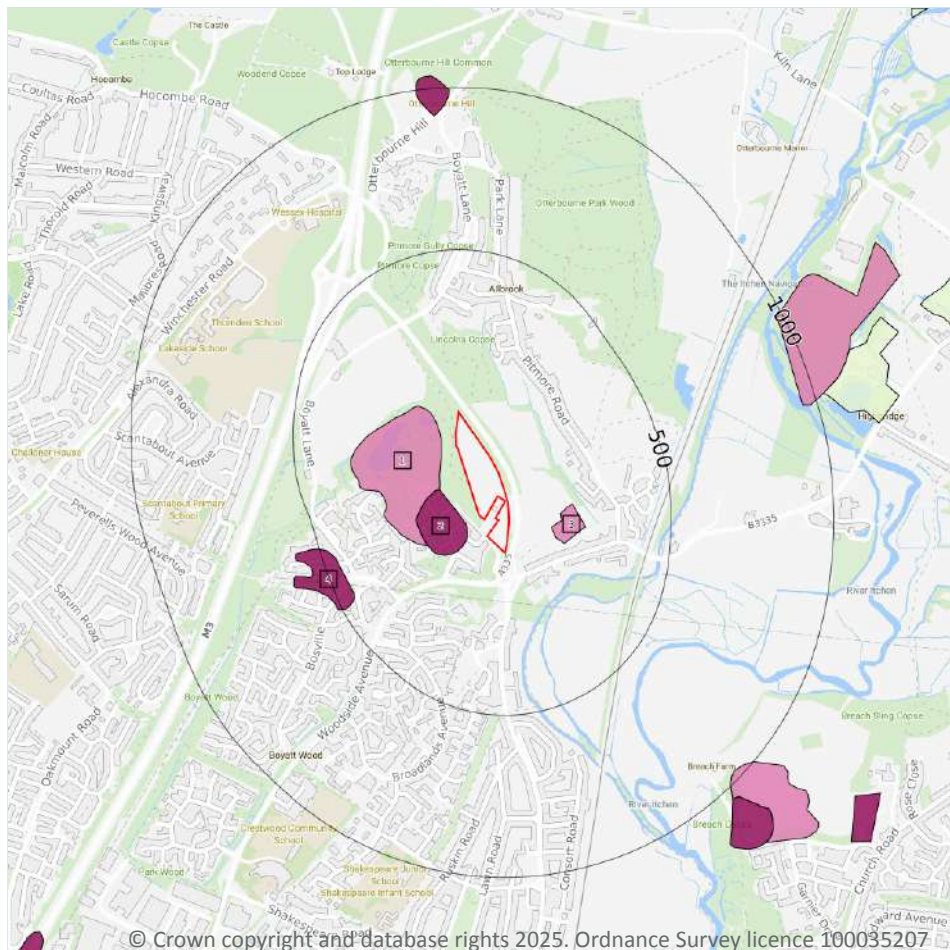
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 95](#) >

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No.            |
|----|----------|------------|-------------|---------|---------------|----------------------|
| 1  | On site  | Full       | Full        | Full    | Full          | EW315_southampton_v4 |

This data is sourced from the British Geological Survey.



## Geology 1:50,000 scale - Artificial and made ground



- Site Outline**
- Search buffers in metres (m)
- Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

### 15.2 Artificial and made ground (50k)

#### Records within 500m

4

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 96 >](#)

| ID | Location | LEX Code  | Description               | Rock description   |
|----|----------|-----------|---------------------------|--------------------|
| 1  | 45m NW   | WGR-VOID  | WORKED GROUND (UNDIVIDED) | VOID               |
| 2  | 48m SW   | MGR-ARTDP | MADE GROUND (UNDIVIDED)   | ARTIFICIAL DEPOSIT |
| 3  | 131m SE  | WGR-VOID  | WORKED GROUND (UNDIVIDED) | VOID               |
| 4  | 447m SW  | MGR-ARTDP | MADE GROUND (UNDIVIDED)   | ARTIFICIAL DEPOSIT |



*This data is sourced from the British Geological Survey.*

### 15.3 Artificial ground permeability (50k)

#### Records within 50m

**1**

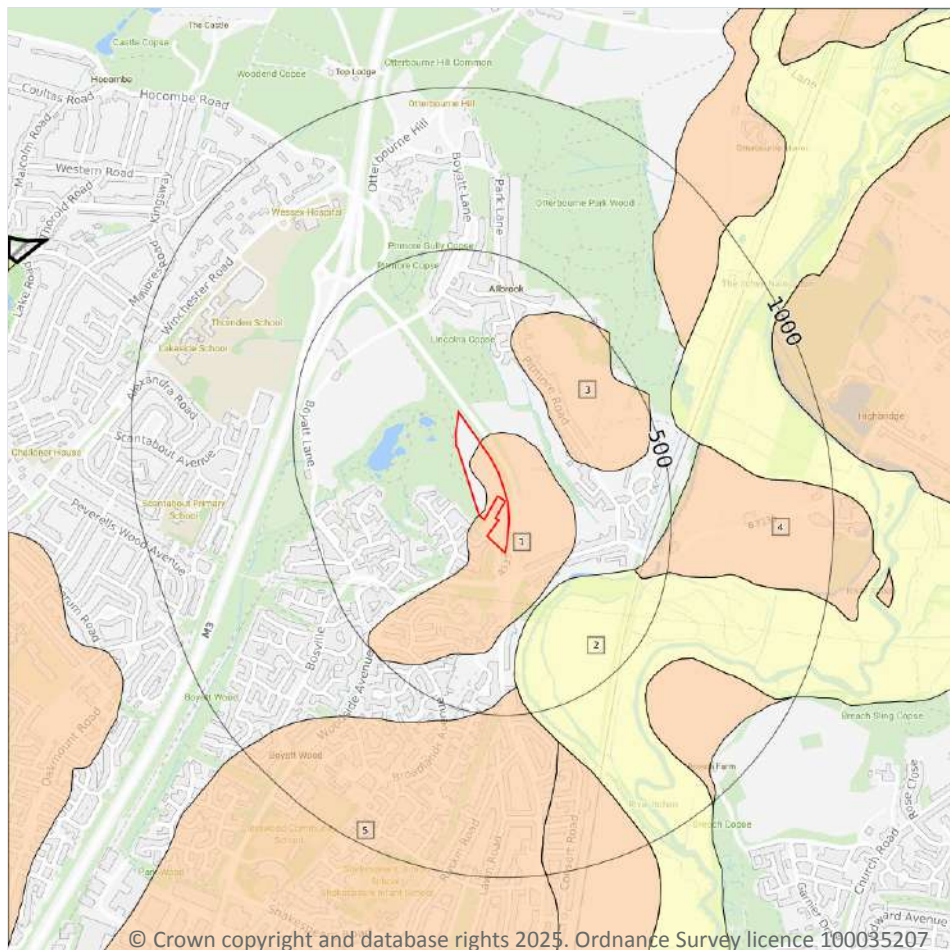
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

| Location | Flow type | Maximum permeability | Minimum permeability |
|----------|-----------|----------------------|----------------------|
| 48m SW   | Mixed     | Very High            | Low                  |

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Superficial



**Site Outline**

Search buffers in metres (m)

**Landslip (50k)**

**Superficial geology (50k)**  
Please see table for more details.

### 15.4 Superficial geology (50k)

#### Records within 500m

5

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 98](#) >

| ID | Location | LEX Code  | Description                               | Rock description            |
|----|----------|-----------|-------------------------------------------|-----------------------------|
| 1  | On site  | RTDU-XSV  | RIVER TERRACE DEPOSITS (UNDIFFERENTIATED) | SAND AND GRAVEL             |
| 2  | 185m SE  | ALV-XCZSV | ALLUVIUM                                  | CLAY, SILT, SAND AND GRAVEL |
| 3  | 219m NE  | RTDU-XSV  | RIVER TERRACE DEPOSITS (UNDIFFERENTIATED) | SAND AND GRAVEL             |
| 4  | 402m SE  | RTD1-XSV  | RIVER TERRACE DEPOSITS, 1                 | SAND AND GRAVEL             |



| ID | Location | LEX Code | Description               | Rock description |
|----|----------|----------|---------------------------|------------------|
| 5  | 415m S   | RTD1-XCZ | RIVER TERRACE DEPOSITS, 1 | CLAY AND SILT    |

*This data is sourced from the British Geological Survey.*

## 15.5 Superficial permeability (50k)

|                           |          |
|---------------------------|----------|
| <b>Records within 50m</b> | <b>1</b> |
|---------------------------|----------|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

| Location | Flow type     | Maximum permeability | Minimum permeability |
|----------|---------------|----------------------|----------------------|
| On site  | Intergranular | Very High            | High                 |

*This data is sourced from the British Geological Survey.*

## 15.6 Landslip (50k)

|                            |          |
|----------------------------|----------|
| <b>Records within 500m</b> | <b>0</b> |
|----------------------------|----------|

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*

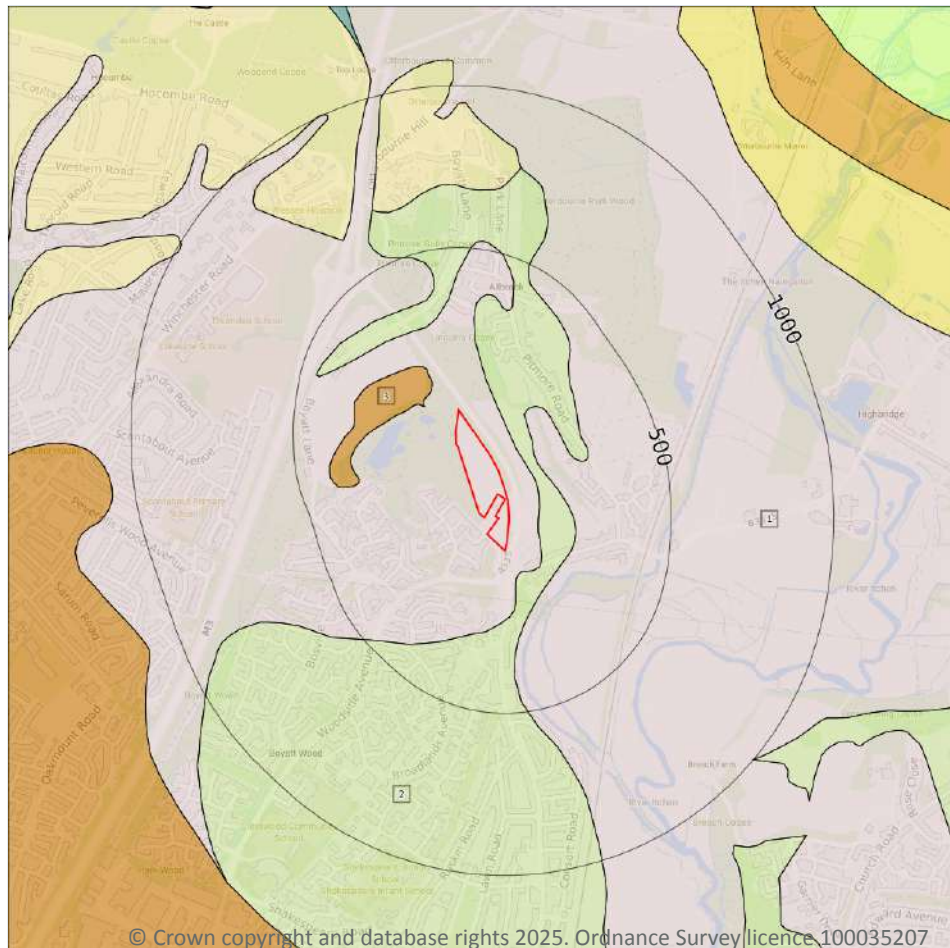
## 15.7 Landslip permeability (50k)

|                           |          |
|---------------------------|----------|
| <b>Records within 50m</b> | <b>0</b> |
|---------------------------|----------|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

## Geology 1:50,000 scale - Bedrock



**— Site Outline**

**Search buffers in metres (m)**

**.... Bedrock faults and other linear features (50k)**

**Bedrock geology (50k)**  
Please see table for more details.

### 15.8 Bedrock geology (50k)

#### Records within 500m

3

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 100](#) >

| ID | Location | LEX Code | Description                                 | Rock age |
|----|----------|----------|---------------------------------------------|----------|
| 1  | On site  | LC-XCZS  | LONDON CLAY FORMATION - CLAY, SILT AND SAND | YPRESIAN |
| 2  | 81m NE   | WHI-S    | WHITECLIFF SAND MEMBER - SAND               | -        |
| 3  | 103m NW  | WTT-XSZC | WITTERING FORMATION - SAND, SILT AND CLAY   | YPRESIAN |

*This data is sourced from the British Geological Survey.*



## 15.9 Bedrock permeability (50k)

### Records within 50m

**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

| Location | Flow type | Maximum permeability | Minimum permeability |
|----------|-----------|----------------------|----------------------|
| On site  | Mixed     | Moderate             | Very Low             |

*This data is sourced from the British Geological Survey.*

## 15.10 Bedrock faults and other linear features (50k)

### Records within 500m

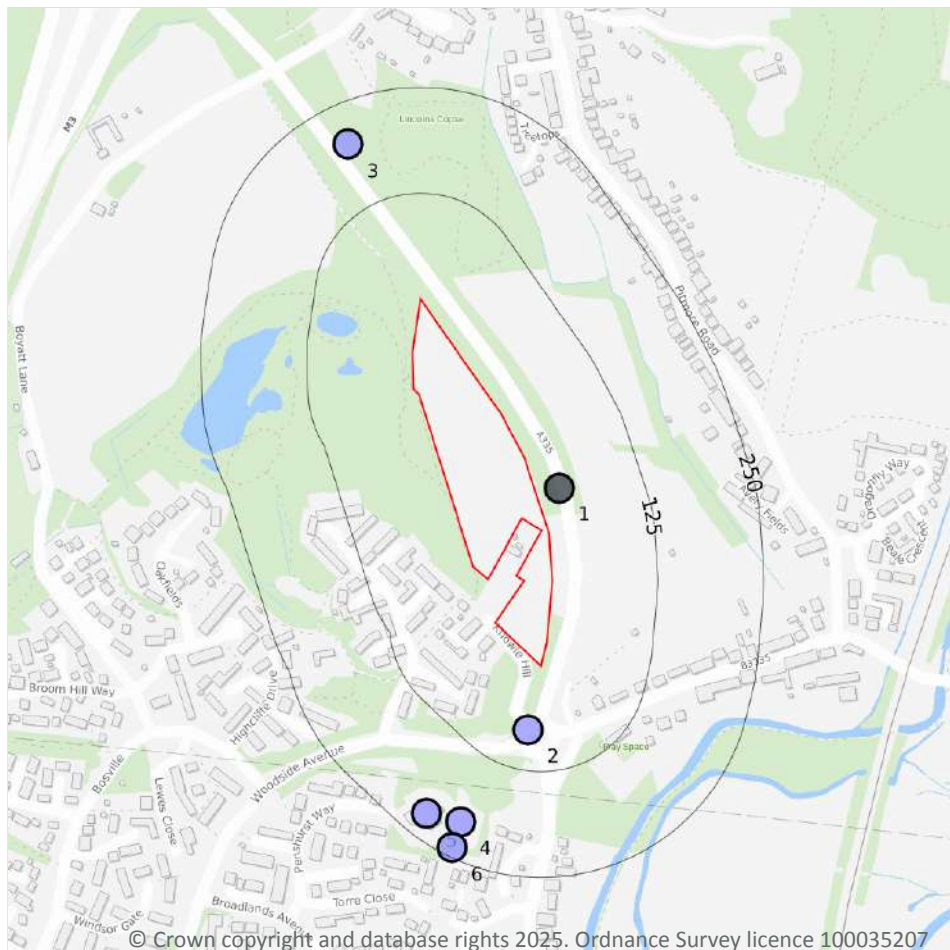
**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

*This data is sourced from the British Geological Survey.*



## 16 Boreholes



— Site Outline  
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

### 16.1 BGS Boreholes

#### Records within 250m

6

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 102](#) >

| ID | Location | Grid reference | Name                            | Length | Confidential | Web link                 |
|----|----------|----------------|---------------------------------|--------|--------------|--------------------------|
| 1  | 28m E    | 445677 121315  | A33 M3 BAR END TO BASSETT 119   | -      | Y            | N/A                      |
| 2  | 77m S    | 445640 121029  | A33/M3 BAR END TO BASSETT TP 16 | 2.1    | N            | <a href="#">412205</a> ↗ |
| 3  | 202m N   | 445427 121721  | A33/M3 BAR END TO BASSETT TP 15 | 3.0    | N            | <a href="#">412204</a> ↗ |

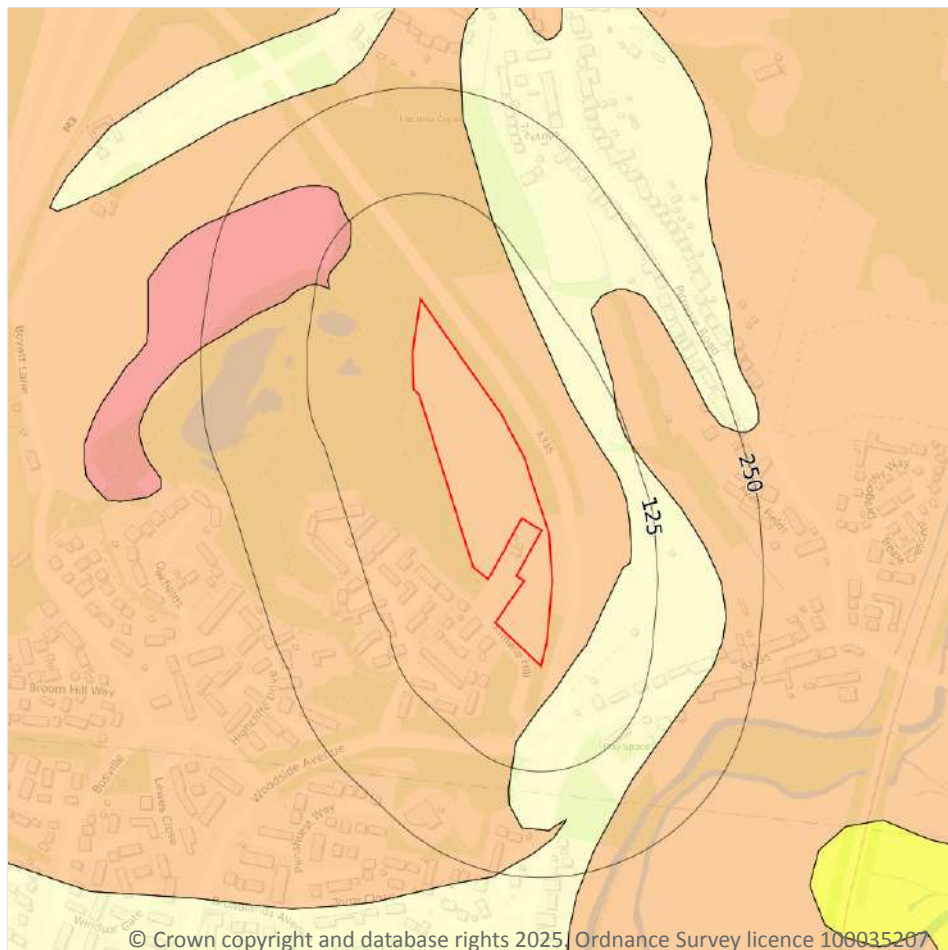


| ID | Location | Grid reference | Name                       | Length | Confidential | Web link                 |
|----|----------|----------------|----------------------------|--------|--------------|--------------------------|
| 4  | 208m S   | 445560 120920  | BOYATT N INFANT SCHOOL TH3 | 2.0    | N            | <a href="#">412137 ↗</a> |
| 5  | 221m S   | 445520 120930  | BOYATT N INFANT SCHOOL TH4 | 2.0    | N            | <a href="#">412138 ↗</a> |
| 6  | 239m S   | 445550 120890  | BOYATT N INFANT SCHOOL TH2 | 2.0    | N            | <a href="#">412136 ↗</a> |

*This data is sourced from the British Geological Survey.*



## 17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.1 Shrink swell clays

#### Records within 50m

2

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

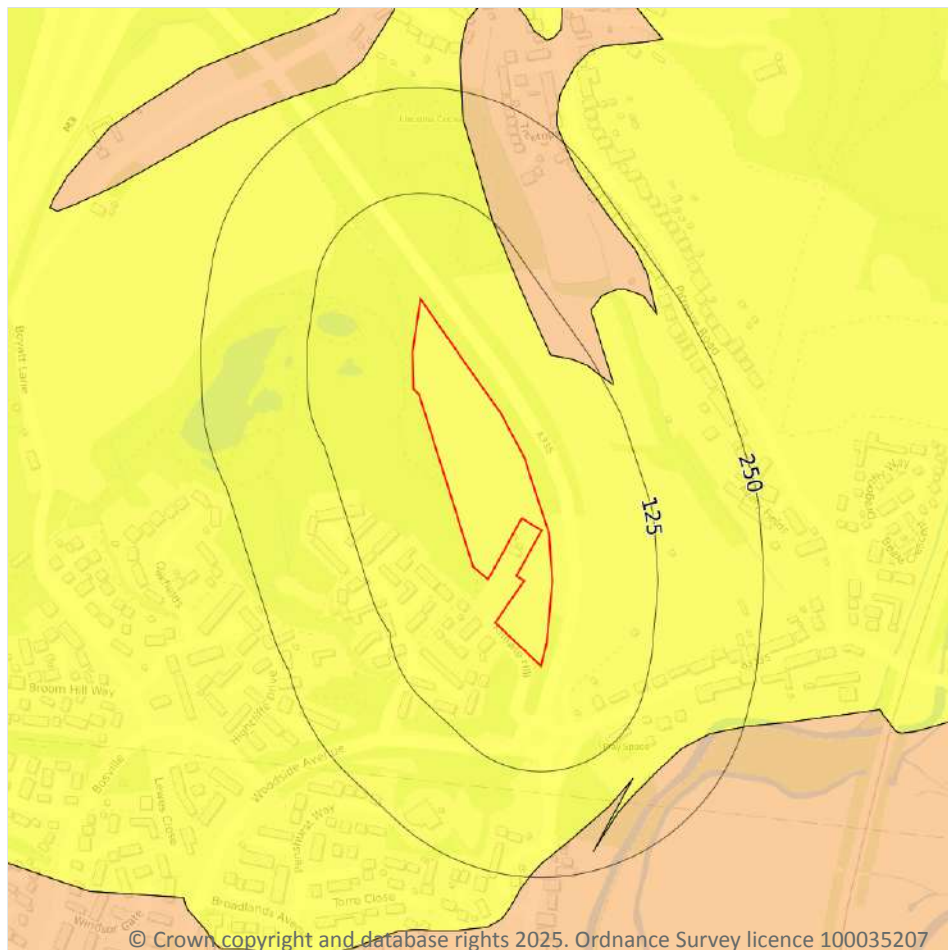
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 104 >](#)

| Location | Hazard rating | Details                                            |
|----------|---------------|----------------------------------------------------|
| On site  | Low           | Ground conditions predominantly medium plasticity. |
| 30m S    | Negligible    | Ground conditions predominantly non-plastic.       |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☒ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.2 Running sands

#### Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

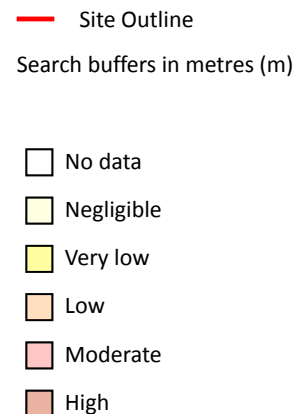
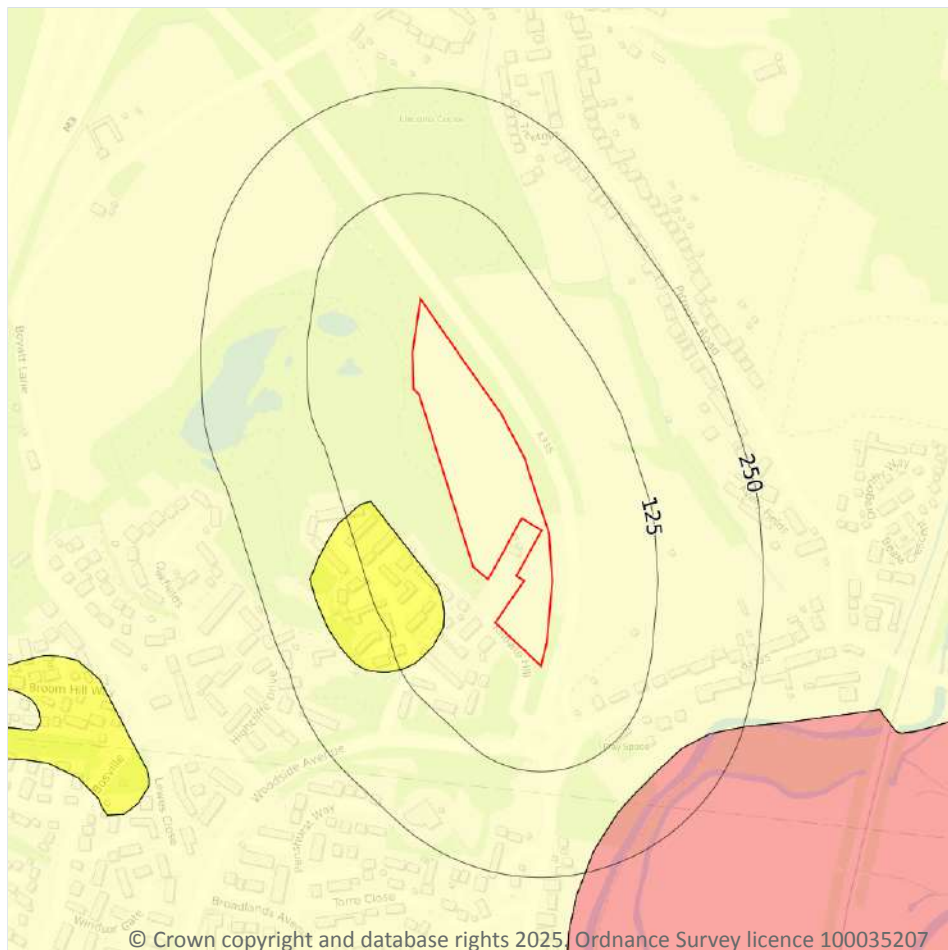
Features are displayed on the Natural ground subsidence - Running sands map on [page 105 >](#)

| Location | Hazard rating | Details                                                                                                                                 |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Very low      | Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Compressible deposits



### 17.3 Compressible deposits

#### Records within 50m

2

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

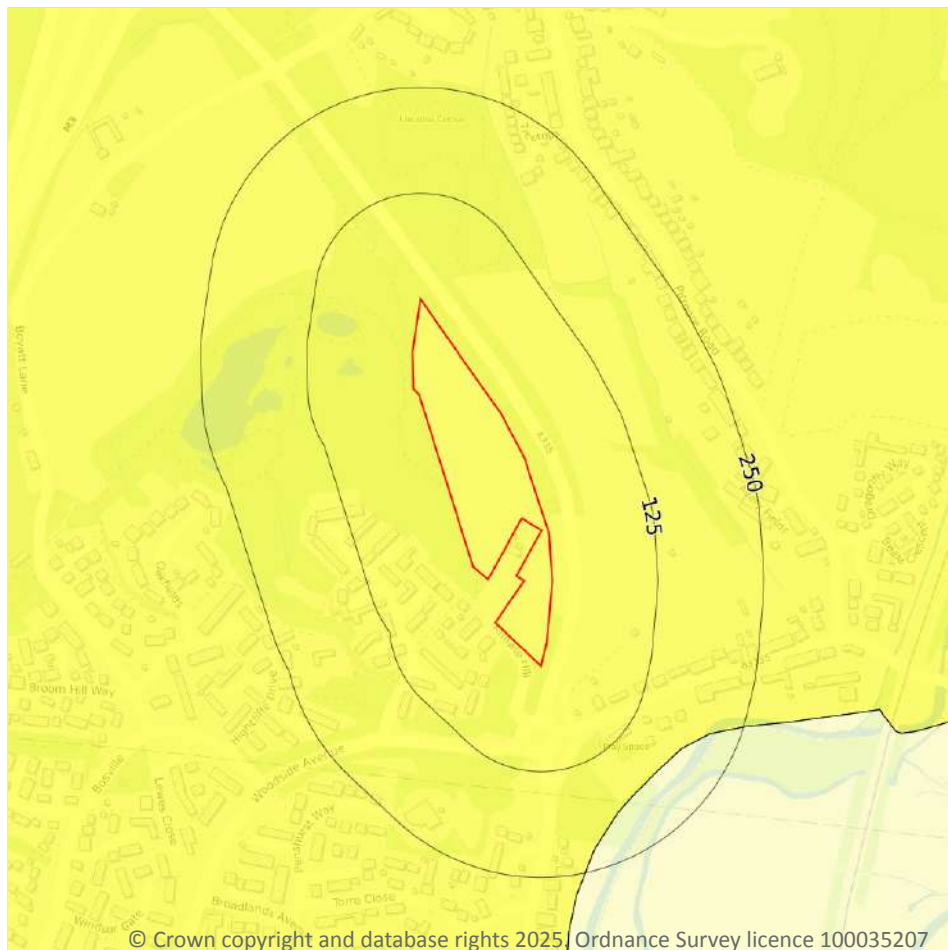
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 106](#) >

| Location       | Hazard rating     | Details                                                                                                         |
|----------------|-------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>On site</b> | <b>Negligible</b> | <b>Compressible strata are not thought to occur.</b>                                                            |
| 48m SW         | Very low          | Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☒ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.4 Collapsible deposits

#### Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

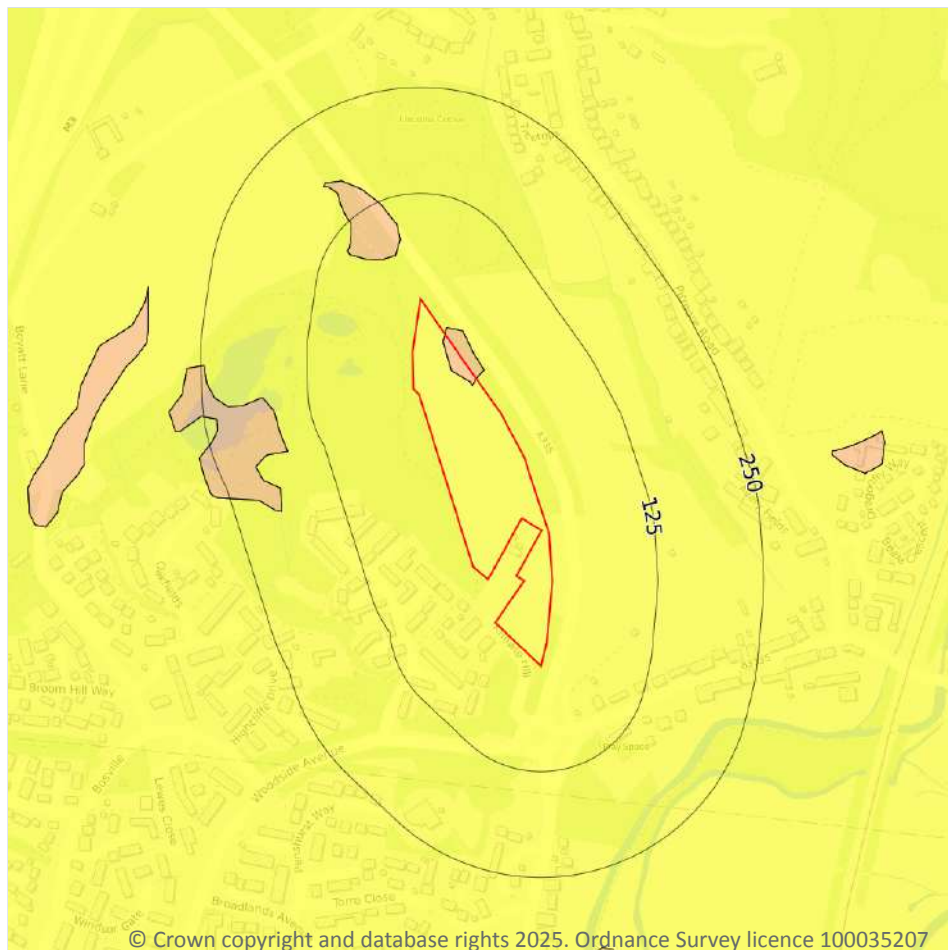
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 108](#) >

| Location | Hazard rating | Details                                                                                   |
|----------|---------------|-------------------------------------------------------------------------------------------|
| On site  | Very low      | Deposits with potential to collapse when loaded and saturated are unlikely to be present. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.5 Landslides

#### Records within 50m

2

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on [page 109](#) >

| Location | Hazard rating | Details                                                                                                                                                         |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Very low      | Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered. |

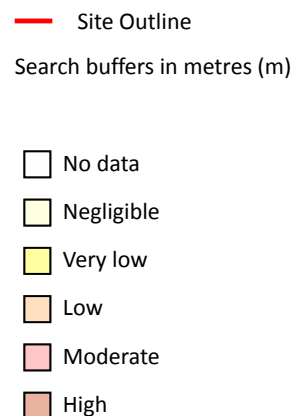
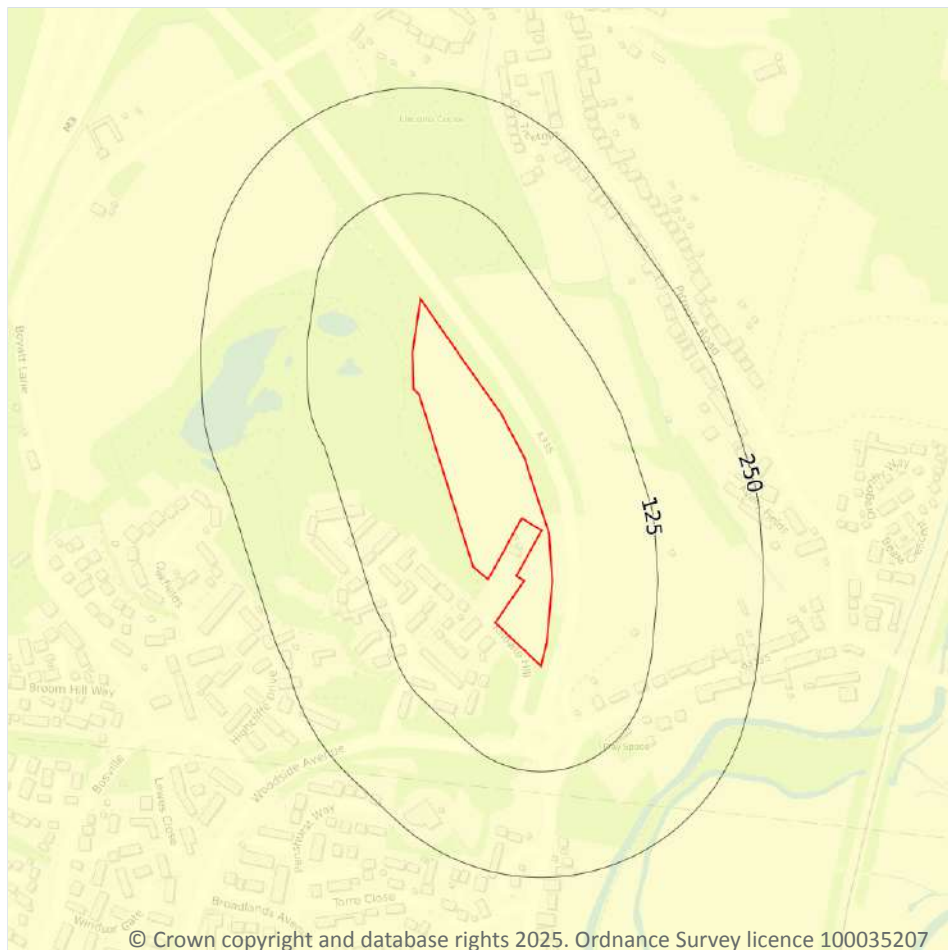


| Location | Hazard rating | Details                                                                                                                                    |
|----------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Low           | Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site. |

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Ground dissolution of soluble rocks



### 17.6 Ground dissolution of soluble rocks

#### Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

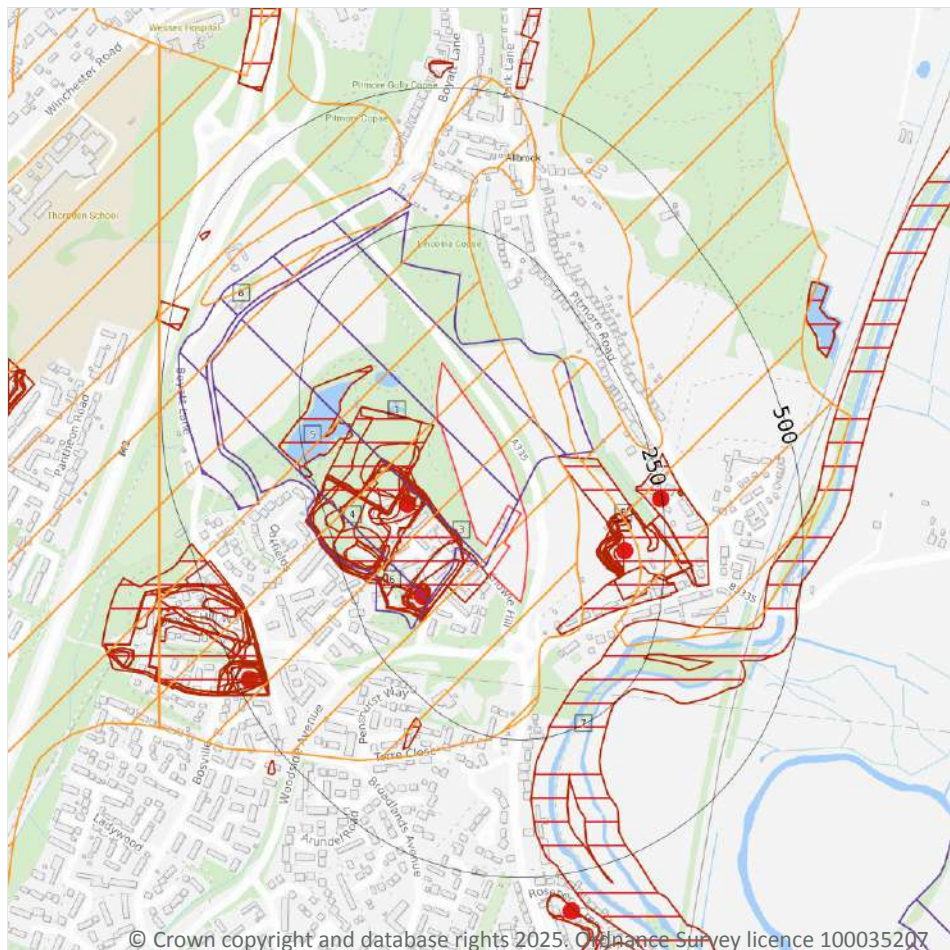
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 111](#) >

| Location | Hazard rating | Details                                                                                                                                             |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Negligible    | Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present. |

*This data is sourced from the British Geological Survey.*



## 18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

### 18.1 BritPits

#### Records within 500m

5

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 113](#) >

| ID | Location | Details                                                                                                                | Description                                                                                                                                                                                                                                                                                                                              |
|----|----------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A  | 101m W   | Name: Bishapstoke Brick Works<br>Address: Allbrook, EASTLEIGH, Hampshire<br>Commodity: Clay & Shale<br>Status: Ceased  | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| B  | 130m SW  | Name: Bishapstoke Brick Works Sand Pit<br>Address: Allbrook, EASTLEIGH, Hampshire<br>Commodity: Sand<br>Status: Ceased | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| C  | 175m SE  | Name: Allbrook Brick Works<br>Address: Allbrook, EASTLEIGH, Hampshire<br>Commodity: Clay & Shale<br>Status: Ceased     | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| F  | 247m E   | Name: Allbrook Brick Works<br>Address: Allbrook, EASTLEIGH, Hampshire<br>Commodity: Clay & Shale<br>Status: Ceased     | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| H  | 478m SW  | Name: Boyatt Brick Works<br>Address: Allbrook, EASTLEIGH, Hampshire<br>Commodity: Clay & Shale<br>Status: Ceased       | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |

*This data is sourced from the British Geological Survey.*

## 18.2 Surface ground workings

**Records within 250m**

**47**

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 113](#) >



| ID | Location | Land Use                    | Year of mapping | Mapping scale |
|----|----------|-----------------------------|-----------------|---------------|
| A  | 5m S     | Brick and Tile Works        | 1968            | 1:10560       |
| A  | 27m S    | Brick Works                 | 1908            | 1:10560       |
| 3  | 29m S    | Unspecified Ground Workings | 1908            | 1:10560       |
| 4  | 30m NW   | Clay Pit                    | 1968            | 1:10560       |
| A  | 30m SW   | Brick Works                 | 1897            | 1:10560       |
| A  | 30m S    | Brick Works                 | 1895            | 1:10560       |
| A  | 32m S    | Brick Works                 | 1931            | 1:10560       |
| A  | 32m S    | Brick Works                 | 1938            | 1:10560       |
| B  | 52m S    | Unspecified Heap            | 1968            | 1:10560       |
| A  | 52m NW   | Unspecified Pit             | 1957            | 1:10560       |
| A  | 68m W    | Unspecified Ground Workings | 1931            | 1:10560       |
| A  | 68m W    | Unspecified Ground Workings | 1938            | 1:10560       |
| A  | 69m W    | Unspecified Ground Workings | 1897            | 1:10560       |
| A  | 70m W    | Unspecified Pit             | 1895            | 1:10560       |
| A  | 71m W    | Unspecified Ground Workings | 1908            | 1:10560       |
| A  | 72m W    | Unspecified Heap            | 1957            | 1:10560       |
| A  | 74m W    | Unspecified Heap            | 1980            | 1:10000       |
| C  | 82m SE   | Brick Works                 | 1897            | 1:10560       |
| B  | 114m SW  | Unspecified Pit             | 1931            | 1:10560       |
| B  | 117m SW  | Unspecified Pit             | 1938            | 1:10560       |
| B  | 117m SW  | Sand Pit                    | 1897            | 1:10560       |
| B  | 117m SW  | Old Sand Pit                | 1908            | 1:10560       |
| B  | 118m SW  | Sand Pit                    | 1895            | 1:10560       |
| 5  | 123m NW  | Water Body                  | 1980            | 1:10000       |
| C  | 125m SE  | Unspecified Ground Workings | 1968            | 1:10560       |
| C  | 125m SE  | Unspecified Ground Workings | 1980            | 1:10000       |
| C  | 125m SE  | Unspecified Ground Workings | 1957            | 1:10560       |
| C  | 128m SE  | Unspecified Ground Workings | 1908            | 1:10560       |



| ID | Location | Land Use                    | Year of mapping | Mapping scale |
|----|----------|-----------------------------|-----------------|---------------|
| C  | 128m SE  | Brick Works                 | 1908            | 1:10560       |
| C  | 129m SE  | Unspecified Ground Workings | 1938            | 1:10560       |
| B  | 130m SW  | Unspecified Heap            | 1957            | 1:10560       |
| C  | 130m SE  | Unspecified Ground Workings | 1931            | 1:10560       |
| C  | 134m SE  | Brick Works                 | 1895            | 1:10560       |
| C  | 135m SE  | Unspecified Ground Workings | 1897            | 1:10560       |
| D  | 144m SW  | Unspecified Ground Workings | 1957            | 1:10560       |
| C  | 146m SE  | Unspecified Disused Pit     | 1895            | 1:10560       |
| E  | 153m E   | Unspecified Pit             | 1938            | 1:10560       |
| E  | 155m E   | Unspecified Pit             | 1931            | 1:10560       |
| D  | 164m SW  | Unspecified Ground Workings | 1980            | 1:10000       |
| 6  | 174m SW  | Pond                        | 1908            | 1:10560       |
| 7  | 175m SE  | Canal                       | 1868            | 1:10560       |
| D  | 177m SW  | Pond                        | 1957            | 1:10560       |
| D  | 181m SW  | Pond                        | 1968            | 1:10560       |
| F  | 205m E   | Brick Works                 | 1868            | 1:10560       |
| C  | 210m E   | Unspecified Ground Workings | 1968            | 1:10560       |
| C  | 210m E   | Unspecified Ground Workings | 1957            | 1:10560       |
| F  | 237m E   | Clay Pits                   | 1868            | 1:10560       |

*This is data is sourced from Ordnance Survey/Groundsure.*

## 18.3 Underground workings

**Records within 1000m**

**0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

*This is data is sourced from Ordnance Survey/Groundsure.*



## 18.4 Underground mining extents

### Records within 500m

**0**

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

*This data is sourced from Groundsure.*

## 18.5 Historical Mineral Planning Areas

### Records within 500m

**2**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

Features are displayed on the Mining and ground workings map on [page 113 >](#)

| ID | Location | Site Name | Mineral      | Type                    | Planning Status | Planning Status Date |
|----|----------|-----------|--------------|-------------------------|-----------------|----------------------|
| 1  | On site  | Allbrook  | Clay, bricks | Surface mineral working | Valid           | 03/08/46             |
| 8  | 273m NW  | Allbrook  | Clay, bricks | Surface mineral working | Refused         | 03/08/46             |

*This data is sourced from the British Geological Survey.*

## 18.6 Non-coal mining

### Records within 1000m

**3**

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on [page 113 >](#)

| ID | Location | Name          | Commodity | Class | Likelihood                                                                                                                                                                                  |
|----|----------|---------------|-----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | On site  | Not available | Chalk     | C     | Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered. |



| ID | Location | Name          | Commodity | Class | Likelihood                                                                                                                                                                                  |
|----|----------|---------------|-----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11 | 504m W   | Not available | Chalk     | C     | Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered. |
| -  | 930m NW  | Not available | Chalk     | C     | Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered. |

*This data is sourced from the British Geological Survey.*

## 18.7 JPB mining areas

### Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

*This data is sourced from Johnson Poole and Bloomer.*

## 18.8 The Coal Authority non-coal mining

### Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

*This data is sourced from The Coal Authority.*

## 18.9 Researched mining

### Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

*This data is sourced from Groundsure.*



## 18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

*This data is sourced from Groundsure.*

## 18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

*This data is sourced from Groundsure.*

## 18.12 Coal mining

Records on site

0

Areas which could be affected by past, current or future coal mining.

*This data is sourced from the Coal Authority.*

## 18.13 Brine areas

Records on site

0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

*This data is sourced from the Cheshire Brine Subsidence Compensation Board.*

## 18.14 Gypsum areas

Records on site

0

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

## 18.15 Tin mining

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Groundsure.*

## 18.16 Clay mining

|                 |   |
|-----------------|---|
| Records on site | 0 |
|-----------------|---|

Generalised areas that may be affected by kaolin and ball clay extraction.

*This data is sourced from the Kaolin and Ball Clay Association (UK).*



## 19 Ground cavities and sinkholes

### 19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

*This data is sourced from Stantec UK Ltd.*

### 19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

*This data is sourced from Stantec UK Ltd.*

### 19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

*This data is sourced from Groundsure.*

### 19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

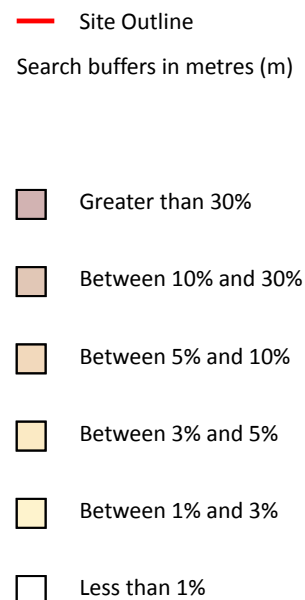
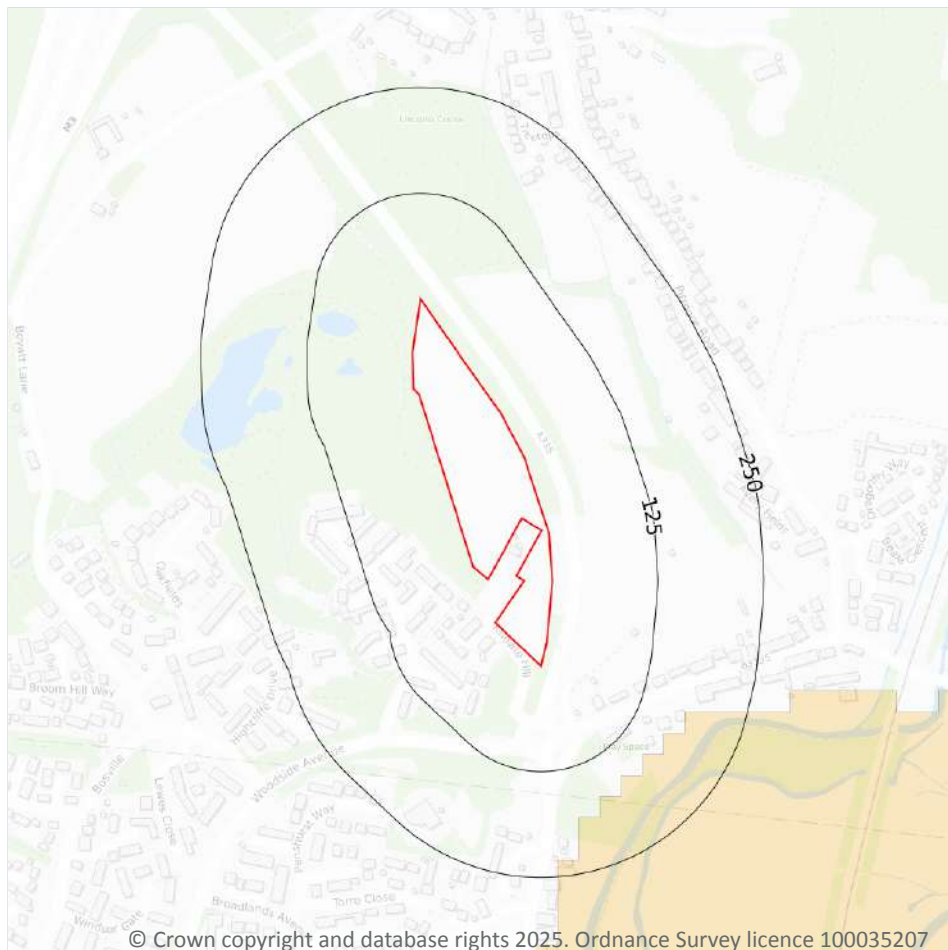
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



*This data is sourced from Groundsure.*



## 20 Radon



### 20.1 Radon

#### Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 123](#) >

| Location | Estimated properties affected | Radon Protection Measures required |
|----------|-------------------------------|------------------------------------|
| On site  | Less than 1%                  | None                               |



*This data is sourced from the British Geological Survey and UK Health Security Agency.*



## 21 Soil chemistry

### 21.1 BGS Estimated Background Soil Chemistry

Records within 50m

5

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km<sup>2</sup>. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km<sup>2</sup>; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

| Location | Arsenic  | Bioaccessible Arsenic | Lead      | Bioaccessible Lead | Cadmium   | Chromium      | Nickel        |
|----------|----------|-----------------------|-----------|--------------------|-----------|---------------|---------------|
| On site  | 15 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site  | 15 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site  | 15 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| 4m NW    | 15 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| 7m NW    | 15 mg/kg | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |

*This data is sourced from the British Geological Survey.*

### 21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km<sup>2</sup>).

*This data is sourced from the British Geological Survey.*

### 21.3 BGS Measured Urban Soil Chemistry

Records within 50m

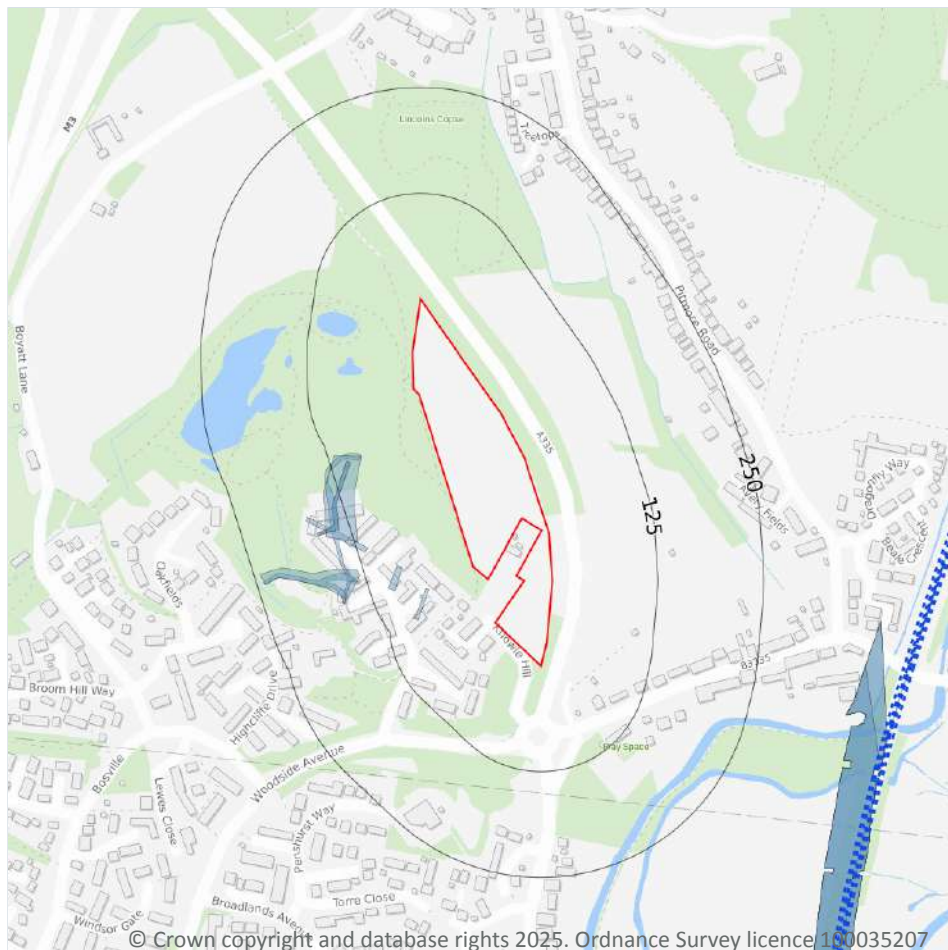
0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

*This data is sourced from the British Geological Survey.*



## 22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

### 22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

*This data is sourced from publicly available information by Groundsure.*

### 22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



*This data is sourced from publicly available information by Groundsure.*

## 22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

*This data is sourced from the Ordnance Survey.*

## 22.4 Historical railway and tunnel features

Records within 250m

8

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 126 >](#)

| Location | Land Use        | Year of mapping | Mapping scale |
|----------|-----------------|-----------------|---------------|
| 59m SW   | Railway Sidings | 1967            | 1250          |
| 80m SW   | Railway Sidings | 1939            | 2500          |
| 87m W    | Tramway Sidings | 1939            | 2500          |
| 87m W    | Railway Sidings | 1957            | 10560         |
| 101m W   | Tramway Sidings | 1950            | 2500          |
| 102m W   | Tramway Sidings | 1950            | 1250          |
| 131m SW  | Railway Sidings | 1938            | 10560         |
| 137m SW  | Railway Sidings | 1932            | 2500          |

*This data is sourced from Ordnance Survey/Groundsure.*

## 22.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

*This data is sourced from Groundsure/the Postal Museum.*



## 22.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

*This data is sourced from OpenStreetMap.*

## 22.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

*This data is sourced from Ordnance Survey and OpenStreetMap.*

## 22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

*This data is sourced from publicly available information by Groundsure.*

## 22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

*This data is sourced from HS2 Ltd.*



## Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

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#### Site Details:

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1868

**Scale:** 1:10,560

**Printed at:** 1:10,560



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Revised 1868  
Edition N/A  
Copyright N/A  
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Revised 1868  
Edition N/A  
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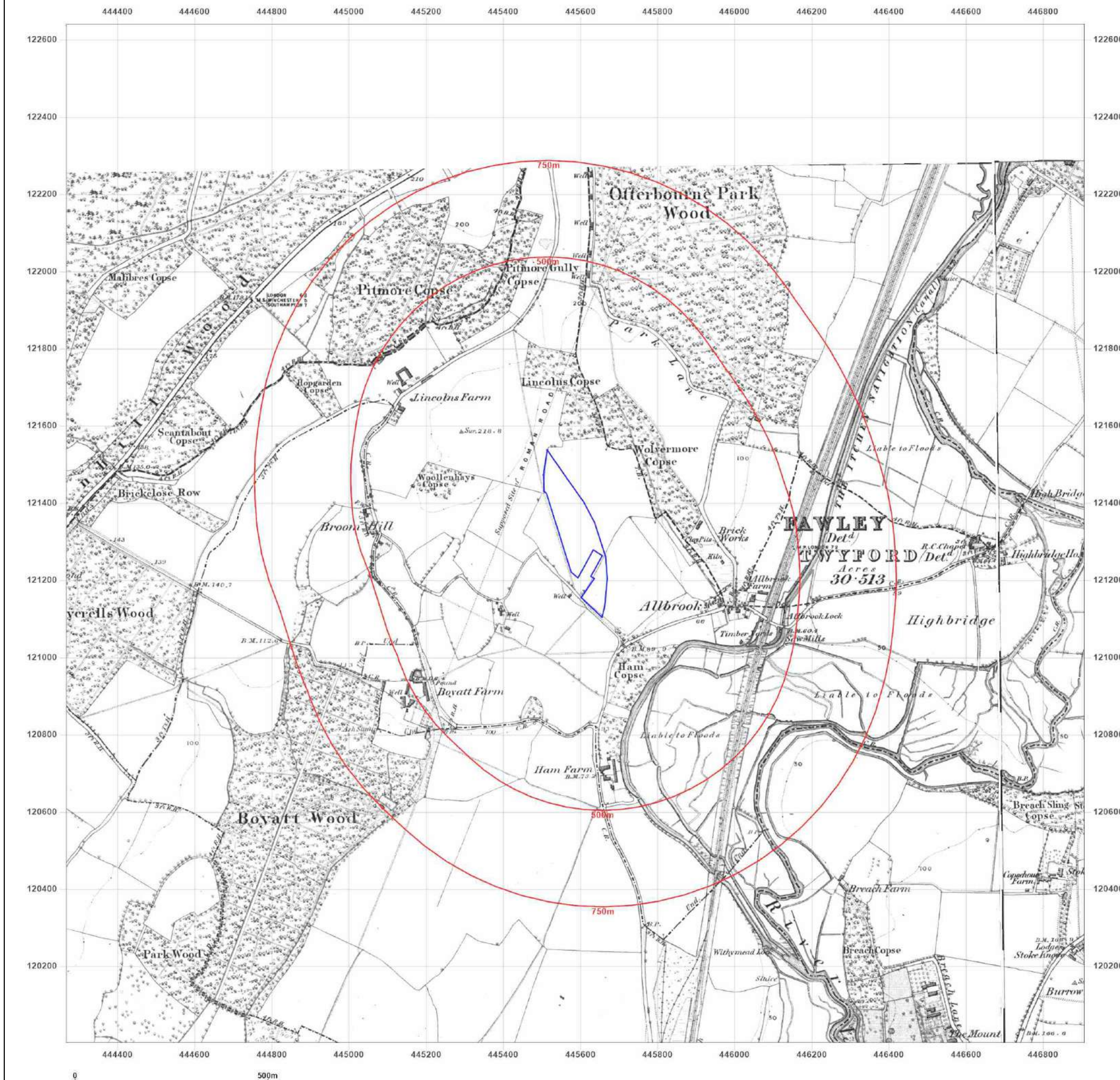


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1895

**Scale:** 1:10,560

**Printed at:** 1:10,560



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Revised 1895  
Edition N/A  
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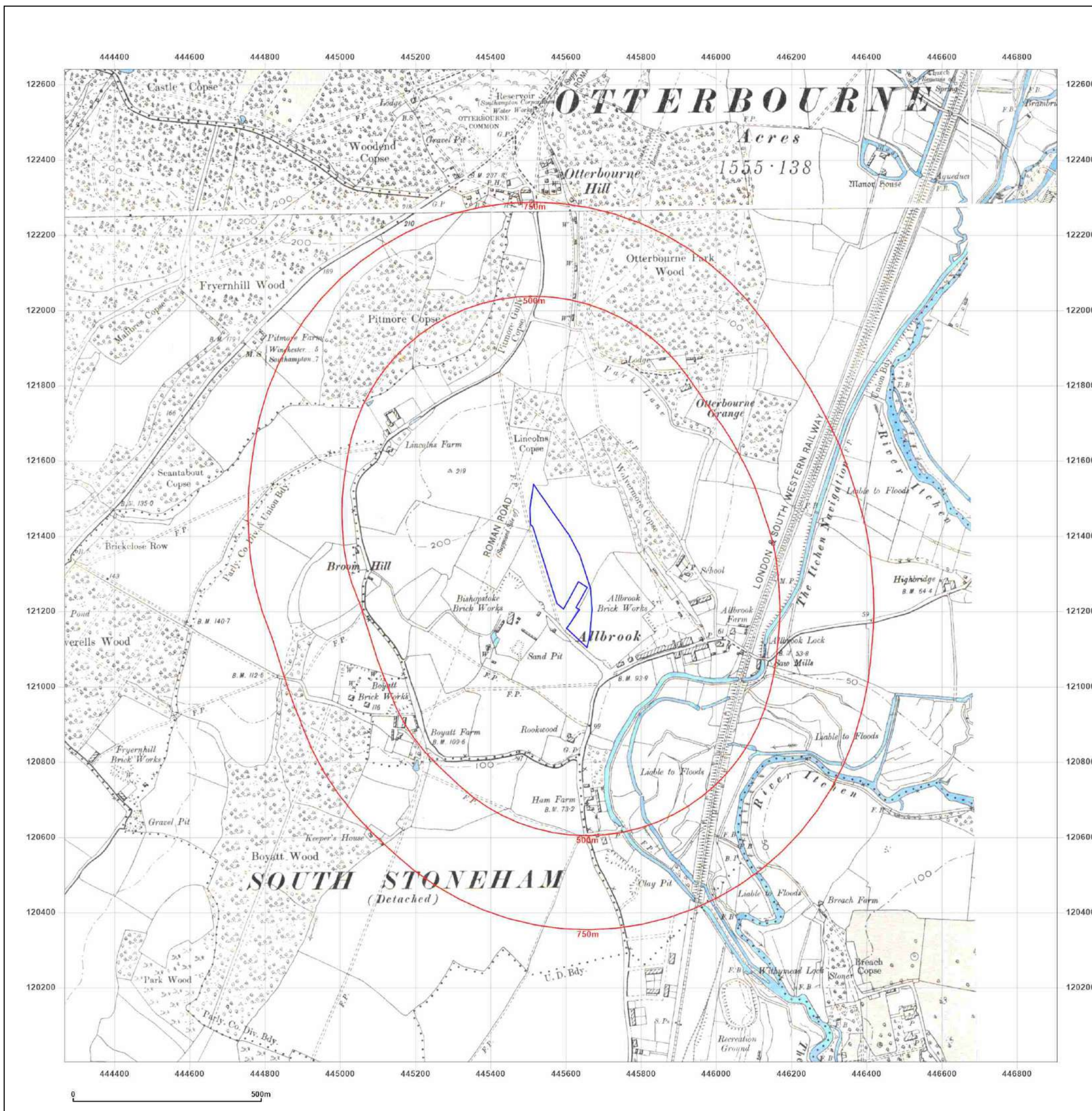


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1895-1898

**Scale:** 1:10,560

**Printed at:** 1:10,560



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Revised N/A  
Edition 1897  
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Surveyed 1868  
Revised 1895  
Edition N/A  
Copyright N/A  
Levelled N/A

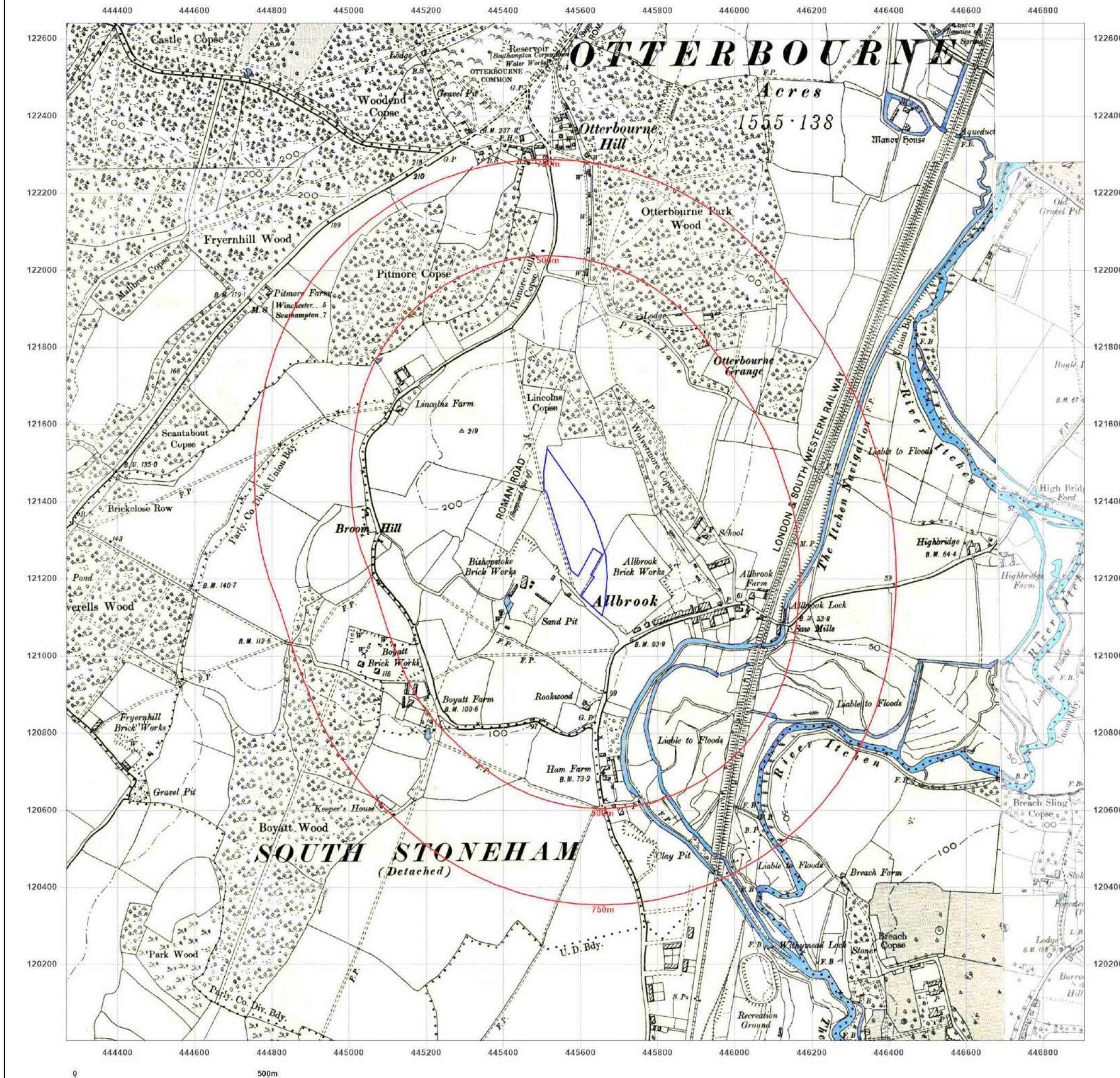


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Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1908

**Scale:** 1:10,560

**Printed at:** 1:10,560



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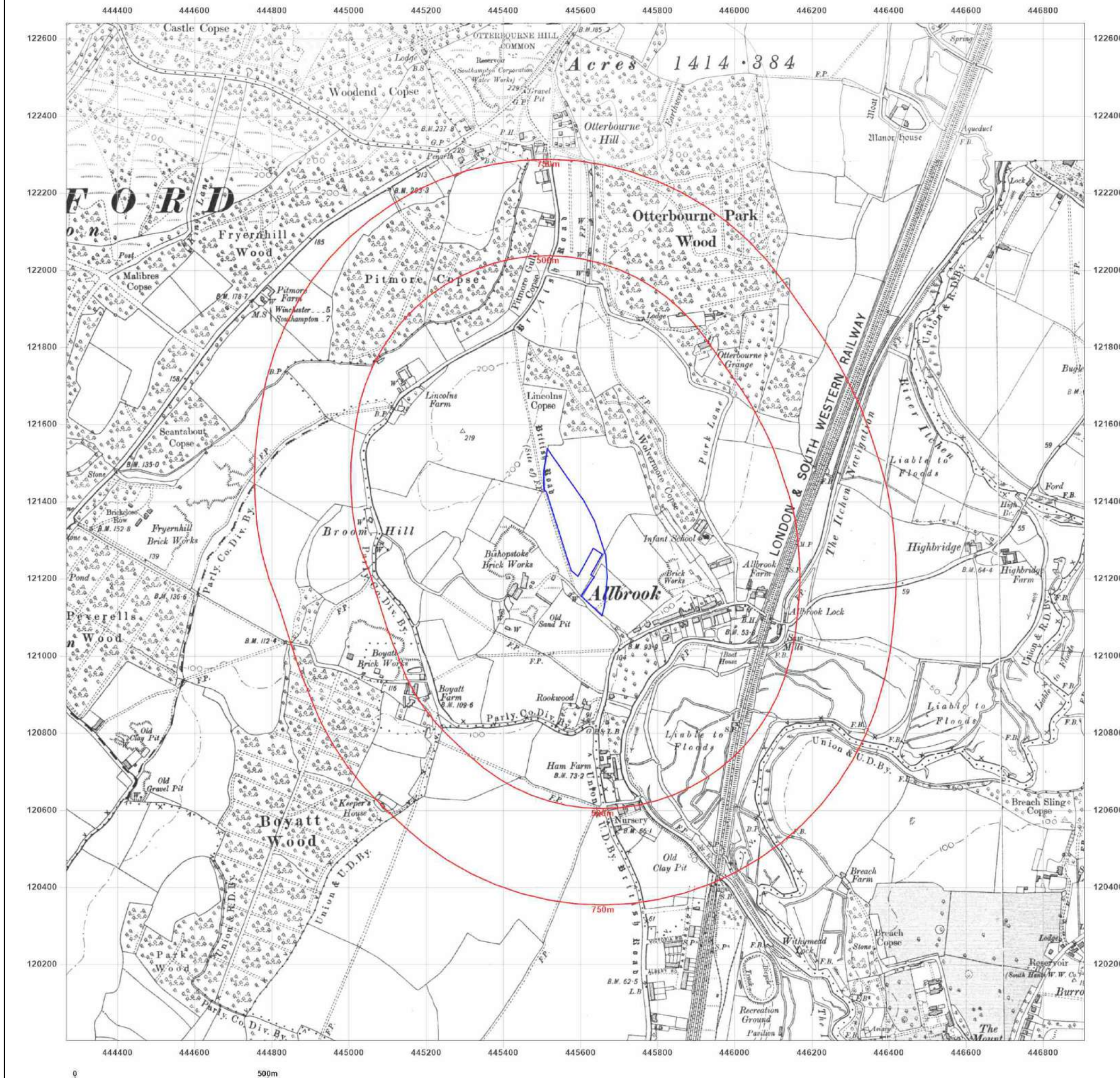


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**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1931

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1868  
Revised 1931  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1868  
Revised 1931  
Edition N/A  
Copyright N/A  
Levelled N/A

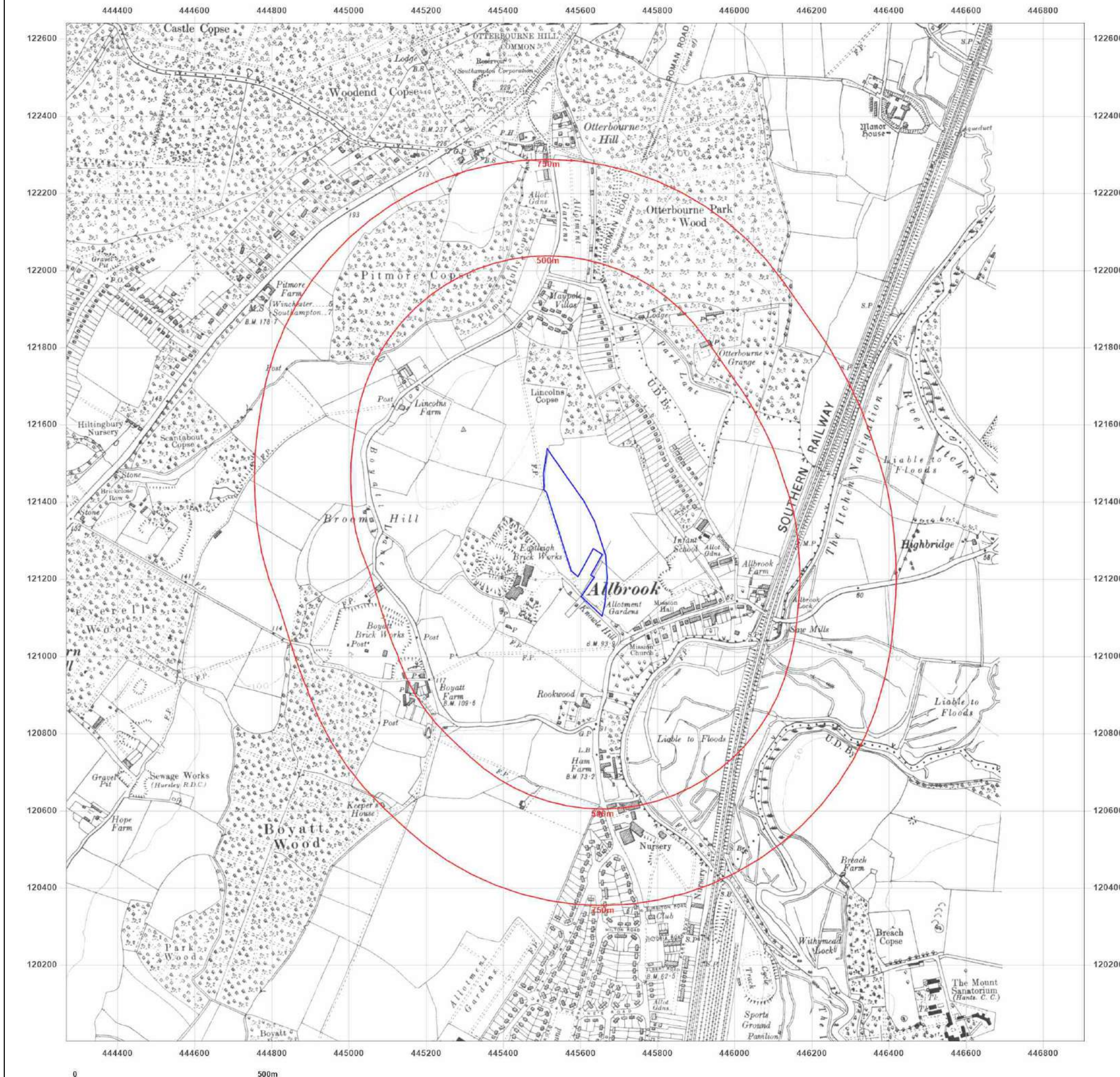


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1938

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1868  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1868  
Revised 1938  
Edition 1938  
Copyright N/A  
Levelled 1907

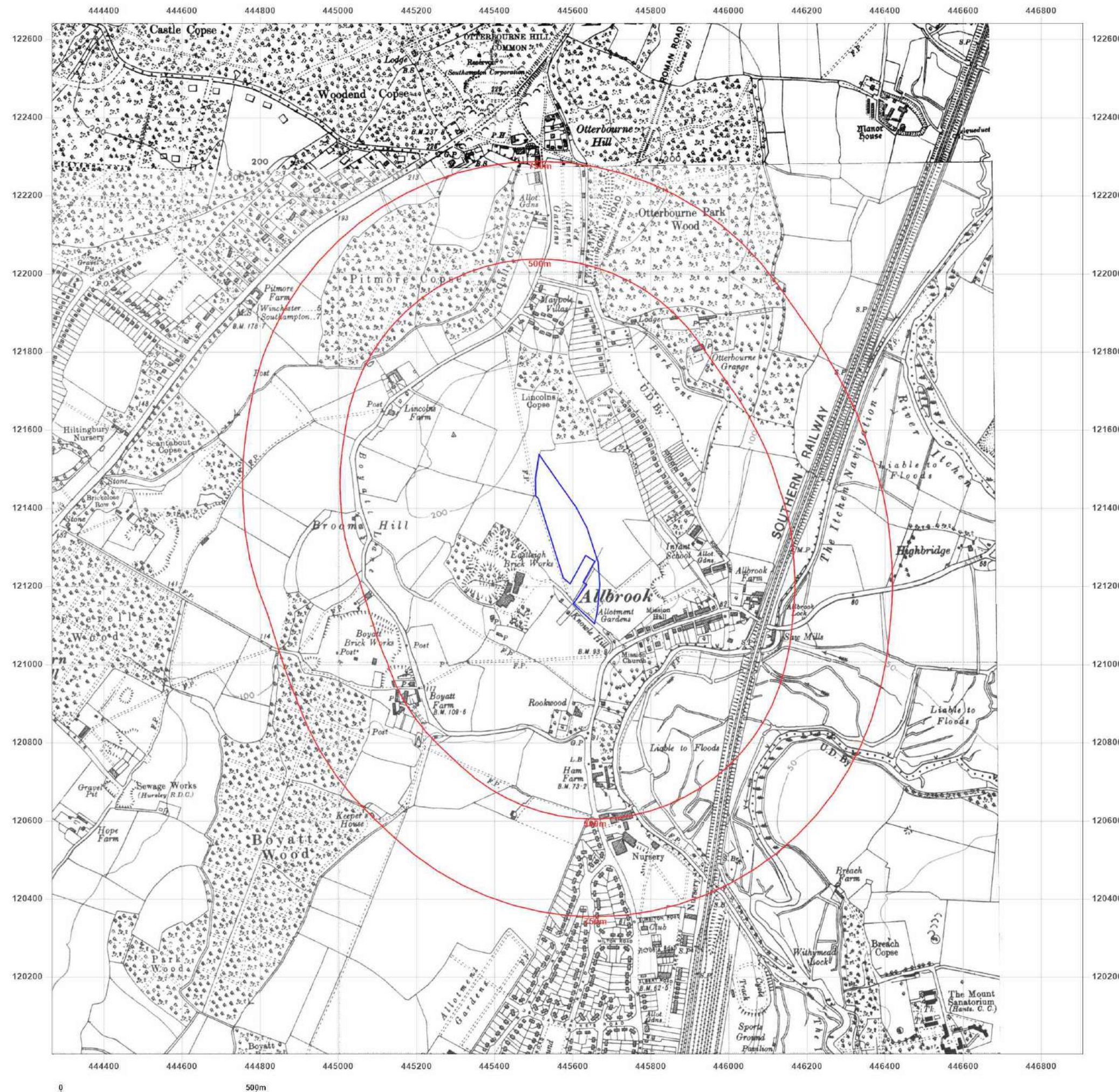


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** County Series

**Map date:** 1938-1939

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1868  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1868  
Revised 1932  
Edition 1938  
Copyright N/A  
Levelled N/A

Surveyed 1868  
Revised 1939  
Edition N/A  
Copyright N/A  
Levelled N/A

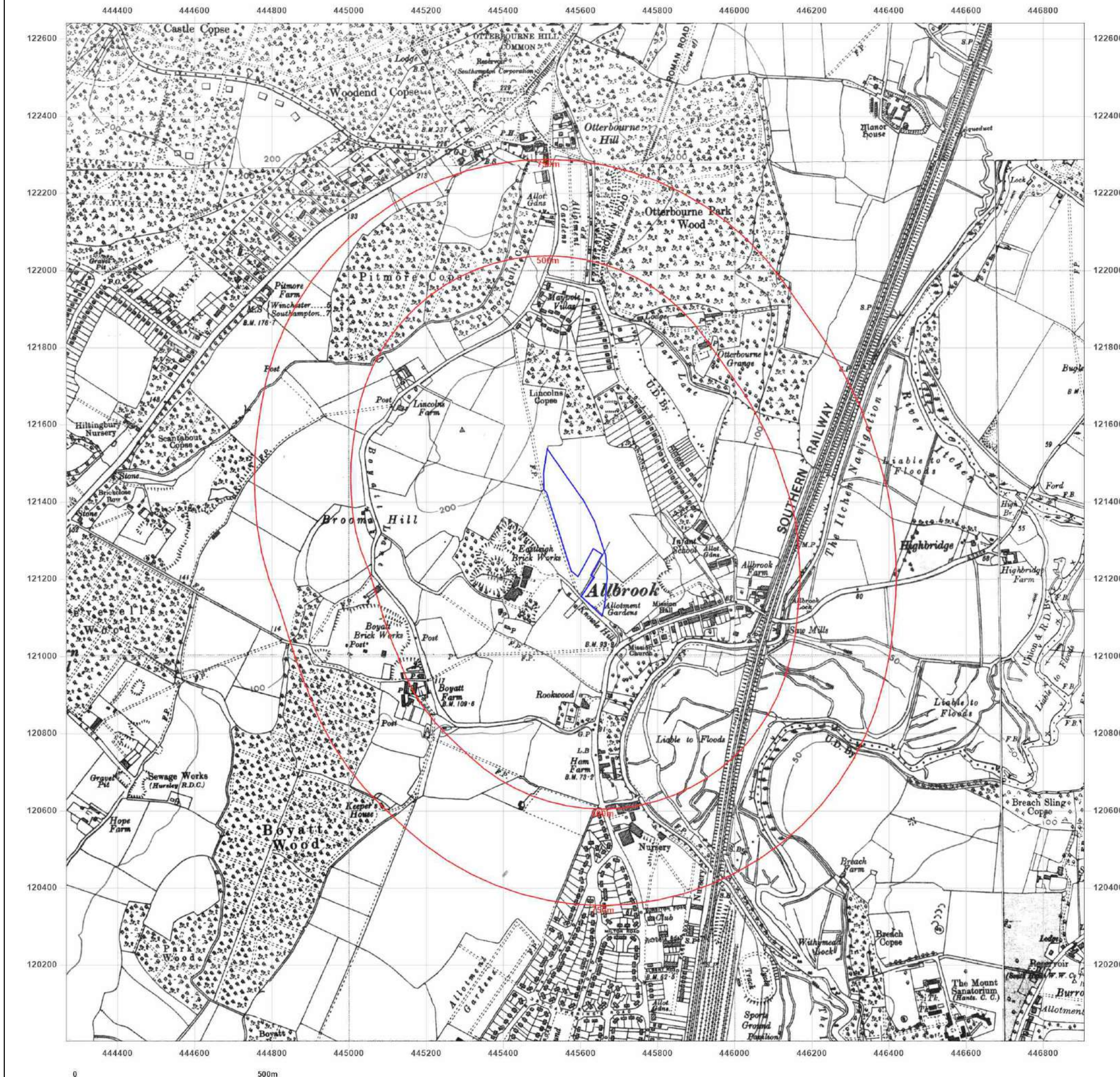


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#### Site Details:

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** Provisional

**Map date:** 1957-1958

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1958  
Revised 1958  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1957  
Revised 1957  
Edition N/A  
Copyright N/A  
Levelled N/A

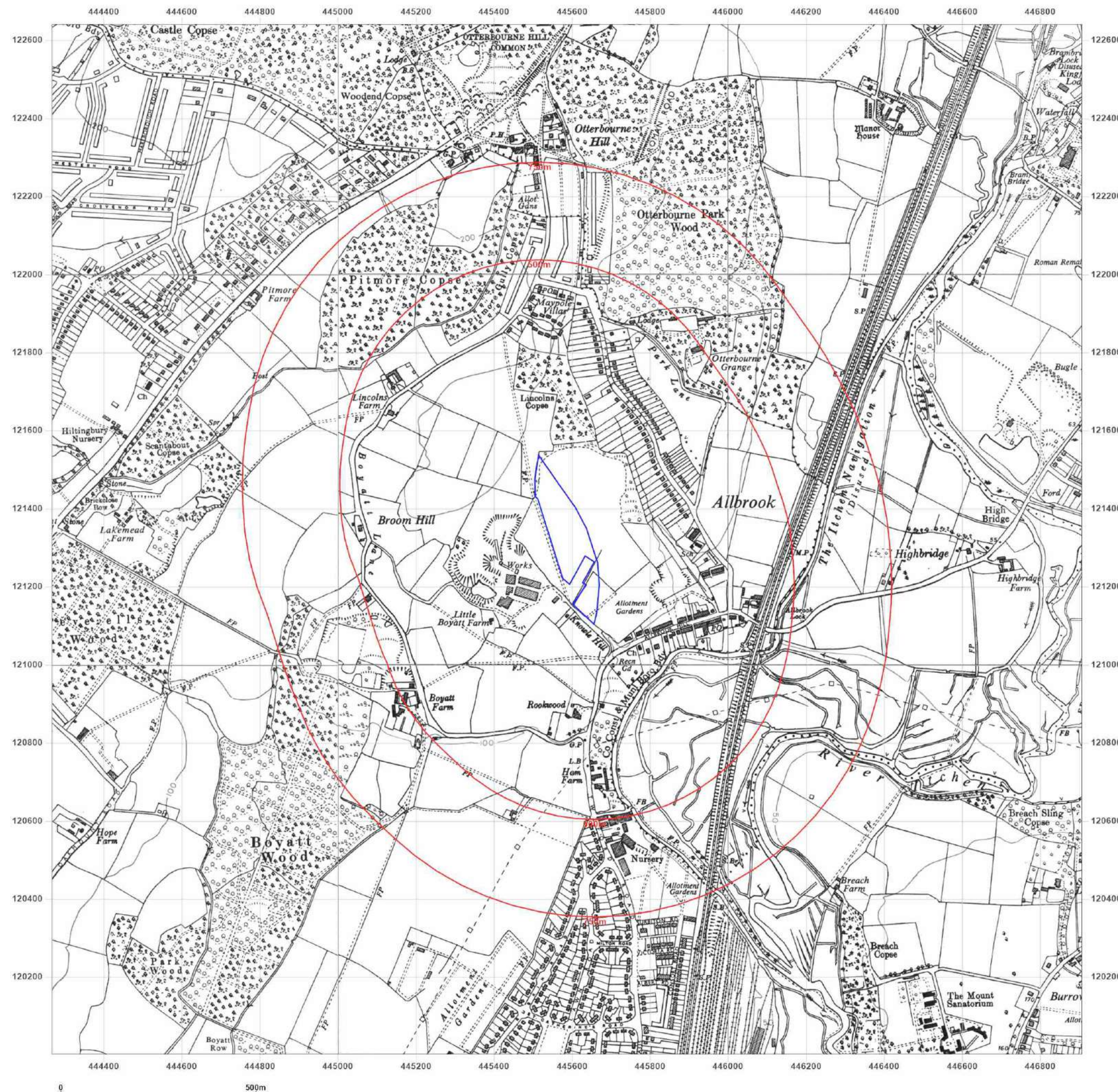


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** Provisional

**Map date:** 1968

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1968  
Revised 1968  
Edition N/A  
Copyright N/A  
Levelled N/A

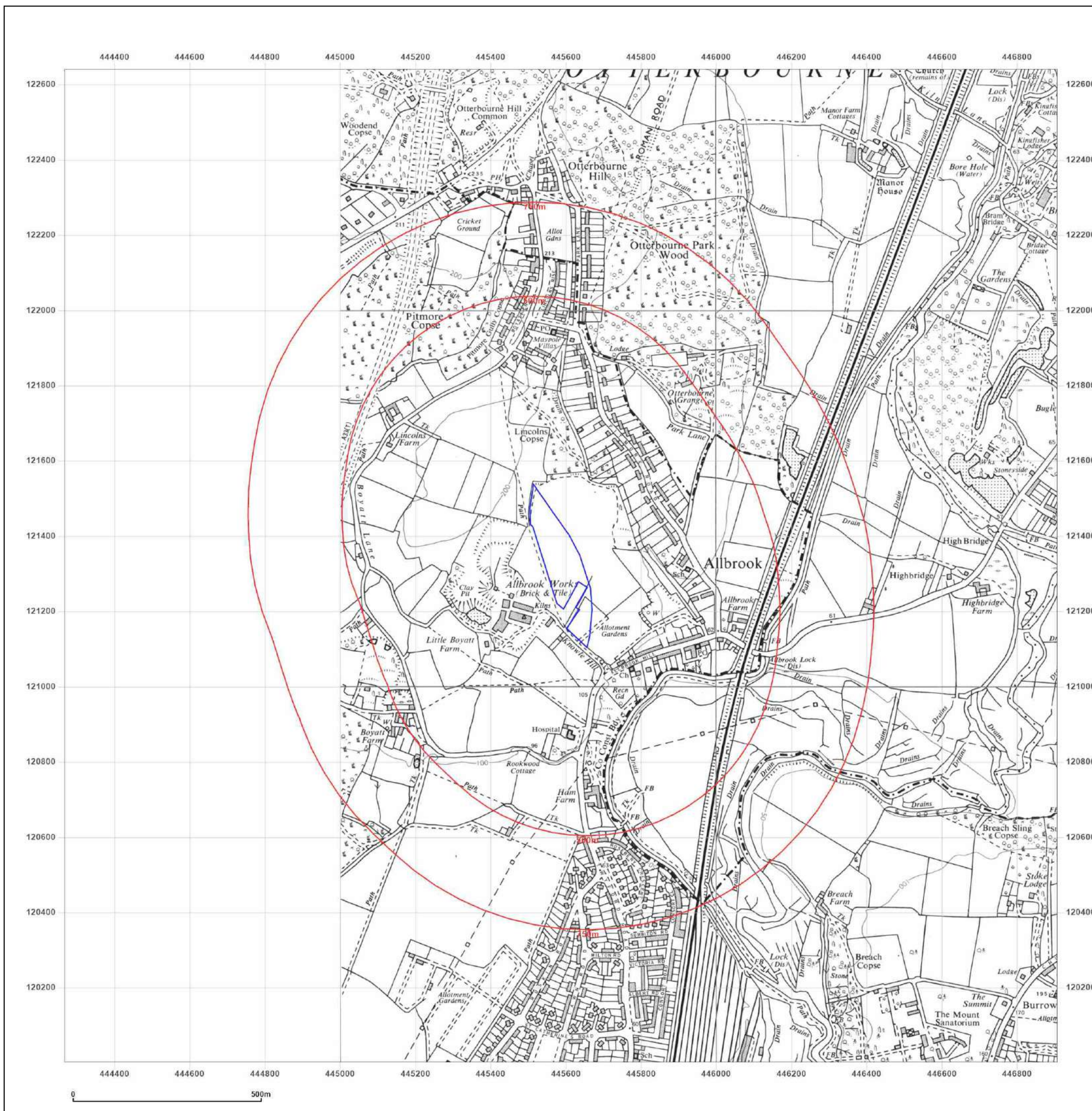


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#### Site Details:

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** National Grid

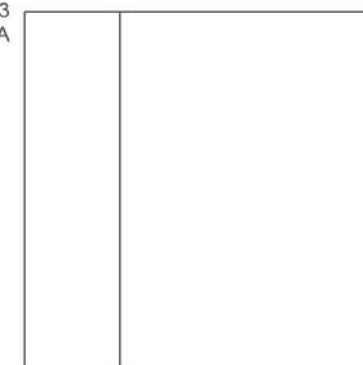
**Map date:** 1973

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1971  
Revised 1973  
Edition N/A  
Copyright 1973  
Levelled N/A

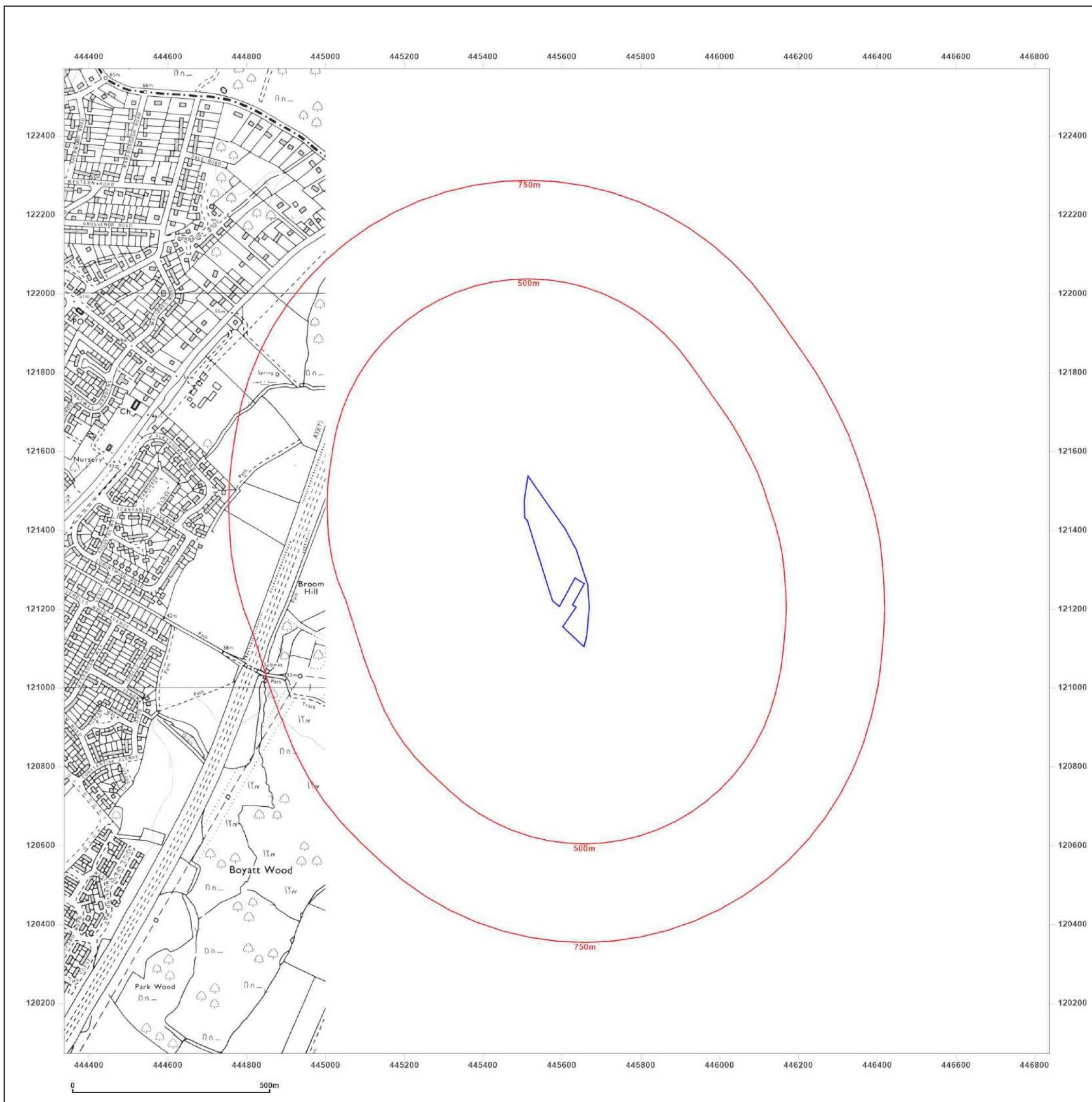


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** National Grid

**Map date:** 1980-1981

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1981  
Revised 1981  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1975  
Revised 1980  
Edition N/A  
Copyright N/A  
Levelled N/A

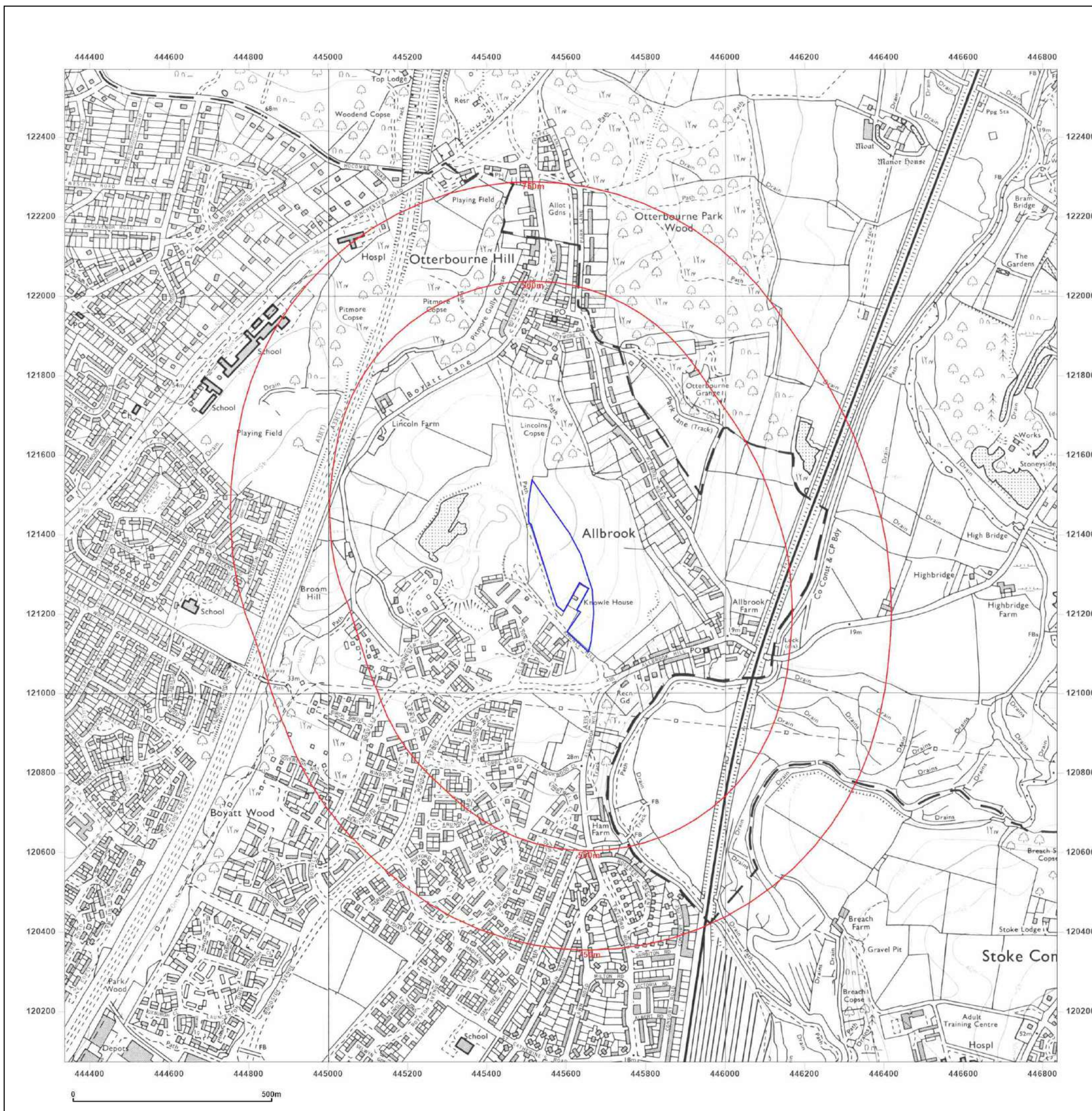


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** National Grid

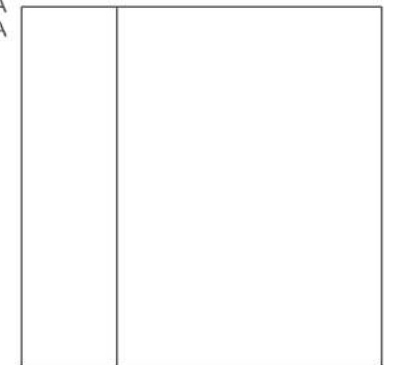
**Map date:** 1991

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1989  
Revised 1991  
Edition N/A  
Copyright N/A  
Levelled N/A



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#### Site Details:

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** National Grid

**Map date:** 2001

**Scale:** 1:10,000

**Printed at:** 1:10,000



2001

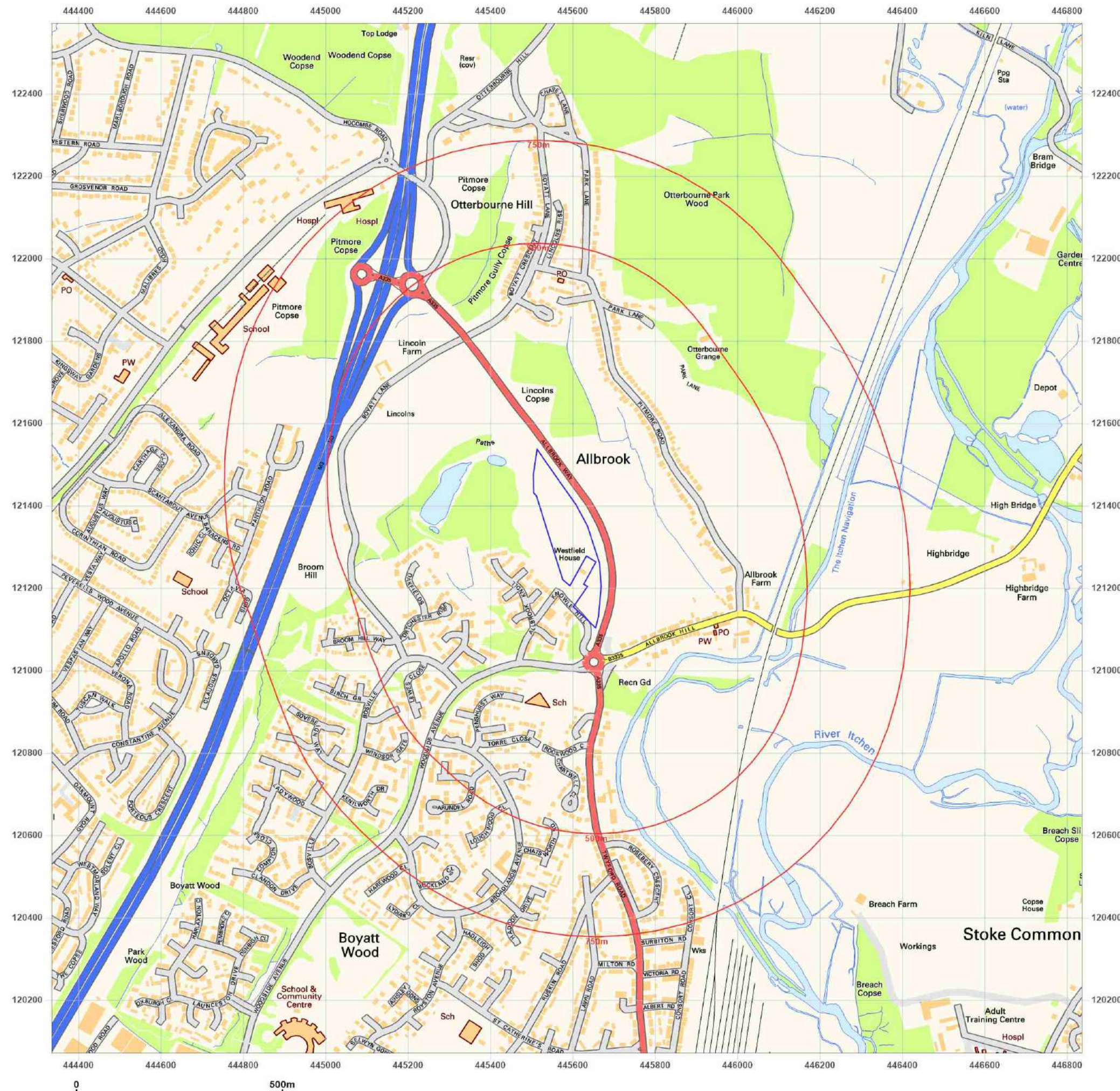


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#### Site Details:

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** National Grid

**Map date:** 2010

**Scale:** 1:10,000

**Printed at:** 1:10,000



2010

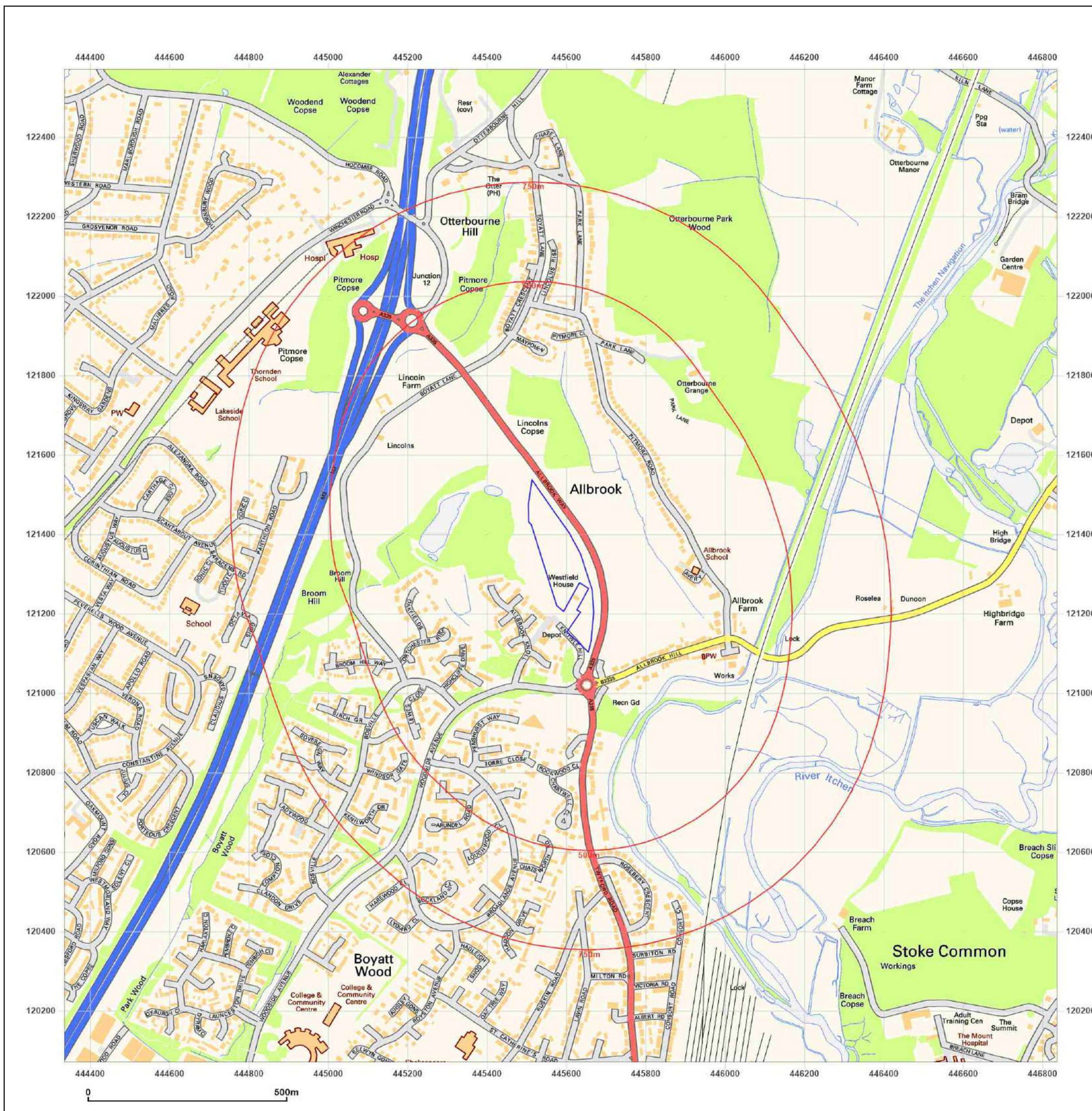


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**Site Details:**

Land at Knowle Hill, Allbrook,  
Eastleigh

**Client Ref:** Bargate  
**Report Ref:** GS-FTZ-CSQ-Q6P-IL1  
**Grid Ref:** 445586, 121321

**Map Name:** National Grid

**Map date:** 2025

**Scale:** 1:10,000

**Printed at:** 1:10,000



2025

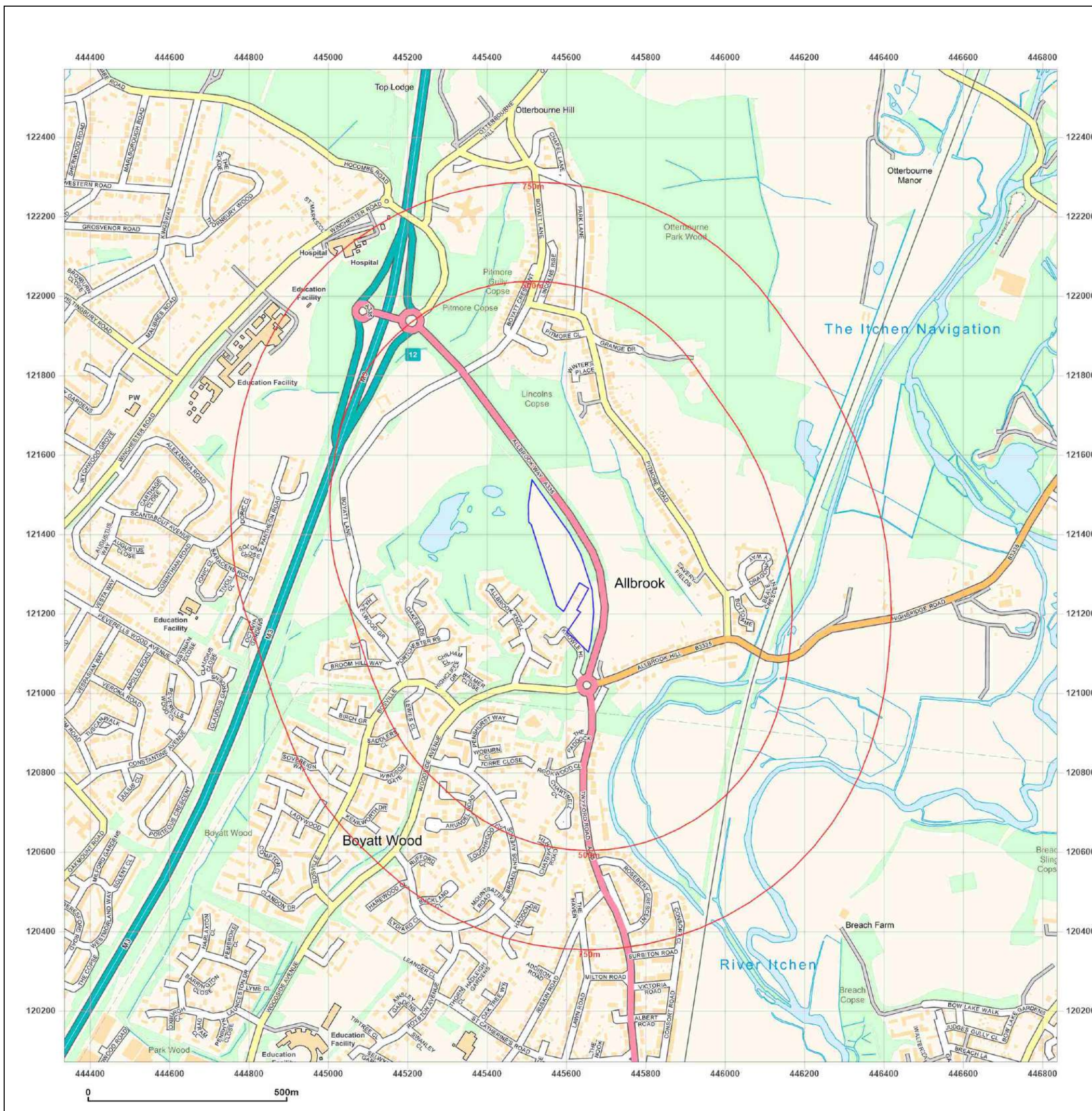


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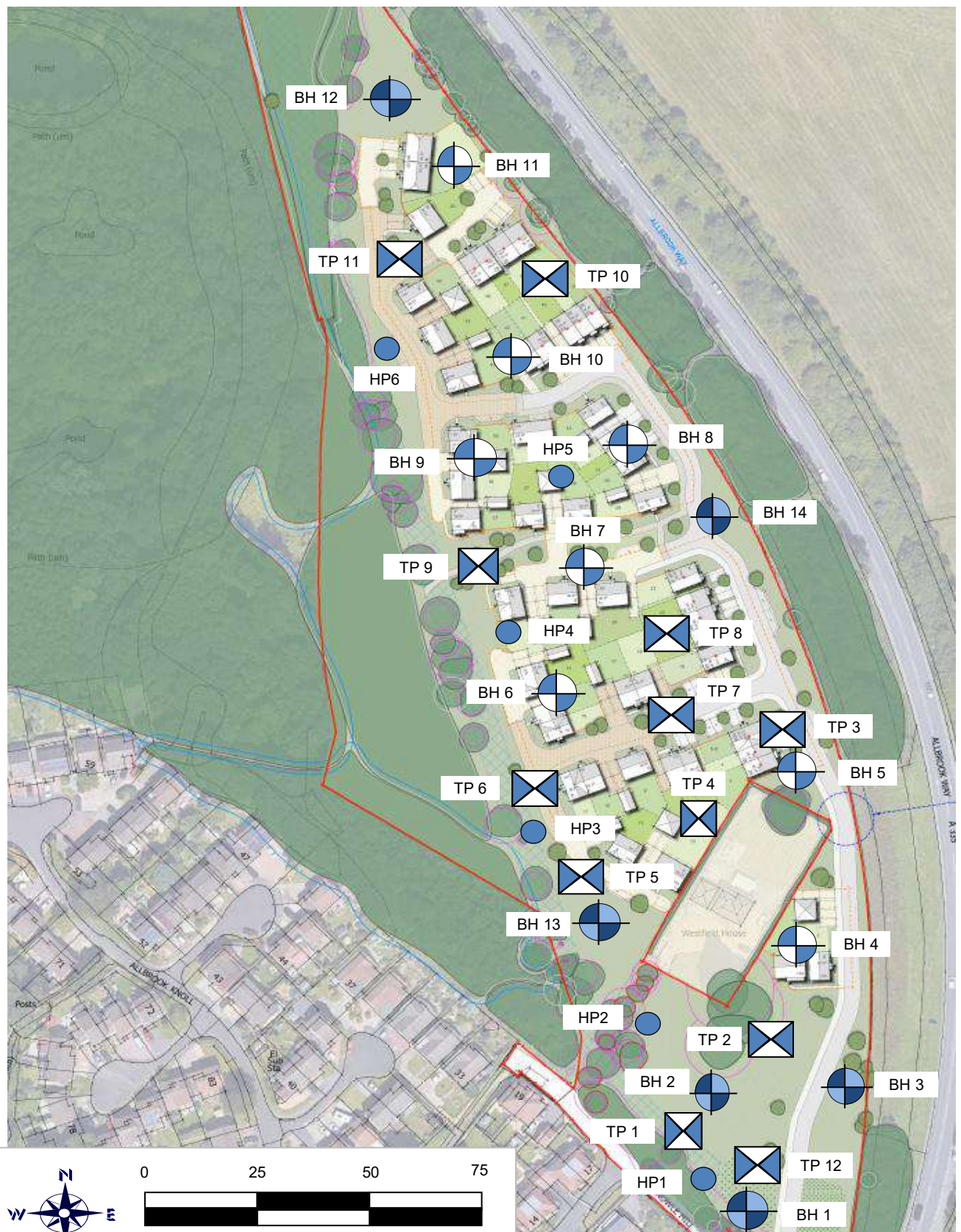
Production date: 26 April 2025

Map legend available at:  
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**Site** Knowle Hill Site, Allbrook, Eastleigh

**Client** Bargate Homes



|               |               |
|---------------|---------------|
| <b>Client</b> | Bargate Homes |
|---------------|---------------|



Bargate Homes

Telephone

Email:

Our Ref: 206249 R

18<sup>th</sup> November 2025

Dear Heather,

**Re: 49nr Plots, Knowle Hill, Allbrook**

We appreciate your enquiry and are pleased to present the following quotation for your consideration. If any element of the offer is unclear, please do not hesitate to contact us.

All the installation details we have recommended are based on the very latest guidance including: BRE.414, NHBC Handbook, BS.8485, CIRIA C.665 & C.735, CIEH Guide to Ground Gas and in accordance with NOS VR 612 and 613.

We utilise a combination of directly employed NVQ Level 2 Qualified Installation Technicians and Installation Technicians working to improve their skills towards the NVQ Level 2 Qualification. All Technicians hold current CSCS cards.

**Quotation for the above is:**

‘Supply and installation’ of 3,286m<sup>2</sup> of RTEC 4 gas membrane to 49 No house Plots.  
Including sealing to all corners and pipes using Self Adhesive Membrane.

**Option 1: Complete Lineout**

| House Types | Area (m <sup>2</sup> ) | Nr | Rate    | Amount    |
|-------------|------------------------|----|---------|-----------|
| Buzzard     | 72.5                   | 2  | £627.85 | £1,255.70 |
| Lark        | 90.2                   | 2  | £781.13 | £1,562.26 |
| Jay         | 91.5                   | 1  | £792.39 | £792.39   |
| Kiwi        | 54.8                   | 7  | £474.57 | £3,321.99 |
| Sparrow     | 61.9                   | 6  | £536.05 | £3,216.30 |
| Nightingale | 72.4                   | 4  | £626.98 | £2,507.92 |
| Heron       | 70.1                   | 6  | £607.07 | £3,642.42 |
| Wren        | 71.7                   | 1  | £620.92 | £620.92   |
| Phoenix     | 85.9                   | 1  | £743.89 | £743.89   |
| Quail       | 89.3                   | 3  | £773.34 | £2,320.02 |
| Blackbird   | 52.7                   | 7  | £456.38 | £3,194.66 |
| Crow        | 94.1                   | 2  | £814.91 | £1,629.82 |

|                                    |      |   |         |                   |
|------------------------------------|------|---|---------|-------------------|
| Pigeon                             | 85.4 | 1 | £739.56 | £739.56           |
| Grouse                             | 96.7 | 2 | £837.42 | £1,674.84         |
| Finch                              | 71.2 | 1 | £616.59 | £616.59           |
| Robin                              | 72.1 | 1 | £624.39 | £624.39           |
| Validation Plan                    |      | 1 | £450.00 | £450.00           |
| Independent Testing and Validation |      | 3 | £600.00 | £1,800.00         |
| <b>TOTAL</b>                       |      |   |         | <b>£30,713.67</b> |

### Option 2: Perimeter and Infill

| House Types                        | Area (m <sup>2</sup> ) | Nr | Rate      | Amount            |
|------------------------------------|------------------------|----|-----------|-------------------|
| Buzzard                            | 72.5                   | 2  | £933.80   | £1,867.60         |
| Lark                               | 90.2                   | 2  | £1,161.78 | £2,323.56         |
| Jay                                | 91.5                   | 1  | £1,178.52 | £1,178.52         |
| Kiwi                               | 54.8                   | 7  | £705.82   | £4,940.74         |
| Sparrow                            | 61.9                   | 6  | £797.27   | £4,783.62         |
| Nightingale                        | 72.4                   | 4  | £932.51   | £3,730.04         |
| Heron                              | 70.1                   | 6  | £902.89   | £5,417.34         |
| Wren                               | 71.7                   | 1  | £923.50   | £923.50           |
| Phoenix                            | 85.9                   | 1  | £1,106.39 | £1,106.39         |
| Quail                              | 89.3                   | 3  | £1,150.18 | £3,450.54         |
| Blackbird                          | 52.7                   | 7  | £678.78   | £4,751.46         |
| Crow                               | 94.1                   | 2  | £1,212.01 | £2,424.02         |
| Pigeon                             | 85.4                   | 1  | £1,099.95 | £1,099.95         |
| Grouse                             | 96.7                   | 2  | £1,245.50 | £2,491.00         |
| Finch                              | 71.2                   | 1  | £917.06   | £917.06           |
| Robin                              | 72.1                   | 1  | £928.65   | £928.65           |
| Validation Plan                    |                        | 1  | £450.00   | £450.00           |
| Independent Testing and Validation |                        | 6  | £600.00   | £3,600.00         |
| <b>TOTAL</b>                       |                        |    |           | <b>£46,383.99</b> |

### Extra Over:

Design & PI -£4,153.50

This quotation has been based on the drawings provided in your email on the 7<sup>th</sup> October 2025. We have allowed for the membrane to step up at the perimeter to bridge the cavity but go under any internal walls.

We have not allowed for any garages, if you would like us to include for these please let us know and we will update our quotation accordingly.

### **Installation**

We have based our quotation based on this project being completed in no more than 12 days for option one or 24 days for option two subject to sufficient areas being made available and favourable weather conditions.

If extra days are required by the main contractor due to matters beyond Dance-Reeves control, day-work will be arranged at £795.00 per two-man team per eight-hour day.

### **Attendances**

The following attendances will be required from the main contractor,

#### **Prior to our arrival the following must be confirmed complete:-**

- Setting out
- The area to be cleared of any sharp objects, stones, etc and dewatered as necessary to the working area.
- A smooth flat finished surface should be provided for work to be carried out on the day.
- Details of all pipe entries to be supplied prior to the 1<sup>st</sup> site visit.

### **During Installation**

- Please allow F.O.C suitable plant/pumps to keep the excavation/formation dewatered while our work proceeds, if required.

### **After Installation**

- Suitable protection may be required over the membrane (to be provided by others), whilst following trades work over the exposed membrane.
- Dance-Reeves can provide protection boards 'Supply & Fix', if required.

### **Variations**

All variations will be priced independently upon receipt of your instruction and drawings. A minimum of one week prior to your requirement to carry out the varied works may be required. Extra meterage will not be calculated pro-rata. Dance-Reeves variation rates will reflect the labour and material element applicable to the detail provided. A full breakdown will be provided to the main contractor upon request prior to an official variation order.

**Terms and Conditions**

|                            |                                              |
|----------------------------|----------------------------------------------|
| Payment Terms:             | Nett Monthly Account.                        |
| LAD's:                     | LAD's are limited to 10% of our contract sum |
| VAT:                       | To be charged at current rate of ruling.     |
| Delivery:                  | To be confirmed. (Job Specific).             |
| Retention:                 | 0% (NSCC Fairpayment Campaign)               |
| Certificate of Conformity: | Issued on payment of invoice for each Plot   |
| Validation Report:         | Issued on payment of final invoice.          |

Dance-Reeves endeavor to work to a **two week** lead time on all projects, although there are some occasions where this cannot be met due to material supplier delays or an excessively busy workload. Please confirm delivery times prior to placing an order.

We trust our proposals and quotation meet with your approval. If you require any further qualifications please do not hesitate to contact either Nick Birch on 07840 298056 or John McLoughlin on 07852 233030 to discuss in further detail.

Yours faithfully,  
For **DANCE REEVES LTD**

**Ben Reeves**  
**Trainee QS**