Ground Investigation Report

Land at Knowle Hill
Allbrook
Eastleigh
Hampshire

Client Bargate Homes

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WILSON BAILEY
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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.

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.

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 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 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.

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 below;

- 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.

The site is not indicated to be located within an area identified as being at risk of radon ingress into buildings such that radon precautions are not anticipated.

2.3 Preliminary Risk Assessment based on Desk Study Findings

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 inly 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 198, 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.

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.

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 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 was 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 was noted within the 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 was 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 (residential with plant uptake) mg/kg	Number of exceedances (number of samples tested)	Location and value of exceedances
Asbestos	Trace concentration (<0.001%)	None (of 6)	--
Arsenic (As)	32	None (of 6)	--
Cadmium (Cd)	10	None (of 6)	--
Chromium (hex)	4.3	None (of 6)	--
Chromium (Cr)	3000	None (of 6)	--
Copper (Cu)	2330	None (of 6)	--
Lead (Pb)	200	None (of 6)	;;
Mercury (Hg)	1.0	None (of 6)	--
Nickel (Ni)	130	None (of 6)	--
Selenium (Se)	350	None (of 6)	--
Zinc (Zn)	3750	None (of 6)	--
Benzo(a)pyrene	5.0	None (of 6)	
Total Phenols (mono)	420	None (of 6)	--
Speciated Fuel Relation hydrocarbons (TPH)	Various species-specific values	None (of 6)	--

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.

4.7 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 included within the appendix to this report.

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.

5.0 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 once 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/m2, 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 gasses 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.

5.8 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. Whilst a detailed Gas Risk Assessment is outside of the brief of this investigation it is considered that raised concentrations of carbo dioxide have been identified, together with detectable but variable gas flows, and a viable source of potentially mobile soil gasses from the adjoining historically backfilled former brickworks clay pit.

As with any development site there is 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.

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.

5.9 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.

5.10 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[1] 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.

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

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 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.

8.0 REQUIREMENT FOR REMEDIATION

On the basis of the ground investigation works presented within this report a requirement for soil remediation has not been identified.

A requirement for soil gas protection to proposed new building floor slabs has been identified on the basis of Carbon Dioxide measurements exceeding 5% together with variable, but detectable flow and a viable source of potentially mobile soil gasses associated with the adjoining historical Inert landfilled former brickworks excavation.

9.0 FURTHER WORK

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 they may be appropriately tested, investigated and assessed by Wilson Bailey in consultation with the Regulatory Authorities before agreeing the scope of any remedial actions as necessary.

APPENDIX

Borehole 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

WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH1

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

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

Remarks
Groundwater encountered at 7.80m. Standpipe installed with a response zone from 1.00m to 8.00m.

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH1

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH10

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

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

Remarks

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH10

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH11

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

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

Remarks

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH11

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH12

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

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20) 0.20	TOPSOIL		
0.50	D1					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		

Remarks
Groudnwater not encountered. Standpipe installed with a response zone from 1.00m to 6.00m.

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH12

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH13

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

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	TOPSOIL with abundant fine to medium flint gravel		
					0.30	Orange-brown silty sandy clayey fine to medium flint GRAVEL		
0.50	D1				(0.80)			
1.00-1.45	SPT N=10		2,2/2,2,3,3		1.10	Firm orange-brown and brown silty sandy CLAy with abundant flint gravel		
1.00	D2							
1.50	D3				(1.20)			
2.00-2.45	SPT N=12		3,3/3,3,3,3					
2.00	D4				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	SPT N=10		3,3/2,2,3,3					
3.00	D6				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							
			Water strike(1) at 5.80m.					▽1
6.00	D12				6.00	Complete at 6.00m		

Remarks
Groundwater encountered at 5.80m. Standpipe installed with a response zone from 1.00m to 6.00m.

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH13

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site Knowle Hill, Allbrooke, Eastleigh			**Number** BH14
Excavation Method Drive-in Windowless Sampler	**Dimensions**	**Ground Level (mOD)**	**Client** Bargate Homes	**Job Number** J202334
	Location	**Dates** 12/10/2023	**Engineer** DPB	**Sheet** 1/1

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

Remarks
Groundwater not encountered. Sampler refused at 4.60m.

Scale (approx)	**Logged By**
1:50	

Figure No. J202334.BH14

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site Knowle Hill, Allbrooke, Eastleigh			**Number** BH2
Excavation Method Drive-in Windowless Sampler	**Dimensions**	**Ground Level (mOD)**	**Client** Bargate Homes	**Job Number** J202334
	Location	**Dates** 12/10/2023	**Engineer** DPB	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25) 0.25	TOPSOIL		
0.50	D1					Firm orange-brown silty slightly sandy CLAY with scattred fine to medium flint gravel		
1.00	D2							
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		

Remarks
Groundwater not encountered. Standpipe installed with a response zone from 1.00m to 6.00m.

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH2

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH3

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

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	TOPSOIL with abudant fine to medium flint gravel - possible made ground		
0.50	D1				0.60	Firm orange-brown silty sandy CLAY		
1.00	D2							
1.50	D3				(2.40)			
2.00	D4							
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							
4.50	D9				4.30 (0.50)	Firm orange-brown and pale brown silty sandy CLAY		
5.00	D10				4.80	Pale orange-brown very clayey sandy SILT with layers and partings of fine to medium very silty very sandy clay		
5.50	D11				(1.20)			
6.00	D12				6.00	Complete at 6.00m		

Remarks
Groundwater not encountered. Standpipe installed with a response zone from 1.00m to 6.00m.

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH3

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH4

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

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

Remarks
Groundwater not encountered.

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH4

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH5

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

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20) 0.20	TOPSOIL		
					(0.60)	Firm orange-brown silty sandy CLAY		
0.50	D1				0.80			
1.00	D2				(0.40) 1.20	Fir orange-brown very silty very sandy CLAY		
1.50	D3					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		

Remarks

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH5

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH6

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

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

Remarks

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH6

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH7

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

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

Remarks

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH7

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site Knowle Hill, Allbrooke, Eastleigh			**Number** BH8
Excavation Method Drive-in Windowless Sampler	**Dimensions**	**Ground Level (mOD)**	**Client** Bargate Homes	**Job Number** J202334
	Location	**Dates** 12/10/2023	**Engineer** DPB	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30) 0.30	TOPSOIL with abundant gravel		
0.50	D1					Firm pale orange-brown and pale grey mottled silty sandy CLAY		
1.00	D2							
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. J202334.BH8

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WILSON BAILEY
GEOTECHNICAL & ENVIROMENTAL

Site	Number
Knowle Hill, Allbrooke, Eastleigh	BH9

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

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

Remarks

Scale (approx)	Logged By
1:50	

Figure No. J202334.BH9

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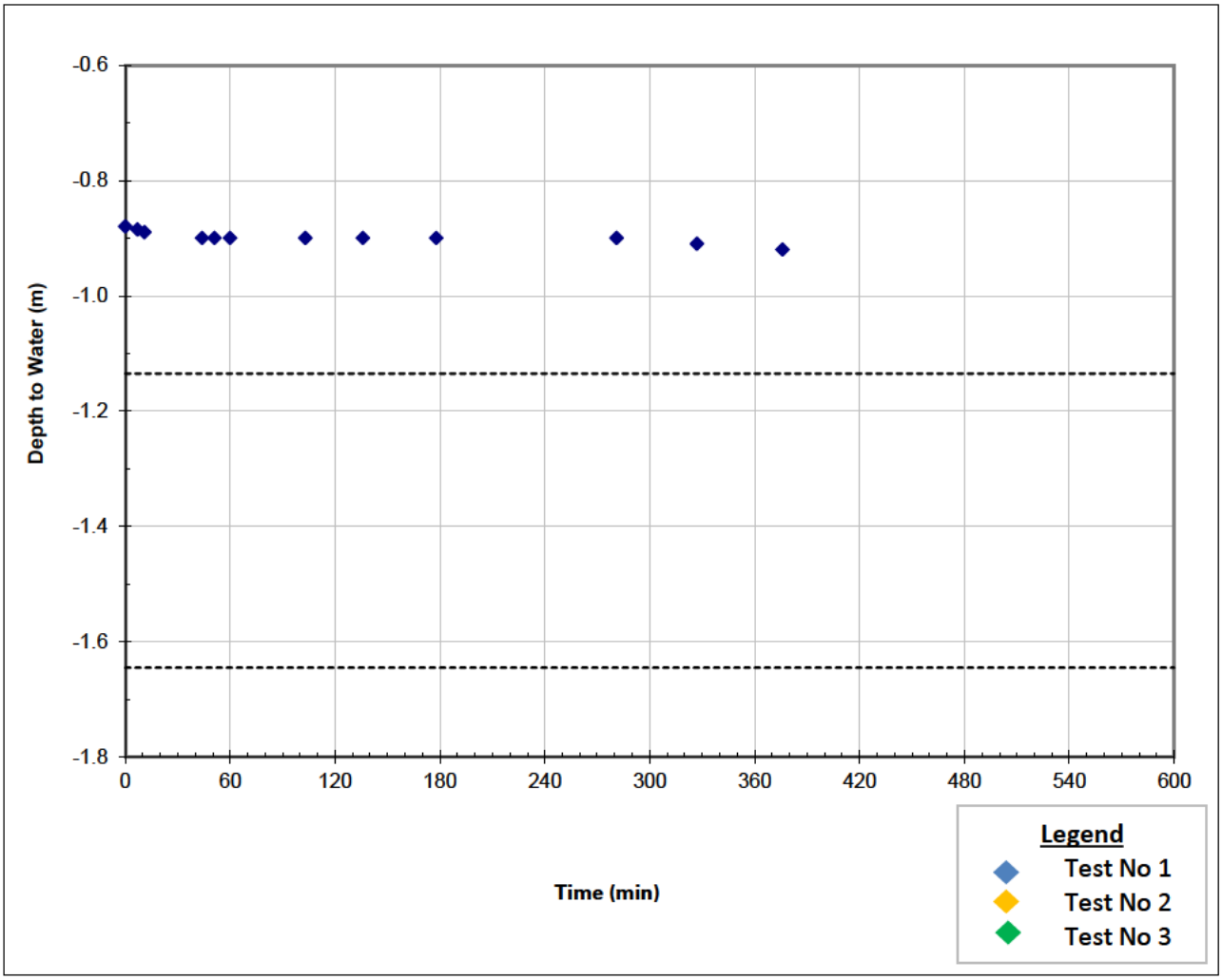
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Soakage Test Results

Site Knowle Hill, Allbrook, Eastleigh

Client Bargate Homes

Trial Pit No.	1	Pit Length (m)	1.45
Date of test	11/10/2023	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

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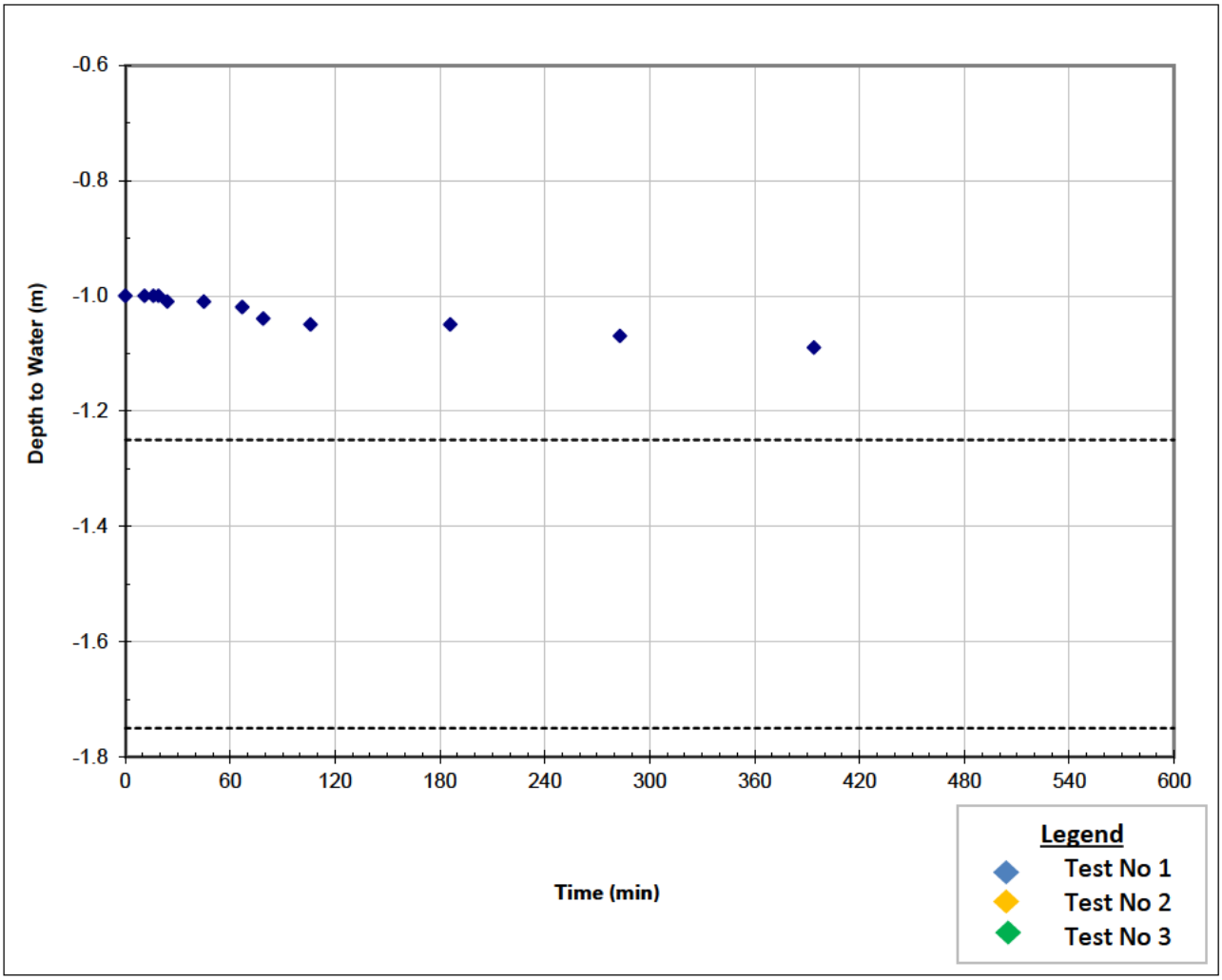
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Soakage Test Results

Site Knowle Hill, Allbrook, Eastleigh

Client Bargate Homes

Trial Pit No.	2	Pit Length (m)	1.4
Date of test	11/10/2023	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

WILSON BAILEY
GEOTECHNICAL & ENVIRONMENTAL

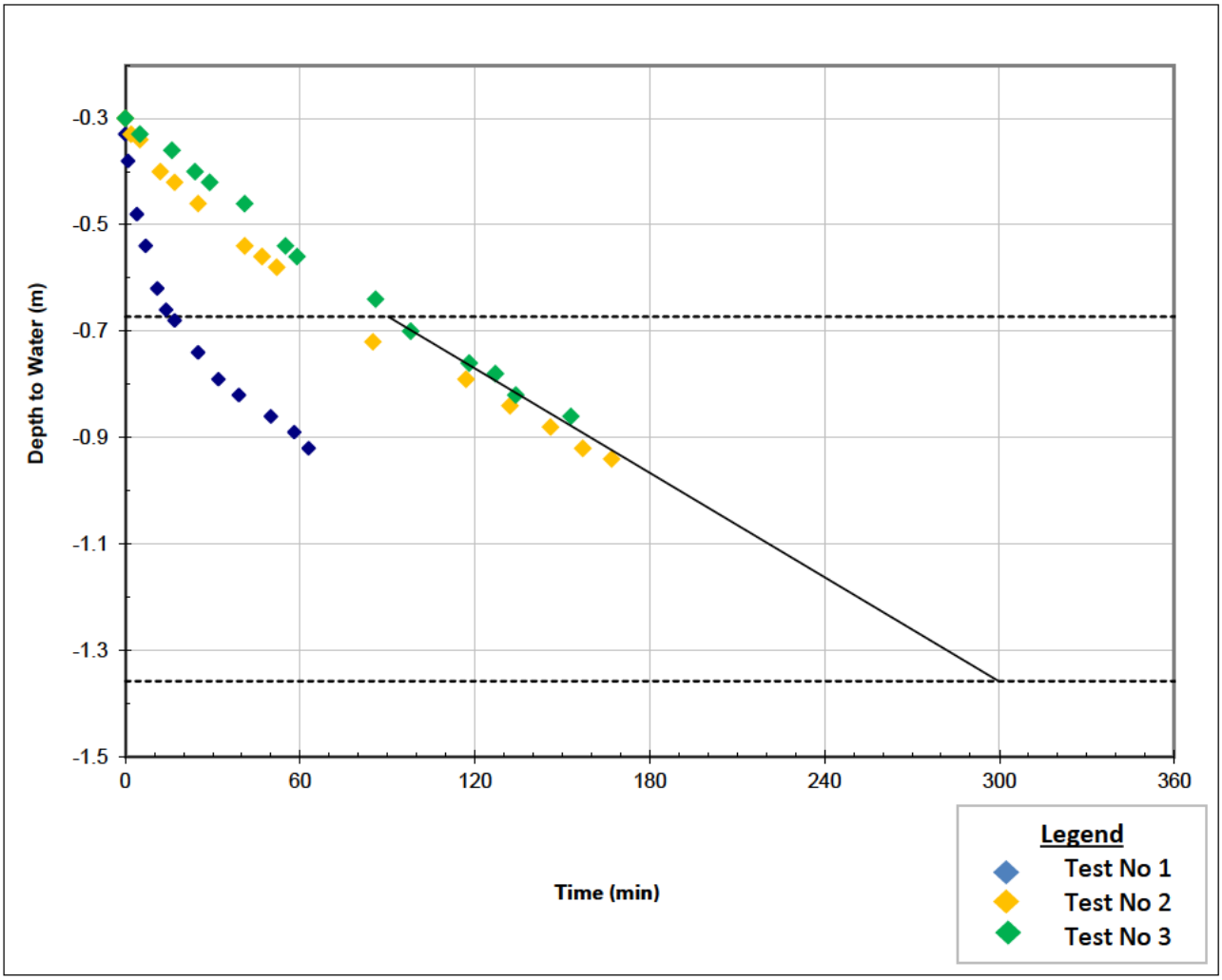
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Soakage Test Results

Site Knowle Hill, Allbrook, Eastleigh

Client Bargate Homes

Trial Pit No.	3	Pit Length (m)	1.15
Date of test	11/10/2023	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

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GEOTECHNICAL & ENVIRONMENTAL

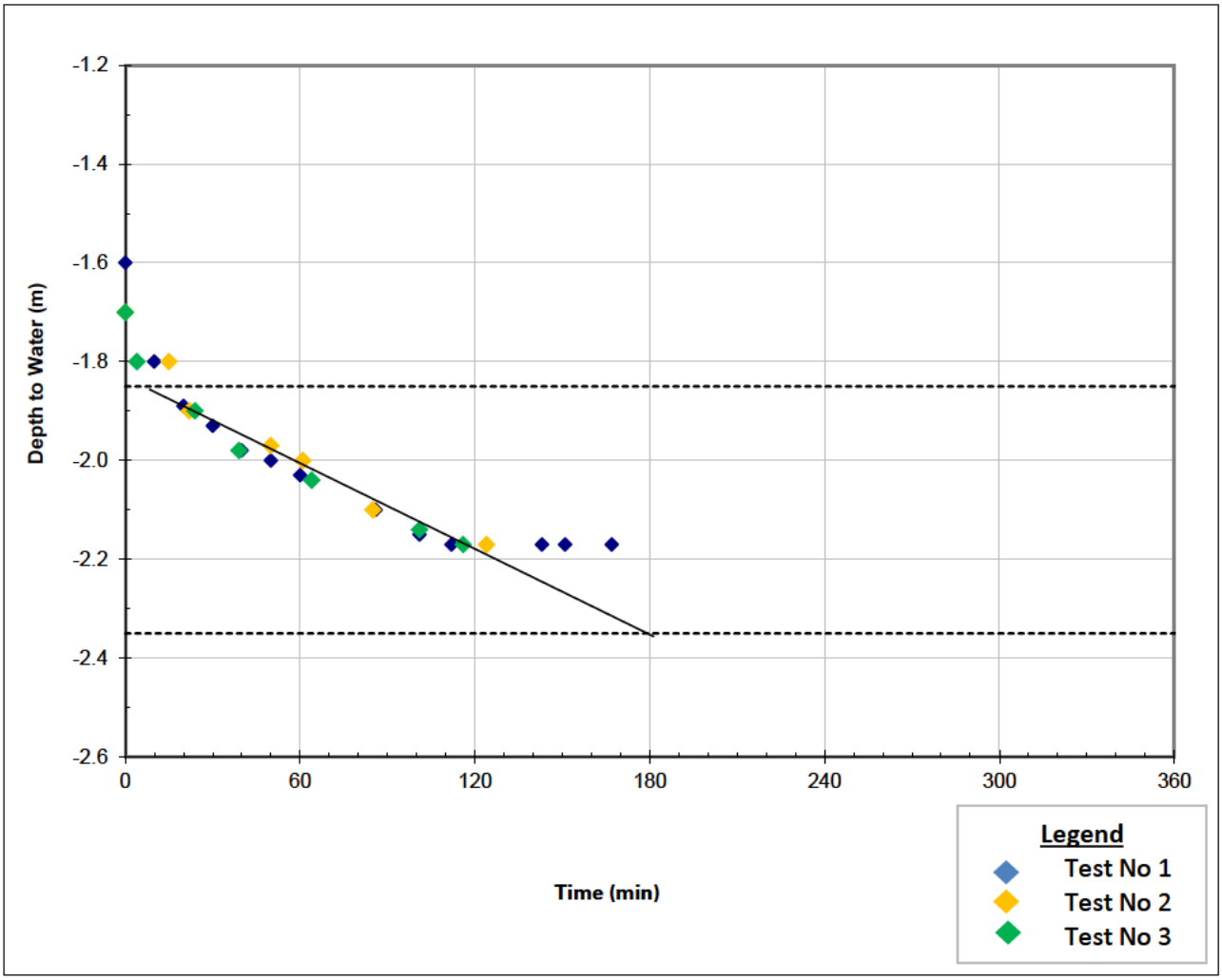
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Soakage Test Results

Site Knowle Hill, Allbrook, Eastleigh

Client Bargate Homes

Trial Pit No.	4	Pit Length (m)	3
Date of test	12/10/2023	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

WILSON BAILEY
GEOTECHNICAL & ENVIRONMENTAL

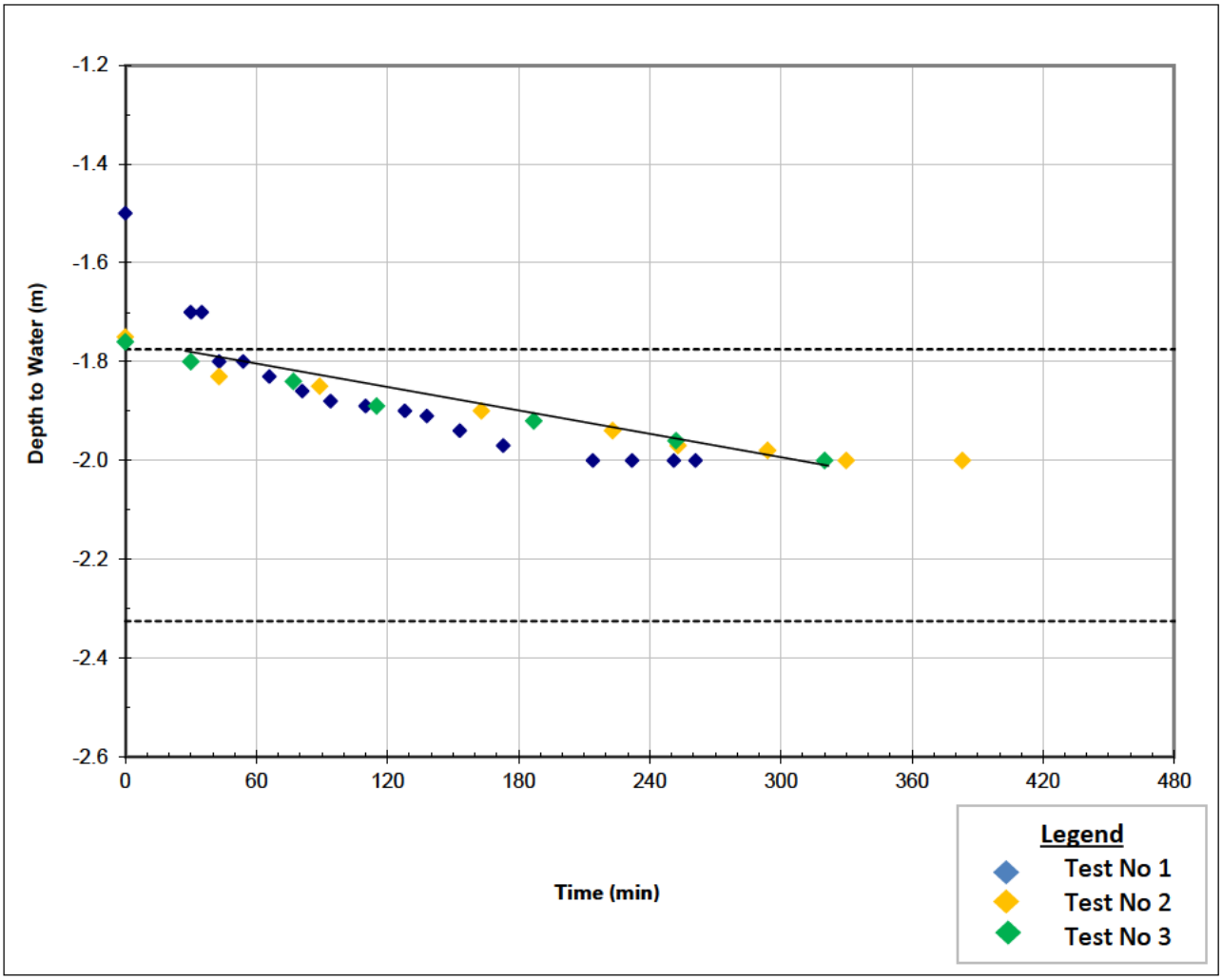
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Soakage Test Results

Site Knowle Hill, Allbrook, Eastleigh

Client Bargate Homes

Trial Pit No.	5	Pit Length (m)	2.5
Date of test	12/10/2023	Pit Width (m)	0.6
	13/10/2023	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)

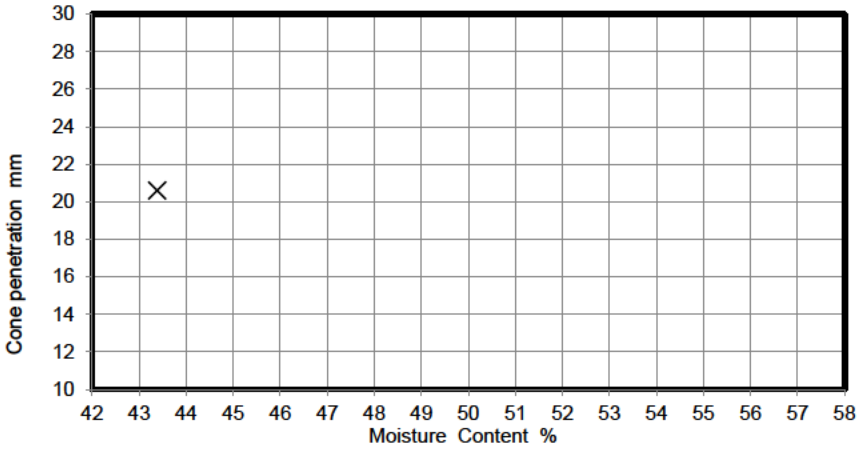
Notes

Testing carried out in a single day with three fills

Base of Clay at 2.00m
Trial pit backfilled to 2.10 in SILT

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

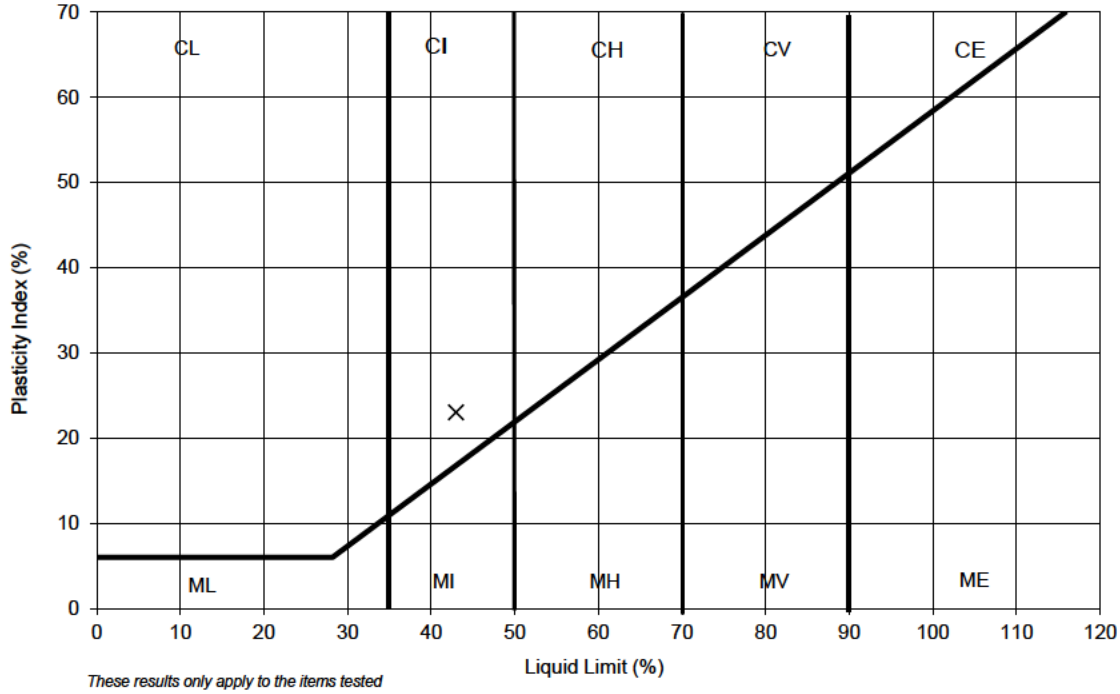


NATURAL MOISTURE CONTENT	21	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	43	%
PLASTIC LIMIT	20	%
PLASTICITY INDEX	23	%

Remarks

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

PLASTICITY INDEX



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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

Checked and Approved

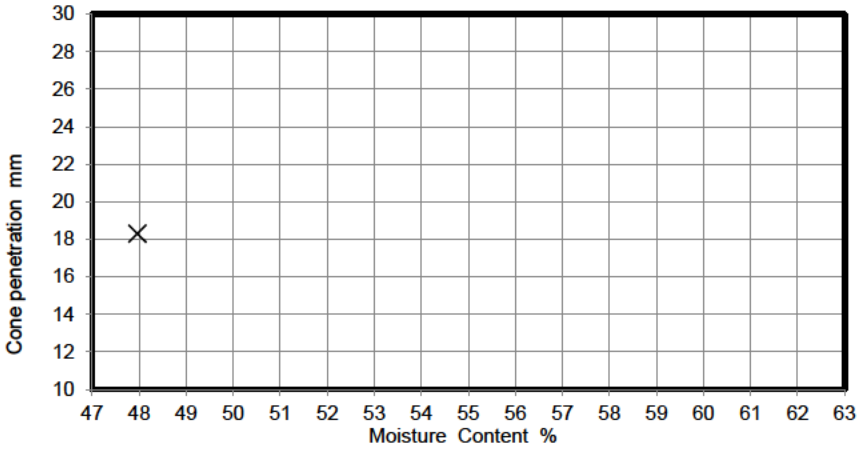
Initials: J.P
Date: 28/11/2023

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Tel: [redacted]

UKAS TESTING 2519

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

	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

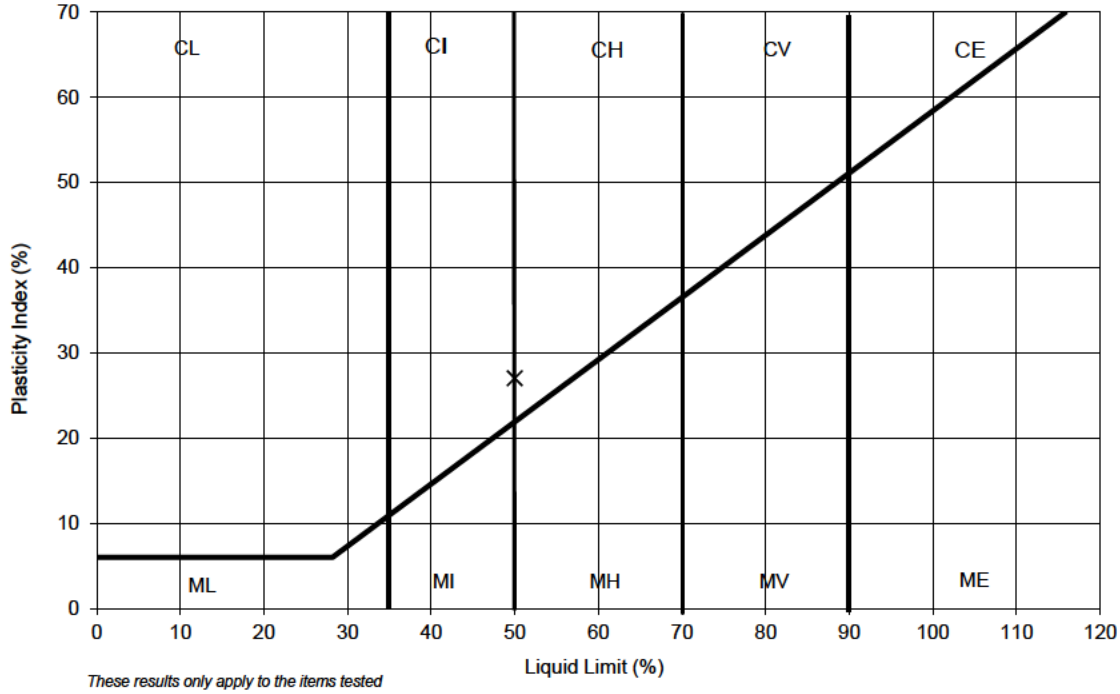


NATURAL MOISTURE CONTENT	**26**	**%**
% PASSING 425µm SIEVE	**100**	**%**
LIQUID LIMIT	**50**	**%**
PLASTIC LIMIT	**23**	**%**
PLASTICITY INDEX	**27**	**%**

Remarks

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

PLASTICITY INDEX



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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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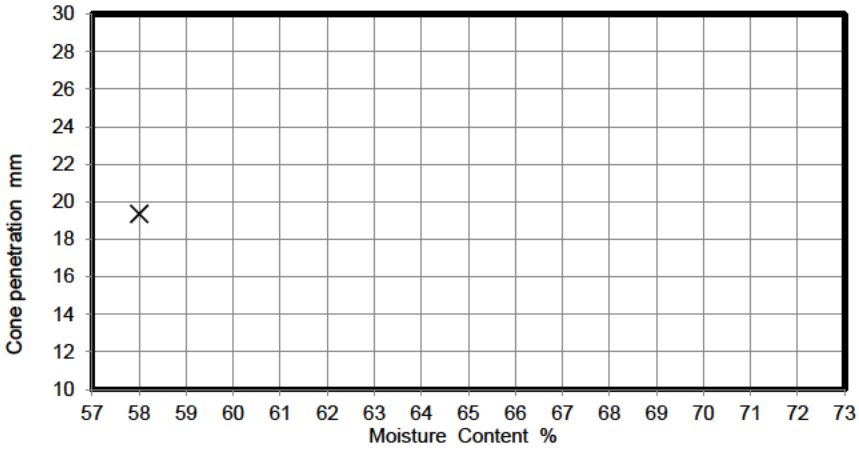
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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	34396
				Borehole/Pit No.	BH9
Site Name	Knowle			Sample No.	-
Project No.	-	Client	Wilson Bailey	Depth Top m	1.00
Soil Description	Yellowish brown, 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

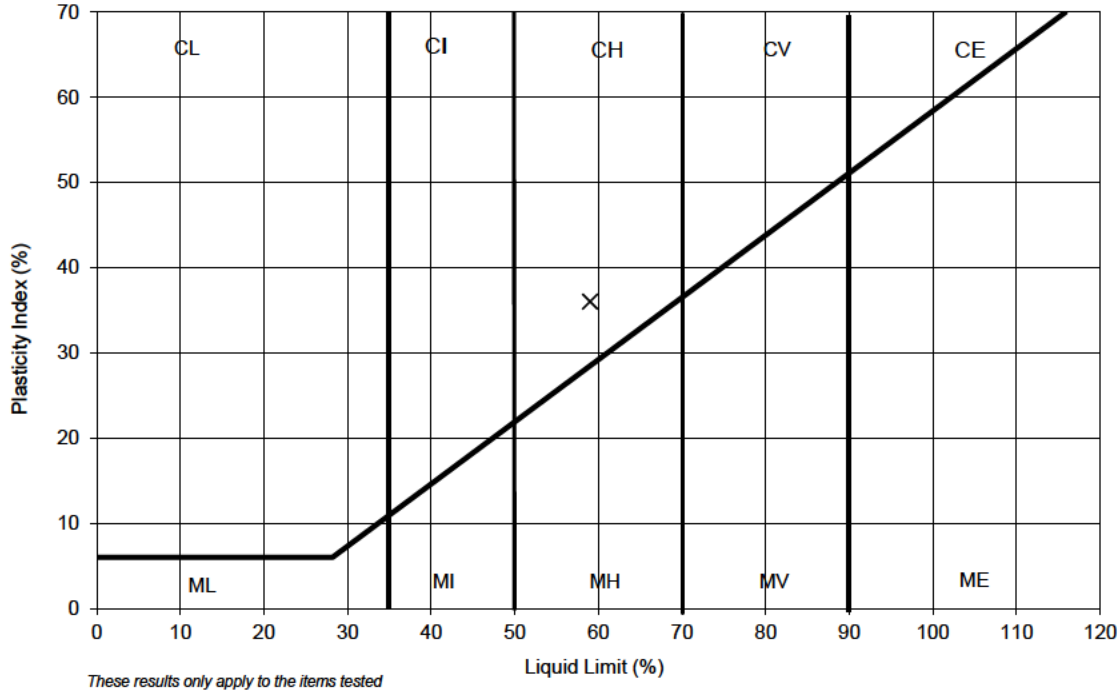


NATURAL MOISTURE CONTENT	26	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	59	%
PLASTIC LIMIT	23	%
PLASTICITY INDEX	36	%

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

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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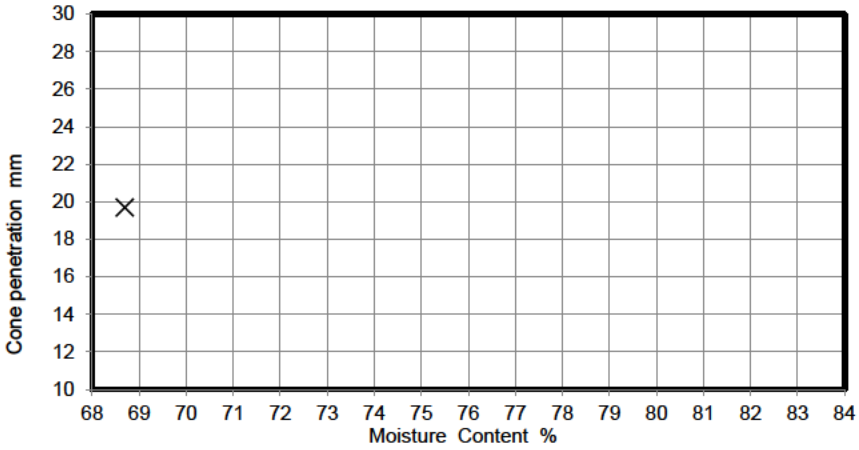
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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				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

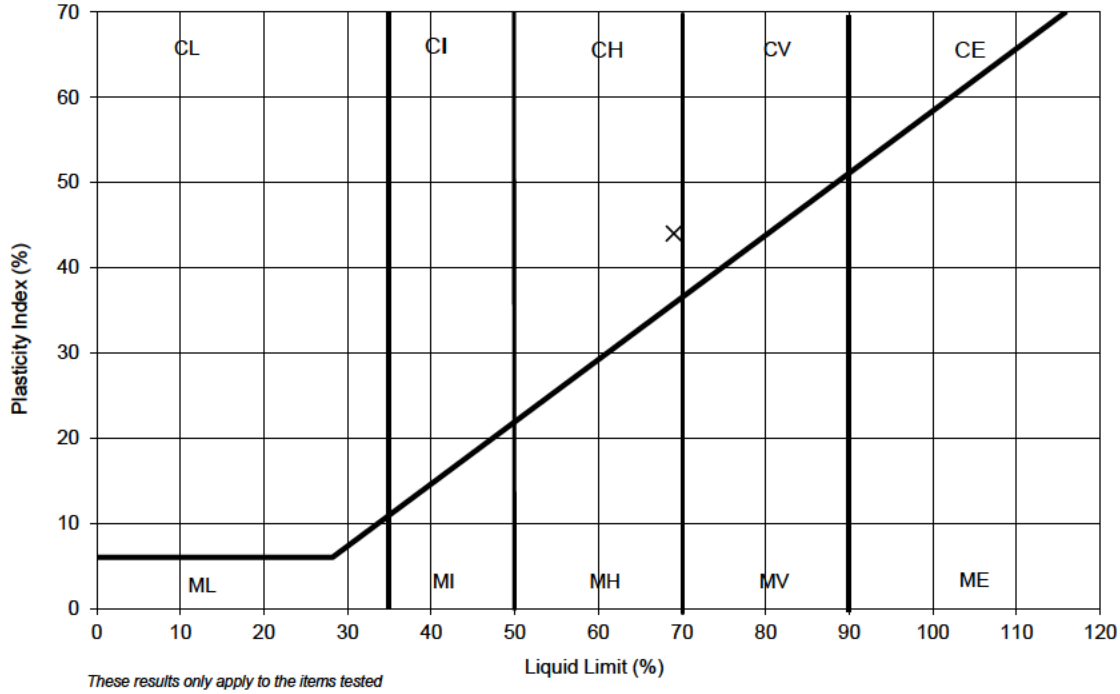


NATURAL MOISTURE CONTENT	27	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	69	%
PLASTIC LIMIT	25	%
PLASTICITY INDEX	44	%

Remarks

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

PLASTICITY INDEX



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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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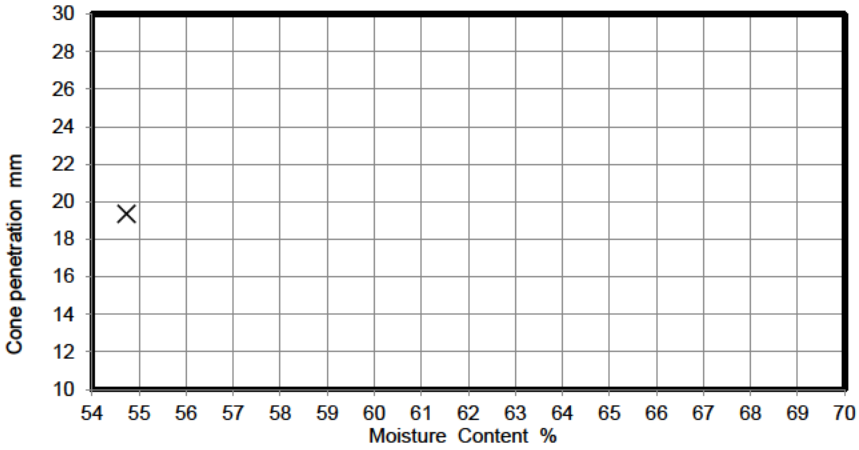
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MSF-5 R2

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	34396
				Borehole/Pit No.	BH10
Site Name	Knowle			Sample No.	-
Project No.	-	Client	Wilson Bailey	Depth Top m	1.00
Soil Description	Orangish brown slightly mottled yellowish 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

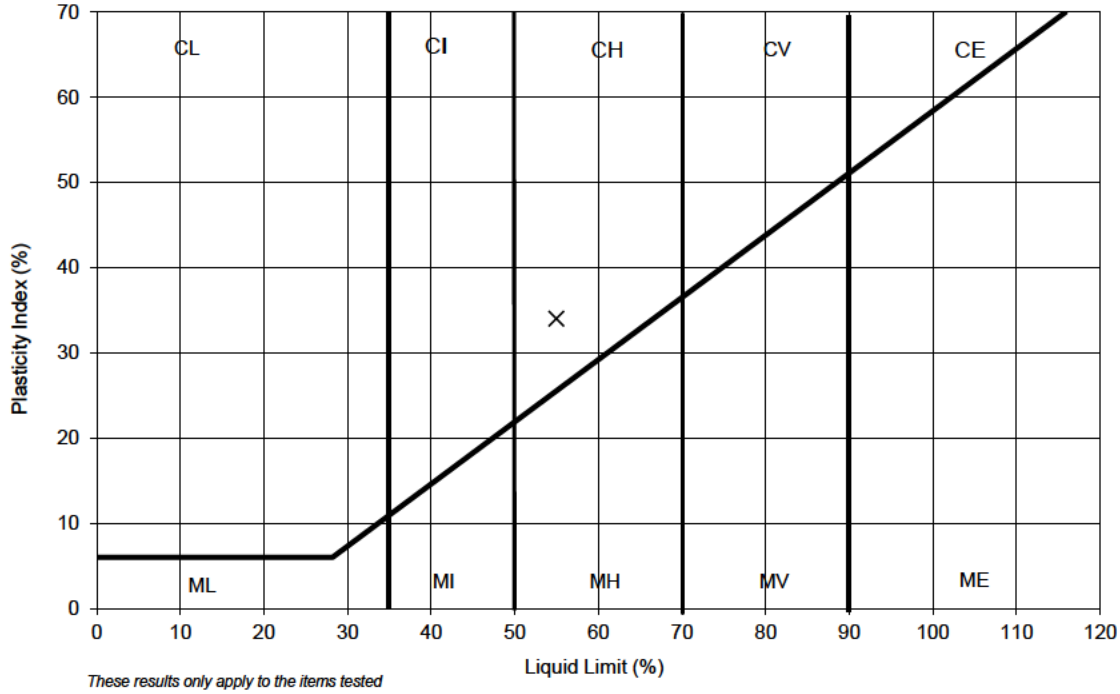


NATURAL MOISTURE CONTENT	26	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	55	%
PLASTIC LIMIT	21	%
PLASTICITY INDEX	34	%

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

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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Date: 28/11/2023

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Tel: [redacted]

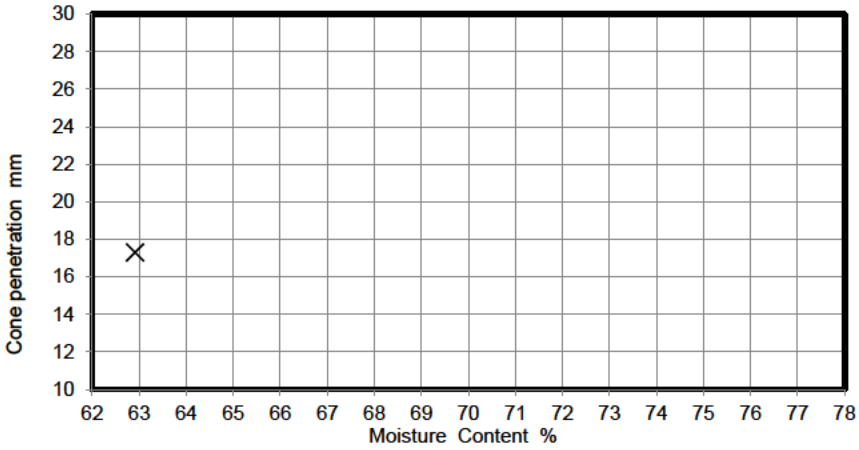
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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				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

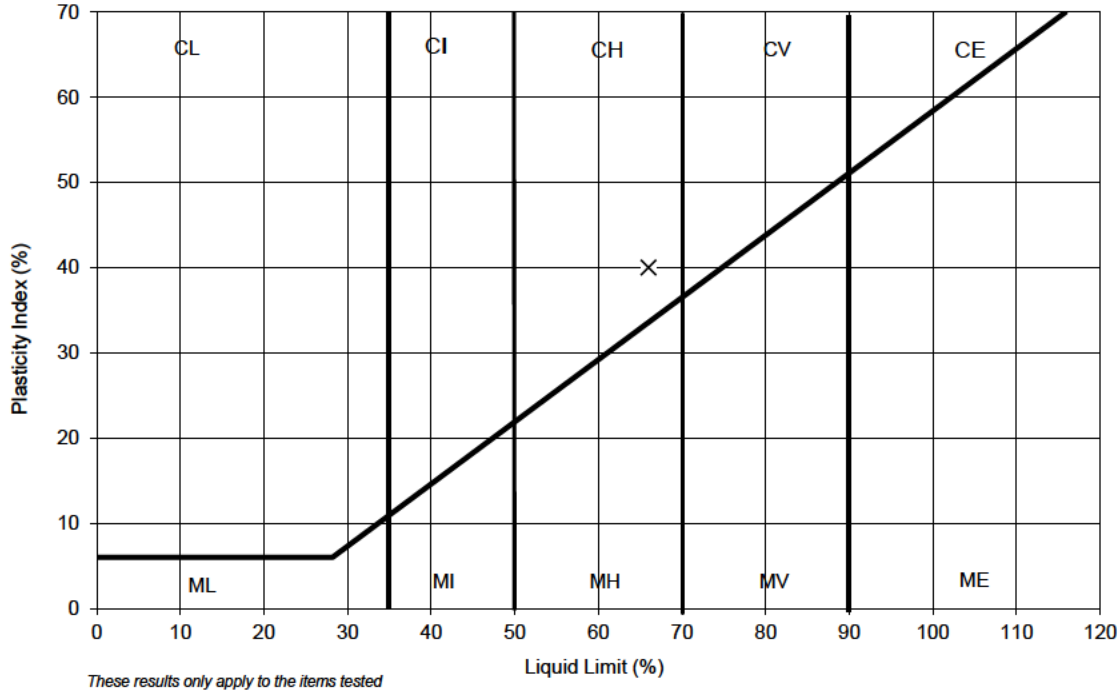


NATURAL MOISTURE CONTENT	30	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	66	%
PLASTIC LIMIT	26	%
PLASTICITY INDEX	40	%

Remarks

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

PLASTICITY INDEX



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

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Tel: [redacted]

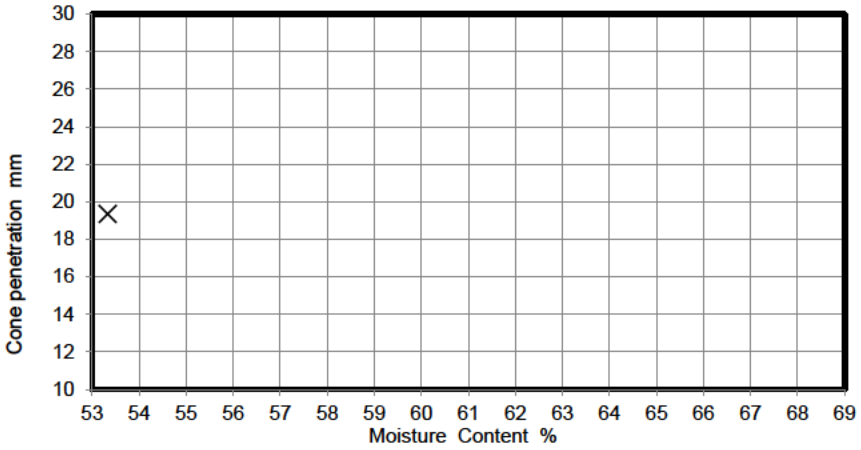
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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				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

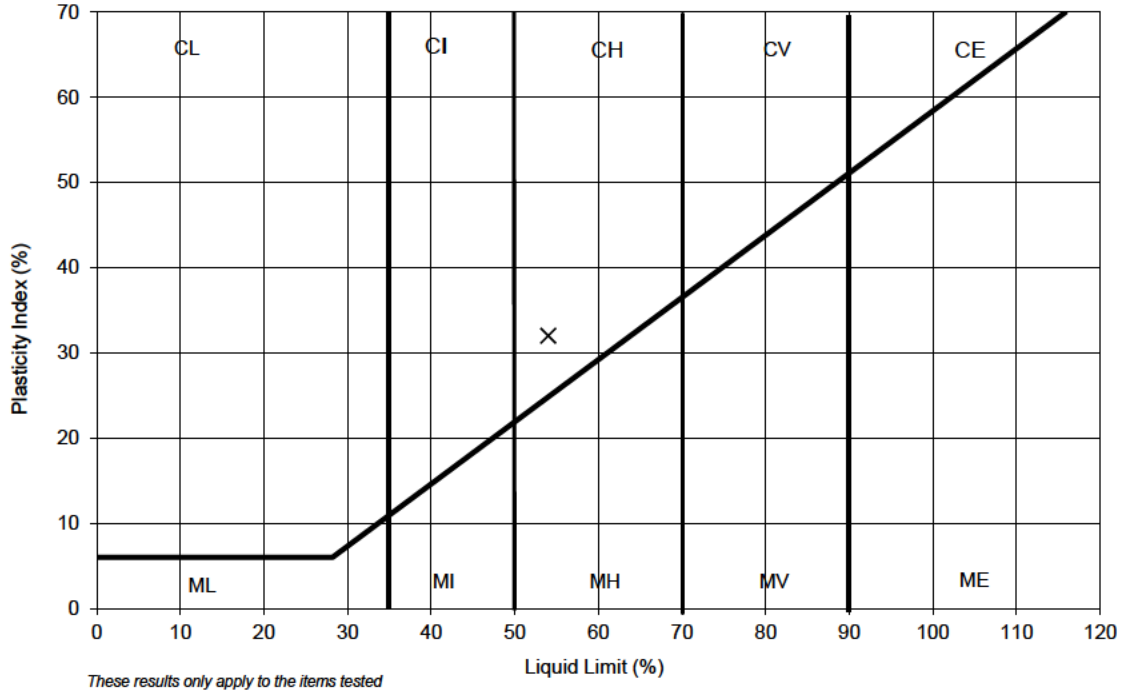


NATURAL MOISTURE CONTENT	33	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	54	%
PLASTIC LIMIT	22	%
PLASTICITY INDEX	32	%

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 3.2 : 1990:Determination of the moisture content by the oven drying

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MSF-5 R2

Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No.	Project Name	Programme	
34396	Knowle	Samples received	06/11/2023
		Schedule received	13/11/2023
Project No.	Client	Project started	14/11/2023
-	Wilson Bailey	Testing Started	27/11/2023

Hole No.	Sample				Soil Description	NMC	Passing 425µm	LL	PL	PI	Remarks
	Ref	Top m	Base 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	

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Test Methods: BS1377: Part 2: 1990:
Natural Moisture Content : clause 3.2
Atterberg Limits: clause 4.3 and 5.0
These results only apply to the items tested

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Watford Herts WD18 9RU

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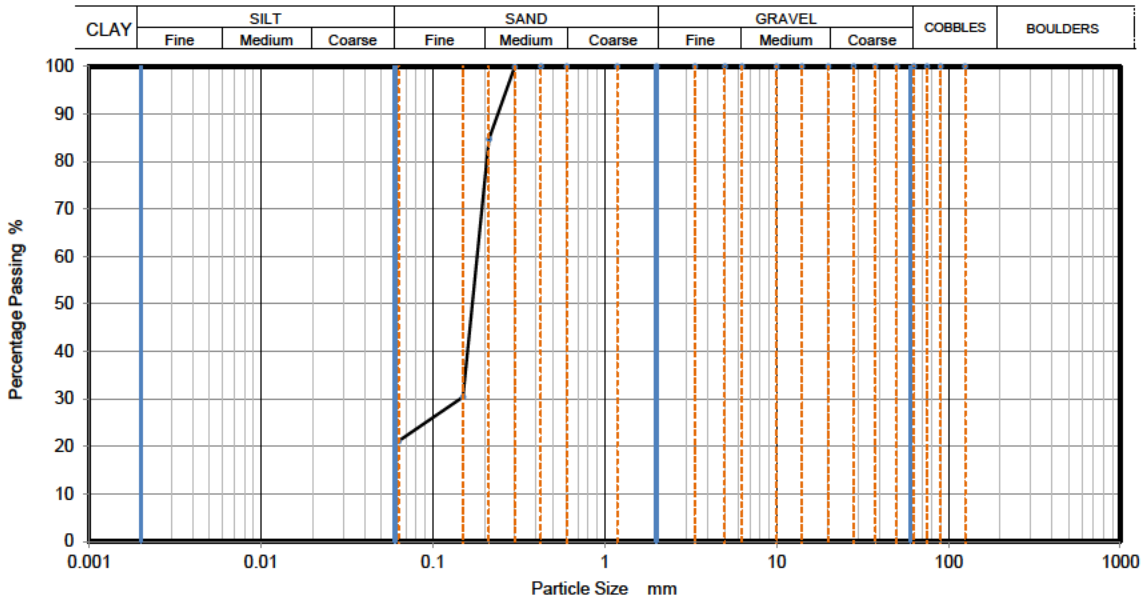
Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R1(b)

PARTICLE SIZE DISTRIBUTION

Site Name	Knowle			Sample No.	-
Project No.	-	Client	Wilson Bailey	Depth Top	5.00 m
Soil Description	Yellowish brown silty clayey SAND			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2023
				Schedules received	13/11/2023
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	14/11/2023
				Date tested	20/11/2023

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	0.181
D30	mm	0.145
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: [redacted]

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

Checked and Approved

Initials: J.P

Date: 28/11/2023

Sulphate Content (Gravimetric Method) for 2:1 Soil: Water Extract and pH Value - Summary of Results

Tested in accordance with BS1377 : Part 3 : 2018, Clause 7.6 & Clause 12

Job No.	Project Name	Programme	
34396	Knowle	Samples received	06/11/2023
		Schedule received	13/11/2023
Project No.	Client	Project started	14/11/2023
-	Wilson Bailey	Testing Started	20/11/2023

Hole No.	Sample Ref	Top m	Base m	Type	Soil description	Dry Mass passing 2mm %	SO4 Content mg/l	pH	Remarks
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	

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Watford Herts WD18 9RU
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Initials J.P

Date: 28/11/2023

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

MSF-5-R29

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

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	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	all ok
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	all ok
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	all ok
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	all ok
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	all ok
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	all ok
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	X	Wet		Snow		Frozen
Wind:		Calm	X	Light		Moderate		Strong		
Cloud cover:		None		Slight	X	Cloudy		Overcast		
Precipitation:		None		Slight	X	Moderate		Heavy		
Time monitoring performed:			10:10	Start			11:06	End		
Barometric pressure (mbar):			1007	Start			1007	End		
Pressure trend (Daily):				Falling	X	Steady		Rising		
Source:	met office									
Air Temperature (Deg. C):			10	Before			10	After		

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: G504657
Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 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_4** 0.0 **CO_2** 0.1 **O_2** 20.9

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

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	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	X	Wet		Snow		Frozen
Wind:		Calm	X	Light		Moderate		Strong		
Cloud cover:		None		Slight		Cloudy	X	Overcast		
Precipitation:	X	None		Slight		Moderate		Heavy		
Time monitoring performed:			10:50	Start			11:50	End		
Barometric pressure (mbar):			1032	Start			1032	End		
Pressure trend (Daily):				Falling	X	Steady		Rising		
Source:	met office									
Air Temperature (Deg. C):			3	Before			3	After		

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: G504657
Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 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_4** 0.0 **CO_2** 0.2 **O_2** 20.9

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

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	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	all ok
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	X	Wet		Snow		Frozen
Wind:		Calm		Light	X	Moderate		Strong		
Cloud cover:		None	X	Slight		Cloudy		Overcast		
Precipitation:	X	None		Slight		Moderate		Heavy		
Time monitoring performed:			12:20	Start			13:40	End		
Barometric pressure (mbar):			1011	Start			1012	End		
Pressure trend (Daily):				Falling		Steady	X	Rising		
Source:	met office									
Air Temperature (Deg. C):			10	Before			10	After		

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: G504657
Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 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_4** 0.0 **CO_2** 0.1 **O_2** 20.8

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

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	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	all ok
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	all ok
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	couldn't remove bung
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	all ok
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	all ok
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	dry
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	x	Wet		Snow		Frozen
Wind:		Calm	x	Light		Moderate		Strong		
Cloud cover:		None		Slight		Cloudy	x	Overcast		
Precipitation:		None		Slight	x	Moderate		Heavy		
Time monitoring performed:			14:00	Start			15:00	End		
Barometric pressure (mbar):			986	Start			986	End		
Pressure trend (Daily):				Falling	x	Steady		Rising		
Source:	met office									
Air Temperature (Deg. C):			12	Before			11	After		

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: G504657
Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 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_4** 0.0 **CO_2** 0.1 **O_2** 20.8

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

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	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	x	Wet		Snow		Frozen
Wind:		Calm	x	Light		Moderate		Strong		
Cloud cover:		None		Slight	x	Cloudy		Overcast		
Precipitation:	x	None		Slight		Moderate		Heavy		
Time monitoring performed:			11:17	Start			12:10	End		
Barometric pressure (mbar):			987	Start			987	End		
Pressure trend (Daily):				Falling	x	Steady		Rising		
Source:	met office									
Air Temperature (Deg. C):			7	Before			8	After		

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: G504657
Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 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_4** 0.0 **CO_2** 0.1 **O_2** 20.7

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

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	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	all ok
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	x	Moist		Wet		Snow		Frozen
Wind:		Calm	x	Light		Moderate		Strong		
Cloud cover:		None	x	Slight		Cloudy		Overcast		
Precipitation:	x	None		Slight		Moderate		Heavy		
Time monitoring performed:			11:55	Start			12:50	End		
Barometric pressure (mbar):			1005	Start			1004	End		
Pressure trend (Daily):			x	Falling		Steady		Rising		
Source:	met office									
Air Temperature (Deg. C):			10	Before			11	After		

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: G504657
Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 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_4** 0.0 **CO_2** 0.1 **O_2** 20.6

Dominic Brightman
Wilson Bailey Geotechnical & Environmental Ltd
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Derwentside Environmental Testing Services Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

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
.ane Industrial Estate
Rose Lane
enham Heath
Maidstone
ent ME17 2JN

[redacted]

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

UKAS TESTING 4480

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 (S)	%	N/a	25.6	5 - 35			
Silt Content (S)	%	N/a	40.7	0 - 65			
Sand Content (S)	%	N/a	33.7	30 - 85			
Textural Class (S)	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 (S)	%	N/a	14.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm (S)	%	N/a	2.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm (S)	%	N/a	0.0	0	0	0	0
pH MU	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 (S)	%	< 0.01	0.55	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) (S)	mg/l	< 3	< 3	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) (S)	mg/l	< 20	51	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) (S)	mg/l	< 1	170	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio (S)	:1	< 0.1	5.3	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium (S)	%	< 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 MU	mg/kg	< 3	47	< 200	< 200		< 300
Copper MU	mg/kg	< 4	12	< 100	< 135		< 200
Nickel MU	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 (S)	mg/l	< 1	110				
Available Calcium (S)	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 discrepencies with current legislation

M Denotes MCERTS accredited test

U Denotes ISO17025 accredited test

Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
[redacted]

4480

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 I/S
Unsuitable Sample U/S
^ no sampling date provided; unable to confirm if samples are within acceptable holding times

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
[redacted]

mCERTS 4480

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 diphenylcarbazide 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 @ 450oC	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 (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 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 (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 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 Uncertainity 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	%

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

Land at Knowle Hill, Allbrook, Eastleigh

Order Details

Date: 26/04/2025

Your ref: Bargate

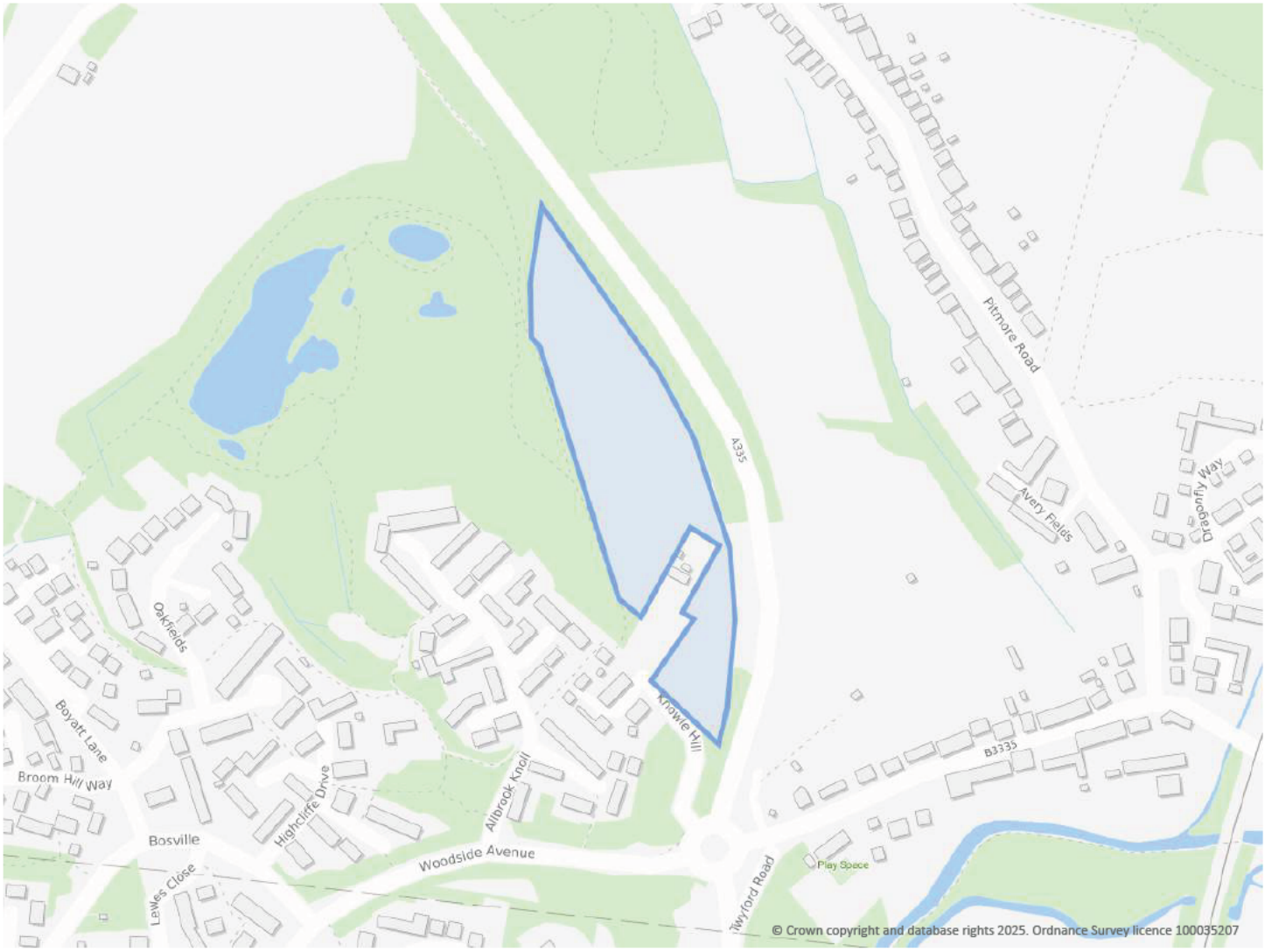
Our Ref: GS-5RW-IK9-51P-81A

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:
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Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	8	33	32	-
18 >	1.2 >	Historical tanks >	0	1	2	0	-
19 >	1.3 >	Historical energy features >	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	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
21 >	2.1 >	Historical industrial land uses >	0	9	38	35	-
25 >	2.2 >	Historical tanks >	0	1	4	0	-
25 >	2.3 >	Historical energy features >	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	Waste and landfill >	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	-
28 >	3.3 >	Historical landfill (LA/mapping records) >	0	1	0	0	-
28 >	3.4 >	Historical landfill (EA/NRW records) >	0	1	0	0	-
28	3.5	Historical waste sites	0	0	0	0	-
29	3.6	Licensed waste sites	0	0	0	0	-
29 >	3.7 >	Waste exemptions >	0	2	0	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
30 >	4.1 >	Recent industrial land uses >	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	-
33 >	4.13 >	Licensed Discharges to controlled waters >	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	-
36 >	4.18 >	Pollution Incidents (EA/NRW) >	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	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
38 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
40 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
42 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
43	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
43	5.5	Groundwater vulnerability- local information	None (within 0m)				
44 >	5.6 >	Groundwater abstractions >	0	0	0	0	6
46 >	5.7 >	Surface water abstractions >	0	0	0	1	1
47 >	5.8 >	Potable abstractions >	0	0	0	0	3
47	5.9	Source Protection Zones	0	0	0	0	-
48 >	5.10 >	Source Protection Zones (confined aquifer) >	0	0	0	2	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
49 >	6.1 >	Water Network (OS MasterMap) >	0	0	10	-	-

50 >	6.2 >	Surface water features >	0	0	13	-	-
51 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
51 >	6.4 >	WFD Surface water bodies >	0	0	1	-	-
51	6.5	WFD Groundwater bodies	0	-	-	-	-
Page	Section	River and coastal flooding >	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 >	Historical Flood Events >	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	Surface water flooding >					
57 >	8.1 >	Surface water flooding >	1 in 100 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
59 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
60 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	1	0	1
61	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
61 >	10.3 >	Special Areas of Conservation (SAC) >	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 >	Designated Ancient Woodland >	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

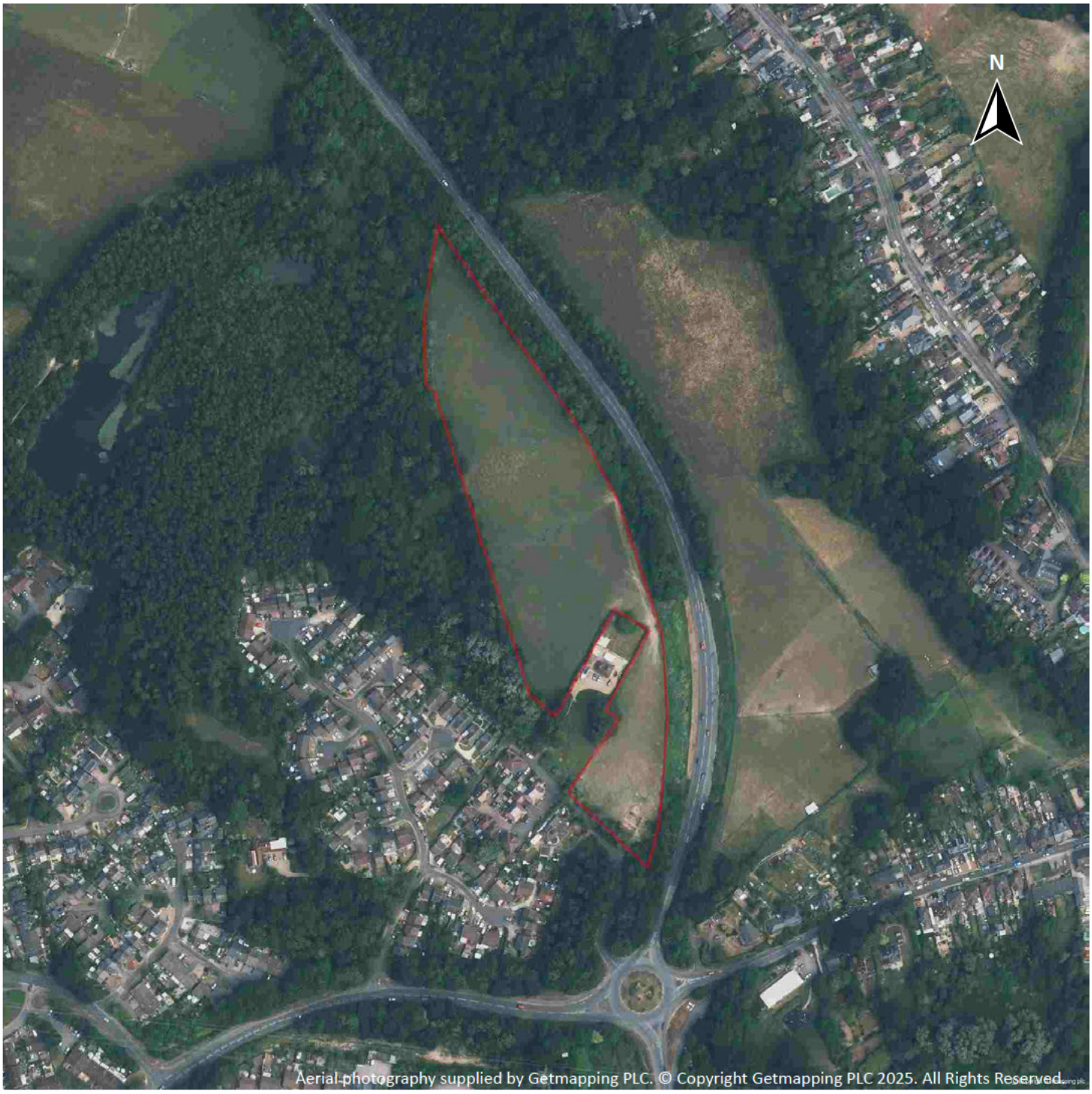
65	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
65	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
65	10.15	Nitrate Sensitive Areas	0	0	0	0	0
65 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	3
67 >	10.17 >	SSSI Impact Risk Zones >	3	-	-	-	-
70 >	10.18 >	SSSI Units >	0	0	2	2	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	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
82 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
83	12.2	Open Access Land	0	0	0	-	-
83 >	12.3 >	Tree Felling Licences >	0	0	1	-	-
83	12.4	Environmental Stewardship Schemes	0	0	0	-	-
84	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
85 >	13.1 >	Priority Habitat Inventory >	0	8	17	-	-
87 >	13.2 >	Habitat Networks >	1	0	4	-	-
87	13.3	Open Mosaic Habitat	0	0	0	-	-
87	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
88 >	14.1 >	10k Availability >	Identified (within 500m)				
89 >	14.2 >	Artificial and made ground (10k) >	0	2	1	6	-
91 >	14.3 >	Superficial geology (10k) >	1	0	2	2	-

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

117 >	18.6 >	Non-coal mining >	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	Radon >					
123 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
125 >	21.1 >	BGS Estimated Background Soil Chemistry >	3	2	-	-	-
125	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
125	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	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	-	-
127 >	22.4 >	Historical railway and tunnel features >	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

Recent site history - 2020 aerial photograph



Capture Date: 05/04/2020

Site Area: 2.83ha

Recent site history - 2013 aerial photograph



Capture Date: 03/06/2013

Site Area: 2.83ha

Recent site history - 2005 aerial photograph



Capture Date: 27/05/2005

Site Area: 2.83ha

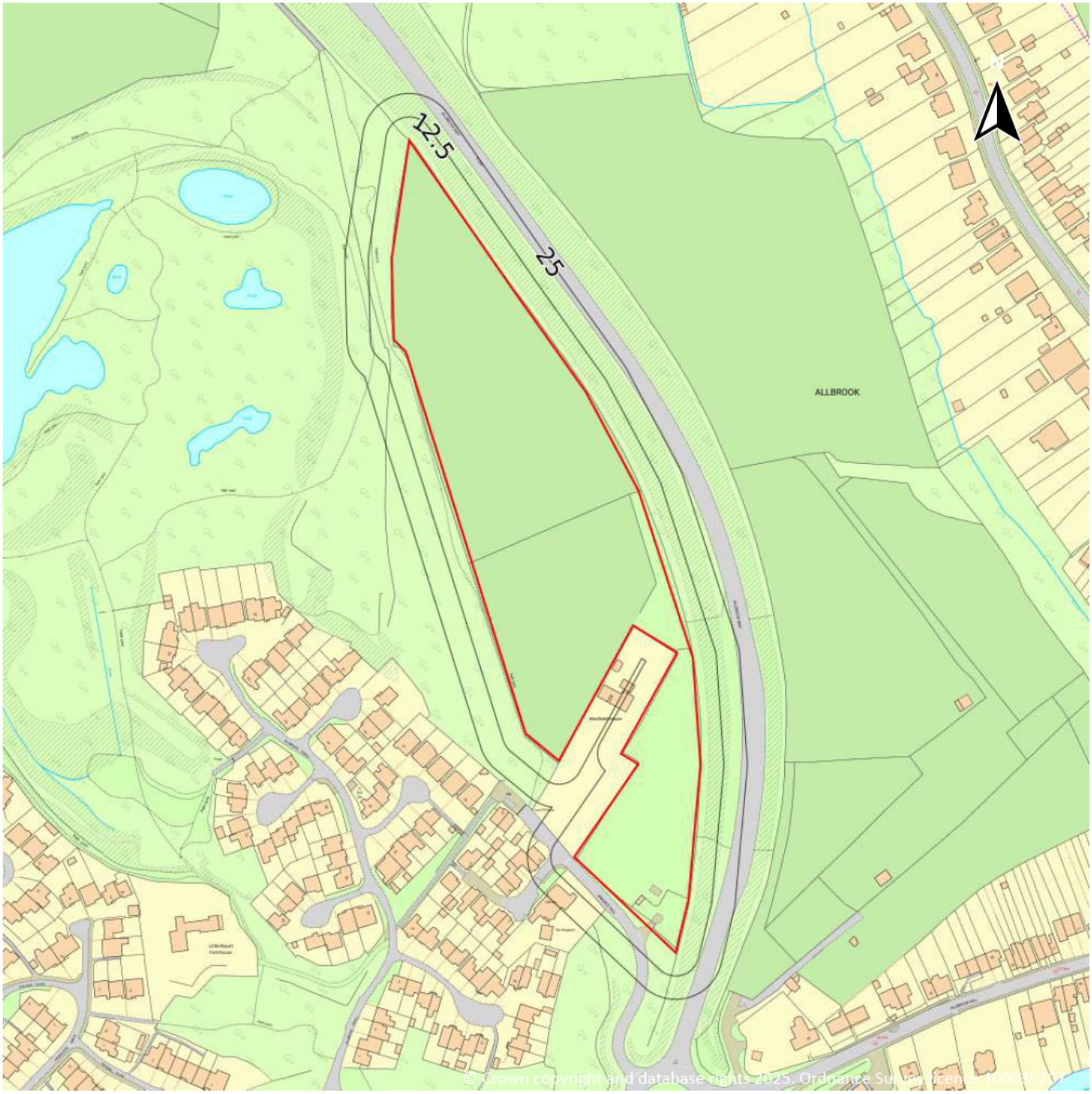
Recent site history - 1999 aerial photograph



Capture Date: 30/04/1999

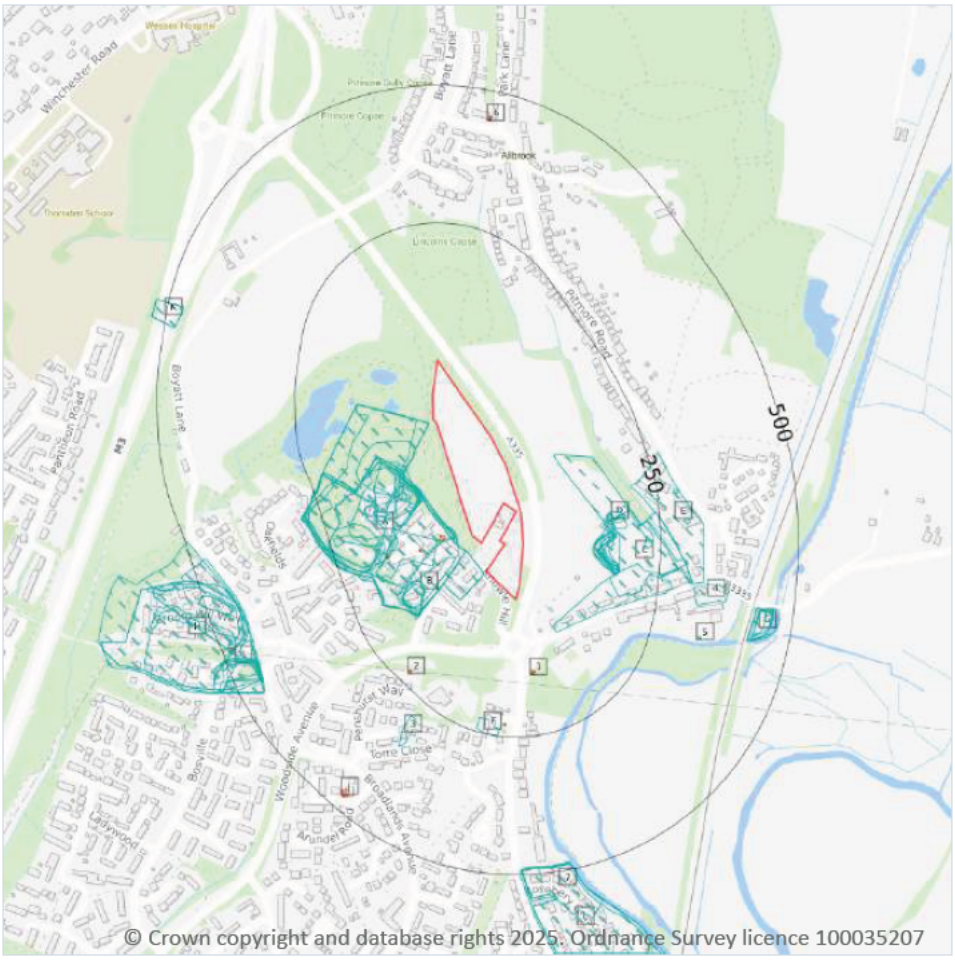
Site Area: 2.83ha

OS MasterMap site plan



Site Area: 2.83ha

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 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	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

Records within 500m	7

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 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	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

Records within 500m	0

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 un-grouped 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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

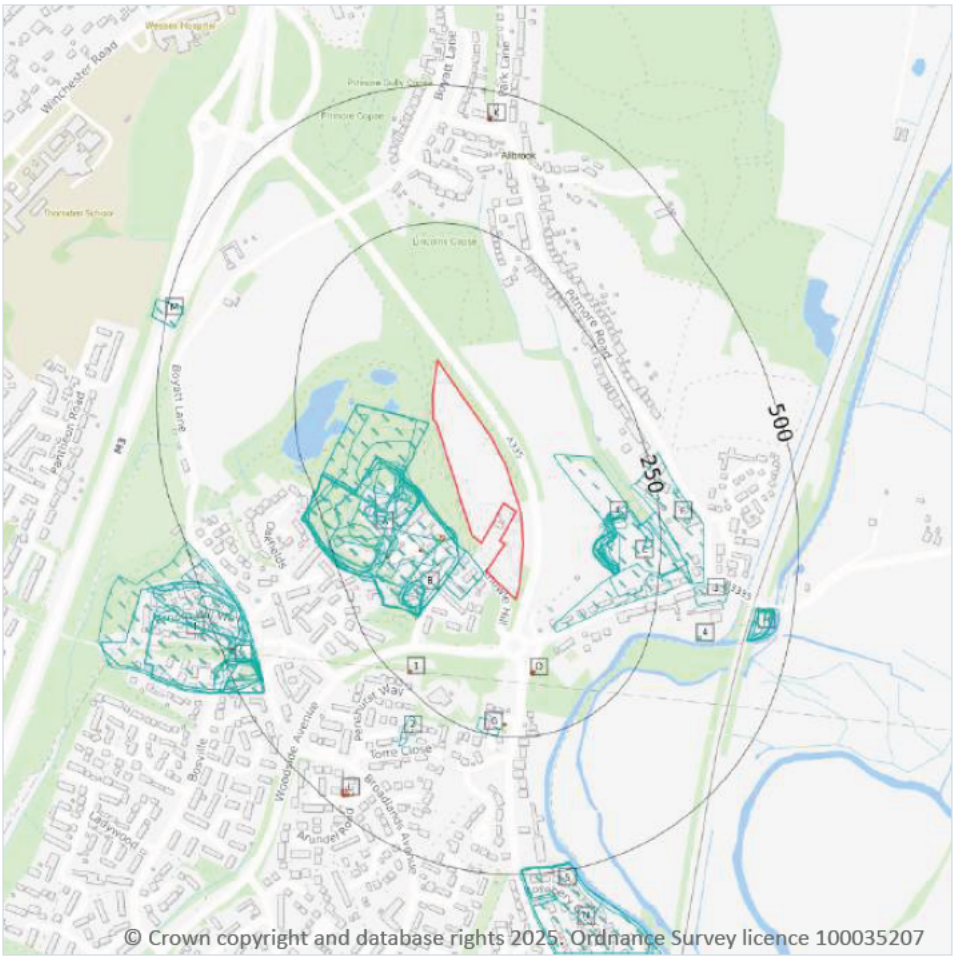
1.6 Historical military land

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.

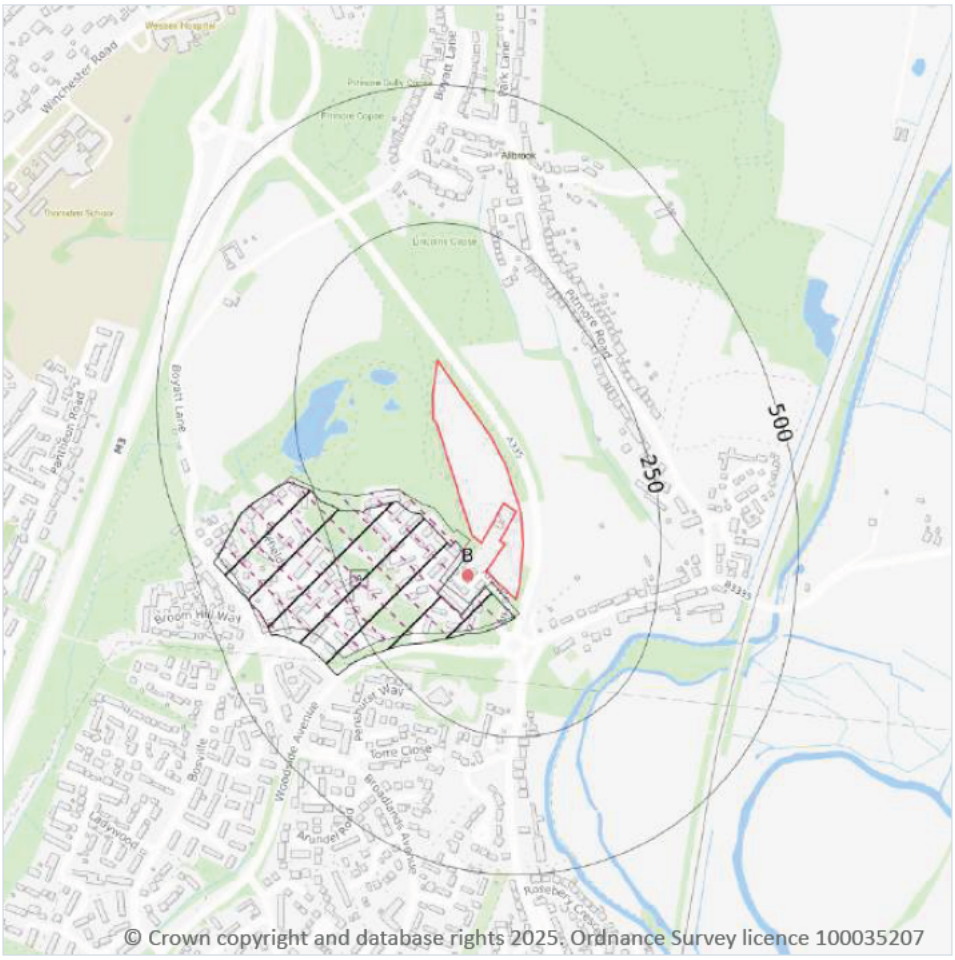
2.5 Historical garages

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



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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 Licence Holder Address: Rivermead House, Abbey Meads, Romsey, Hampshire	Waste Licence: Yes Site Reference: 9/4, FEA2 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 07/11/1977 Licence Surrender: 30/11/1981	Operator: - Licence Holder: Chamberlayne McLean Limited First Recorded 01/09/1977 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

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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&NORTHERNRDJCT,ROMSEY,HAMPSHIRE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N01290 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 29/07/1977 Effective Date: 29/07/1977 Revocation Date: 01/07/1991
A	205m SE	OUTFALLPOFTHEM3MOTORWAY,OUTFALLPOFTHEM3MOTORWAY,ALLBROOKHILL,ALLBROOK,EASTLEIGH,HAMPSHIRE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: P01725 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 05/07/1988 Effective Date: 05/07/1988 Revocation Date: 31/03/1997
7	323m SE	EDMUNDNUTTALLLTD,EDMUNDNUTTALLLTD,ALLBROOKPLANTDEPOT,ALLBROOKHILL,ALLBROOK,SO504LY	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: P07187 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 08/09/1998 Effective Date: 08/09/1998 Revocation Date: -

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

ID	Location	Address	Details	
14	487m NW	LINCOLNSFARM,LINCOLNSFARM,BOYATTLANE,OTTERBOURNEHAMPSHIRE	Effluent Type: UNSPECIFIED Permit Number: H01876 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 17/04/1964 Effective Date: 17/04/1964 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 Incident Identification: 209792 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	419m S	Incident Date: 17/10/2002 Incident Identification: 115225 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
12	463m E	Incident Date: 08/09/2003 Incident Identification: 188318 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) 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.

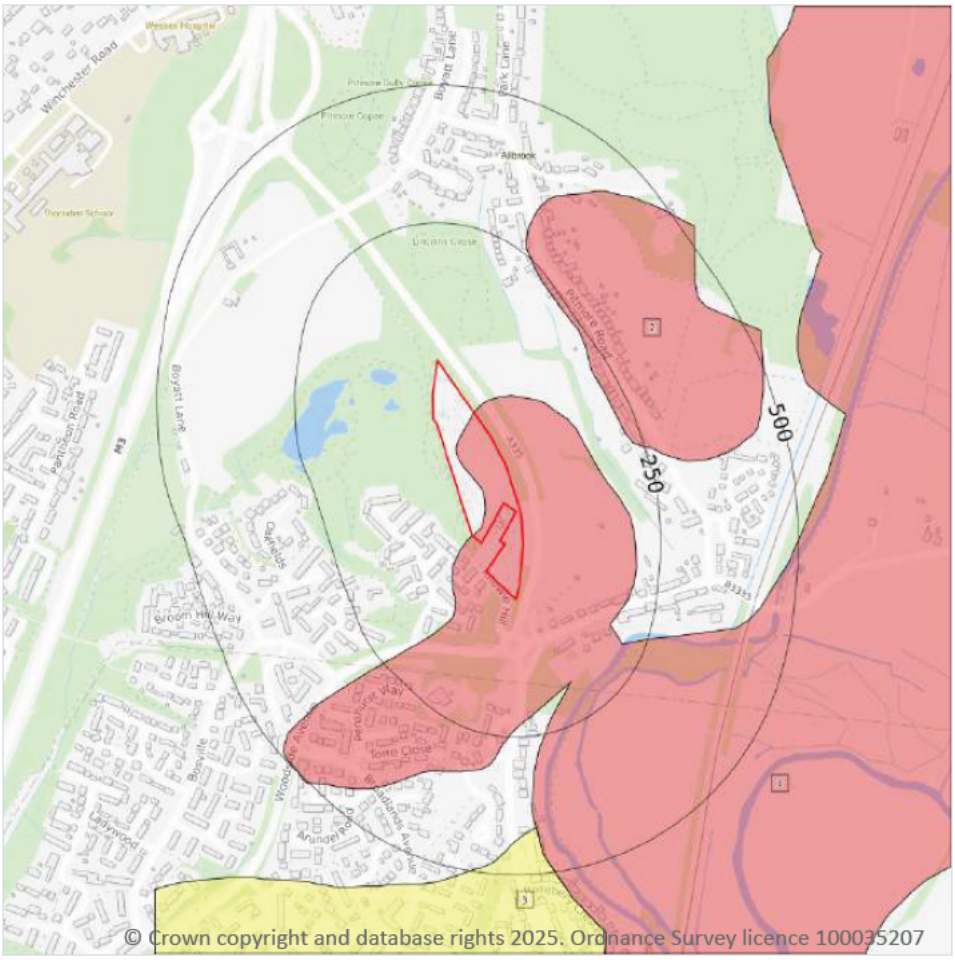
4.21 Pollution inventory radioactive waste

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.

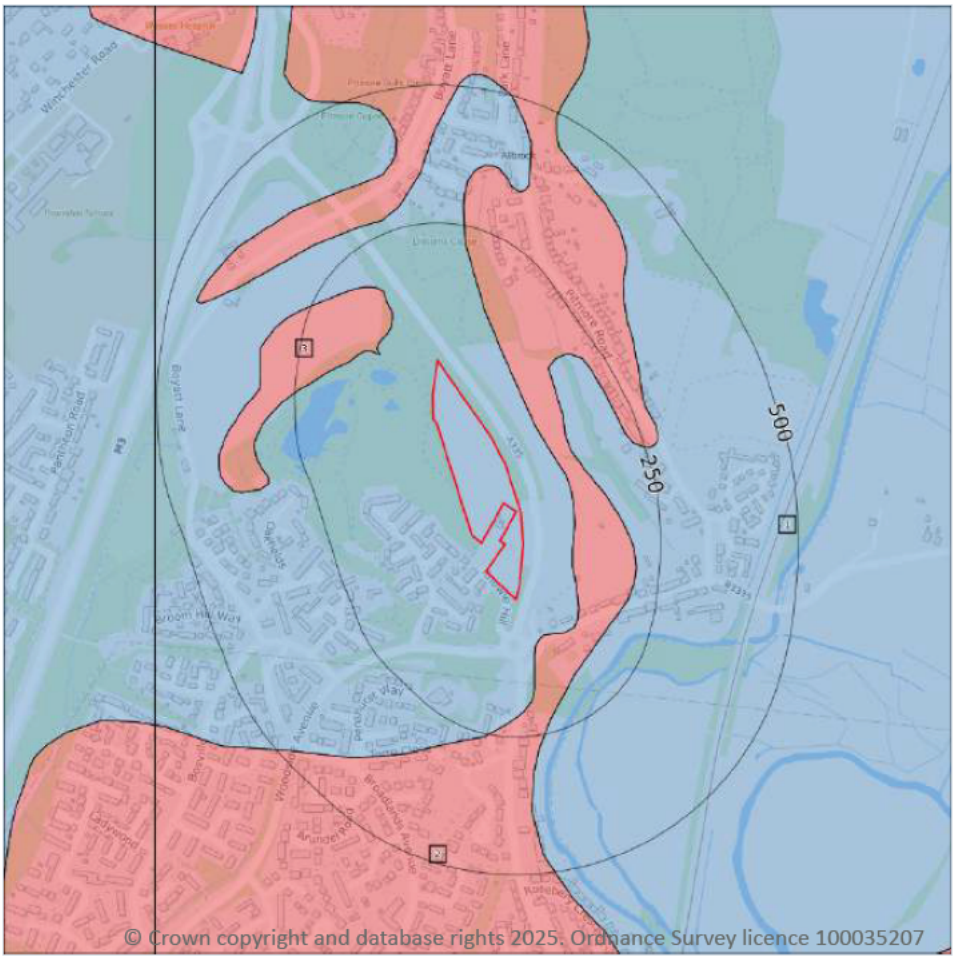
Features are displayed on the Hydrogeology map on page 38 >

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 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.

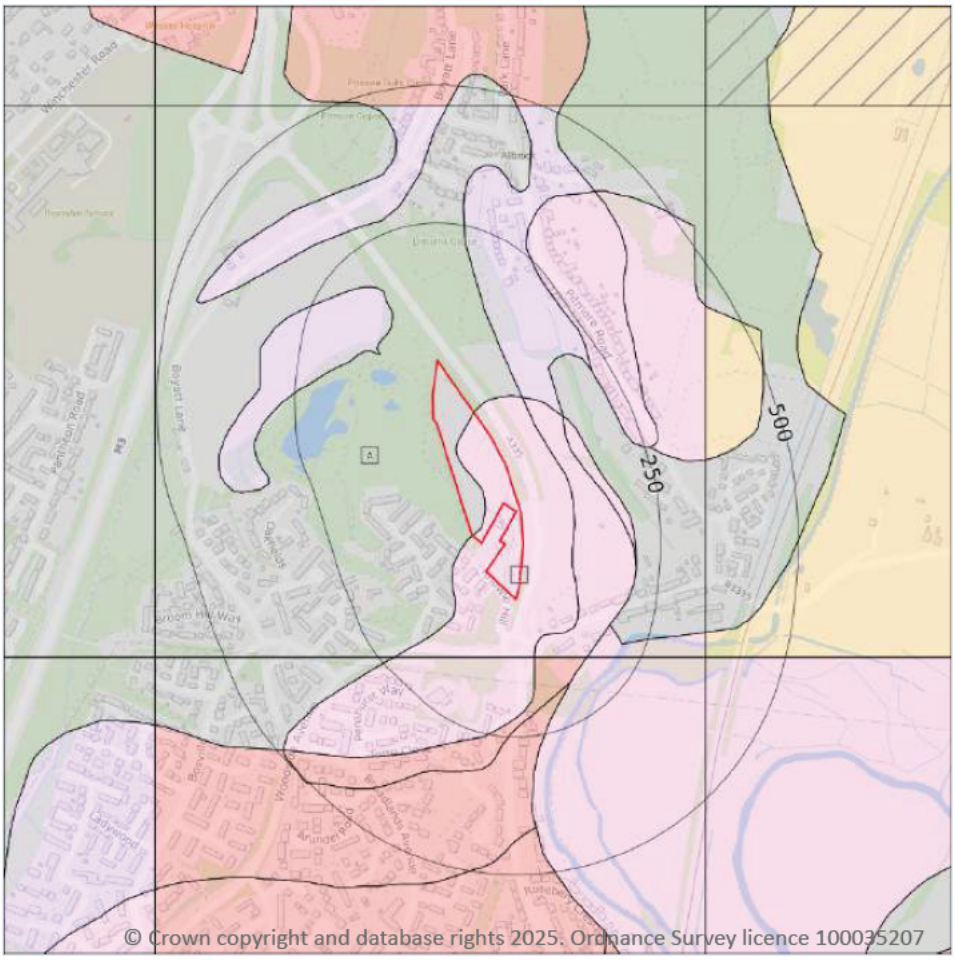
Features are displayed on the Bedrock aquifer map on page 40 >

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

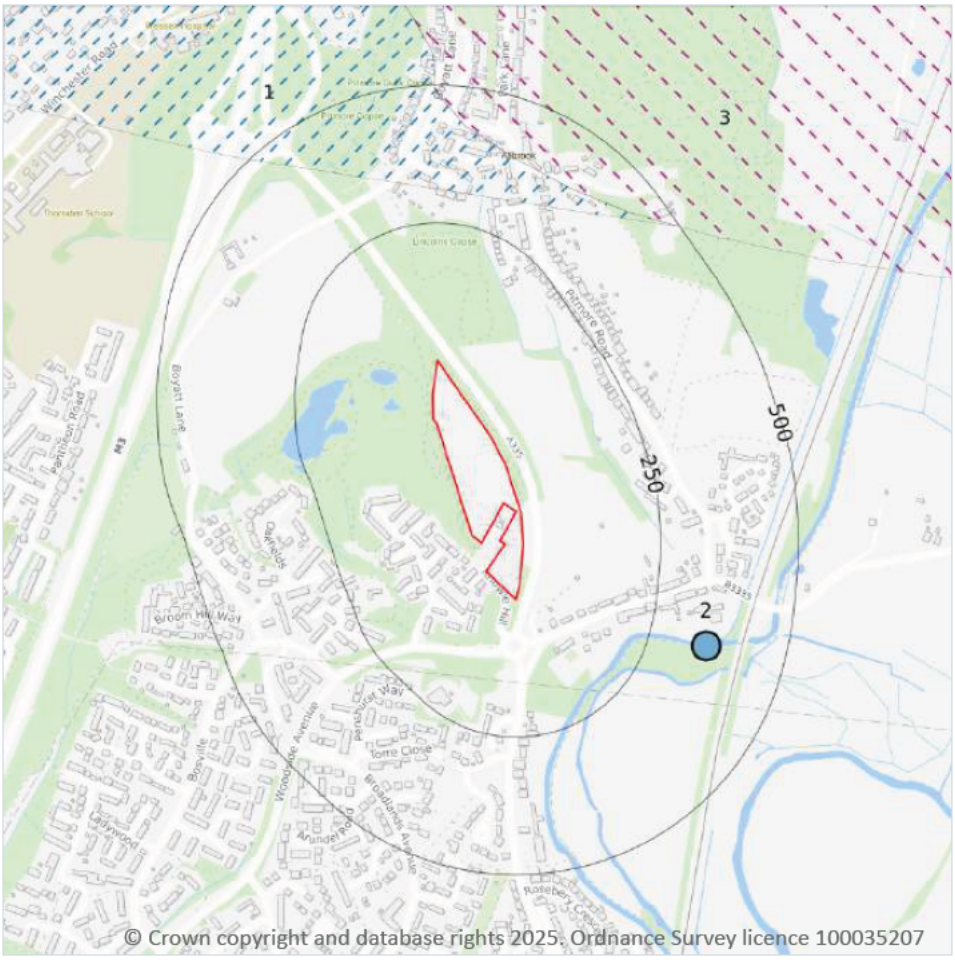
5.5 Groundwater vulnerability- local information

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 [redacted]

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

ID	Location	Details	
-	1813m NE	Status: Historical Licence No: 11/42/22.7/94 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: OTTERBOURNE PS POINT J Data Type: Point Name: Southern Water Services Ltd Easting: 446650 Northing: 122950	Annual Volume (m^3): 21229820 Max Daily Volume (m^3): 71600 Original Application No: - Original Start Date: 23/04/1971 Expiry Date: - Issue No: 100 Version Start Date: 11/06/2009 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 Licence No: 31/110 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Southern Region Surface Waters Point: BLACK DYKE, POINT A ON LICENCE MAP Data Type: Point Name: Russell Easting: 446000 Northing: 121020	Annual Volume (m^3): 365000 Max Daily Volume (m^3): 1000 Original Application No: 169/0038H Original Start Date: 20/02/2009 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 16/04/2019 Version End Date: -
-	1909m NE	Status: Active Licence No: SO/042/0031/023 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Southern Region Surface Waters Point: ITCHEN NAVIGATION AT BRAMBRIDGE Data Type: Point Name: Bronks Easting: 446969 Northing: 122772	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/010253 Original Start Date: 24/07/2012 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 01/04/2021 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 Licence No: 11/42/22.7/94 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: OTTERBOURNE PS POINT F Data Type: Point Name: Southern Water Services Ltd Easting: 446090 Northing: 122690	Annual Volume (m^3): 21230240 Max Daily Volume (m^3): 71601 Original Application No: NPS/WR/020890 Original Start Date: 23/04/1971 Expiry Date: 31/03/2025 Issue No: 101 Version Start Date: 15/03/2019 Version End Date: -
-	1451m NE	Status: Active Licence No: 11/42/22.7/94 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: OTTERBOURNE PS POINT E Data Type: Point Name: Southern Water Services Ltd Easting: 446680 Northing: 122400	Annual Volume (m^3): 21230240 Max Daily Volume (m^3): 71601 Original Application No: NPS/WR/020890 Original Start Date: 23/04/1971 Expiry Date: 31/03/2025 Issue No: 101 Version Start Date: 15/03/2019 Version End Date: -
-	1813m NE	Status: Historical Licence No: 11/42/22.7/94 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: OTTERBOURNE PS POINT J Data Type: Point Name: Southern Water Services Ltd Easting: 446650 Northing: 122950	Annual Volume (m^3): 21229820 Max Daily Volume (m^3): 71600 Original Application No: - Original Start Date: 23/04/1971 Expiry Date: - Issue No: 100 Version Start Date: 11/06/2009 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

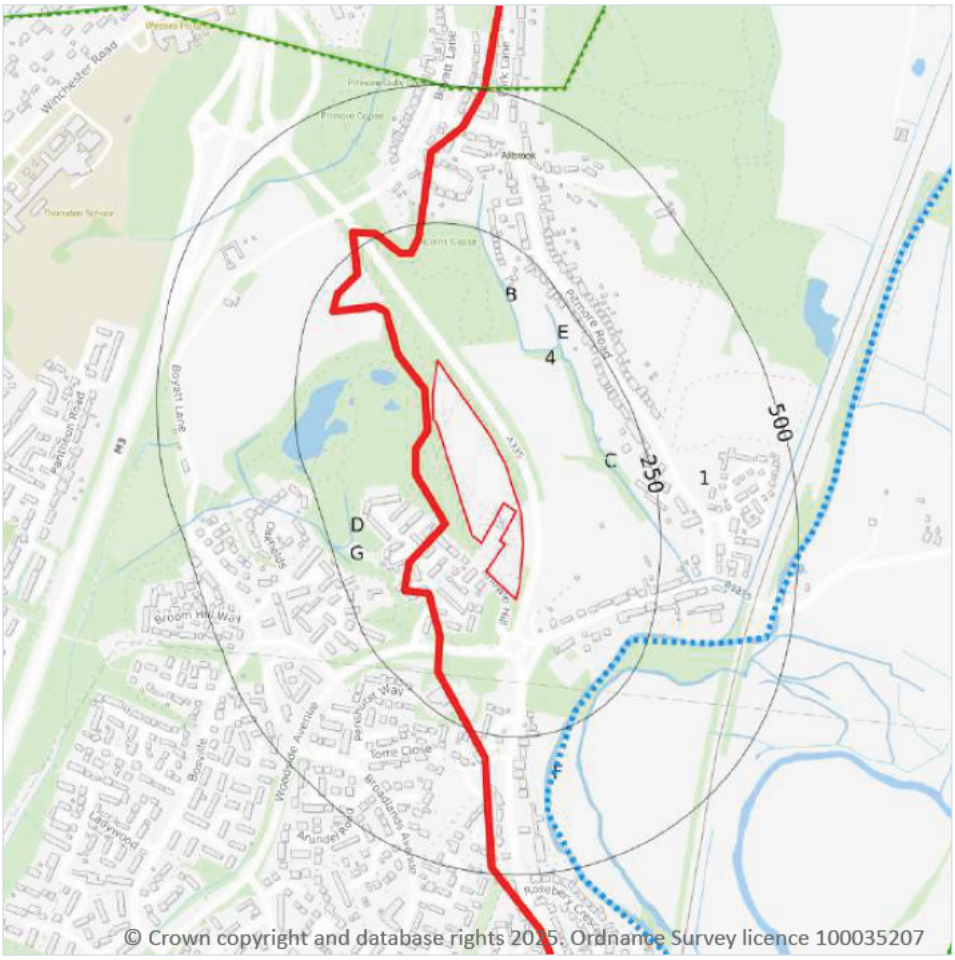
Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

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



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

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	GB70710008 ↗	Moderate	Fail	Good	2019
-	556m SE	River	Itchen	GB107042022580 ↗	Moderate	Fail	Good	2019

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

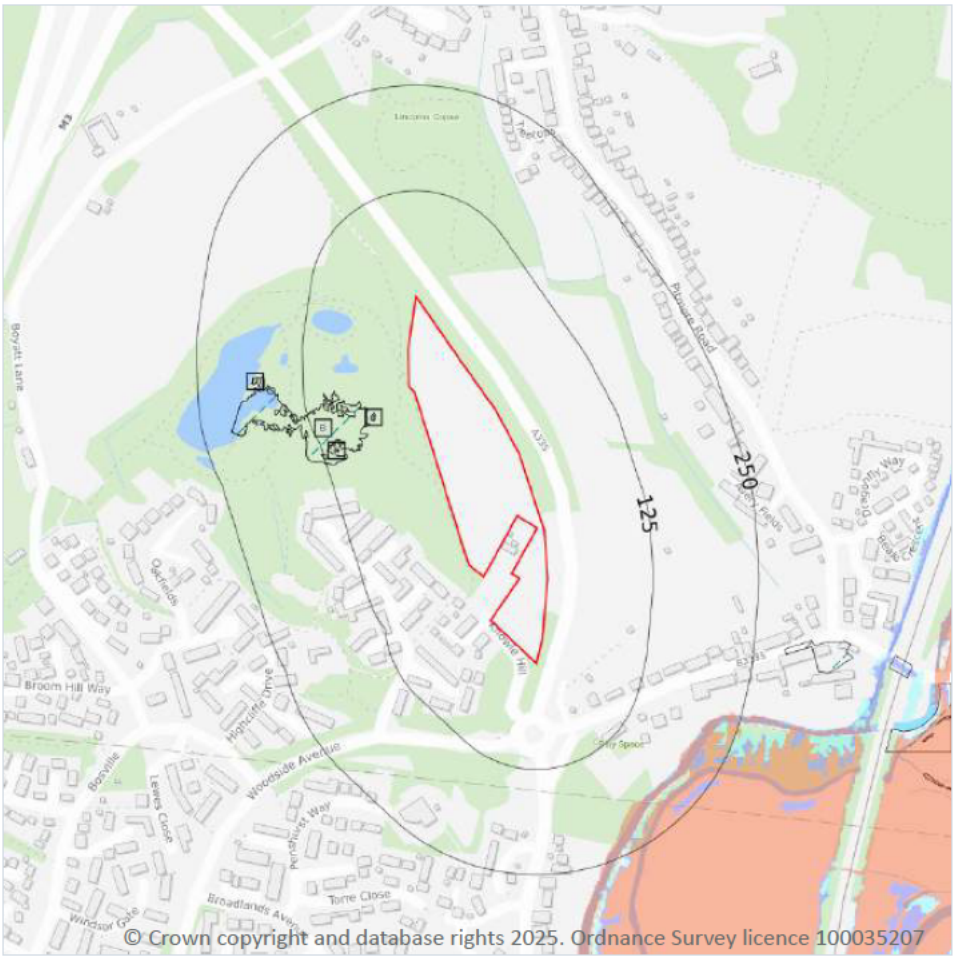
6.5 WFD Groundwater bodies

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 2014-03-05	Other	Groundwater/high water table	Fluvial
A	52m NW	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 2014-03-05	Other	Groundwater/high water table	Fluvial
B	56m NW	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 2014-03-05	Other	Groundwater/high water table	Fluvial
B	56m NW	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 2014-03-05	Other	Groundwater/high water table	Fluvial
C	106m W	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 2014-03-05	Other	Groundwater/high water table	Fluvial
C	106m W	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 2014-03-05	Other	Groundwater/high water table	Fluvial
D	178m NW	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 2014-03-05	Other	Groundwater/high water table	Fluvial
D	178m NW	Winter 13/14 East Hampshire Aerial Photography	2014-03-05 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.

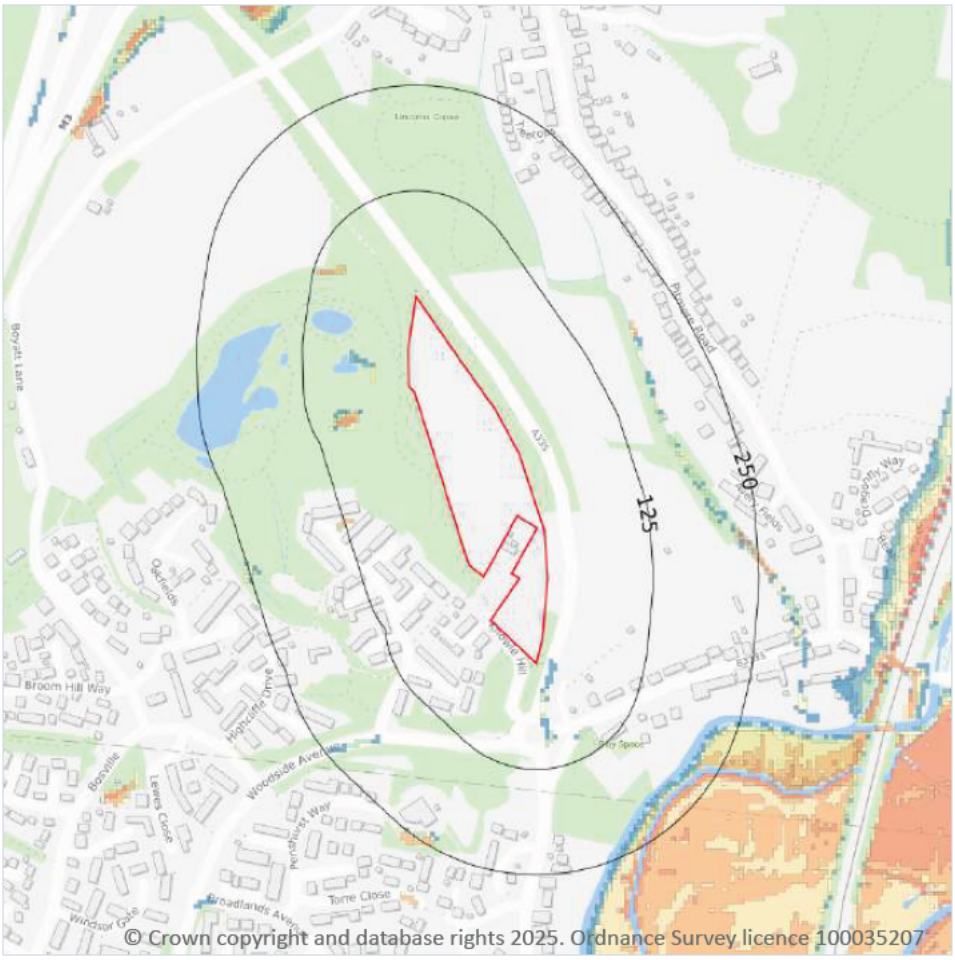
7.7 Flood Zone 3

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 >

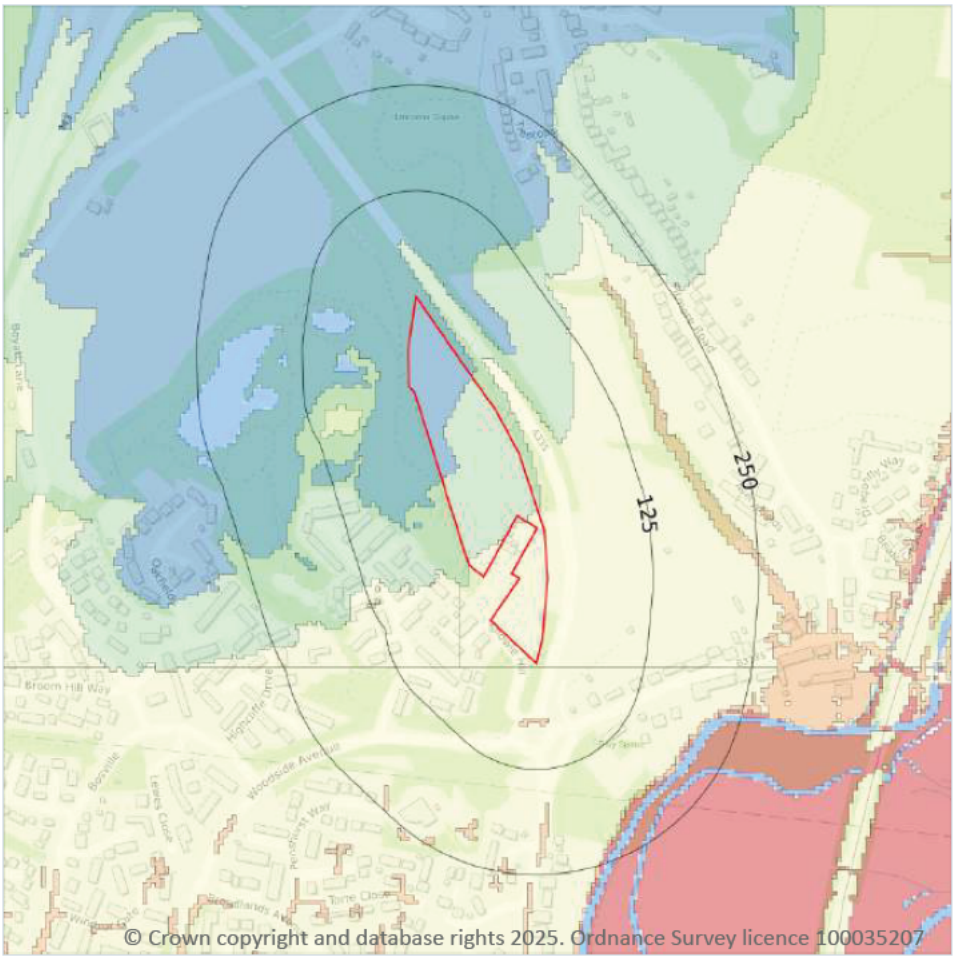
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

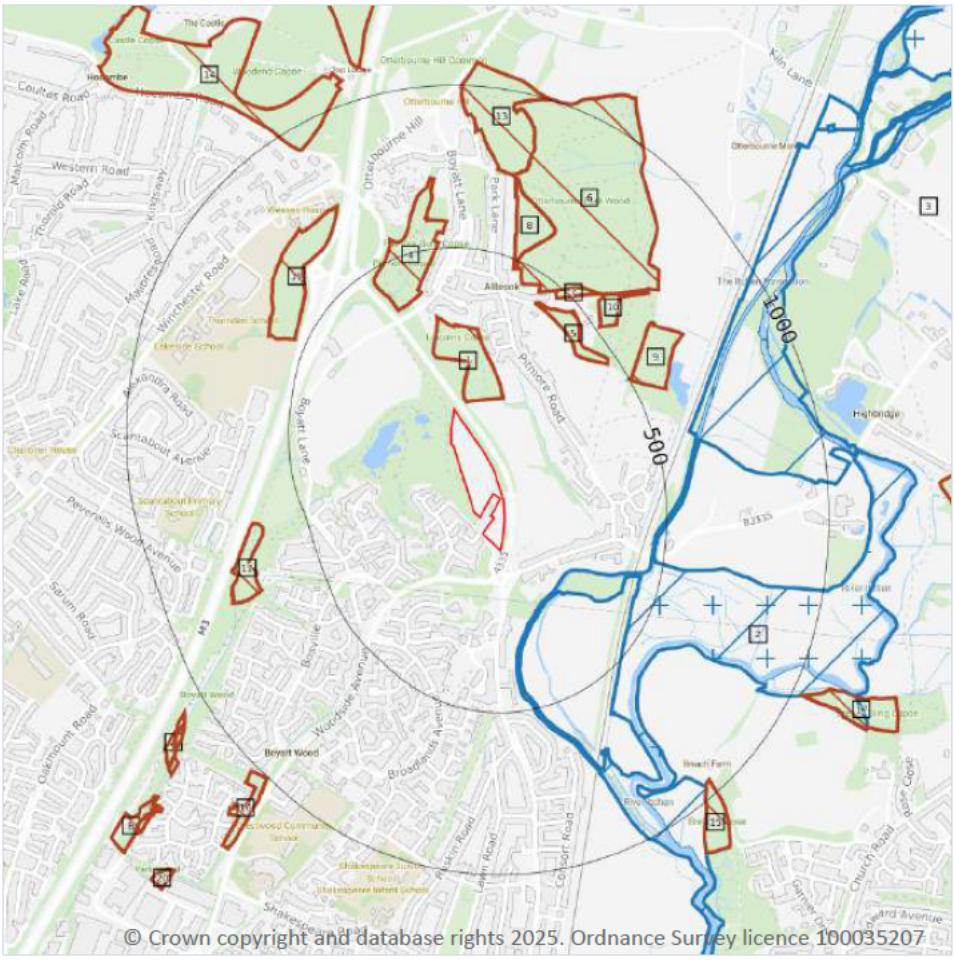
Highest risk on site	**Moderate**
Highest risk within 50m	**Moderate**

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 Ambiental 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)

Records within 2000m	0

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)

Records within 2000m	1

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

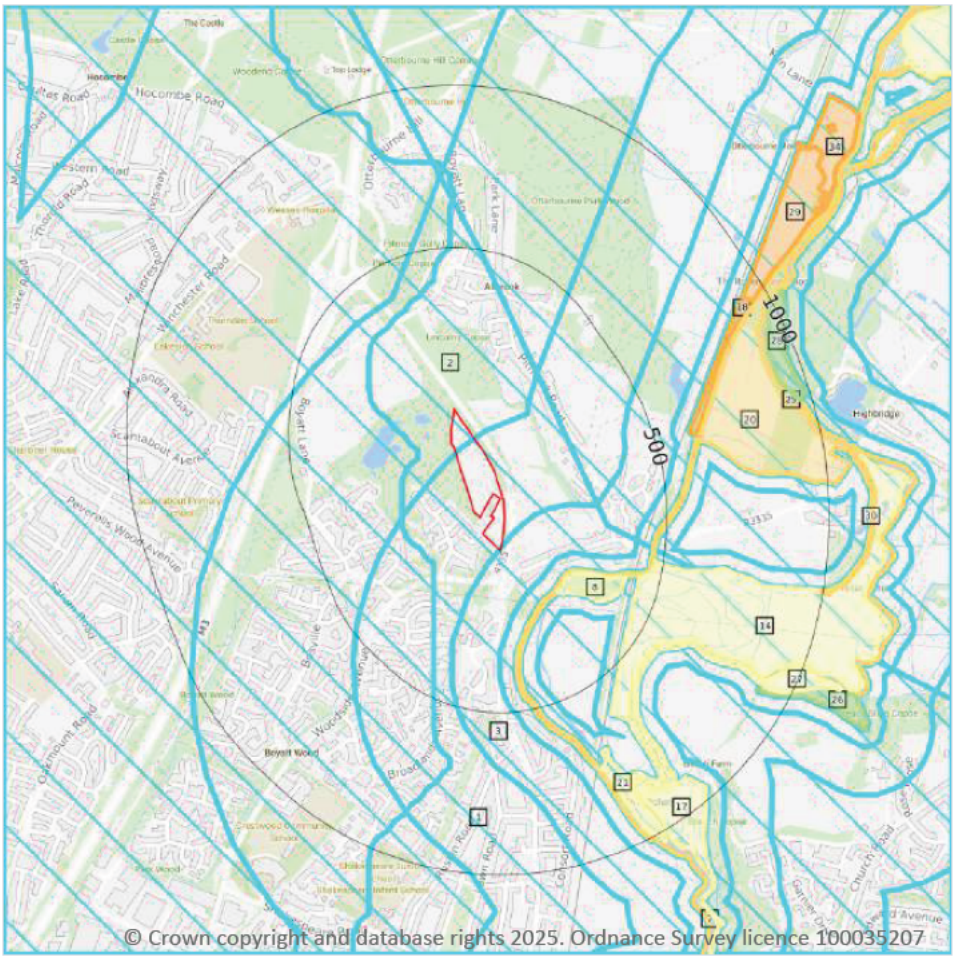
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

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	**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. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 10 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). 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. 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. Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. 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. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply . 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.**

ID	Location	Type of developments requiring consultation
2	On site	**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.** **Wind and Solar - Wind turbines.** **Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.** **Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.** **Residential - Residential development of 100 units or more.** **Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas.** **Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).** **Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.** **Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.** **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.** **Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.** **Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .** **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.**

ID	Location	Type of developments requiring consultation
3	On site	**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. 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. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 10 units or more. Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units. Air pollution - Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). 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. 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. Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. 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. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply . 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.**

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, 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 - Recovering	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: 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, 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: 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, Coenagrion mercuriale	Unfavourable - Recovering	14/06/2011
S1355 Otter, Lutra lutra	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, 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

Feature name	Feature condition	Date of assessment
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 - Recovering	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: 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 - Coenagrion mercuriale, 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, 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 - Recovering	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: -
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.

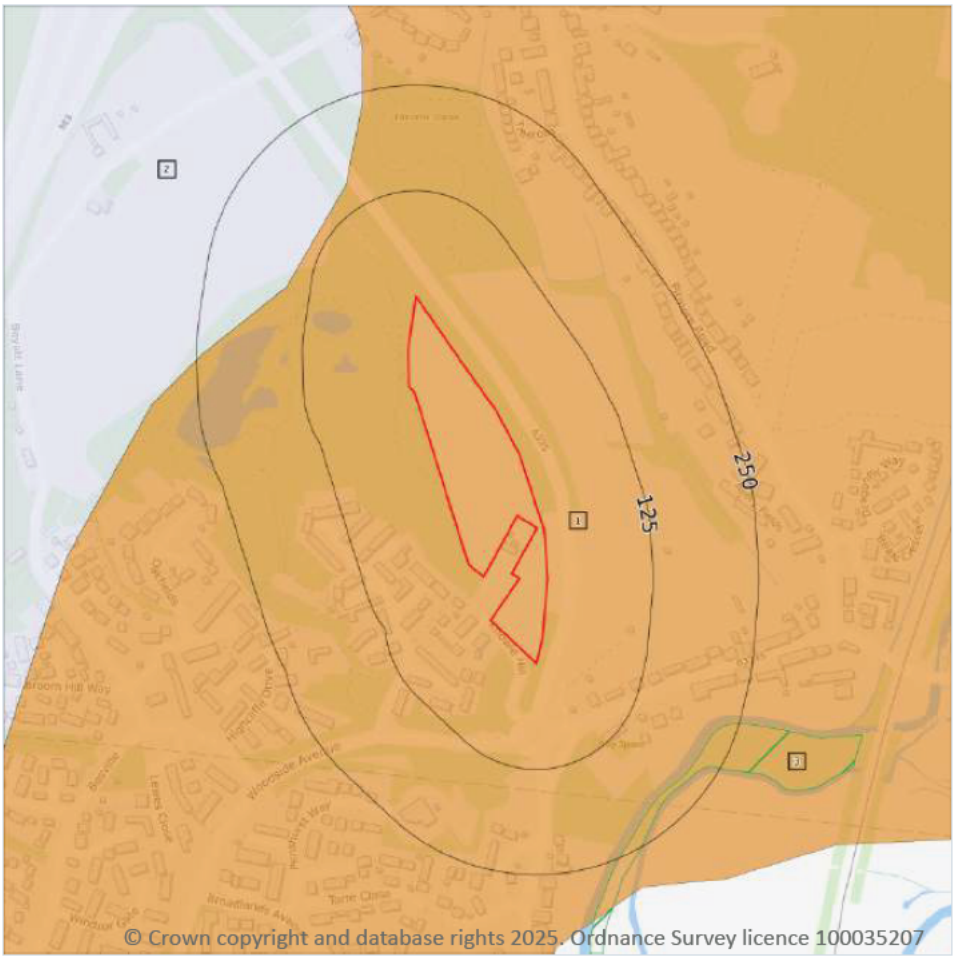
11.7 Registered Parks and Gardens

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

Records within 250m	0

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

Records within 250m	1

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

Records within 250m	0

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.

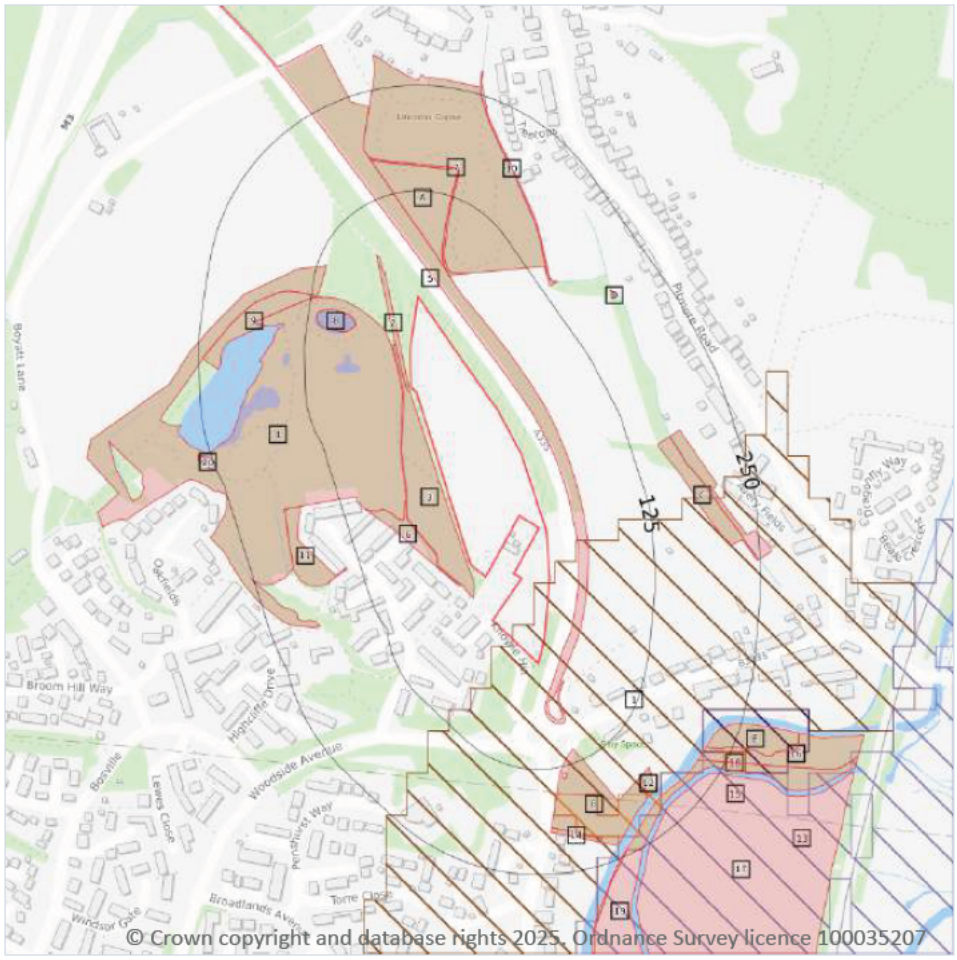
12.5 Countryside Stewardship Schemes

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



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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.

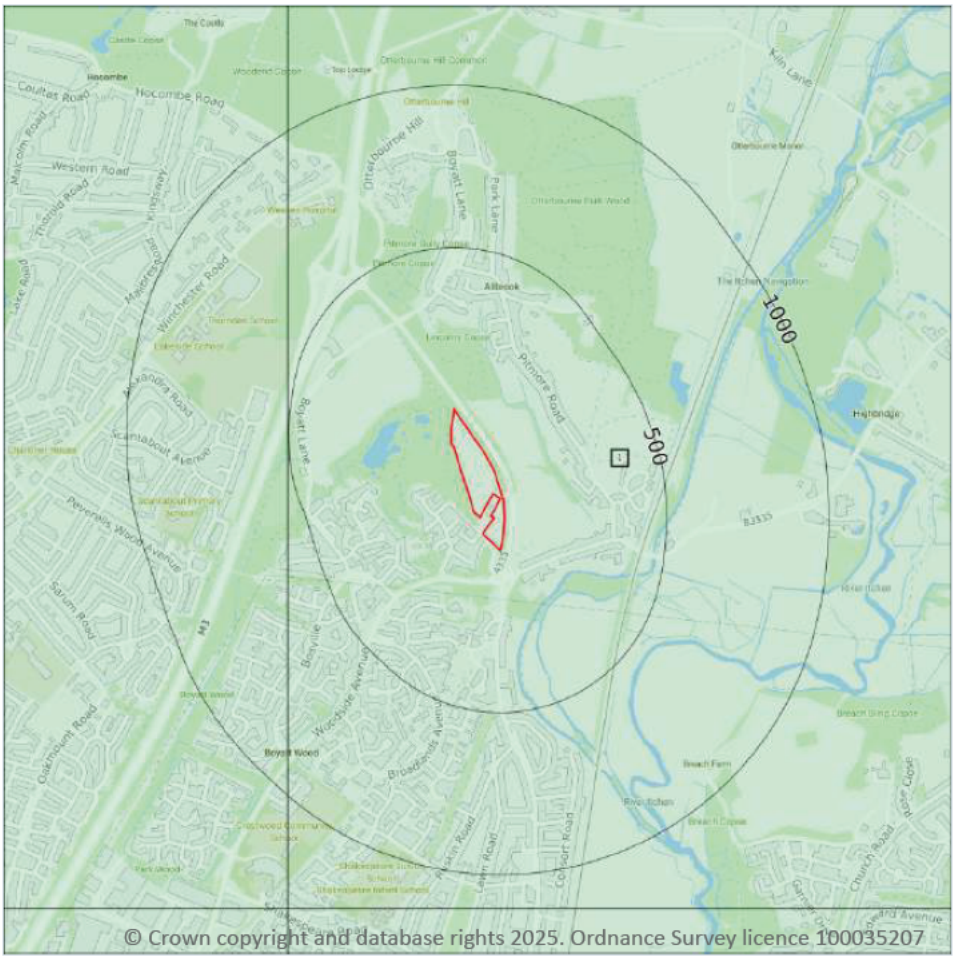
13.4 Limestone Pavement Orders

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

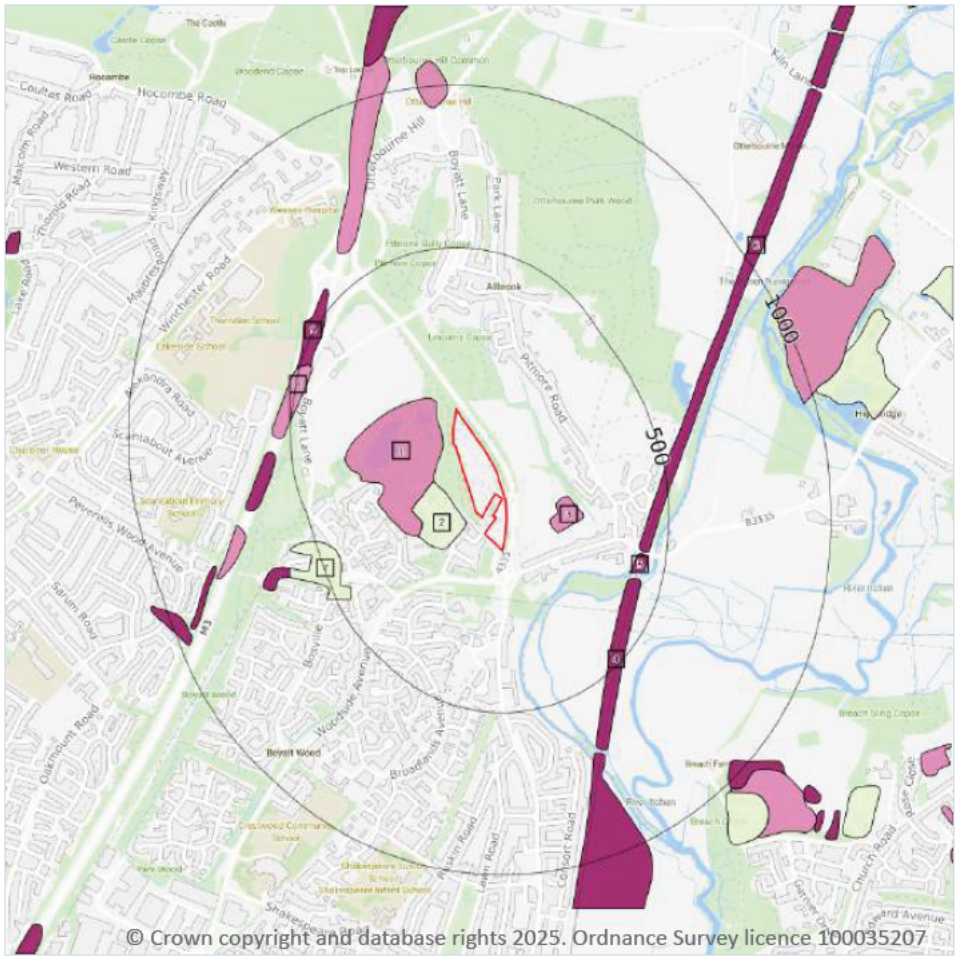
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

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.

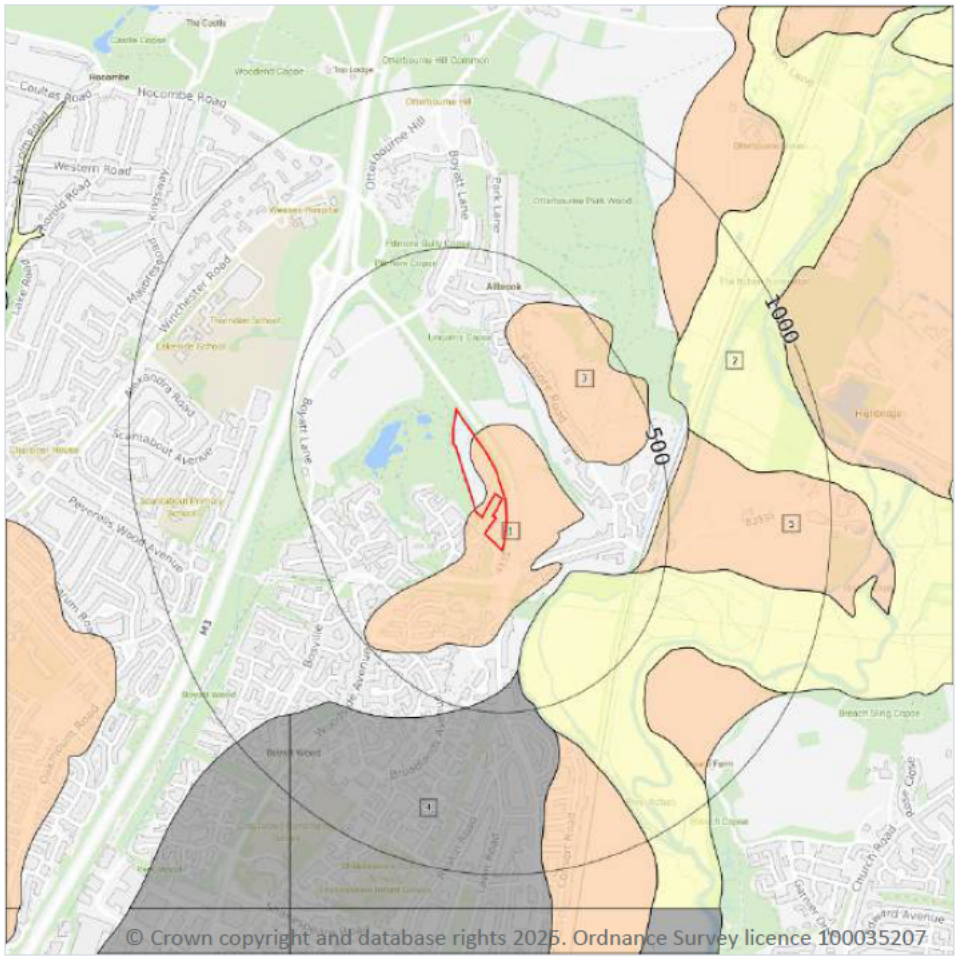
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on page 89 >

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



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.

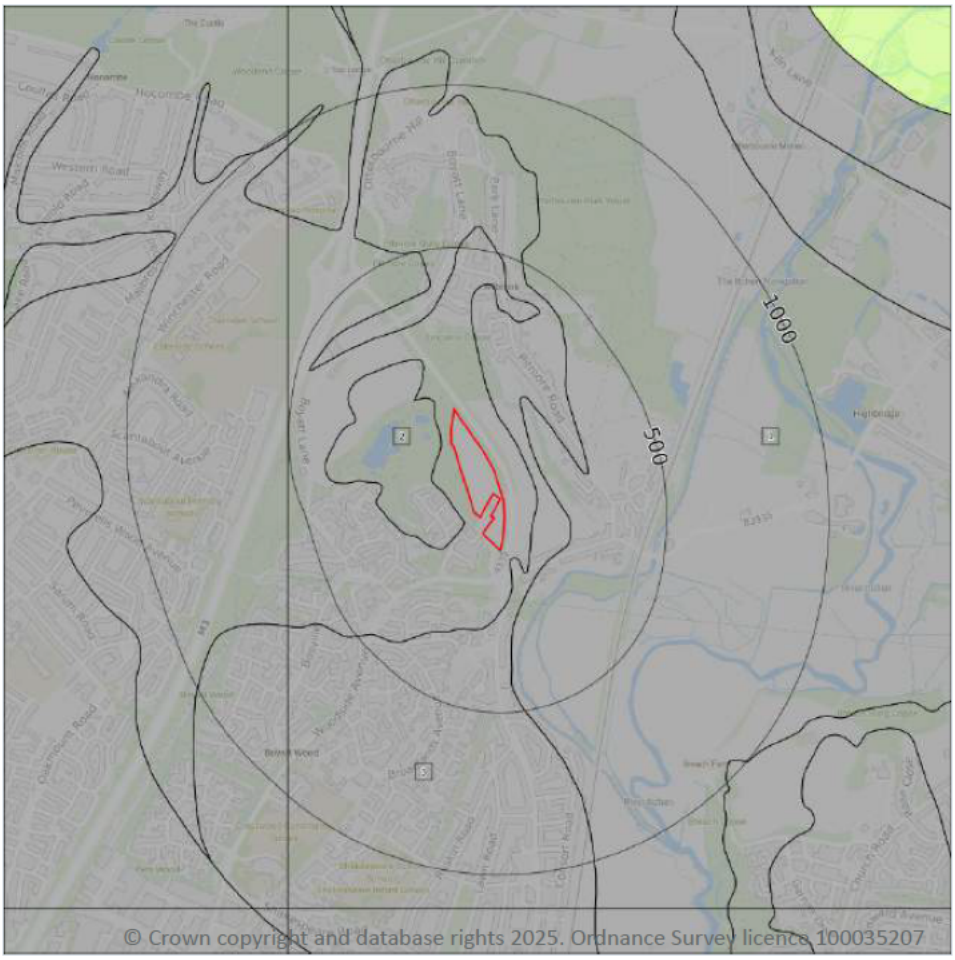
14.4 Landslip (10k)

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

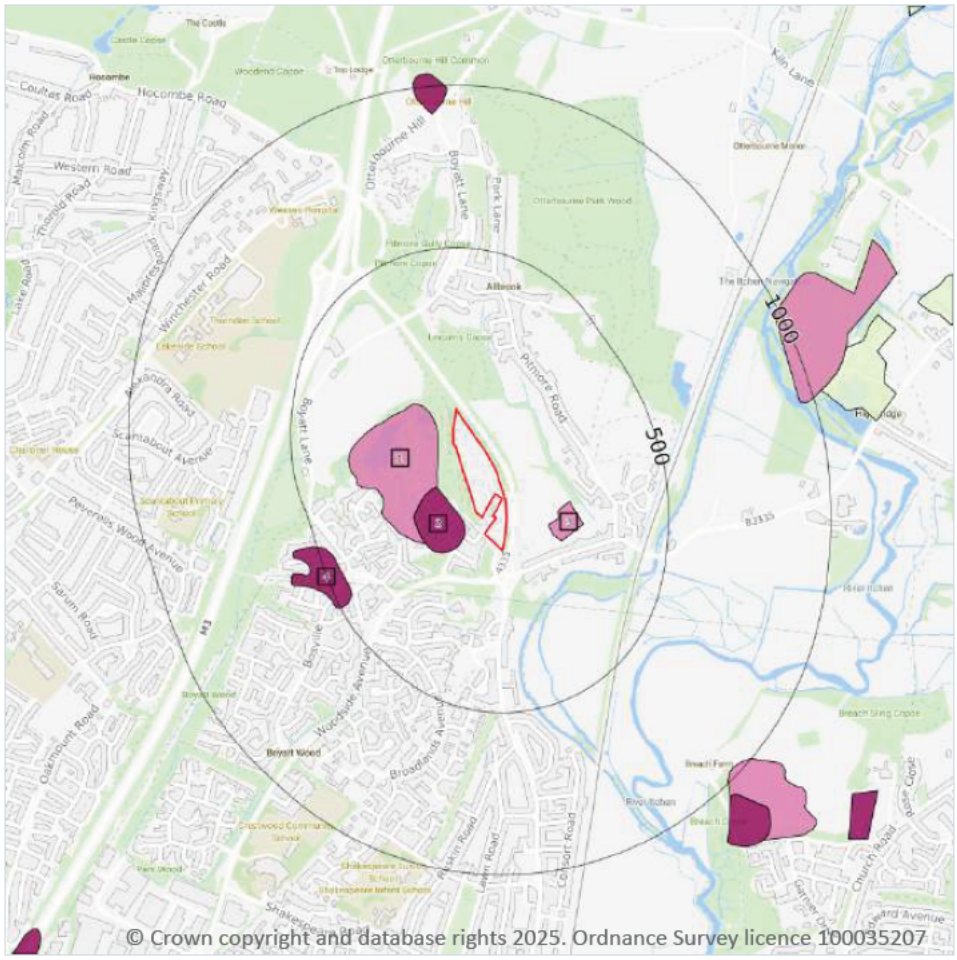
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

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)

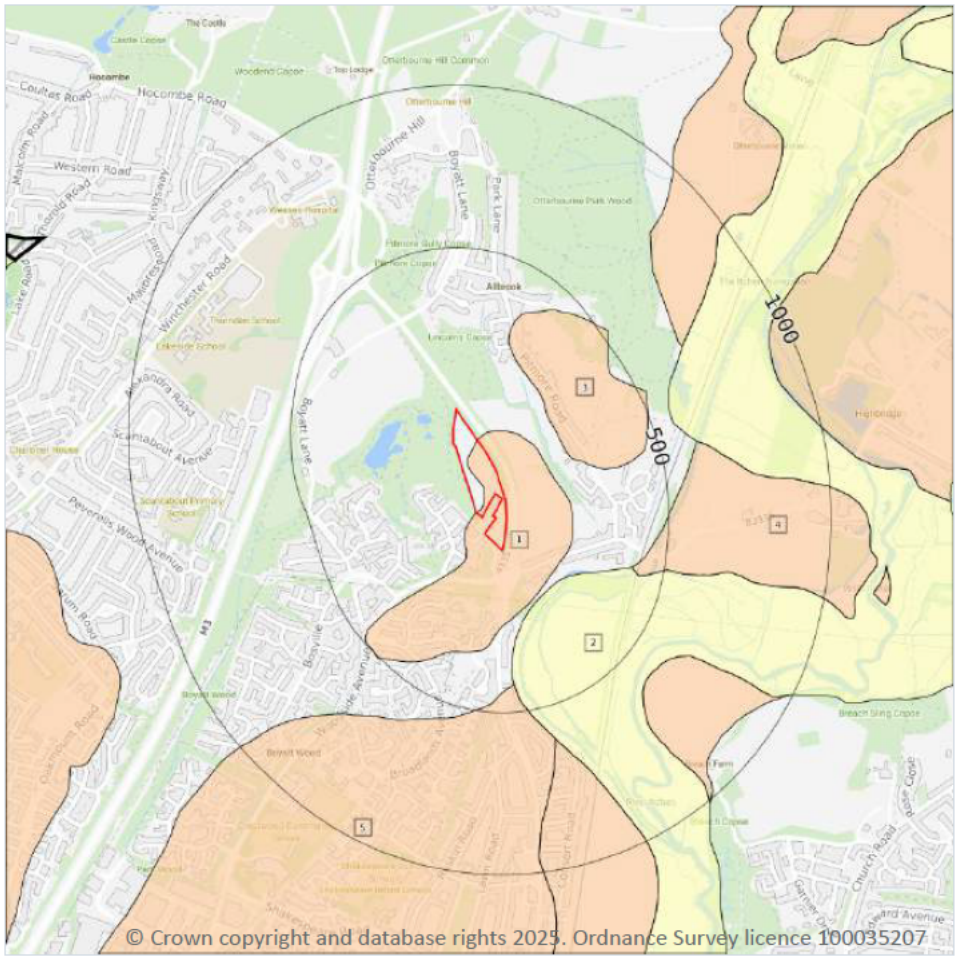
Records within 50m	1

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)

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 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)

Records within 500m	0

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.

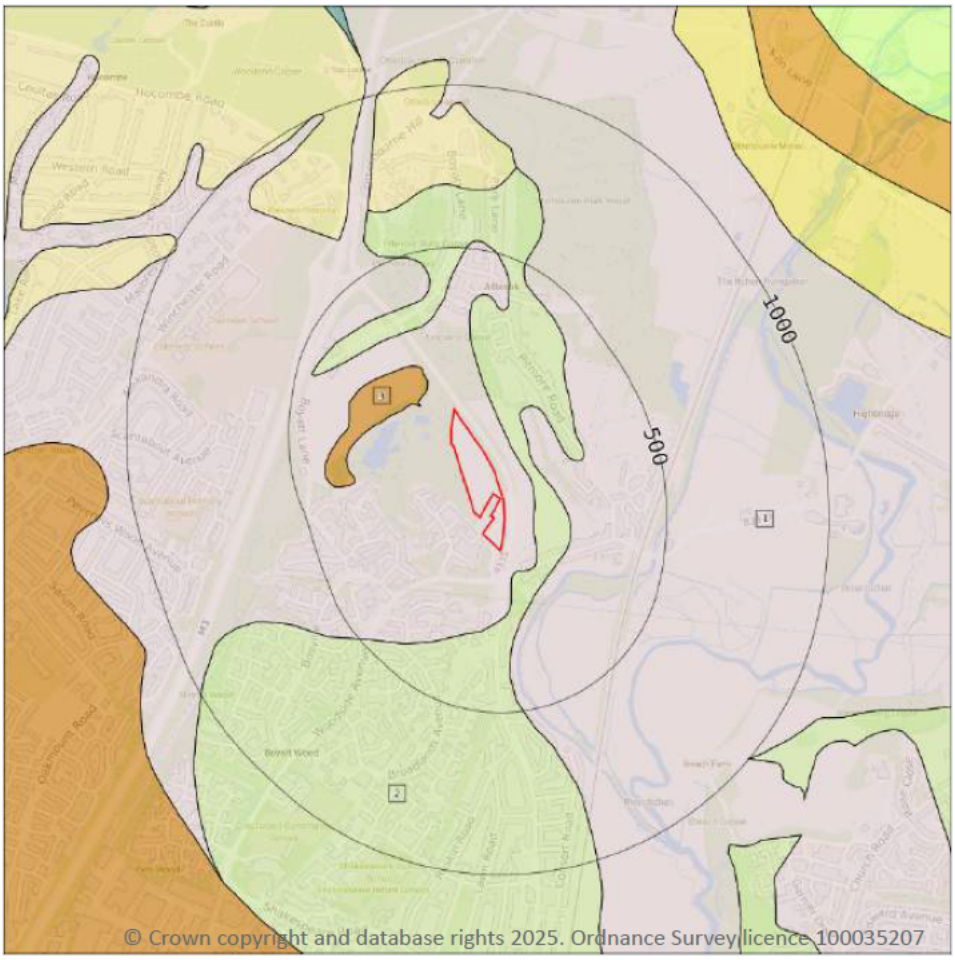
15.7 Landslip permeability (50k)

Records within 50m	0

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.

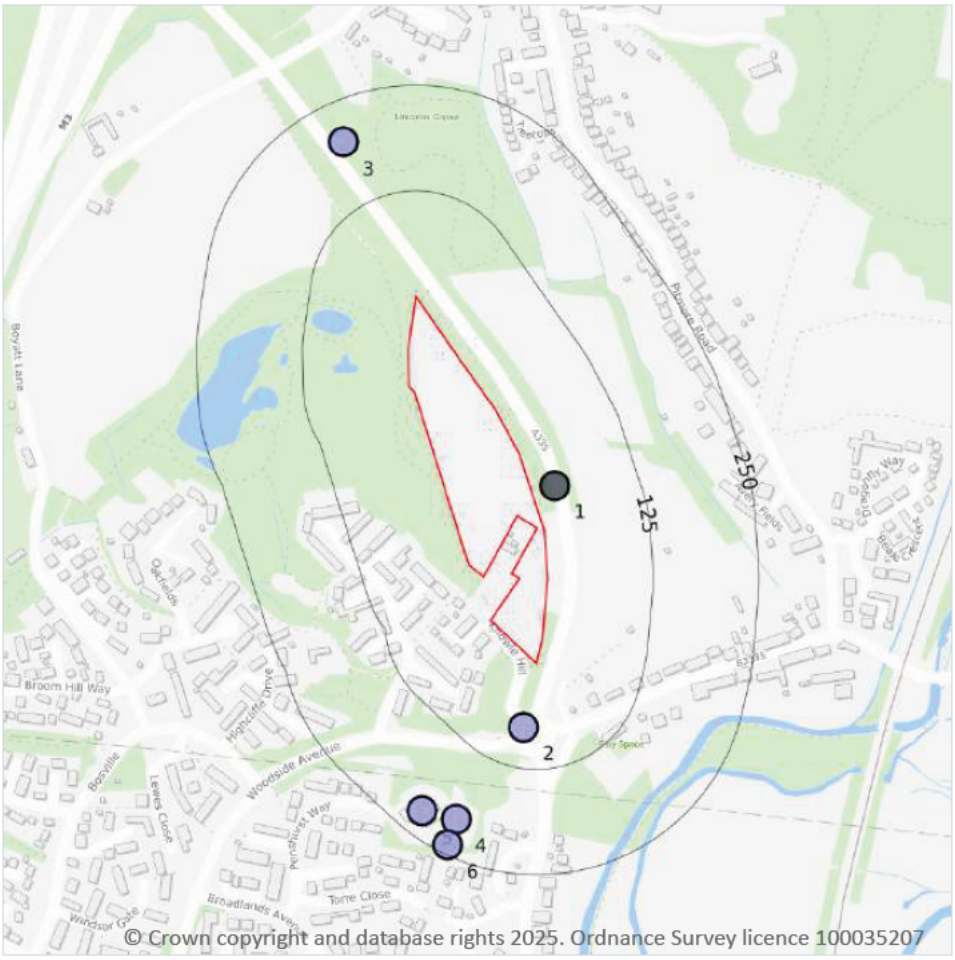
15.10 Bedrock faults and other linear features (50k)

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



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.

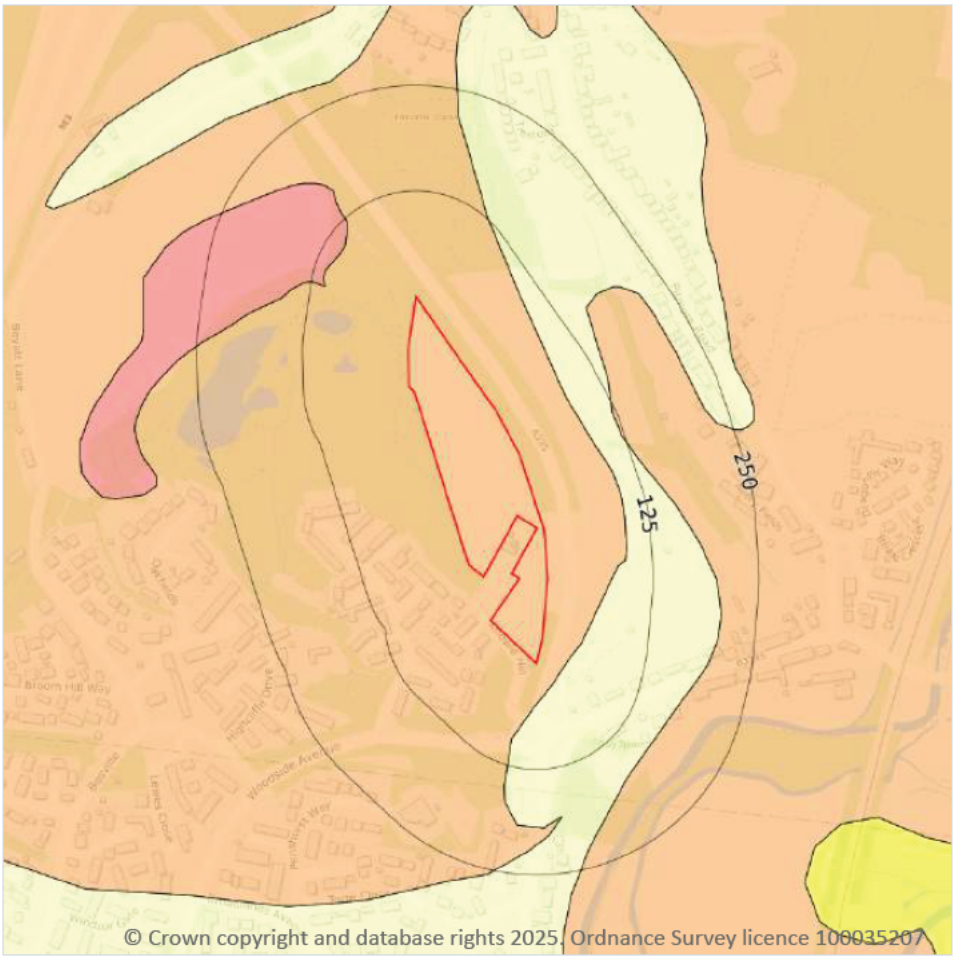
Features are displayed on the Boreholes map on page 102 >

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	412205 ↗
3	202m N	445427 121721	A33/M3 BAR END TO BASSETT TP 15	3.0	N	412204 ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	208m S	445560 120920	BOYATT N INFANT SCHOOL TH3	2.0	N	412137 ↗
5	221m S	445520 120930	BOYATT N INFANT SCHOOL TH4	2.0	N	412138 ↗
6	239m S	445550 120890	BOYATT N INFANT SCHOOL TH2	2.0	N	412136 ↗

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

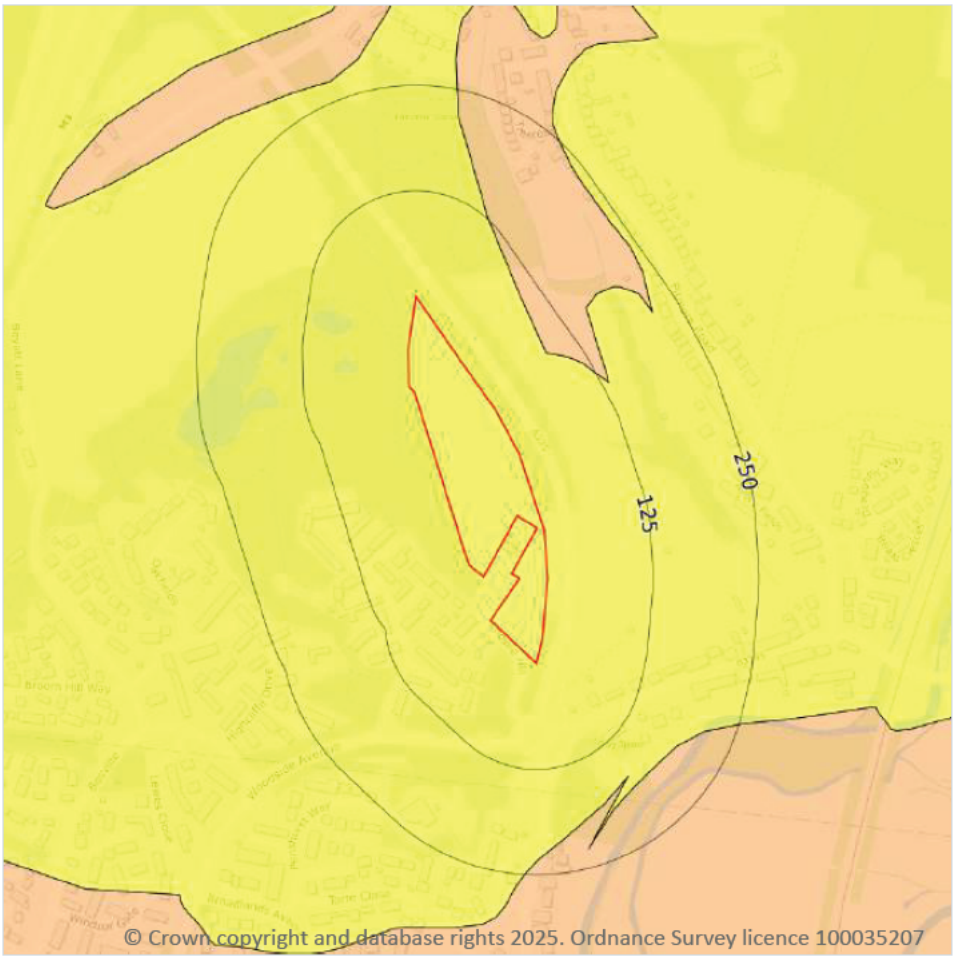
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and 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

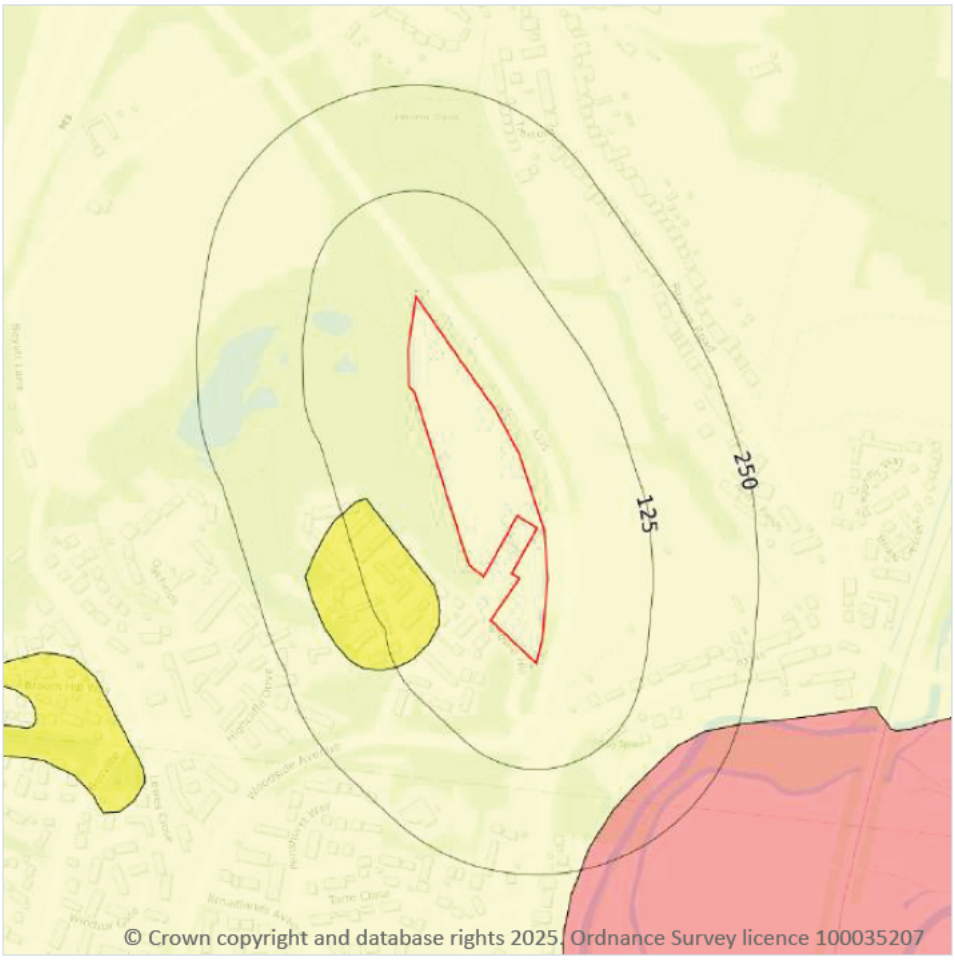
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

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



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	2

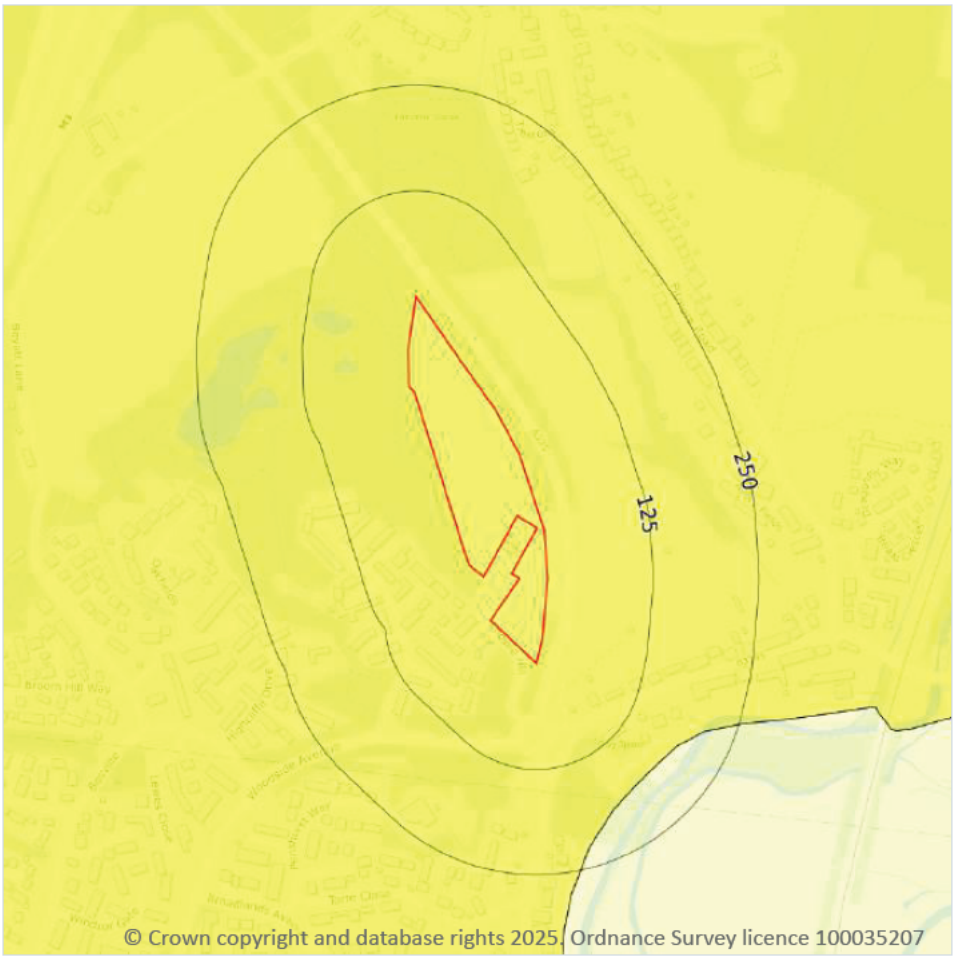
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 106 >

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
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

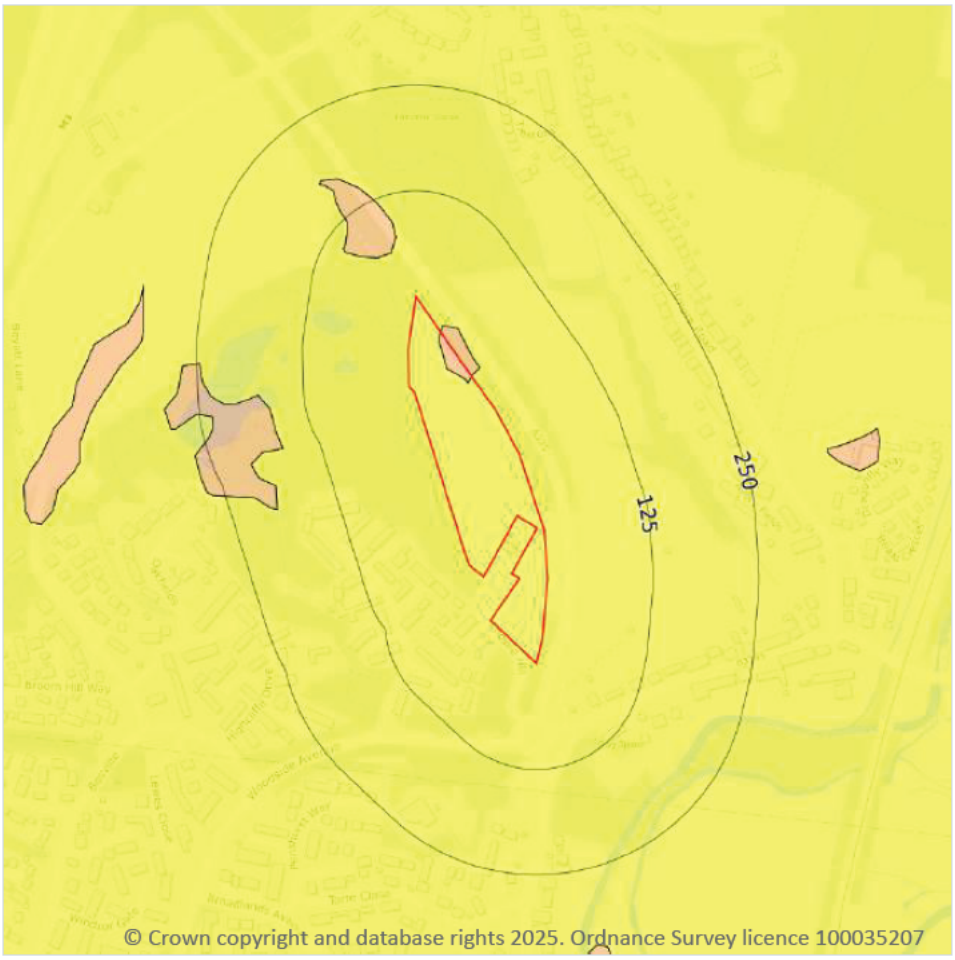
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

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.

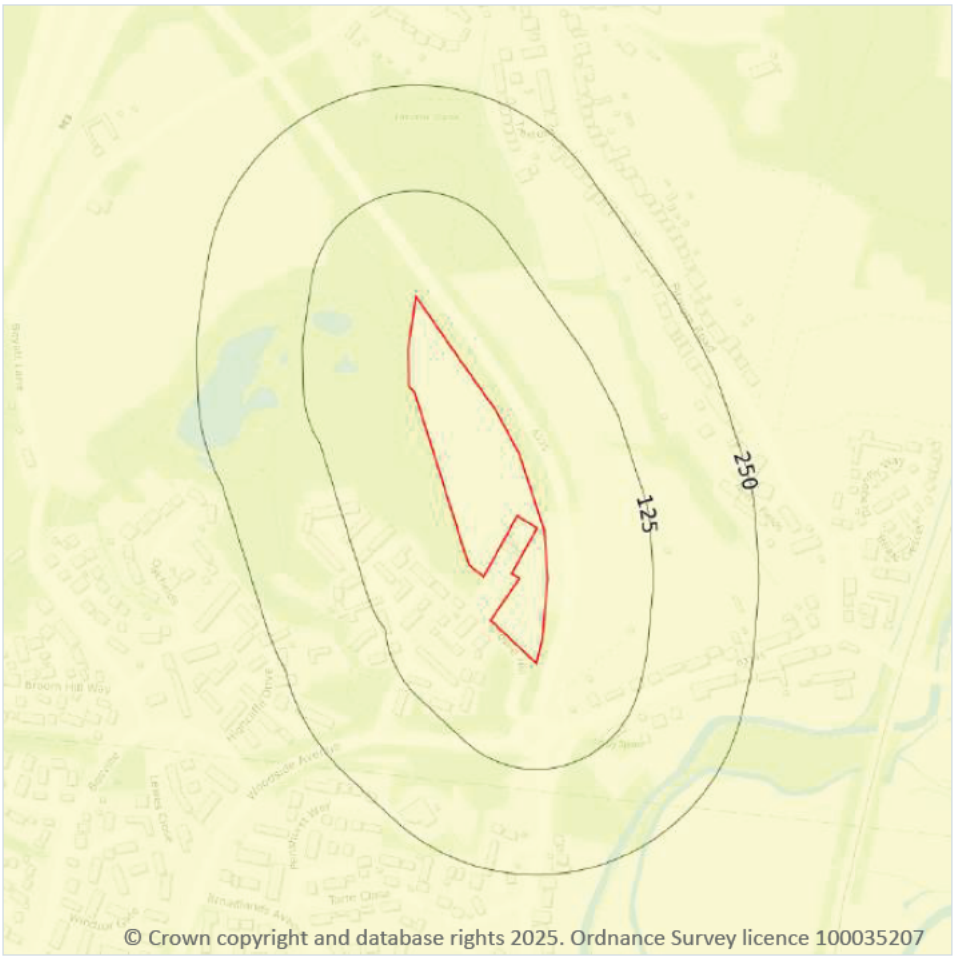
Features are displayed on the Natural ground subsidence - Landslides map on page 109 >

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



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

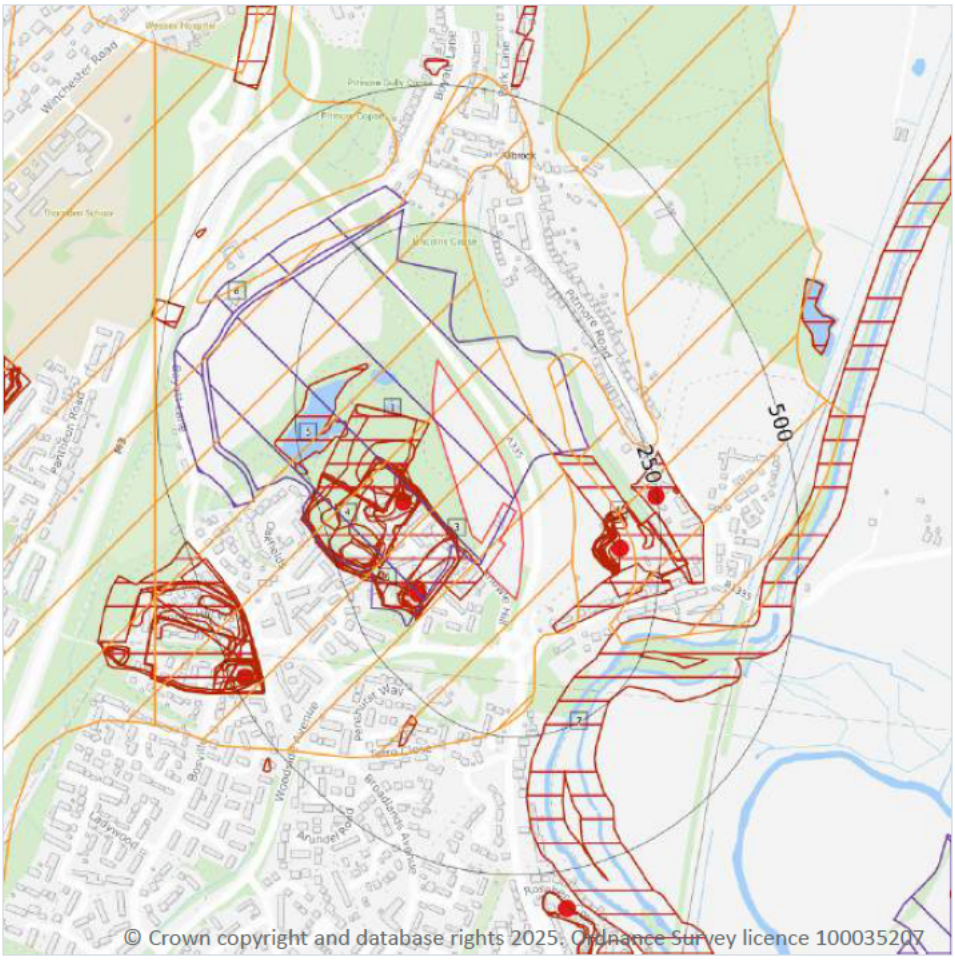
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

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 Address: Allbrook, EASTLEIGH, Hampshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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 Address: Allbrook, EASTLEIGH, Hampshire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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 Address: Allbrook, EASTLEIGH, Hampshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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 Address: Allbrook, EASTLEIGH, Hampshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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 Address: Allbrook, EASTLEIGH, Hampshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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

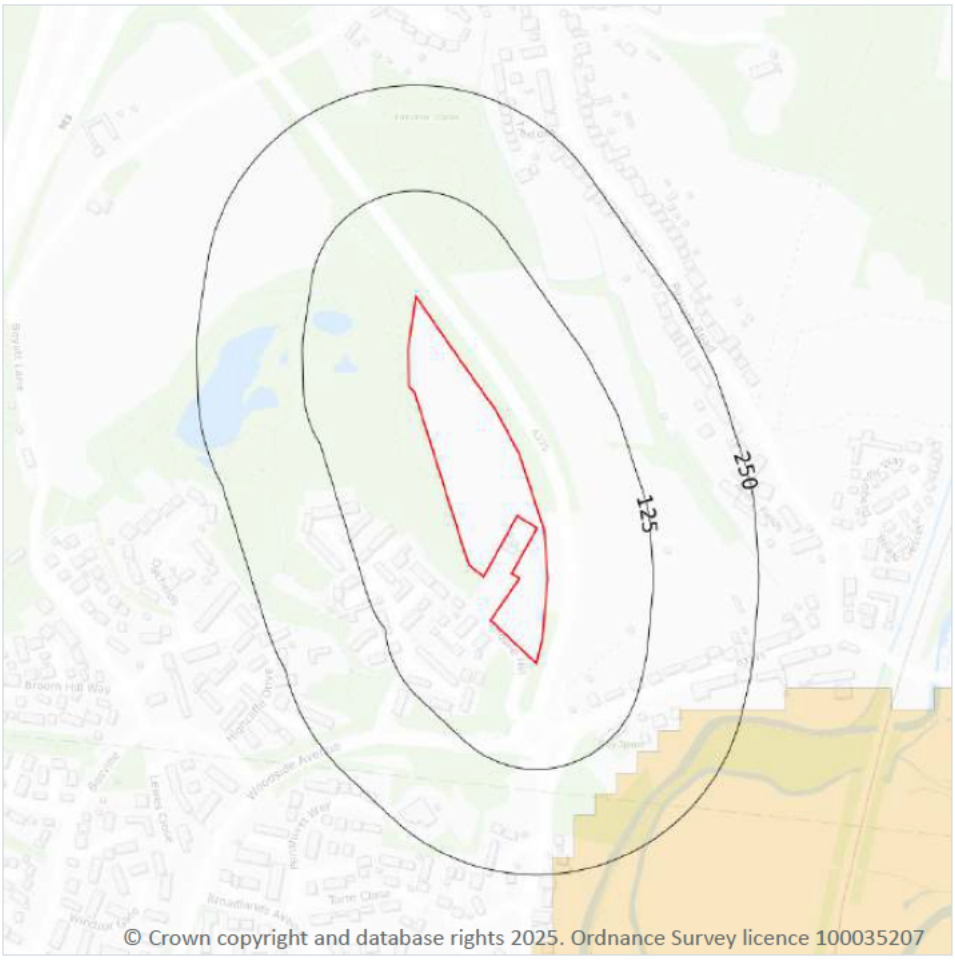
Records within 500m	0

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



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

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^2. 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^2; 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^2).

This data is sourced from the British Geological Survey.

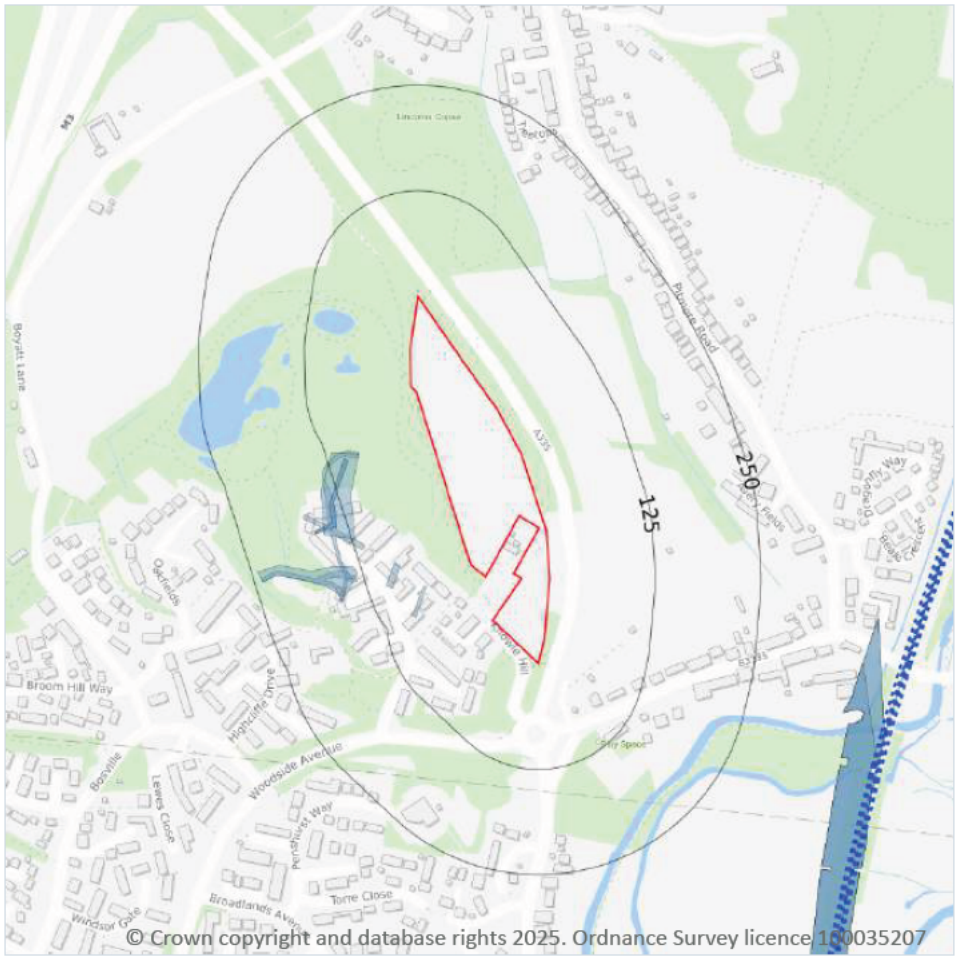
21.3 BGS Measured Urban Soil Chemistry

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^2.

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects



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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.

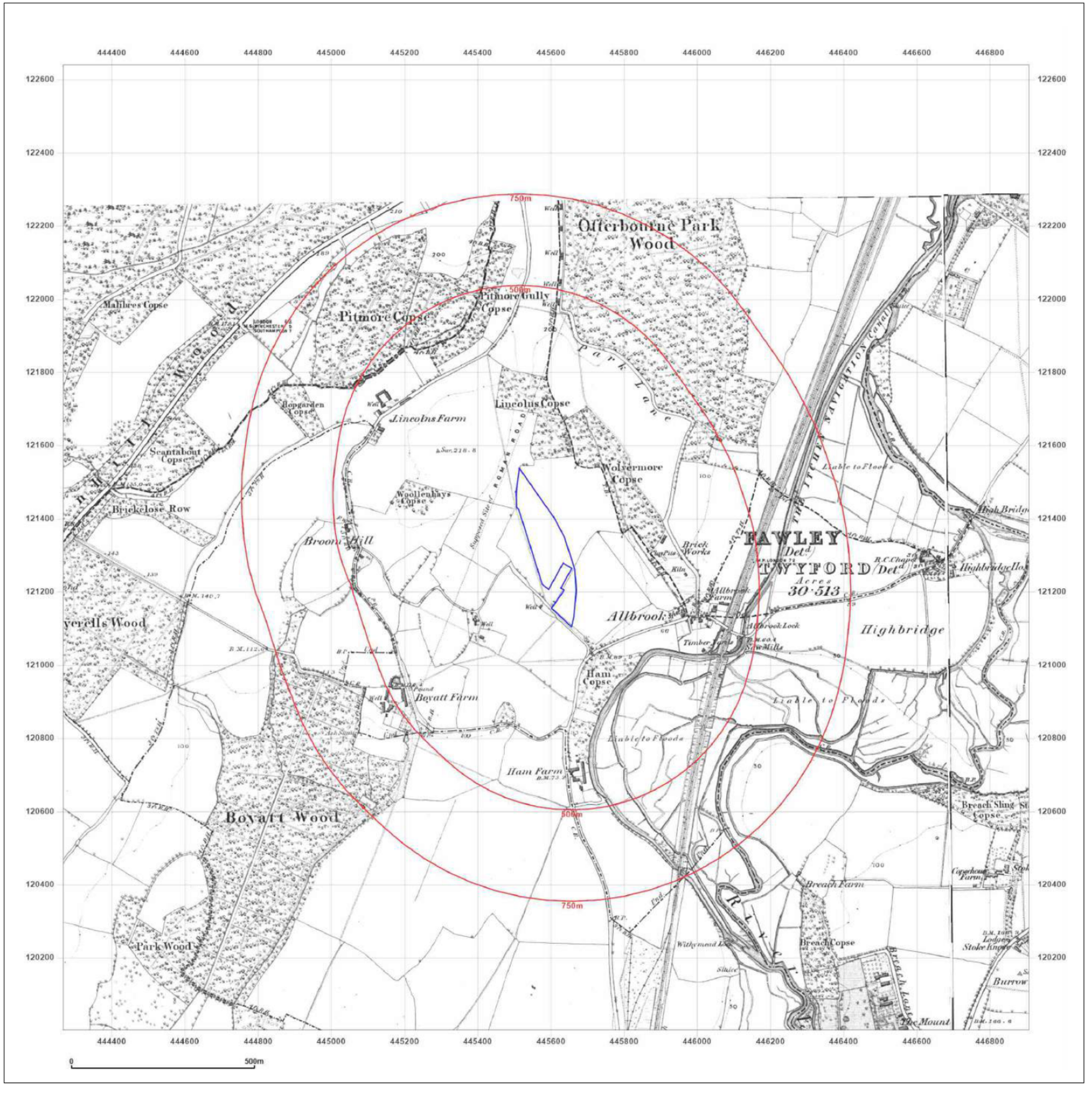
This data is sourced from HS2 ltd.

Data providers

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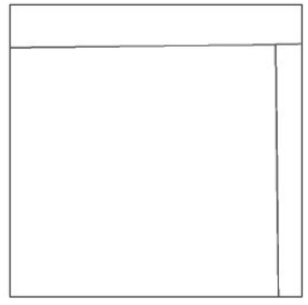
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Grid Ref: 445586, 121321

Map Name: County Series
Map date: **1868**
Scale: 1:10,560
Printed at: 1:10,560

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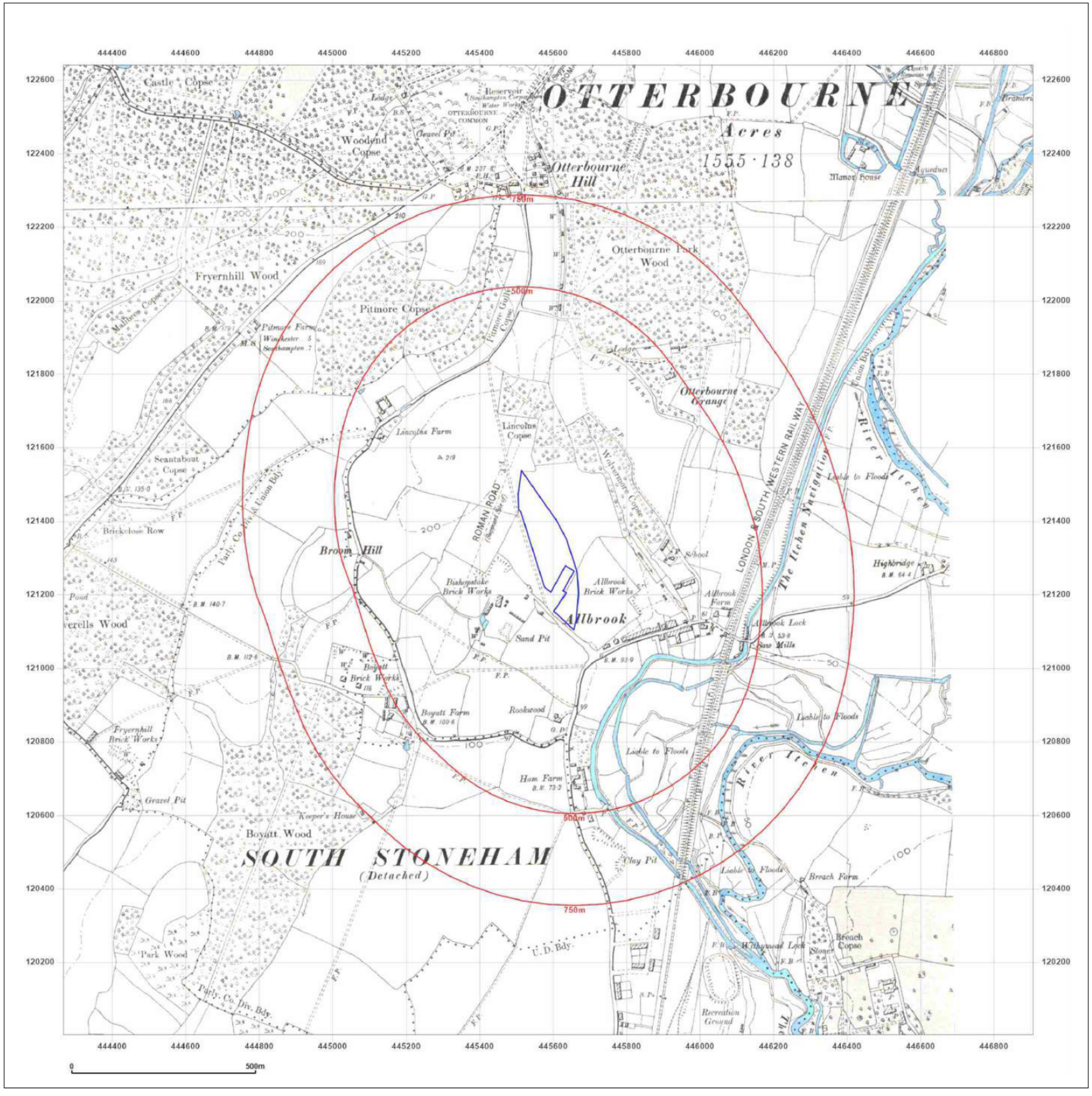
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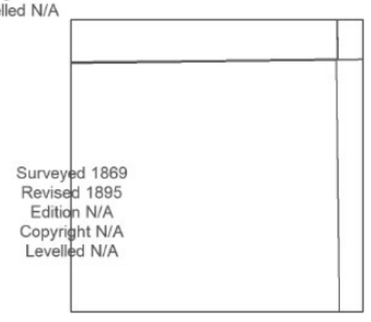
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Map Name: County Series
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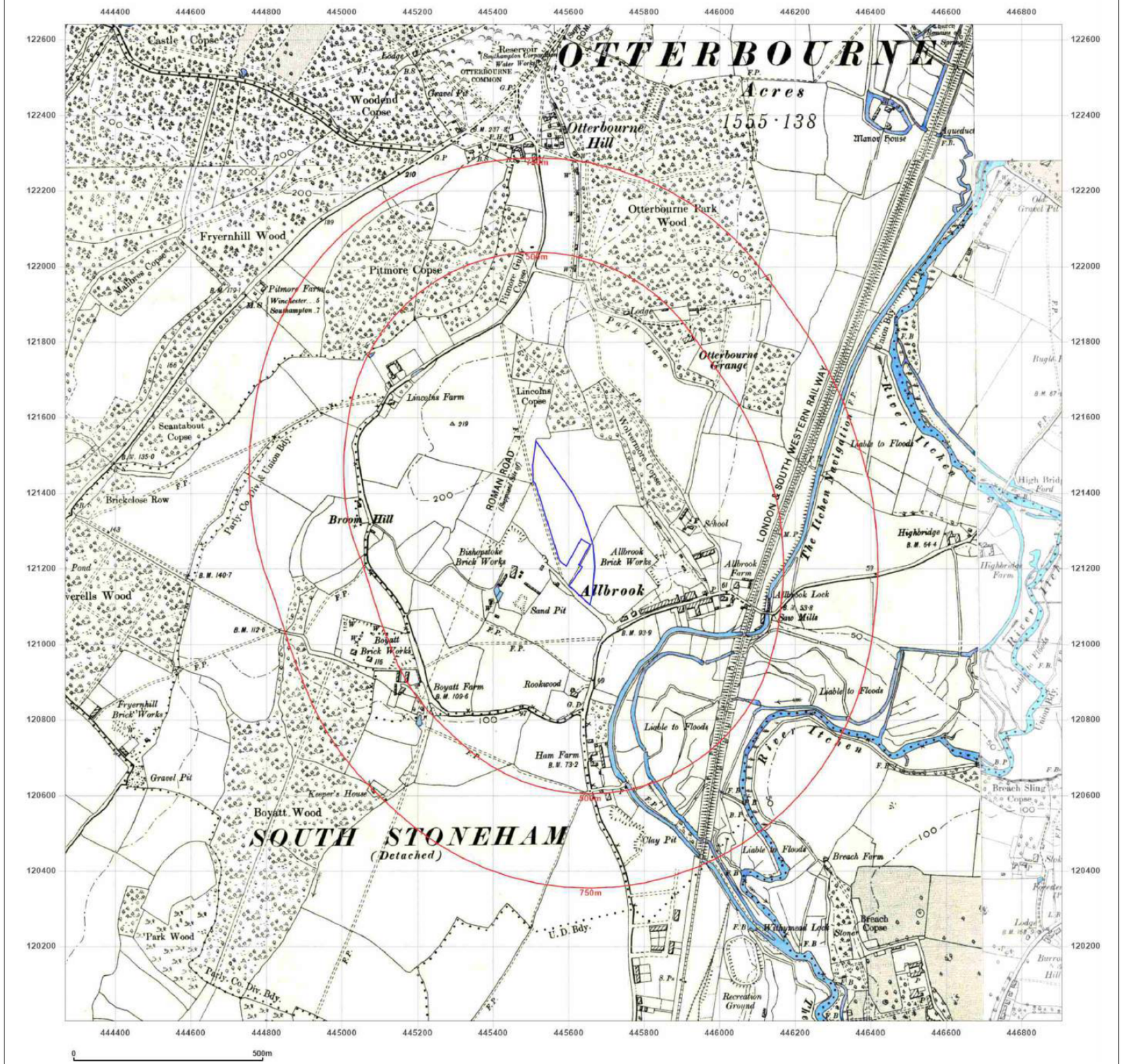
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Map Name: County Series

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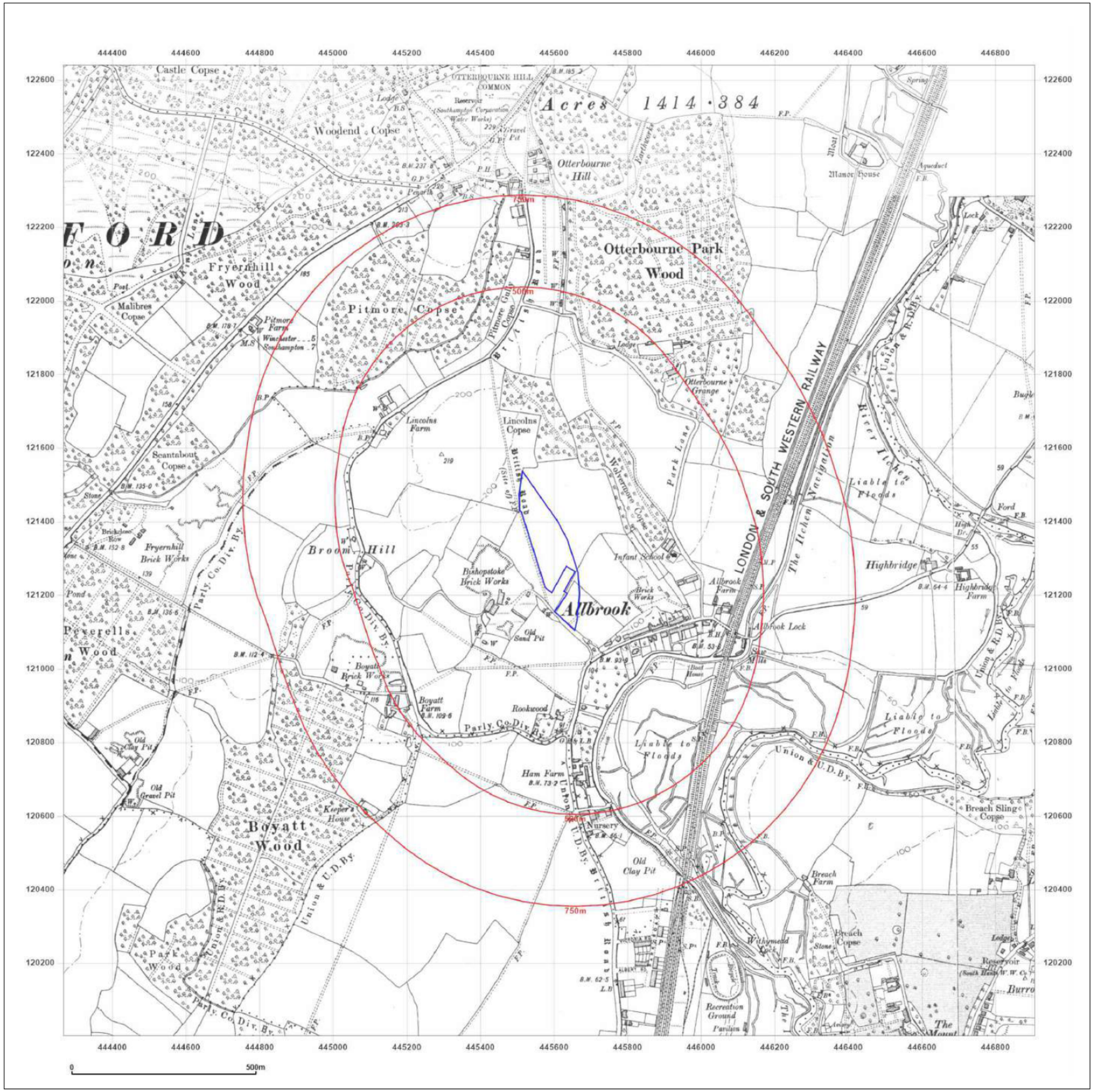
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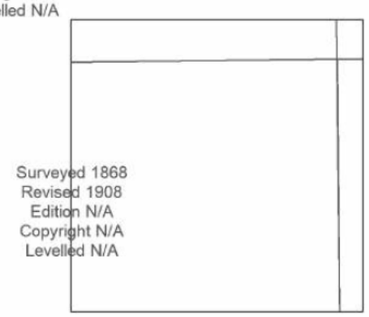
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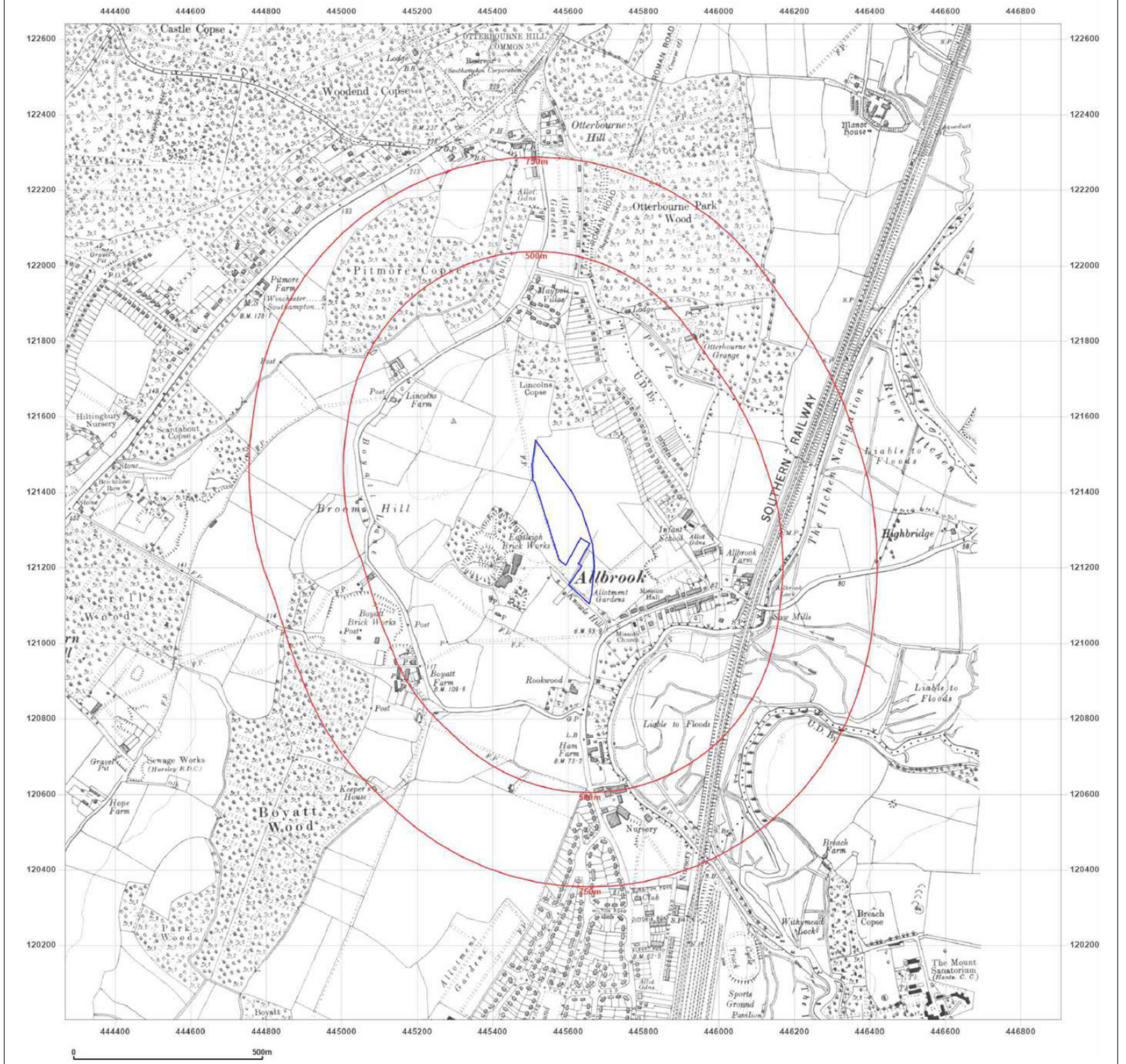
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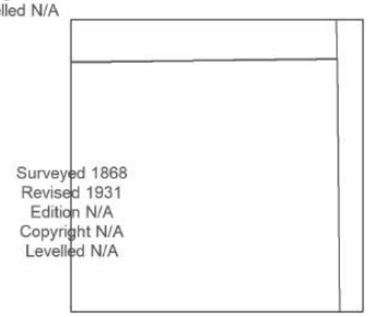
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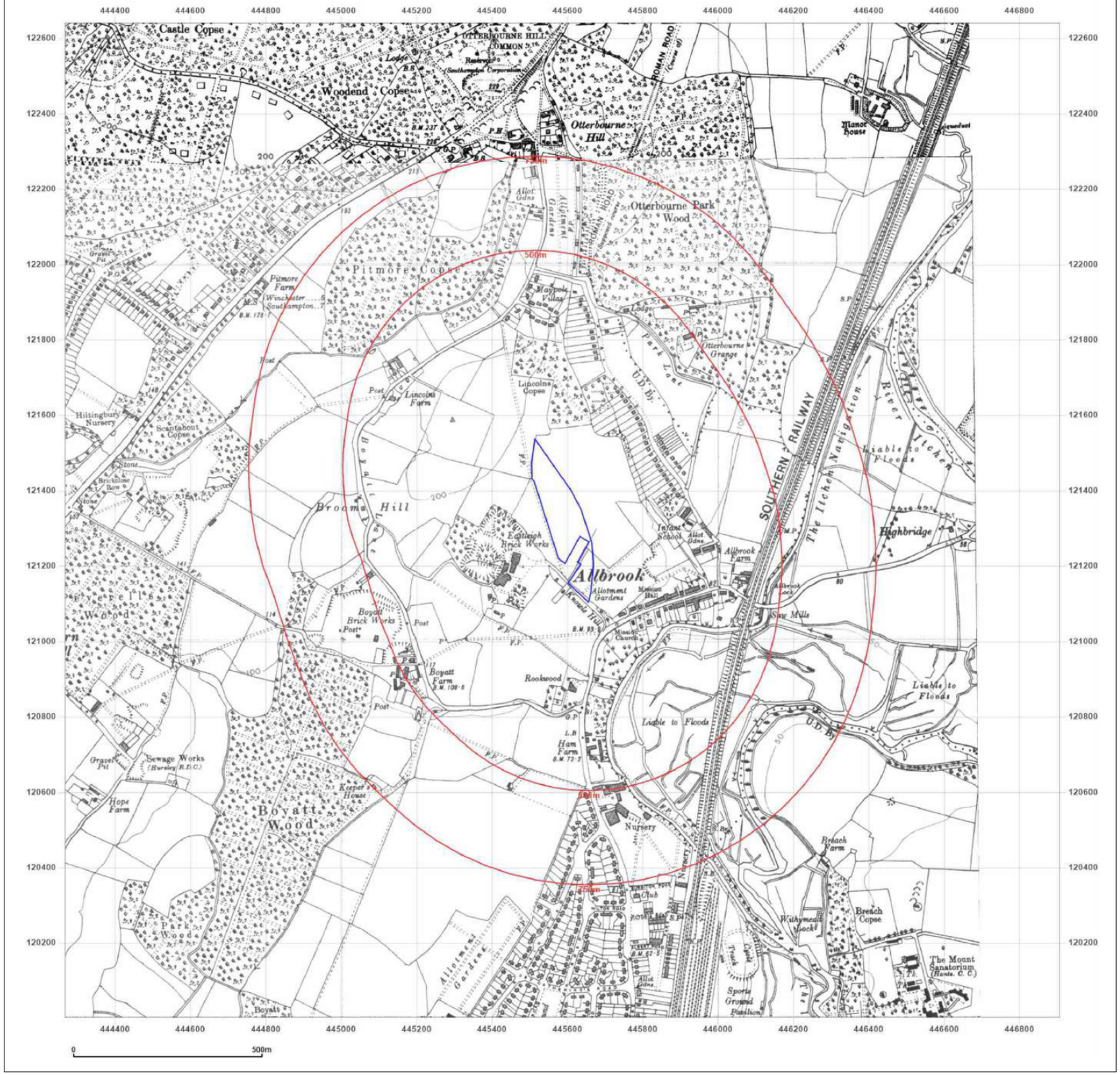
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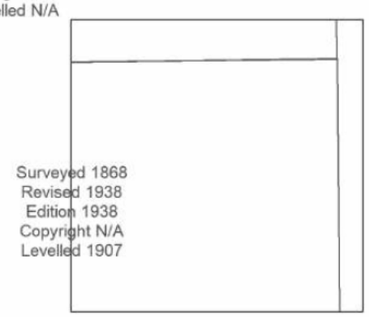
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Map Name: County Series
Map date: **1938**
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Printed at: 1:10,560

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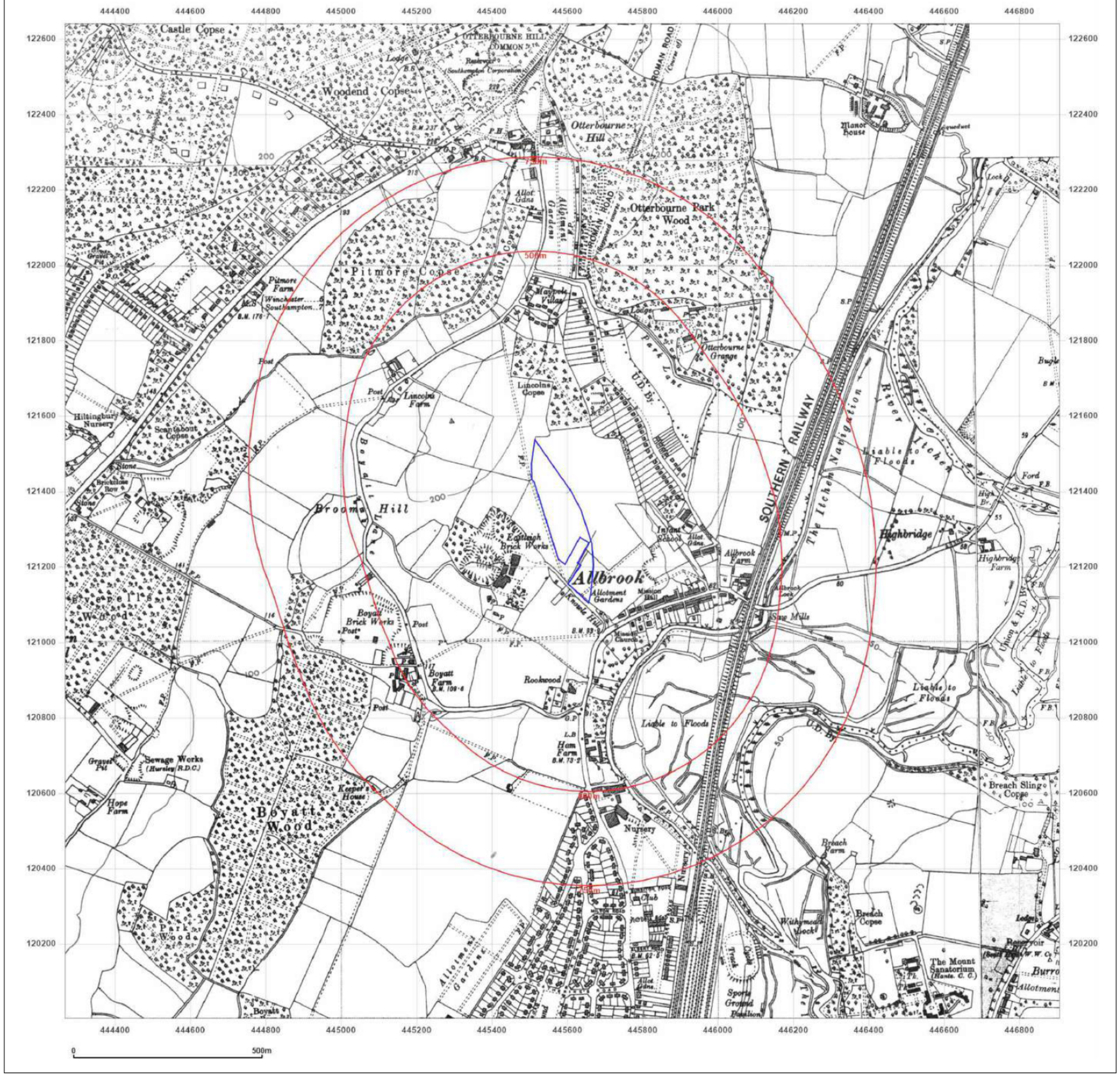
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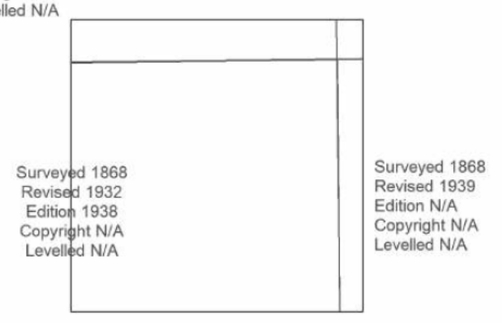
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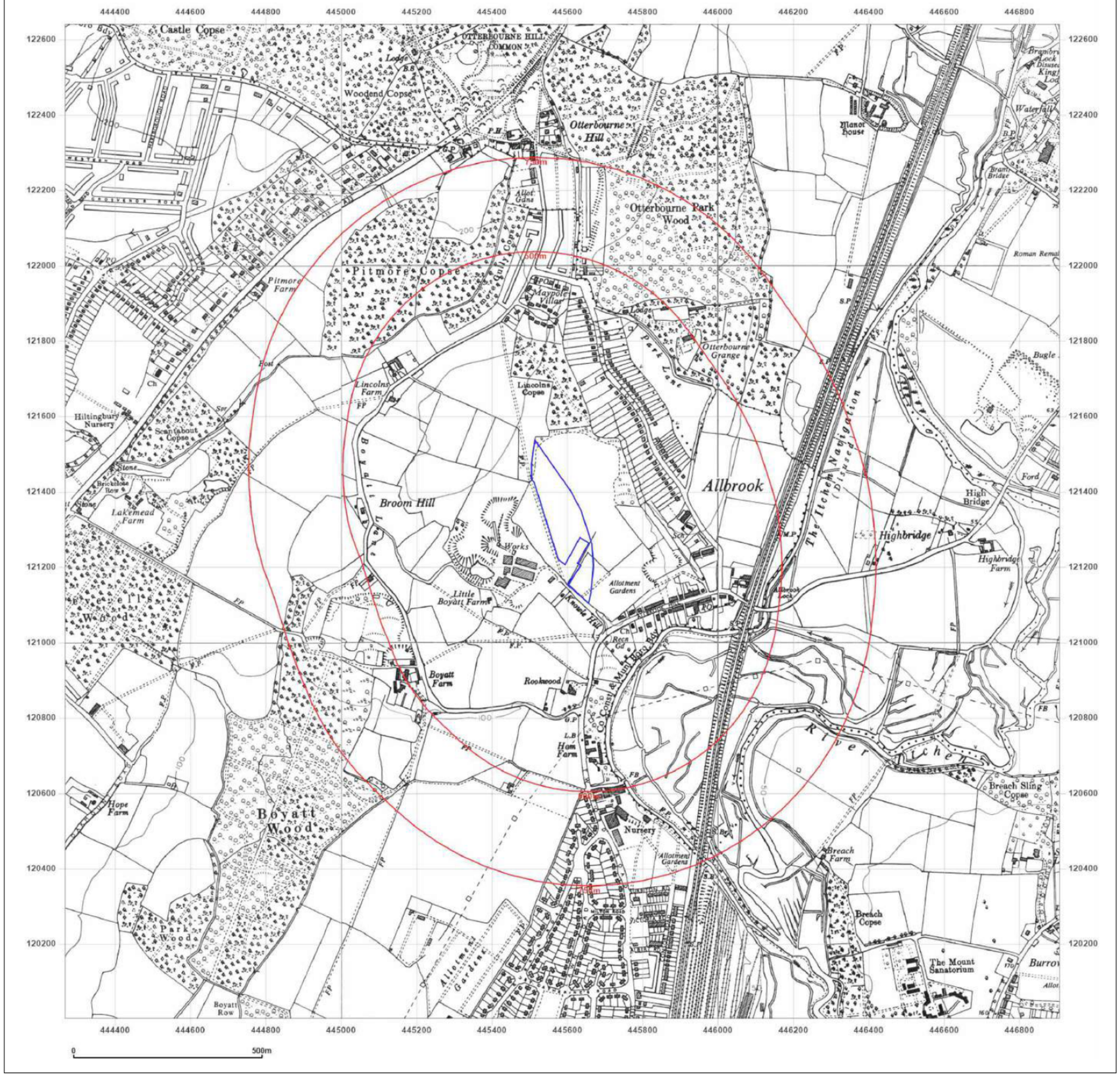
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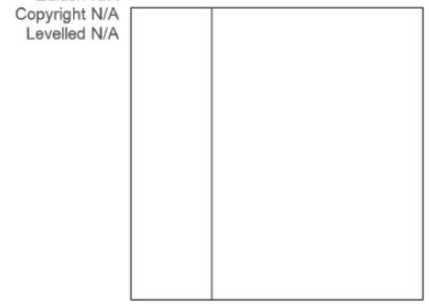
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Map date: **1957-1958**
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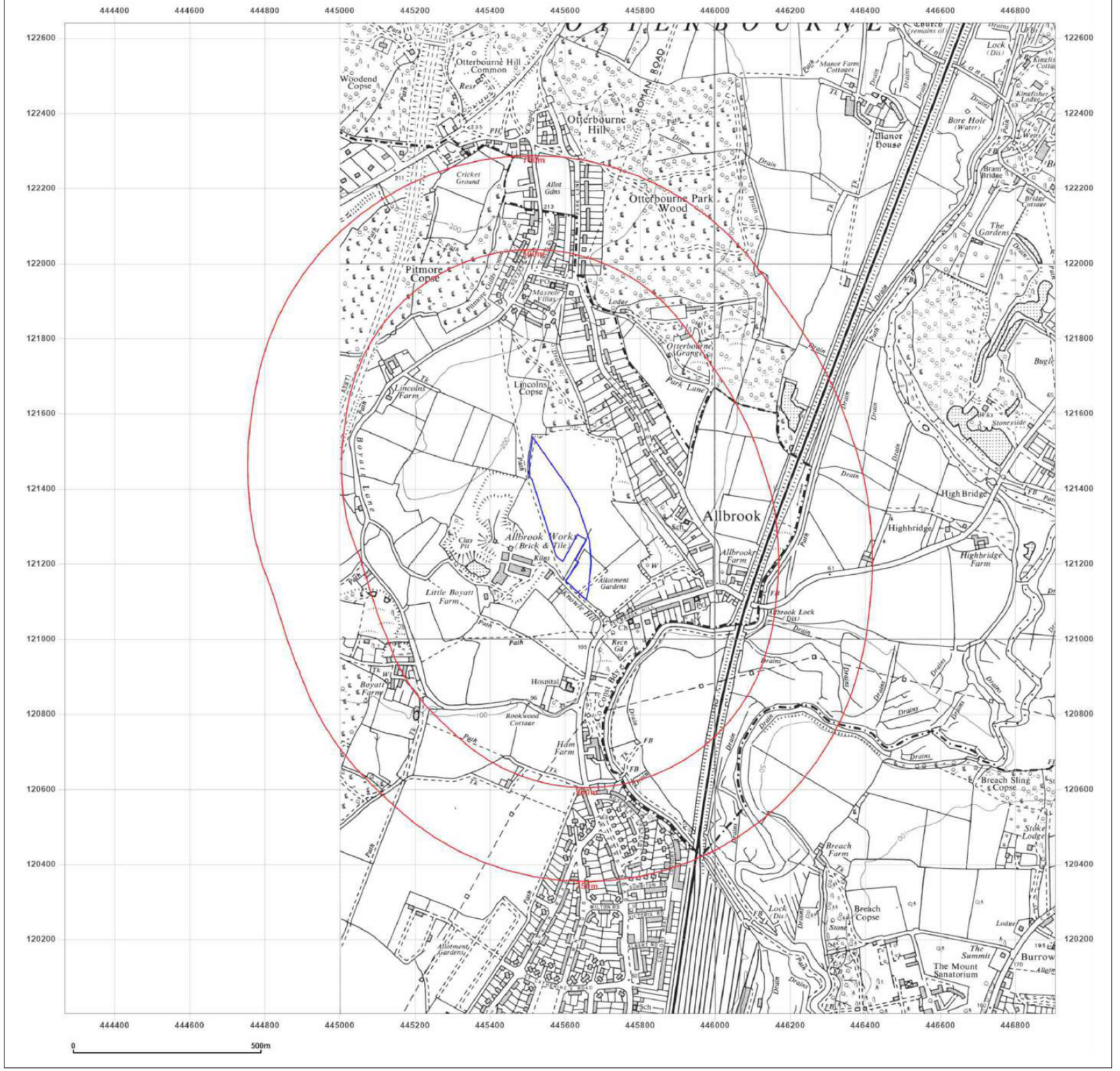
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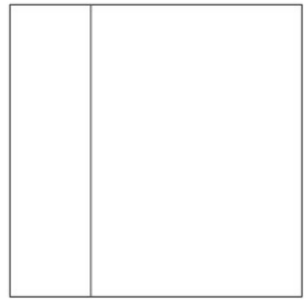
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Map Name: Provisional
Map date: **1968**
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Edition N/A
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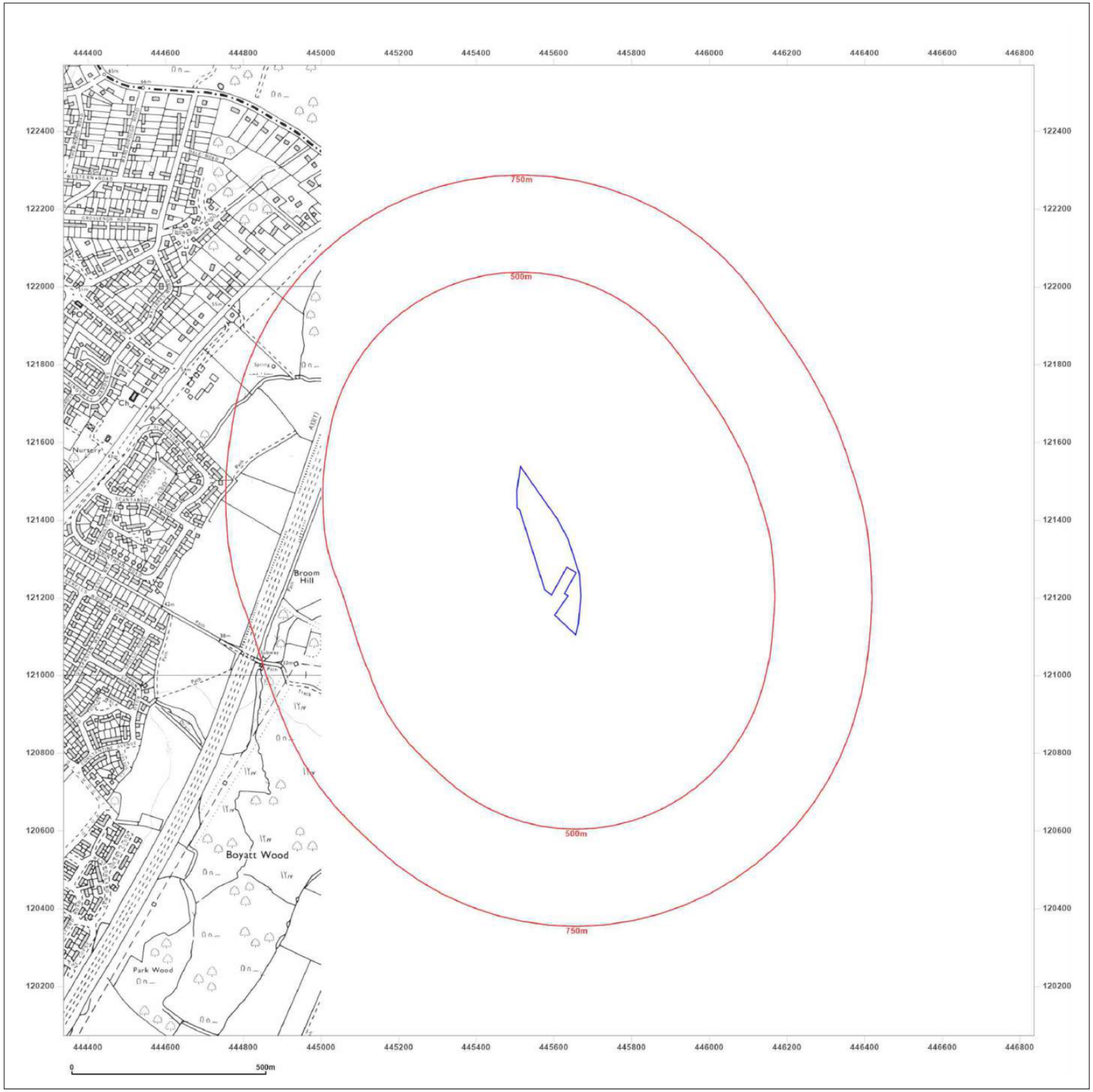
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Grid Ref: 445586, 121321

Map Name: National Grid

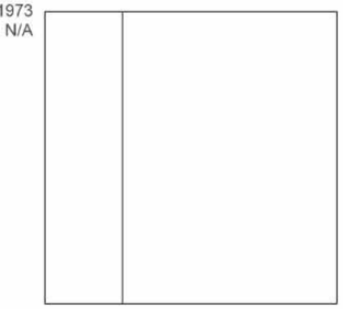
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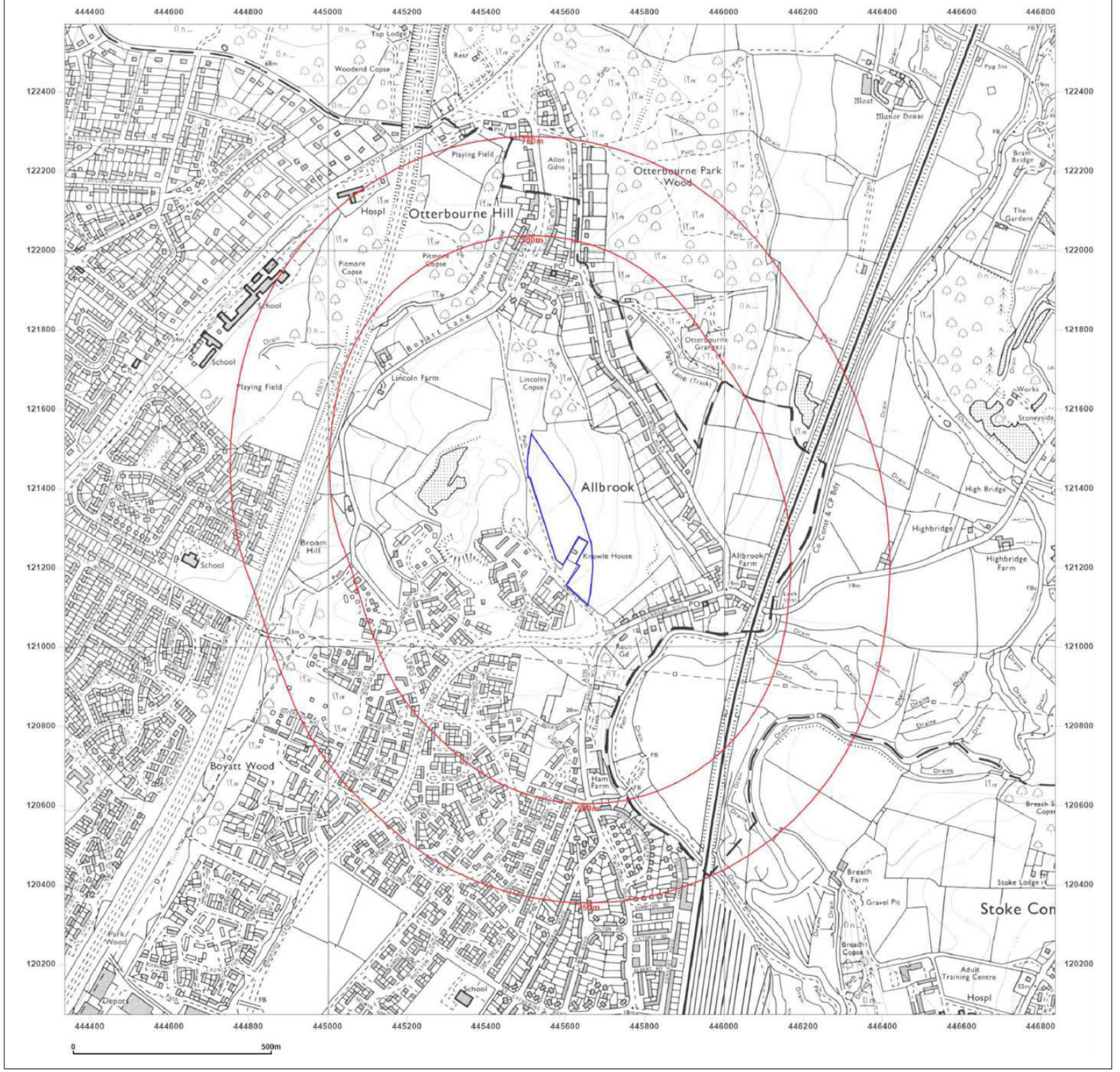
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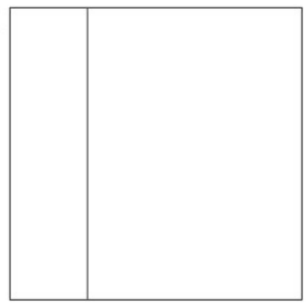
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Grid Ref: 445586, 121321

Map Name: National Grid
Map date: **1980-1981**
Scale: 1:10,000
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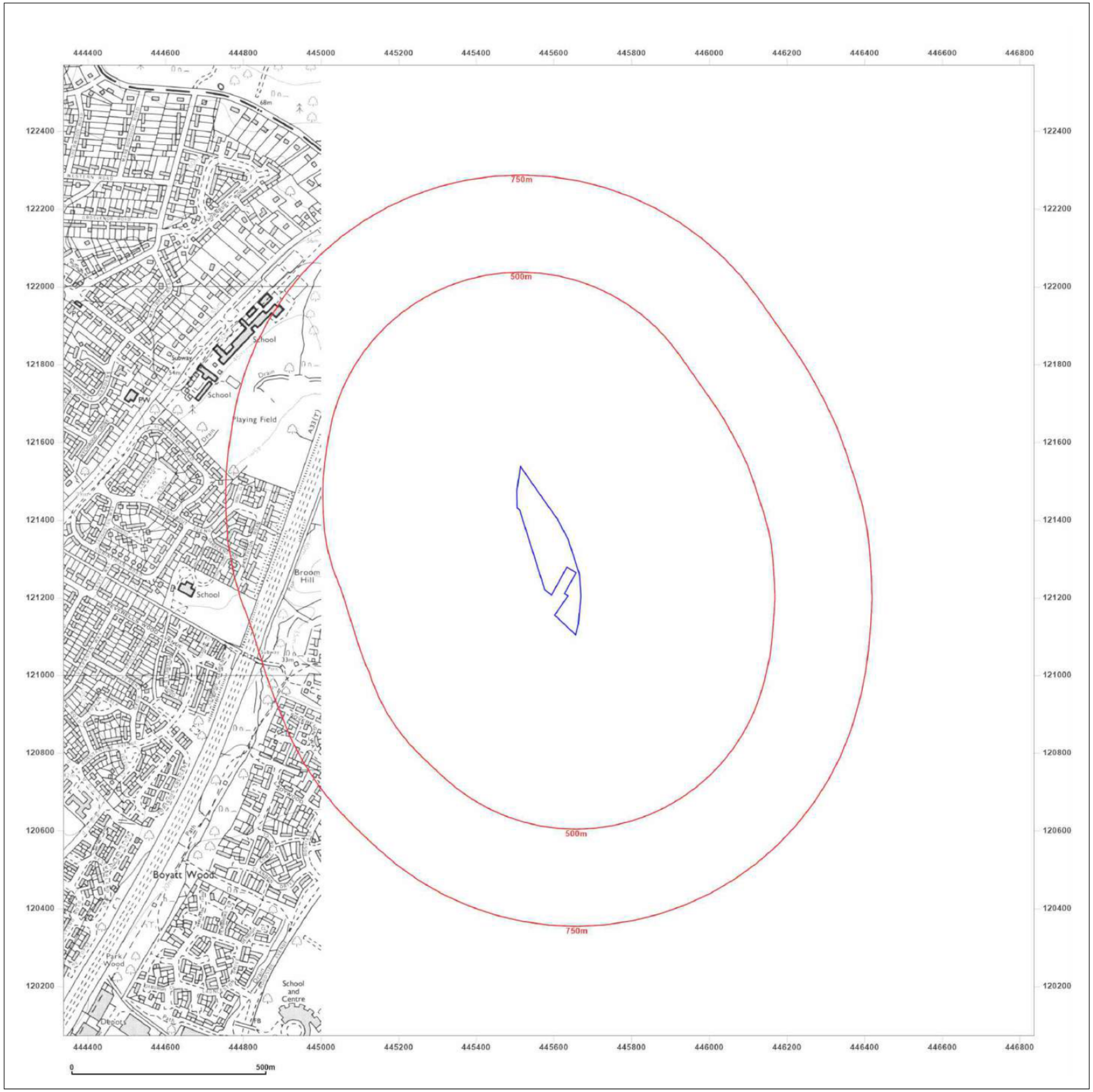
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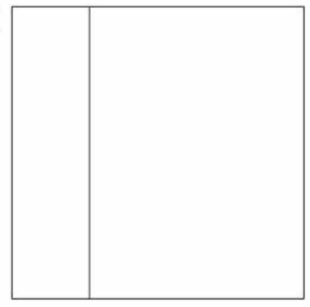
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Grid Ref: 445586, 121321

Map Name: National Grid
Map date: **1991**
Scale: 1:10,000
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Map Name: National Grid
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Groundsure INSIGHTS

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

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2010

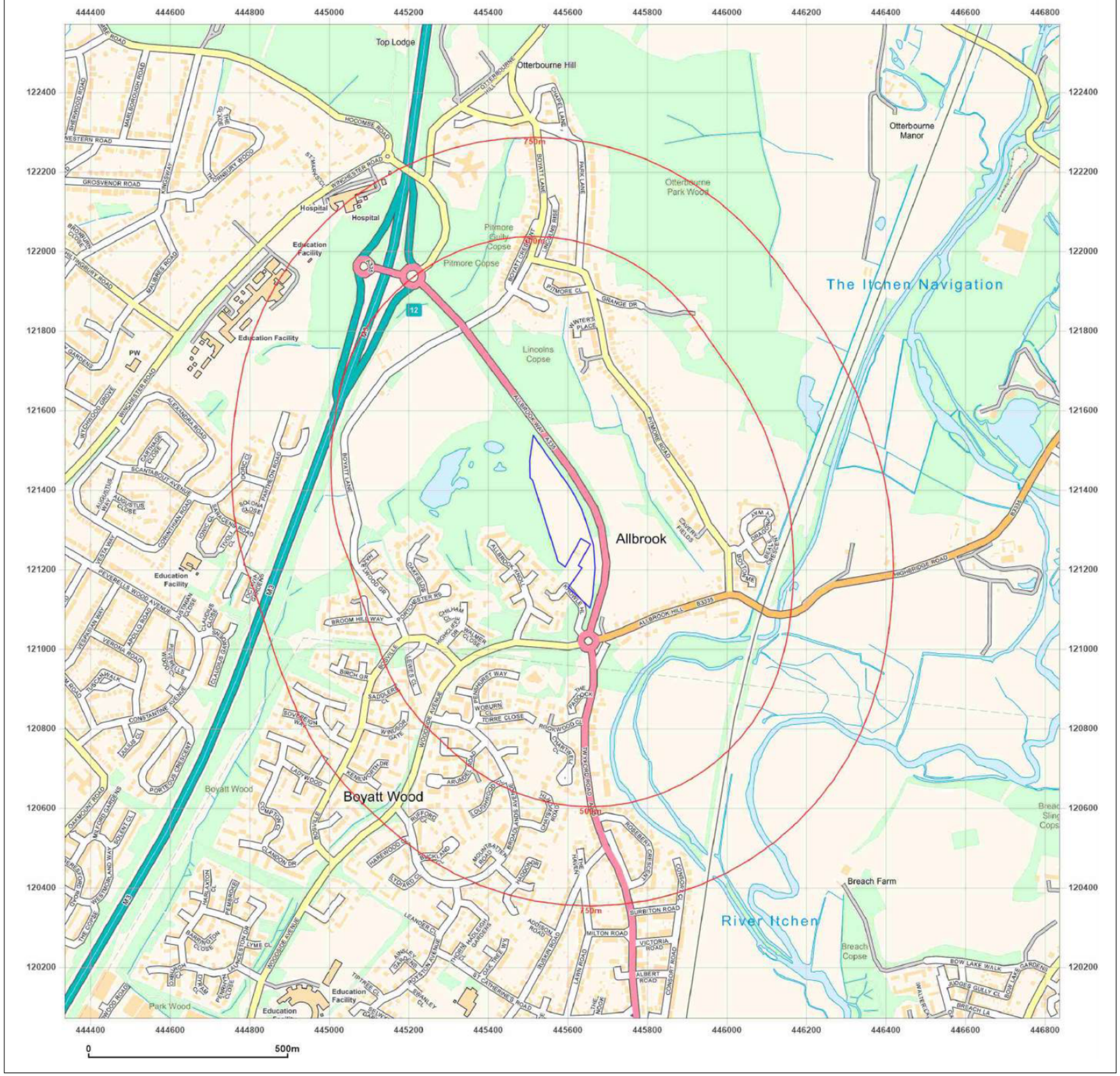
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Groundsure INSIGHTS

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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: National Grid
Map date: **2025**
Scale: 1:10,000
Printed at: 1:10,000

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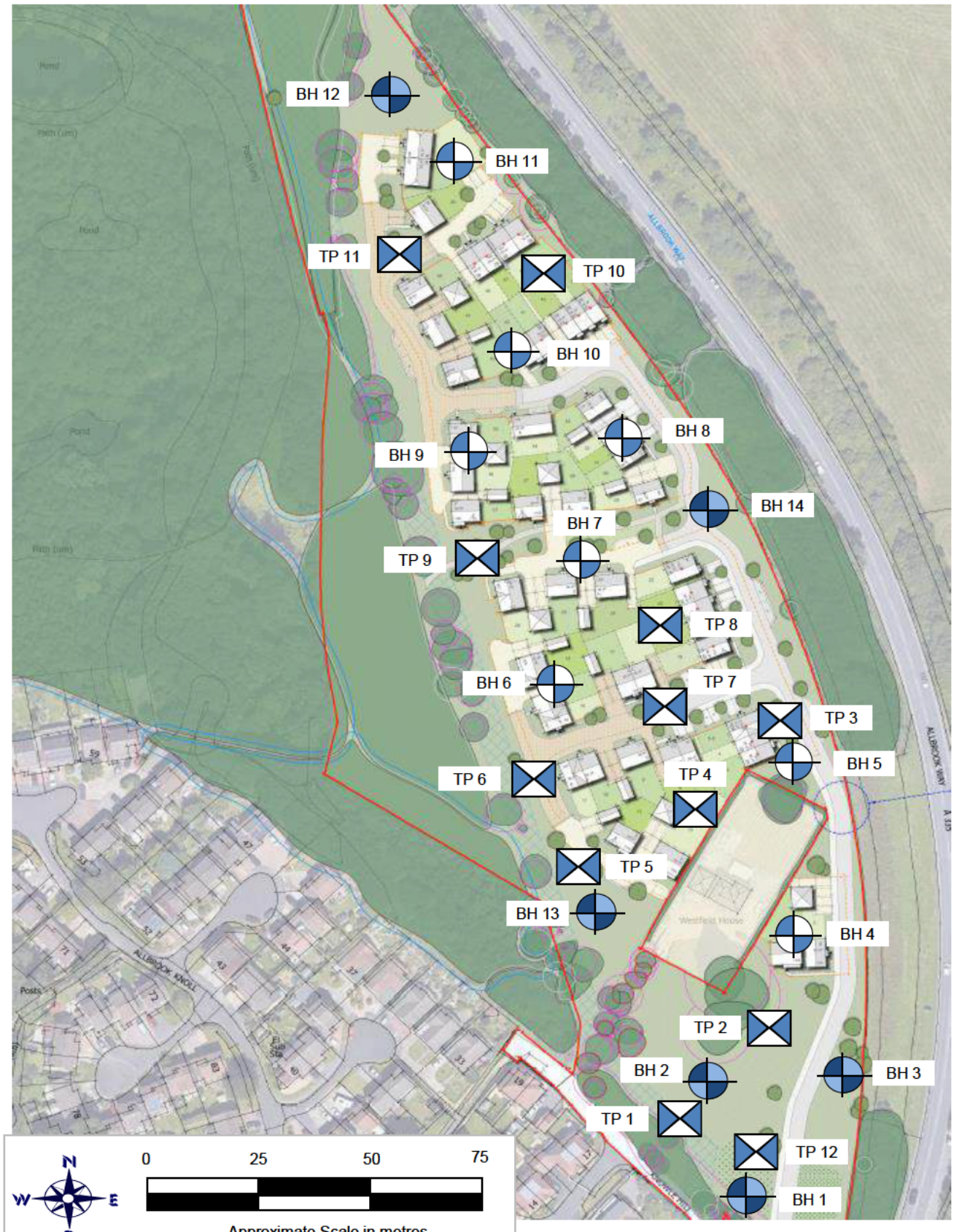
WILSON BAILEY
GEOTECHNICAL & ENVIRONMENTAL

Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Site Plan

Site Knowle Hill Site, Allbrook, Eastleigh

Client Bargate Homes



Site Plan

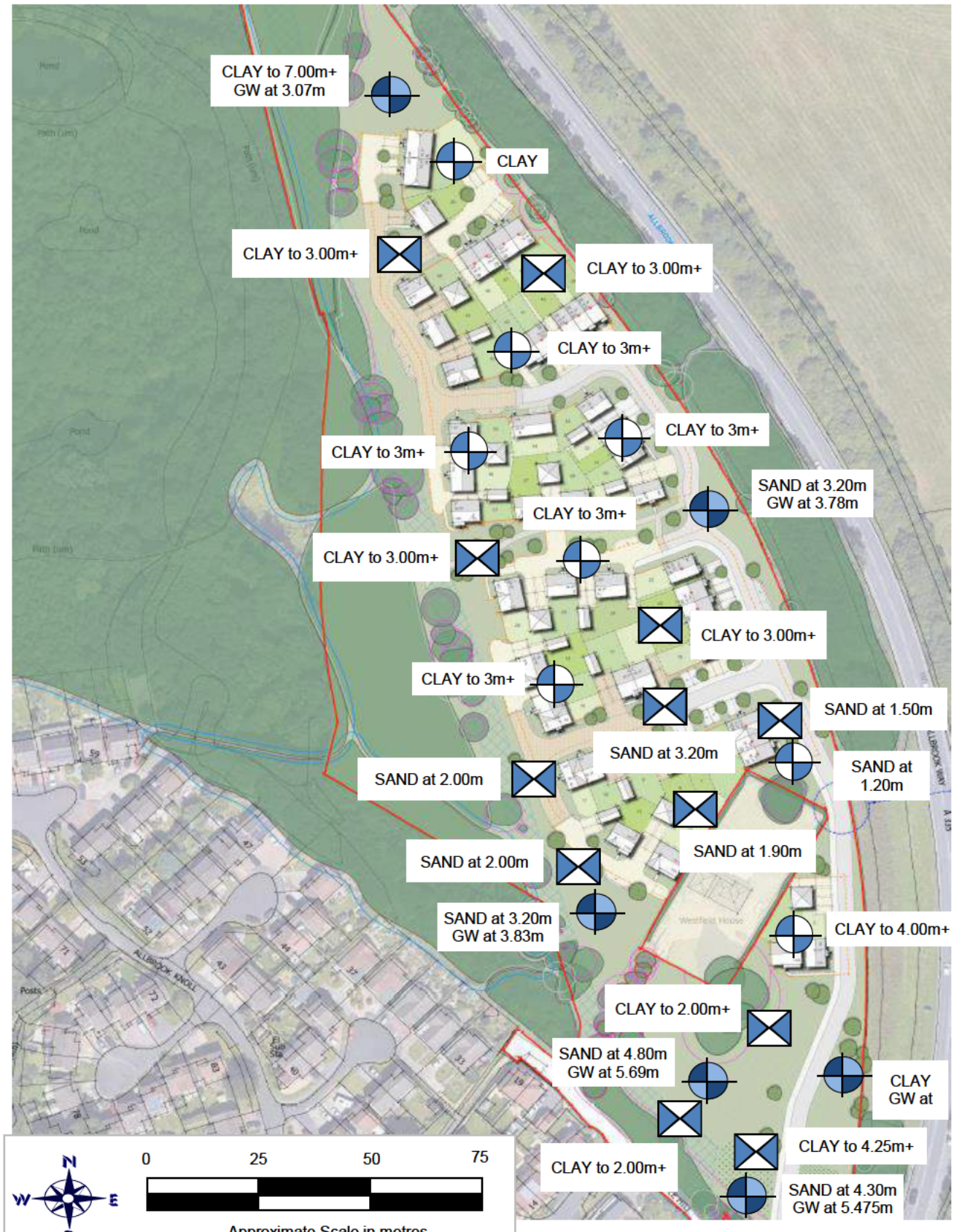
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Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

Site Plan Annotated with Ground Conditions and Infiltration Summary

Site Knowle Hill Site, Allbrook, Eastleigh

Client Bargate Homes



Ground Conditions

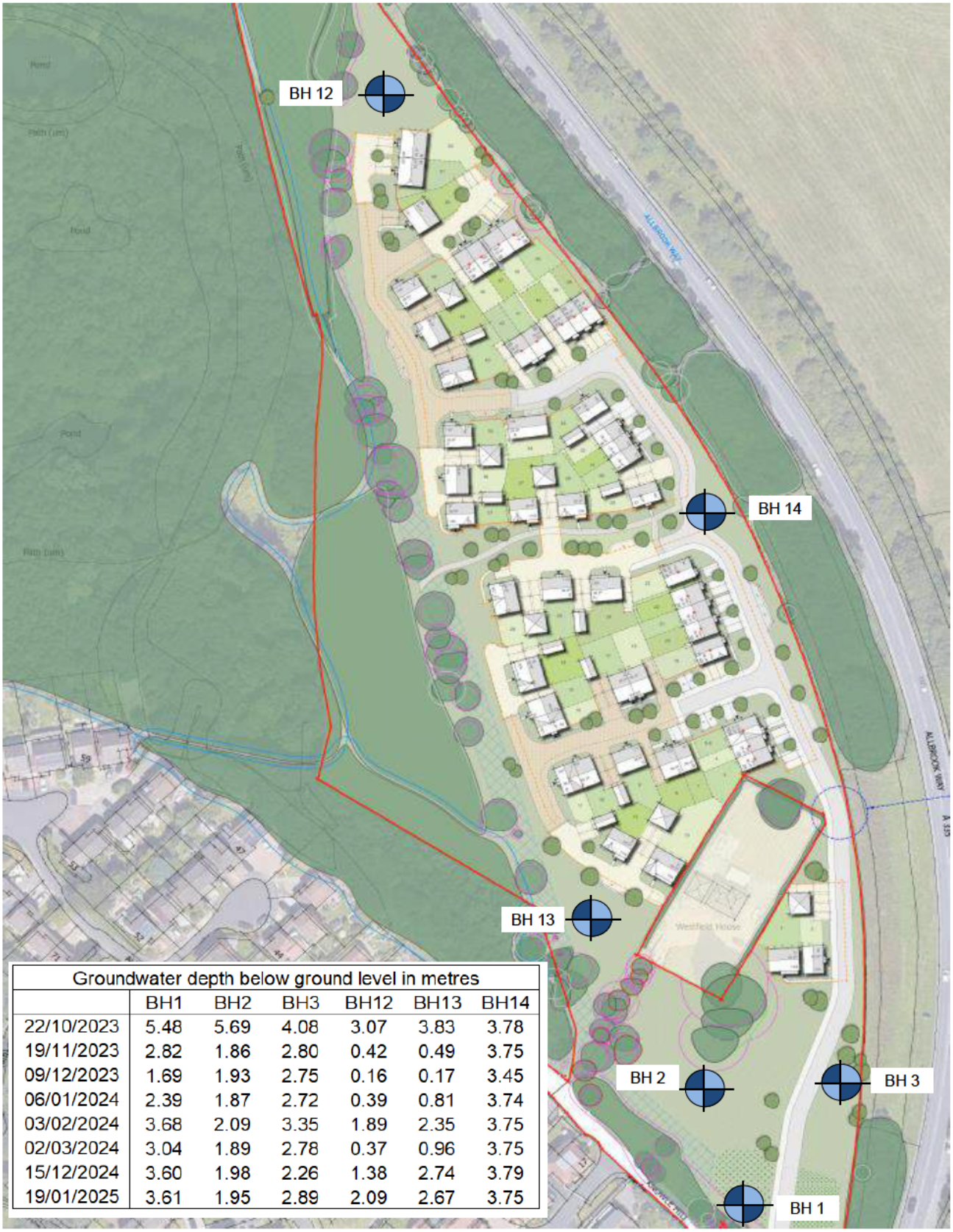
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Site Plan

Site Knowle Hill Site, Allbrook, Eastleigh

Client Bargate Homes



Groundwater depth below ground level in metres						
	BH1	BH2	BH3	BH12	BH13	BH14
22/10/2023	5.48	5.69	4.08	3.07	3.83	3.78
19/11/2023	2.82	1.86	2.80	0.42	0.49	3.75
09/12/2023	1.69	1.93	2.75	0.16	0.17	3.45
06/01/2024	2.39	1.87	2.72	0.39	0.81	3.74
03/02/2024	3.68	2.09	3.35	1.89	2.35	3.75
02/03/2024	3.04	1.89	2.78	0.37	0.96	3.75
15/12/2024	3.60	1.98	2.26	1.38	2.74	3.79
19/01/2025	3.61	1.95	2.89	2.09	2.67	3.75