

FINAL

Abbeymill Homes Ltd

Phase I Desk Study

&

Phase II

Geotechnical and Geo-Environmental Report

Land at Barkham Road

Barkham

Wokingham

RG41 4TG

Report No: 24-12-06

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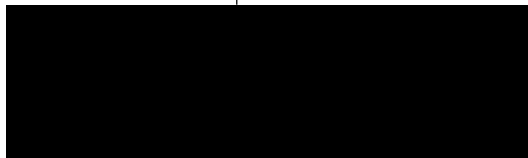
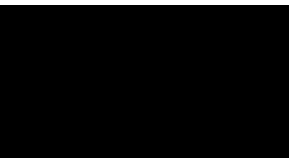
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Project Number 24-12-06

Client Name Abbeymill Homes Ltd.

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EXECUTIVE SUMMARY

Site Location	Land at Barkham Road, Barkham, Wokingham, RG41 4TG
OS Grid Reference	SU 78471 67166
Development Proposals	It is proposed to construct multiple new residential dwellings on land at Barkham Road, Barking, Wokingham, RG41 4TG. The proposals also include associated pavements, parking areas, and private soft landscaped gardens and planted areas.
Published Geology	Geological maps identify that the investigation area is directly underlain by Palaeogene Bedrock Geology of the Bagshot Formation overlying the London Clay Formation.
Topography	The topography of the investigation area sloped towards the south/southeast. Site levels ranged from approximately 70m AOD in the northwestern corner to 61m AOD in the southeastern site corner.
Site History	The site has historically been an open undeveloped paddock/field since the first available records dated 1870s. Aerial imagery from the 2000s has however identified that the site was impacted by the adjacent residential development to the west of the site, with areas of stored materials, parked vehicles and stripped earth shown across the site area. Later imagery dated 2010 shows the completed residential houses to the west, and the site shown as a grassed undeveloped field/paddock, as it did prior to the adjacent development.
Ground Conditions Encountered	The exploratory fieldwork undertaken during this investigation has identified that the site is underlain by Topsoil from ground level to a depth of 0.45m bgl. Locally Made Ground down to depths of 0.80m. The material varied across the site and consisted of seemingly reworked natural Topsoil and Bagshot Formation soils with small inclusions of brick and other man-made/introduced material. The underlying natural soils below the site included the variable cohesive and granular strata of the Bagshot Formation encountered as a clay/silt, down to a depth between 3.95m in CT3 and in excess of the base of the upslope boreholes (CT1 and CT2) at 5m bgl. In CT3, situated at the lower site area, the London clay was encountered at 3.95m (59.05m AOD), down to a depth in excess of the base of the borehole at 5m bgl.
Groundwater Encountered	Groundwater was encountered locally across the site, ranging from 1.10m and 3.70m bgl, as slow seepages in the Bagshot Formation. However, long-term monitoring at the site, identified shallower groundwater levels between 0.70m and 0.90m bgl.
Ground/Groundwater Contamination	There is no significantly elevated risk perceived to Human Health or the Environment at the site.
Foundations	Conventional shallow foundations may be employed on site. However, with groundwater encountered as shallow as 0.70m, construction (particularly in winter months) would be difficult, as sump pumping would be required to retain dry excavations. As such, it is recommended that a dewatering trial is undertaken prior to works commencing. Additionally, locally Made Ground was encountered as such footings would locally need to be at a depth of 1m bgl (and further below the perched groundwater level encountered). Furthermore, given there was localised horizons of cohesive/granular soil at founding depth, it is recommended foundations are reinforced to guard against differential settlement. Alternatively, should a piled foundation solution be utilised, then, a supplementary deep borehole investigation would likely be required by a piling contractor, aiming to undertake sampling and insitu testing and achieve a depth ranging from 10-25m.
Chemical Attack On Buried Concrete	Topsoil: DS-1 ,AC-1 Made Ground: DS-1, AC-1 Bagshot Formation; DS-1 ,AC-1 London Clay; DS-3, AC-3
Waste Soil Classification	From the results of the HazWasteOnline spreadsheets, currently, the waste soil on this site is recommended to be classified as follows. Topsoil: Non-Hazardous Made Ground: Non-Hazardous Natural Soil: Inert
Recommendations	Care should also be taken when excavating the site to retain slope stability (see section 6.5) Furthermore, we recommend a watching brief should be undertaken during the construction phase, and if during development any previously undiscovered contamination (including visual or olfactory evidence) is found, then site management should be immediately informed and inspection by a suitably qualified person should be undertaken.

This executive summary must be read in conjunction with the full report text.

1 GROUND INVESTIGATION REPORT

1.1 INTRODUCTION

Geo-Integrity Ltd were commissioned by Abbeymill Homes Ltd, via purchase order No. GH2/533, dated 5th December 2024 to undertake a Phase I Desk Study and Phase II Factual and Interpretative Geotechnical and Geo-Environmental Report on land at Barkham Road, Barkham, Wokingham, RG41 4TG, in order to inform the design and construction of the proposed development.

This report describes desk-based searches of geological, environmental and historical information, the fieldwork and laboratory testing undertaken and provides an interpretative section of the geotechnical and geo-environmental data from this investigation to inform the proposed development.

The site is located at National Grid Reference SU 78471 67166.

The report is likely to be reviewed by the Wokingham Borough Council with reference to the NPPF. Once the development is completed, and as a minimum, land must not be capable of being determined as 'contaminated land' under the terms of Part IIA of the Environmental Protection Act 1990. However, it also states that "Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner." As such, this desk study report is the first stage in investigating whether the site is likely to be considered "contaminated", in accordance with the ground conditions and pollution clause.

The objectives of this phase I and phase II interpretative report are:-

-  To undertake a site walkover to identify any potential pollution sources or geotechnical hazards on the site.
-  To gather historical, geological and environmental information.
-  To complete a preliminary site conceptual model so that potential pollutant linkages can be established and investigated further.
-  Briefly summarise the site development proposals and site setting.
-  To describe and report the fieldwork undertaken at the site.
-  To describe and report the chemical laboratory work undertaken on selected samples.
-  To describe and report the geotechnical laboratory work undertaken on selected samples.
-  To provide an interpretation of the results of this investigation with regard to the geo-environmental and waste disposal implications for the proposed development.

The investigation was performed in accordance with the general requirements of BS 5930:2015+A1-2020, BS EN 1997-2 (2009), BS EN ISO 22475-1 (2006) and other relevant related standards identified below. The initial fieldwork took place between the 14th January 2025, with supplementary investigation occurring on the 29th and 30th January 2025.

1.2 SOURCES OF INFORMATION

The following sources of information have been used to compile this report:-

-  Extracts of available historical Ordnance Survey (OS) maps covering the period from 1871 to 2025, which are presented in the Appendices.
-  Groundsure Report Ref GS-28Z-P1Z-9EP-VTS included in the Appendices.
-  The British Geological Survey (BGS) and Environment Agency (EA) websites.
-  A site reconnaissance visit undertaken on the 14th January 2025.
-  Information from various internet sites on site history and environmental setting.

It should be noted that the information provided in the desk study is obtained from independent third-party sources. It is provided in good faith, but no guarantee can be provided as to its accuracy. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources.

1.3 DEVELOPMENT PROPOSALS

It is proposed to construct multiple new residential dwellings on land at Barkham Road, Barking, Wokingham, RG41 4TG. The proposals also include associated pavements, parking areas, and private soft landscaped gardens and planted areas.

2 PHASE I DESK STUDY

2.1 WALKOVER SURVEY

A site walkover survey was initially undertaken on the 14th of January 2025. Site location and layout plans are included in the Appendices, along with a selection of photographs taken during the survey.

The site is located to the south of the Barkham area of Wokingham within a residential/rural area situated between Barkham Road and Edney's Hill (road).

The investigation area consists of a roughly rectangular 0.6ha plot, consisting of an open undeveloped field/paddock area.

The topography of the investigation area sloped towards the south/southeast. Site levels ranged from approximately 70m AOD in the northwestern corner to 61m AOD in the southeastern site corner.

The investigation area is bordered by mature trees to the north and east, fronting Barkham Road and Edney's Hill (road) respectively. The southern and western field boundaries consisted of fences demarking the boundary with the open paddock to the south and the neighbouring residential dwellings of Barkham Road to the west. Site access was available from a field gate off Edney's Hill (road).

During the site walkover, there were no significant potential point sources of contamination encountered.

Information supplied by the client did, however, identify two sewers which crossed the eastern section of the site (north to south).

3 GEOLOGY

3.1.1 Published Geology

Reference to the British Geological Survey website and Sheet 268; Reading; 2000; indicates that the site is directly underlain by Palaeogene Bedrock Geology of the Bagshot Formation overlying the London Clay Formation.

No superficial soils, artificial worked or Made Ground deposits are recorded locally to the investigation area.

The Bagshot Formation is generally represented as a pale yellow-brown, fine to coarse grained sand, which is locally clayey, and increases with clay content towards its base. In this area, the formation

occurs up to around 25m in thickness, and given the proximity to nearby underlying geological strata, recorded 71m southeast, it is likely that the formation is significantly thinner beneath the site.

The London Clay is described in the BGS memoir as “mainly comprises bioturbated or poorly laminated, blue-grey or grey-brown, slightly calcareous, silty to very silty clay, clayey silt and sometimes silt, with some layers of sandy clay. It commonly contains thin courses of carbonate concretions (‘cementstone nodules’) and disseminated pyrite”. The London Clay Formation is encountered up to approximately 100m in thickness beneath the site area. Geological maps show the formation to daylight 71m southeast of the site.

3.2 HISTORY OF THE SITE

The history of the site has been established by the review of freely available information and old Ordnance Survey maps going back to 1871. The maps and any other relevant information are included in the appendices and indicated the following.

3.2.1 Ordnance Survey

The earliest maps dated 1870s, record the investigation area to be located within an open, undeveloped fields, called Coppid Hill. Both the contemporary northern and eastern boundaries are recorded along the alignments with Edney’s Hill and Barkham Roads.

Later in the 1890s, residential dwellings are recorded to the west and southeast of the site, generally matching footprints of present day houses.

Between 1933 and 1967, the site has been split into two areas, likely paddocks associated with a recorded riding stables situated to the southwest.

Between 2001 and 2010, the 1:10,000 maps indicated that the residential development to the west of the site was completed.

No further changes are shown at the site to the present day.

3.2.1.1 Aerial Imagery

Aerial imagery is available for the site from 1999, which shows the site much to its present day layout as a singular open undeveloped field/paddock.

Imagery from 2003 and 2005, however, identifies that the site was impacted by the adjacent development of the residential development to the west of the site, with areas of stored materials, parked vehicles and stripped earth shown.

Later imagery dated 2010, however shows the completed residential houses to the west, and the site again shown as a grassed undeveloped field/paddock. A mowed circular track is notable on site, and on the 2019 aerial image shows a helipad (possibly temporary) within the western site area, later absent from 2020.

3.3 UNEXPLODED ORDNANCE AND BOMB SITES

Reference to the site-specific unexploded bomb risk map (UXO) produced by Zetica indicates that the site is located in an area where there is a low risk of unexploded ordnance. Low risk regions are those with a bombing density of <15 bombs per 1000 acres or less.

Care is however required when assessing the risk for specific sites where the risk may be higher because of local wartime activity, such as munitions factories, pivotal infrastructure, airfields and dummy airfields, many of which were removed from historical maps in the interest of national security.

3.4 HYDROLOGY

The nearest surface watercourse is an inland river (drain feature) located approximately 83m east of the site.

There are no active current surface water abstraction licenses located within 1000m of the site.

3.5 HYDROGEOLOGY

Reference to the Environment Agency website indicates that the site is located on the following aquifers and aquicludes;

-  Secondary A Aquifer – associated with the Bagshot Formation beneath the site.
-  Unproductive Strata - associated with the underlying London Clay Formation,

The aquifer designation data is based on geological mapping provided by the British Geological Survey. The maps are divided into two different types of aquifer designation:

Superficial (Drift) - permeable unconsolidated (loose) deposits. For example, sands and gravels.

Bedrock - solid permeable formations e.g., sandstone, chalk and limestone.

For each type, there are four designations: -Principal, Secondary A, Secondary B and Unproductive Strata, ranked by importance.

The site is recorded to be located outside of any Source Protection Zones.

A Source Protection Zone (SPZ) is a designated area around a well or abstraction borehole. An SPZ is generally divided into three zones (but can be a fourth).

There are no recorded groundwater abstraction licenses located within 1000m of the site.

There have been two recorded pollution incidents to controlled waters/land within the surrounding area;

-  Category 3 - minor land impact 113m west of the site in 2003 regarding inert materials and wastes (construction and demolition materials and wastes) – no impact (category 4) to controlled waters/air.
-  Category 3 – minor water impact 116m west of the site in 2001 regarding suspended soils/contaminated water – no impact (category 4) to land/air.

Both of these are recorded as minor impacts, and occurred in excess of 20 years ago, and are a significant distance from the site, where any contaminants are unlikely to have migrated to the site, therefore it is considered that there is no significant risk to the site area from these instances.

3.6 WASTE TREATMENT AND LANDFILL SITES

3.6.1 Landfills

There are no records of operational or historical landfill sites within the vicinity of the site area.

3.6.2 Other Waste Treatment Sites

There are no records of other waste treatment sites in close vicinity to the site area.

The closest facility is recorded 296m northwest of the site and is a Metal Recycling Site (Vehicle Dismantler) and ELV Facility, considered unlikely to impact the site area.

3.7 INDUSTRIAL USAGE SITES

The past/present potentially contaminative activities that have been found within 250m of the site, include the following;

-  Livestock Farm – 16m southeast of the site.
-  Electrical substation - 76m northwest of the site
-  Plant Nursery – 81m southeast of the site prior to 1961)
-  Vehicle Garage – 98m west of the site (prior to 1993)

Records also show an inactive/ obsolete fuel filling station identified 173m west of the site on Barkham Road.

However, these instances are unlikely to have significantly impacted the site area itself.

3.7.1 Historical Site Usage

The site has historically been an open undeveloped paddock/field since the first available records dated 1870s.

Aerial imagery from the 2000s has however identified that the site was impacted by the adjacent residential development to the west of the site, with areas of stored materials, parked vehicles and stripped earth shown across the site area.

Later imagery dated 2010 shows the completed residential houses to the west, and the site shown as a grassed undeveloped field/paddock, as it did prior to the adjacent development. Notably, however, since 2010 a mowed circular track is notable on site, and on the 2019 aerial imagery a helipad (possibly temporary) is identified within the western site area, later then absent from 2020.

Therefore, it is considered that Made Ground is possibly present beneath the site, relating to this historical usage, particularly as a construction compound/store area.

Additionally, given the identified parked vehicles, small-scale areas of TPH/PAHs may be present where vehicles have historically been parked/stored.

Notably, however, no significant or obvious identification of any potential contaminantative sources at the investigation area or surrounding area, identified during the site walkover.

3.8 WORKED OUT GROUND/MADE GROUND

Information supplied by the desk study material identified that no instances of worked ground are recorded within the surrounding area.

3.9 GROUND GASES

3.9.1 Radon

Information obtained from the BGS and the National Geoscience Information Service indicates that the site lies within an area where less than 1% of homes exceed the action level of 200Bq/m³ for radon gas. Therefore, no radon protection measures are necessary in the construction of new dwellings or extensions, on this site.

However, should the development proposals change to include a basement, as radon levels may be higher in an underground room and in accordance with BRE Quick Guide 7, Reducing Radon, Underground Rooms – Cellars and Basements, 2015, mitigation measures should be included in any basement design.

3.9.2 Landfill Gasses

In accordance with BS8576:2013, the site has been provisionally assessed for the risk of ground gases. This has been done with reference to “A pragmatic approach to ground gas risk assessment for the 21st Century” Card and Wilson, 2011.

-  No credible sources or pathways for landfill gas migration from an off-site landfill have been identified.
-  The site has not been a registered landfill
-  The Made Ground is not expected to be 5m deep or an average of 3m in thickness at the site.
-  The site is not located on a carbonate-rich rock that can produce carbon dioxide.
-  Radon protection measures are not recommended for this site.
-  The site does not significantly lie on a potential naturally organic soil or humic or degradable Made Ground soil.

Therefore, it is considered that the site is unlikely to be at risk from ground gases.

3.10 POTENTIAL GEOTECHNICAL HAZARDS

The desk study information identified that the site does not lie within an area likely to be affected by coal mining or non-coal mining activities.

The risk of naturally occurring geotechnical hazards at the site is recorded in the Groundsure report to be as follows:

Ground Stability Hazard	Maximum Hazard Potential Rating
Collapsible deposits	Very Low
Compressible deposits	Negligible
Ground dissolution of soluble rocks	Negligible
Shrinking and swelling clays	Negligible
Landslides	Very Low
Running sand	Low

The hazard potential rating for the site are all very low (or lower), however notably the underlying London Clay formation, which daylights some 71m south of the site, is shown to have elevated risks associated with its presence near surface. Therefore, dependant on the depth to cohesive soils, the effects of any trees or hedgerows within desiccation influencing the distance of the development (as described in the NHBC Standards, Chapter 4.2) should also be considered during design and construction. Where such vegetation is within the influence of new buildings, then foundations will need to extend to depths where soils are moisture/volume stable and appropriate precautionary foundation and floor slab design measures adopted in accordance with the NHBC Building Near Trees protocol.

Additionally, given the propensity for the Bagshot Formation to increase in fines fraction towards the base and underlying London Clay Formation, it is possible foundations may cross varying strata (cohesive/granular). Therefore, to combat differential settlement, shallow foundations may need to be reinforced.

3.11 POTENTIALLY SENSITIVE LAND USES

The site is located within a Nitrate Vulnerable Zone.

4 INITIAL CONCEPTUAL SITE MODEL

In accordance with the Environment Agency guidance *LCRM Land Contamination: Risk Management*, (EA, 2019), this desk study and site reconnaissance report constitutes a preliminary risk assessment in order to establish the potential presence of pollutant linkages.

The site has historically been an open undeveloped paddock/field since the first available records dated 1870s.

Aerial imagery from the 2000s has however identified that the site was impacted by the adjacent residential development to the west of the site, with areas of stored materials, parked vehicles and stripped earth shown across the site area.

Later imagery dated 2010 shows the completed residential houses to the west, and the site shown as a grassed undeveloped field/paddock, (as it did prior to the adjacent development). Notably, however, since 2010 a mowed circular track is notable on site, and on the 2019 aerial imagery a helipad (possibly temporary) is identified within the western site area, later then absent from 2020.

Therefore, it is considered that Made Ground is possibly present beneath the site, relating to this historical usage, particularly as a construction compound/store area. Additionally, given the identified parked vehicles, small-scale areas of TPH/PAHs may be present where vehicles have historically been parked/stored.

Notably, however, no significant or obvious identification of any potential contaminantative sources at the investigation area or surrounding area were identified during the site walkover.

It is considered that there may be a potential risk of contamination at the site, which may impact both human health and the environment, via a source/pathway/receptor's linkage.

Potential Source	Potential Pathway	Potential Receptor	Considered Risk
Historic contaminants (such as metals and inorganic substances) within the ground from long human history and usage of the site as a development compound, etc	Ingestion, inhalation, or absorption from direct contact with soil.	End Users	Low/Medium risk
	Leaching through the ground	Controlled Waters	Low/Medium risk
	Possible contact during work phase	Construction Workers	Low/Medium risk
Historic hydrocarbons within the ground from long human history and usage of the site as a development compound, etc	Ingestion, inhalation, or absorption from direct contact with soil.	End Users	Low/Medium risk
	Volatile vapours possible	End Users	Low/Medium risk

Potential Source	Potential Pathway	Potential Receptor	Considered Risk
	Leaching through the ground	Controlled Waters	Low/Medium risk
	Possible contact during work phase	Construction Workers	Low/Medium risk
	Possible contact	Underground services	Low/Medium risk
Historic asbestos within the made ground from long human history and usage of the site as a development compound, etc	Inhalation from exposed soil.	End Users	Low risk
	Possible contact during work phase	Construction Workers	Low risk

Therefore, as part of the Phase II investigation, both a Human Health and Environmental risk assessment has been undertaken.

5 PHASE II INTRUSIVE INVESTIGATION

5.1 SITE WORK AND SAMPLING STRATEGY

The fieldwork was undertaken in accordance with BS 5930:2015+A1:2020, BS EN 1997-2 (2007) (NA 2009) and BS EN ISO 22475-1 (2006), with the exploratory locations being selected by Geo-Integrity Ltd. The exploratory hole locations can be seen in the Appendices.

The initial fieldwork was undertaken on the 14th January 2025 and consisted of three continuous tube (window) sampler boreholes to 5m bgl and three in-situ TRL DCP-CBR probes.

The second phase of fieldwork was undertaken between the 29th and 30th January 2025 and consisted of four machine excavated trial pits, three of which were undertaken in general accord with 'BRE 365'.

Exploratory Hole	Location Reasoning
CT1,2,3	Located across the site area to identify ground conditions and how they change as the slope descends.
SA1,2,3	Located across the site area to identify ground conditions, their permeability and how they change as the slope descends.
CBR1,2,3	Located in proposed areas of hardstanding/pavements across the site area,
TP1	Located in the west of the site, where the majority of disturbance to soils, sorted materials and the helipad were identified on historical plans.

Disturbed samples were taken at selected depths down to the base of the holes for subsequent laboratory testing and inspection. On completion, all exploratory holes were carefully backfilled with arisings in thin layers, ensuring that the excavated material was replaced in the same order as it had been removed.

Additionally, within CT3 (located near the base of the slope, and closer to the boundary with the underlying unproductive London Clay) a groundwater monitoring standpipe was installed to 5.0m depth.

5.2 GROUND CONDITIONS

5.2.1 Summary

The site and laboratory test work revealed that the general succession of strata can be represented by Topsoil overlying localised Made Ground deposits, overlying the Bagshot Formation, overlying the London Clay Formation. The downward succession was generally consistent across the site and was in accordance with published geology. Descriptions of the strata encountered are given on the exploratory hole records, and are summarised below. Further information is provided on the exploratory hole logs within the appendices.

5.2.2 Topsoil

Encountered in each of the exploratory holes (TP1) from ground level to a depth of between 0.10m and 0.45m bgl. The material generally consisted of a soft, dark-brown, silty sandy organic clay.

5.2.3 Made Ground

Encountered at two of the test locations CT2 and CT3, from beneath the Topsoil at depths of 0.10m and 0.15m respectively, down to depths of 0.80m (CT2) and 0.25m (CT3). The material varied across the site and consisted of seemingly reworked natural topsoil and Bagshot Formation soils with small inclusions of brick and other man-made/introduced material.

5.2.4 Bagshot Formation

Encountered at each of the exploratory locations from depths of between 0.10m and 0.80m below ground level, down to a depth between 3.95m and in excess of the base of the upslope boreholes (CT1 and CT2) at 5m bgl.

Represented in general as a variable cohesive and granular strata, consisting of bedded layers of mottled light brown and grey silty very sandy slightly gravelly clay, and clayey very sandy silt. The gravel component consisted of a fine to coarse, rounded flints.

Laboratory tests undertaken on representative samples revealed moisture contents ranging from 23% to 28%, a plasticity index ranging from 13% to 20% and a modified plasticity index ranging from 13% to 20%, which equates to an NHBC Volume Change Potential of Low.

SPT 'N' values undertaken within the boreholes ranged from 6 to 22, the penetration resistance of the strata generally increased with depth and the results are interpreted to indicate generally firm becoming stiff clay soils.

5.2.5 *London Clay Formation*

Encountered near the base of the slope in CT3 at a depth of 3.95m bgl (59.05m AOD), down to a depth in excess of the base of the borehole at 5m bgl.

The boundary between the overlying Bagshot Formation and underlying London Clay Formation is transitional. The transition between these two formations is not always sharp and can vary depending on the location. In some areas, there may be a gradational change from the clayey sediments of the London Clay to the sandy sediments of the Bagshot Formation. This gradational boundary reflects changes in depositional environments, as sea level and sediment supply transitioned.

On site this is represented as two identified layers;

-  From 3.95m to 4.65m, a stiff dark brown silty slightly sandy clay.
-  From 4.65m a Stiff grey silty clay typical of the main body of the London Clay was encountered.

Laboratory tests undertaken on a representative sample revealed moisture content of 23%, a plasticity index of 12% and a modified plasticity index of 12%, which equates to an NHBC Volume Change Potential of low.

SPT 'N' values undertaken within the borehole held at 21 at 4m and 5m depth, and the results are interpreted to indicate stiff clay soils.

5.2.6 *Groundwater*

Groundwater was encountered locally across the site, ranging from 1.10m and 3.70m bgl, as slow seepages in the Bagshot Formation.

Monitoring of the standpipe within CT3 positioned near the base of the slope, and closer to the boundary with the underlying unproductive London Clay revealed the groundwater levels between

0.70m and 0.90m bgl. Monitoring was undertaken within the borehole standpipe at CT3 as part of this investigation, on four occasions (the 24th and 29th January, and the 4th and 10th February 2025).

5.2.7 BRE365 Infiltration Testing

The three exploratory holes (SA1, SA2 & SA3) were tested for their infiltration potential using the general methods set out in BRE 365. However, calculated infiltration rates were not possible as insufficient drop in water levels was recorded over the 24 hour test period. Notably SA2 (where groundwater was encountered) recorded a rise in groundwater of 22cm.

5.2.8 Sulphate and pH Tests

Soluble sulphate and pH tests were carried out on four soil samples recovered from the exploratory holes. These recorded values as shown in the table below:

Parameter	Range
Soluble Sulphate (mg/l)	13 – 71
Total Sulphur %	0.63
Sulphate (Acid Soluble) %	0.04
pH units	6.6 – 7.2

5.2.9 California Bearing Ratio (CBR) Tests

In-situ TRL Dynamic Cone Penetrometer (DCP) tests were undertaken within the near-surface Made Ground and underlying Bagshot Formation soils, at three locations within the proposed pavement area to the east of the site.

Results per stratum are given below;

Strata	Equivalent CBR (%)
Made Ground	7-10
Bagshot Formation	5-26

5.2.10 Evidence of Contamination

No obvious or significant contamination was identified within the natural or Made Ground soils encountered during the field work. However, some man-made materials were encountered within the Made Ground such as brick, which may contain elevated levels of possible contaminants. Therefore, chemical testing has been undertaken at the site, see environmental risk assessments below.

5.3 GEOENVIRONMENTAL TESTING

Geo-environmental laboratory testing was scheduled by Geo-Integrity on four soil samples recovered during the fieldwork. The testing was carried out at an MCERTS and UKAS accredited laboratory. The results are presented in the Appendices.

Soil samples were tested for a varied suite containing the following

-  Metals and inorganic substances
-  Speciated Polyaromatic Hydrocarbons (PAH)
-  Benzene, Toluene, Ethylbenzene and Xylene (BTEX)
-  Total Petroleum Hydrocarbons (TPH), with eight band split
-  The presence or absence of Asbestos.

In addition, a single sample was tested for a suite of hydrocarbons, volatile organic compounds (VOCs), and Semi-volatile organic compounds (SVOCs) as part of the UKWIR Suite to assess whether barrier pipe is required for underground water pipes.

6 GEOTECHNICAL INTERPRETATIVE SECTION

6.1 GENERAL GROUND CONDITIONS INTERPRETATION

The exploratory fieldwork undertaken during this investigation has identified that the site is underlain by Topsoil from ground level to a depth of between 0.10m and 0.45m bgl. Locally Made Ground was encountered in CT2 and CT3 from beneath the Topsoil at depths of 0.10m and 0.15m respectively, down to depths of 0.80m (CT2) and 0.25m (CT3). The material varied across the site and consisted of seemingly reworked natural Topsoil and Bagshot Formation soils with small inclusions of brick and other man-made/introduced material.

The underlying natural soils below the site included the variable cohesive and granular strata of the Bagshot Formation encountered as a mottled light brown and grey silty very sandy slightly gravelly clay, and clayey very sandy silt, down to a depth between 3.95m in CT3 and in excess of the base of the upslope boreholes (CT1 and CT2) at 5m bgl.

In CT3, situated at the lower site area, the London clay was encountered at 3.95m (59.05m AOD), down to a depth in excess of the base of the borehole at 5m bgl. The boundary between the overlying Bagshot Formation and underlying London Clay Formation is transitional and on site this is represented as two identified layers, incorporating an upper stiff dark brown silty slightly sandy clay, from 3.95m to 4.65m, underlain by a stiff grey silty clay (typical of the main body of the London Clay).

Groundwater was encountered locally across the site, ranging from 1.10m and 3.70m bgl, as slow seepages in the Bagshot Formation. However, long-term monitoring at the site, identified shallower groundwater levels between 0.70m and 0.90m bgl.

The Phase I site review identified an elevated risk from shrinking and swelling clays. Laboratory tests confirm this and have identified that the clay soils of the Bagshot Formation and underlying London Clay exhibit a low volume change potential to depth.

Additionally, given that the underlying natural soils are predominantly cohesive deposits, the effects of any trees or hedgerows, within desiccation influencing distance of the development (as described in the NHBC Standards, Chapter 4.2), should also be considered during design and construction. Where such vegetation is within influence of new buildings, then foundations will need to extend to depths where soils are moisture/volume stable and appropriate precautionary foundation and floor slab design measures adopted in accordance with the NHBC Building Near Trees protocol.

Furthermore, review of the laboratory classification tests undertaken on cohesive soils tested from the site identifies that the soils are not significantly desiccated.

6.2 EXCAVATIONS

Conventional excavation equipment and plant should be sufficient for excavating shallow foundations and service trenches at the site.

It is considered likely that shallow excavations will encounter water influx from 0.70m depth. However, it should be noted that the investigation works were undertaken during the wet winter season when groundwater levels are likely to be near their shallowest, and seasonally the levels are likely to be deeper.

It is also worth noting that excavations may be unstable and suitable shoring and edge protection should be employed in keeping with good practice.

6.3 FOUNDATIONS

It is understood that the development at the site will include multiple new residential dwellings, therefore, we have provided the following interpretative geotechnical analysis and recommendations with regard to the ground conditions and foundation of the development.

6.3.1 Shallow Foundations

Shallow foundations may be considered at the site providing the following criterion is followed;

The Made Ground (including reworked deposits, hardstanding and topsoil) is considered unsuitable as a bearing stratum due to its variability, and potential for unacceptable total and differential settlement under applied foundation loadings.

However, the underlying Bagshot Formation is considered to be a suitable bearing stratum for conventional shallow foundations at not less than 0.75m below existing ground level or 0.20m into the top of the formation, whichever is the deeper. (This depth assumes that there will be no future planting within the influence zones of the foundations – if future planting cannot be discounted the minimum depth of foundations should be 1.0m bgl in accord with the NHBC Standards)

At this depth, a net allowable bearing pressure of 100kPa may be adopted for foundations not exceeding 1.0m in width. This allows for a factor of safety of three against shear failure and for settlements generally not to exceed 25mm taking place over a number of years.

However, with groundwater encountered as shallow as 0.70m, construction (particularly in winter months) would be difficult, as sump pumping would be required to retain dry excavations. As such, it is recommended that a dewatering trial is undertaken prior to works commencing.

Additionally, as mentioned above, locally Made Ground was encountered to a depth of between 0.25m and locally in excess of 0.8m, as such footings would locally need to be at a depth of 1m bgl (and further below the perched groundwater level encountered).

The soils should be considered as being of low volume change potential.

Furthermore, given that localised horizons of granular and cohesive soils are encountered within the Bagshot Formation, it is recommended foundations are reinforced to guard against differential settlement.

Should foundations be constructed within the vicinity of trees or shrubs on this site, then they will require deepening in accord with guidelines given in NHBC Building Standards Chapter 4.2. Should trees not to be removed, mature tree heights should be assumed when determining the foundation depths.

6.3.2 Piled Foundations

Should the shallow groundwater be too problematic, the above quoted allowable bearing pressure prove insufficient, or ineffective at greater depths, a piled foundation solution may be adopted.

Piles would extend through the Made Ground and terminate in the underlying Bagshot Formation and London Clay Formation.

Should a piled foundation solution be utilised, then, a supplementary deep borehole investigation would likely be required by a piling contractor, aiming to undertake sampling and insitu testing and achieve a depth ranging from 10-25m

The advice of specialist piling contractors should be sought to formulate a suitable piling technique and type for the ground conditions encountered at this site, before the commencement of the works. The following comments regarding the pile design are therefore for general guidance only.

It is anticipated that a bored, cast in situ pile system will be the most appropriate on this site given the ground conditions. Consideration will still, however need to be given to the possible obstructions within the Bagshot Beds and specifically the underlying London Clay with potential rock quality

claystone beds beneath the site. The claystone bands may make driven piling and flight auger piling unsuitable (due to the piles being halted before depth).

6.4 FLOOR SLAB DESIGN

Floor slabs at the site can be ground bearing, provided the Topsoil/Made Ground is stripped and removed and is based on a blanket of good quality, free draining, well compacted granular material, placed prior to the construction of the floor slab, in order to make up the level.

Alternatively, in areas of thicker Made Ground >600mm, suspended ground floors are typically used, this will be dependent on site layouts and proposed finished floor levels.

However, where it is required to deepen the main foundations below 1.50m depth, due to the presence of vegetation or where seasonal desiccation is occurring, then ground floor slabs will require suspending in accord with NHBC guidelines (should NHBC guarantees be required). A void should be left below the floor slab to accommodate future moisture content related soil movements. This may be achieved by the use of a proprietary compressible material such as Clay board or Cellcore.

6.5 SLOPE STABILITY

It is assumed that in its present state the slope is at a stable angle, as it is believed to have been in place/stable for decades, with no known or observed signs of any movement. However, it is possible that the proposed development at the site may impact on its stability.

“Human activity is a common cause of slope instability, failures can be induced by undercutting the foot of the slope, by loading the crest of the slope or by altering the pore pressure distribution within the slope, for example if nature drainage is impeded.”

Therefore, in the absence of detailed ground analysis, as a guide, consideration should be given to avoiding the following to avoid possible instability:

-  Increasing/redirecting water flow through the slope (e.g. sheet piling, retaining walls >1m, soakaways).
-  Long continuous open foundation/retaining-wall excavations, parallel to ground contours.
-  Unduly loading the slope, such as infilling following ground contours, say 1m above existing ground levels.

 Permanent cuttings following ground contours more than say 1m.

Temporary works should also be sufficient to support the slope in the short term, it should also be noted that typical temporary works, such as sheet piles, can increase/redirect water flow through the slope, causing failure elsewhere on the slope, in previously stable areas. Particular care should be paid to the area adjacent to the existing structures situated adjacent to the areas of concern.

6.6 RETAINING WALLS AND BELOW GROUND STRUCTURES

6.6.1 Soil Parameters

Should temporary or permanent retaining structures be required for the development, the following soil properties could be used:-

Parameter	Bagshot Formation
ϕ'	17°
c'	10kPa
c_u	45kN/m ²
γ_b	19kN/m ³

Groundwater is expected to be present as seepages (spring-lines) at variable depths through the slope from a depth of 0.70m and deeper.

6.7 SULPHATE ATTACK ON UNDERGROUND CONCRETE

Three soil samples from this investigation were scheduled for the measurement of water-soluble sulphate and pH to give an indication of the aggressivity of the ground in relation to buried concrete, as set out in the Building Research Establishment (BRE) Special Digest 1 (2005) Concrete in Aggressive Ground, Part 1: Assessing the aggressive chemical environment.

The samples were recovered from CT1 and CT2, and were sourced from representative near surface areas of Topsoil, Made Ground and Bagshot Formation. Total Sulphur and Acid Soluble Sulphate testing was also undertaken on the underlying London Clay Formation to investigate the potential for sulphate ions/pyrite within this basal strata.

Therefore, in accordance with the BRE Special Digest, these results have been given in the table below, in relation to strata type and required Design Sulphate Class and site Aggressive Chemical Environment Classification (ACEC).

Strata	Design Sulphate Class	Aggressive Chemical Environment Classification
Topsoil	DS-1	AC-1
Made Ground		
Bagshot Formation		
London Clay	DS-3	AC-3

The recommendations given in the above digest, with respect to suitable concrete design and other associated precautions against sulphate attack, should be followed for all below-ground level concrete.

6.8 ACCESS ROADS AND PARKING

The structural design of a road or hard standing is based on the strength of the subgrade, which is assessed on the California Bearing Ratio (CBR) scale.

In-situ CBR tests undertaken in the near-surface Made Ground and Bagshot Formation provided equivalent CBR values from 5%. However as Made Ground has been proven across the site, and given the unknown origin of the soil, its variability and the likelihood and proven possibility for soft spots, we recommend that any areas of soft or deleterious material should be excavated, replaced with a properly compacted coarse-grained fill and proof rolled prior to construction.

In addition, to avoid uneven and excessive settlement in hard-standing areas it is recommended that the following precautions are taken:-

-  Heavy proof-rolling of the exposed sub-grade strata
-  Excavation of soft spots encountered and replacement with well-compacted granular material
-  The usage of a geotextile separator layer above the sub-grade
-  All materials within 450mm of final finished levels in roads or pavement should comprise non-frost susceptible soils in accordance with BS 812-124.

6.9 INFILTRATION MEASURES

Appropriately designed sustainable drainage systems (SuDS) are more sustainable than using piped drainage to local sewer systems. However, infiltration measures close to buildings may result in the undermining of foundations and softening of soils, leading to instability. Attenuation measures should be located at suitable distances from foundations and infrastructure.

Three soakaway tests were undertaken, at the site, within the near-surface Bagshot Formation soils at depths ranging from 0.85m and 1.20m (above the groundwater influx). The test results, however, indicated a lower-end infiltration rate, and due to an insufficient drop in water levels, calculation of an infiltration rate was not possible and the ground is considered to be effectively impermeable.

7 GEO-ENVIRONMENTAL INTERPRETATION SECTION

7.1 RISKS TO HUMAN HEALTH

7.1.1 Introduction

Environment Agency guidance LCRM *Land Contamination: Risk Management*, (EA, 2019), states that human health risk assessment should be undertaken by a tiered approach using the source-pathway-receptor principle. A desk study constitutes the first tier and this has been undertaken as part of this investigation. The conclusions of this phase were that:-

“The site has historically been an open undeveloped paddock/field since the first available records dated 1870s.

Aerial imagery from the 2000s has however identified that the site was impacted by the adjacent residential development to the west of the site, with areas of stored materials, parked vehicles and stripped earth shown across the site area.

Later imagery dated 2010 shows the completed residential houses to the west, and the site shown as a grassed undeveloped field/paddock, (as it did prior to the adjacent development). Notably, however since 2010 a mowed circular track is notable on site, and on the 2019 aerial imagery a helipad (possibly temporary) is identified within the western site area, later then absent from 2020.

Therefore, it is considered that Made Ground is possibly present beneath the site, relating to this historical usage, particularly as a construction compound/store area. Additionally, given the identified parked vehicles, small-scale areas of TPH/PAHs may be present where vehicles have historically been parked/stored.

Notably, however no significant or obvious identification of any potential contaminantative sources at the investigation area or surrounding area were identified during the site walkover.

It is considered that there may be a potential risk of contamination at the site, which may impact both human health and the environment, via a source/pathway/receptor’s linkage.” However, the risk is identified as low to moderate.

Therefore, as part of the investigation chemical testing was undertaken at the site. Results are analysed under the second tier, known as a Generic Quantitative Risk Assessment (GQRA), which uses generic guideline values to compare site chemical data against, and the final tier would be a

Detailed Quantitative Risk Assessment (DQRA), which use data derived from the ground investigation to assess risks to identified receptors.

The assessment included in this report comprises a GQRA, which is undertaken by comparing soil contaminant concentrations from this investigation with conservative Generic Assessment Criteria (GAC). GAC for various land use and exposure scenarios have been selected from the following sources:

-  CL:AIRE Category 4 Screening Levels (C4SL);
-  LQM Suitable for Use Levels (S4UL);
-  CL:AIRE/EIC/AGS GAC

The GACs have been derived using the Environment Agency Contaminated Land Exposure Assessment (CLEA) model, for a range of land uses and exposure scenarios, including:

-  Residential with the consumption of home-grown produce;
-  Residential without the consumption of home-grown produce;
-  Commercial;
-  Allotments;
-  Public Open Space near residential housing (POS_{resi}); and
-  Public Open Space public park scenario (POS_{park})

It is considered that as the development at the site will inherently reduce/remove existing potential pathways at the site by essentially capping areas of existing soft landscaping. However, for the purposes of this assessment a “Residential with the consumption of home-grown produce” has been selected.

7.1.2 Results of Chemical Testing

Of the four soil samples screened as part of this investigation, screened against the relevant GAC for a ‘Residential with the consumption of home-grown produce’ land use scenario as described above, none have exceeded the relevant GACs. Samples were tested from the following locations and strata;

-  Topsoil taken from 0.20m in CT1
-  Bagshot Formation soils taken from 0.50m in CT1

 Made Ground soils taken from 0.20m in CT2

 Made Ground soils taken from 0.20m in CT3

7.1.2.1 Asbestos

Screening for the presence of asbestos did not reveal any asbestos-containing material (ACM) or fibres in the four samples of soils tested.

7.1.3 Risk to End Users

Given the results of the desk study, intrusive investigation and laboratory testing, no significant source-pathway-receptor linkage exists at the site and consequently, no additional human health risk assessment is considered necessary. However, this should be confirmed by the relevant Regulatory Authority as soon as possible prior to development.

7.1.4 Risk to Surrounding Residents and Construction Workers

Given the results of the intrusive investigation, and laboratory testing, it is considered there is no further significant risk to surrounding residents of the site, other than those encompassed by the risk to end users (see above section).

However, to reduce the risk to as low as reasonably practicable for the construction workers, it is recommended that high standards of personal hygiene should be maintained amongst the site personnel at all times. All personnel coming into contact with the soil, ground workers in particular, should be instructed to use gloves when on site to avoid dermal contact and restrict inadvertent hand-to-mouth ingestion. Washing facilities should be provided for the site staff to use, and should be used prior to eating or smoking. Reference should be made to the HSE Document, "Protection of Workers and the General Public during Development of Contaminated Land".

It is also recommended that a watching brief for undiscovered contamination is included in the Works Method Statement. Given the long human history of the surrounding area, it is always possible that some previous undiscovered contamination may be encountered. If this is the case, the area should be isolated and contact be made to a suitably qualified professional for further advice. This is particularly important if the contamination is possibly ACM or liquid based.

7.2 RISK TO CONTROLLED WATERS

The Phase I investigation concluded that the site was possibly at a potential risk to controlled waters and the environment from the past land usage at the site.

However, no hydrocarbons, BTEX or MTBE were significantly encountered, being largely below detectable limits, and metal/metalloid values across each of the samples were within tolerable ranges. Additionally, VOC and SVOCs tested for as part of the UKWIR testing identified no levels above the detection limit.

Furthermore, several significant mitigating factors reducing significant risks from the site included:

-  Soakway testing at the site, indicated that the ground is effectively impermeable.
-  The site is recorded to be located outside of any Source Protection Zones
-  There are no recorded active groundwater abstraction licenses located within 1000m of the site.

Therefore, it is considered that there is no significantly elevated risk of significant harm to Controlled Waters pollution from development at this site.

The Environment Agency is the regulatory body charged with the protection of controlled waters and may be a consultee in the planning process. We recommend that the conclusions of this report are agreed with the relevant Local Authority at the earliest stage, to reduce potential delays to the development.

7.3 RISK TO UNDERGROUND WATER SUPPLY PIPES

Based upon the guidance document from the UK Water Industry Research (UK WIR), 'Contaminated Land Assessment Guidance', February 2014, and the results of the samples tested from the site it is considered that conventional PE water pipes would be suitable at this site as no elevated levels of hydrocarbons or BTEX were recorded.

This should be confirmed with the local water company as not all authorities use this guidance.

8 WASTE DISPOSAL CLASSIFICATION

8.1 INTRODUCTION

Excavation for foundations or services will produce waste soil and possibly other waste streams. As a waste producer, you have a duty of care under section 34 of the Environmental Protection Act 1990 to ensure, amongst other things that these wastes are: -

-  Correctly stored
-  Correctly classify
-  Handed only to an authorised person
-  Disposed of properly.

To aid with these obligations, we have used HazWasteOnline to undertake the Hazard Assessment Screen as part of this investigation, to establish whether the sampled soils should be considered as either hazardous or non-hazardous waste. This classification process is in line with the Environment Agency's guidance WM3 "Guidance on the classification and assessment of waste", 2021.

8.2 RESULTS OF HAZARD ASSESSMENT

The full results of the HazWasteOnline analyses can be seen in the Appendices.

The HazWasteOnline classification summary sheet from this investigation provides a waste classification of non-hazardous waste for all samples tested.

Also, no visible pieces of asbestos were detected (by the naked eye) in any of the exploratory holes, or identified in any of the four samples screened. Therefore, asbestos was not considered further from a waste perspective.

Furthermore, uncontaminated soil can be classified as inert without testing, in accordance with EU Council Decision 2003/33/EC para. 2.1.1. As such, given the testing results, currently the underlying natural un-impacted soils from the site can be disposed of at an INERT Landfill site. In addition, the HazWasteOnline results corroborate this.

Analytical results relevant to the materials being disposed of should be provided to the landfill operators or waste management contractors to confirm whether it meets their license agreements and to confirm tipping costs.

All wastes removed from the site should be consigned, transported, and disposed of in full accordance with all relevant UK legislation.

8.3 WASTE CLASSIFICATION

From the results of the HazWasteOnline spreadsheets, currently, the waste soil on this site is classified as follows.

Stata/ Waste Stream	Description of Material	Recommended Classification	Recommended List of Waste code	Recommended Landfill Tax Rate
Topsoil	Naturally occurring soils and stones (Topsoil)	Non-Hazardous	17 05 04	Standard Rate
Made Ground	Naturally occurring soils and stones (subsoil) including small amounts of Group 2 Materials:- concrete.	Non-Hazardous	17 05 04	Standard Rate
Natural Soil	Naturally occurring soils and stones (subsoil)	Inert	17 05 04	Lower Rate

Analytical results relevant to the materials being disposed of should be provided to the landfill operators or waste management contractors to confirm whether it meets their license agreements and to confirm tipping costs.

All wastes removed from the site should be consigned, transported, and disposed of in full accordance with all relevant UK legislation.

WAC testing could be undertaken on samples of the Made Ground from site, to further the classification, and potentially identify these as inert wastes. However, given that at least two streams of Made Ground have been identified, with one being Topsoil derived, the standard rate would remain for such waste soils.

8.4 RE-USE OF MATERIAL ON SITE

Currently, if surplus arisings are 'fit for re-use' on the site and have not been treated, its re-use is allowed within the planning law. If it needs treating prior to re-use, exemptions can be sought from the Environment Agency to allow this activity.

Based upon the human health and groundwater risk assessments, the underlying soil is currently considered suitable for re-use on site. This analysis is, however, dependent on the agreement of the Local Authority.

9 RECOMMENDATIONS

9.1 FOUNDATIONS

As detailed in section 6 of this report, shallow foundations may be considered at the site.

Conventional shallow foundations may be employed from 0.75m below existing ground level or 0.20m into the top of the formation, whichever is the deeper. However, with groundwater encountered as shallow as 0.70m, construction (particularly in winter months) would be difficult, as sump pumping would be required to retain dry excavations. As such, it is recommended that a dewatering trial is undertaken prior to works commencing.

Additionally, locally Made Ground was encountered to a depth of 0.8m as such footings would locally need to be at a depth of 1m bgl (and further below the perched groundwater level encountered).

Furthermore, given there was localised horizons of cohesive/granular soil at founding depth, it is recommended foundations are reinforced to guard against differential settlement.

Additionally, should foundations be constructed within the vicinity of trees or shrubs on this site then they will require deepening in accord with guidelines given in NHBC Building Standards Chapter 4.2. Should trees not be removed, mature tree heights should be assumed when determining the foundation depths.

Alternatively, should a piled foundation solution be utilised, then, a supplementary deep borehole investigation would likely be required by a piling contractor, aiming to undertake sampling and insitu testing and achieve a depth ranging from 10-25m.

Care should also be taken when excavating the site to retain slope stability (see section 6.5)

9.2 WATCHING BRIEF

Furthermore, we recommend a watching brief should be undertaken during the construction phase, and if during development any previously undiscovered contamination (including visual or olfactory evidence) is found, then site management should be immediately informed and inspection by a suitably qualified person should be undertaken.

10 REFERENCES

- Building Research Establishment (BRE) BR 211, Radon: guidance on protective measures for new buildings. 2007.
- National House Building Council (NHBC) Standards, Chapter 4.2 Building Near Trees. 2011.
- National House Building Council (NHBC) Standards, Chapter 4.1 Land Quality – Managing Ground Conditions. 2011.
- Environment Agency, ‘Land contamination: risk management’, LCRM, 2019.
- Health and Safety Executive (HSE), “Protection of Workers and the General Public during Development of Contaminated Land” HS(G) 66. HMSO London 1991.
- Environment Agency, ‘Human Health Toxicological Assessment of Contaminants in Soil’, August 2008.
- BGS Geology of Britain Viewer: 2016. www.bgs.ac.uk. British Geological Survey.
- BRE Special Digest 1: 2005: Concrete in aggressive ground. Building Research Establishment.
- BS 1377: 2018: Methods of test for soils for civil engineering purposes. British Standards Institution.
- BS 5930: 2015+A1 2020: Code of practice for ground investigations. British Standards Institution.
- BS EN 1997-2: 2007+NA 2009: Eurocode 7 - Geotechnical design - Part 2 Ground investigation and testing. British Standards Institution.
- BS EN ISO 14688-1:2018: Geotechnical investigation and testing - Identification and classification of soil - Part 1 Identification and description. British Standards Institution.
- BS EN ISO 14688-2:2018: Geotechnical investigation and testing - Identification and classification of soil - Part 2 Principles for a classification. British Standards Institution. Investigation of Potentially Contaminated Sites – Code of Practice, BS10175, 2011.
- Environment Agency, “Waste Sampling and Testing for Disposal to Landfill” March 2013
- G Card and S Wilson, An Alternative Approach for Ground Gas Risk Assessment, 2011.



APPENDIX A



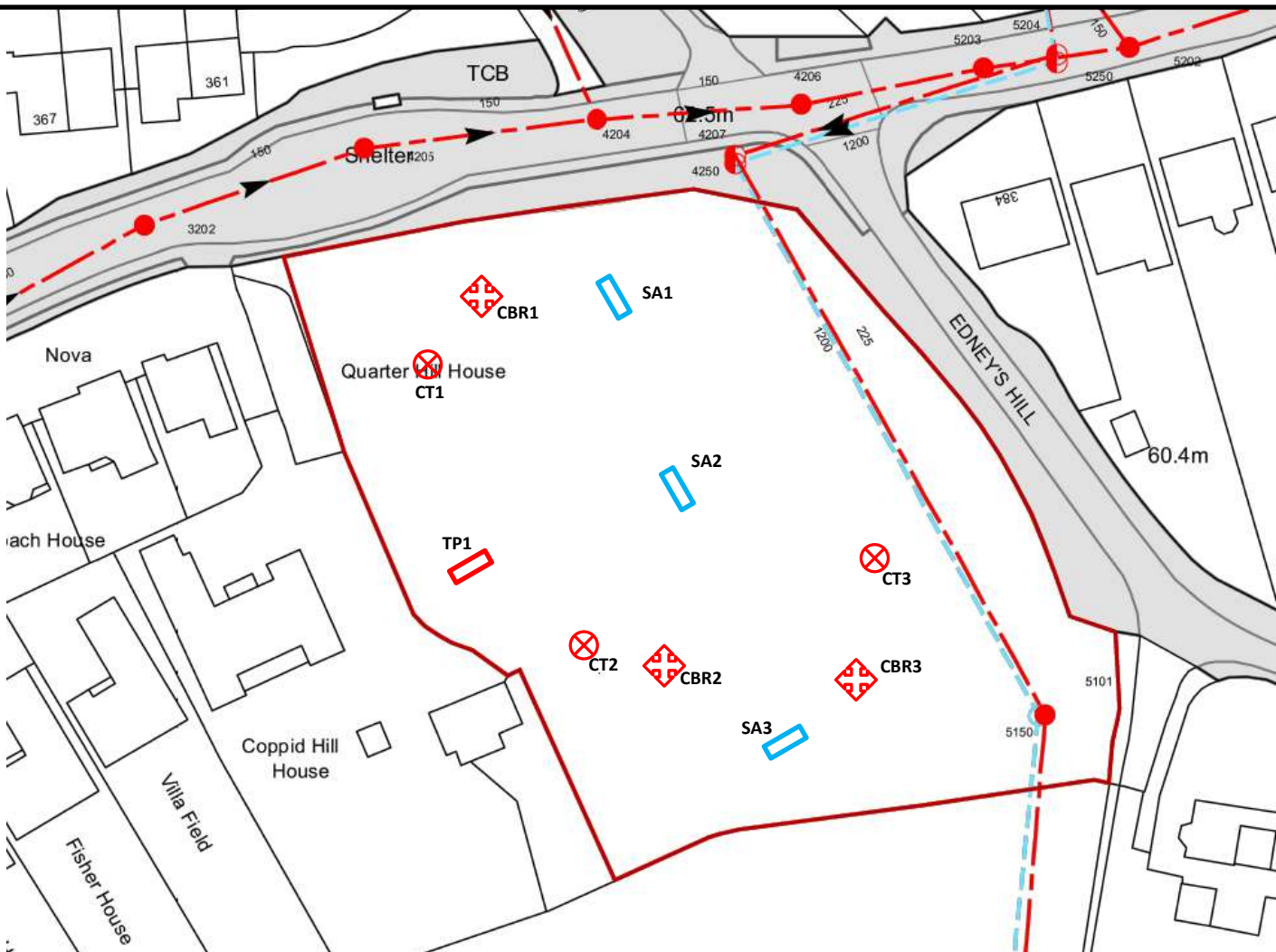
Geo-Integrity, - 07858 367 125 Email:- info@geo-integrity.co.uk



December 2024

SITE LOCATION PLAN

Report No:- 24-12-06



Key

-  Trial Pit
-  Continuous Tube Borehole
-  Soakaway Pit
-  CBR Test

**Exploratory Hole
Location Plan**

JOB NO.:-24-12-06

Tel:- 01280 816409
Mob:- 07858 367 125
www. geo-integrity.co.uk

**SITE:- Coppid Hill
House, Wokingham**

**CLIENT:- Abbeymill
Homes**

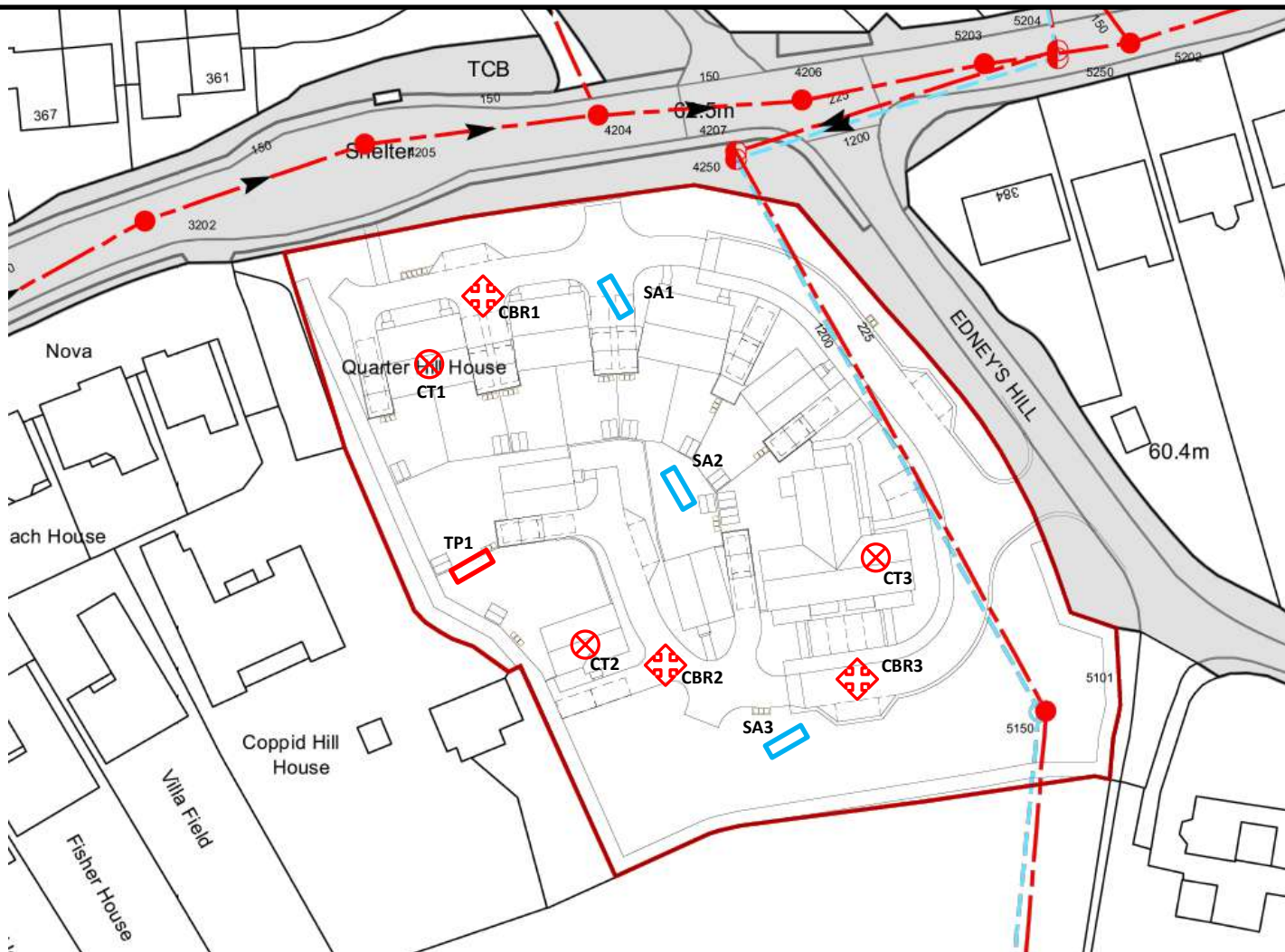
4 Church Street
Maids Moreton
MK18 1QE

**Drawn
EM**

**Checked
DL**

**Scale: Not To Scale, for
indicative purposes only**





Key

-  Trial Pit
-  Continuous Tube Borehole
-  Soakaway Pit
-  CBR Test

**Exploratory Hole
Location Plan –
Proposed**

JOB NO.:-24-12-06

Tel:- 01280 816409
Mob:- 07858 367 125
www. geo-integrity.co.uk

**SITE:- Coppid Hill
House, Wokingham**

**CLIENT:- Abbeymill
Homes**

4 Church Street
Maids Moreton
MK18 1QE

**Drawn
EM**

**Checked
DL**

**Scale: Not To Scale, for
indicative purposes only**





View of the site area, looking southwards from the northwestern site area



View of the western site area from the central site area

March 2025

SITE PHOTOGRAPHS

Report No.:- 24-12-06



View of the northern site area from the central site area



View of the southern site section form the western site area

March 2025

SITE PHOTOGRAPHS

Report No.:- 24-12-06



APPENDIX B



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01280 816409

Site
land at Barkham Road, Wokingham, RG41 4TG

Number
CT1

Machine : Window Sampling Rig
Method : Drive-in Windowless
Sampler

Dimensions
87mm to 2.00m 57mm to 5.00m
77mm to 3.00m
67mm to 4.00m

Ground Level (mOD)
68.50

Client
Abbeymill Homes

Job
Number
24-12-06

Location (Observed measurements)
478430 E 167191 N

Dates
14/01/2025

Engineer
Danny Lusardi

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D			68.15	(0.35) 0.35	TOPSOIL Soft dark brown silty sandy organic CLAY.		
0.50 0.50-1.00	PP 50kPa D		50,50,50/Av. 50.00			BAGSHOT FORMATION - Firm mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
1.00 1.00-1.45 1.00-1.50	PP 50kPa SPT N=12 D		50,50,50/Av. 50.00 1,2/3,3,3,3					
1.50 1.50-2.00	PP 50kPa D		50,50,50/Av. 50.00		(2.45)			
2.00 2.00-2.45 2.00-2.50	PP 50kPa SPT N=16 D		Water strike(1) at 1.90m. 50,50,50/Av. 50.00 2,2/3,3,4,6					
2.50 2.50-2.80	PP 33.33kPa D		50,25,25/Av. 33.33					
2.80 2.80-3.00 3.00 3.00-3.45 3.00-3.50	PP 33.33kPa D PP 58.33kPa SPT N=12 D		25,25,50/Av. 33.33 50,75,50/Av. 58.33 3,4/3,3,3,3	65.70	2.80 (0.80)	BAGSHOT FORMATION - Medium dense yellowish brown slightly clayey very sandy SILT		
3.60 3.60-4.00	PP 50kPa D		50,50,50/Av. 50.00	64.90	3.60 (0.40)	BAGSHOT FORMATION - Firm mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
4.00-4.45	SPT N=25		3,4/5,5,7,8	64.50	4.00 (0.70)	BAGSHOT FORMATION - Inferred as medium dense SAND - Very poor recovery		
4.70 4.70-5.00 5.00-5.45	PP 75kPa D SPT N=22		75,75,75/Av. 75.00 4,4/4,5,6,7	63.80 63.50	4.70 (0.30) 5.00	BAGSHOT FORMATION - Firm to stiff mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint Complete at 5.00m		

Remarks

Scale
(approx)
1:40

Logged
By
HF

Figure No.
24-12-06.CT1





www.geo-integrity.co.uk
info@geo-integrity.co.uk
01280 816409

Site
land at Barkham Road, Wokingham, RG41 4TG

Number
CT2

Machine : Window Samplig Rig
Method : Drive-in Windowless
Sampler

Dimensions
87mm to 2.00m 57mm to 5.00m
77mm to 3.00m
67mm to 4.00m

Ground Level (mOD)
67.00

Client
Abbeymill Homes

Job
Number
24-12-06

Location (Observed measurements)
478457 E 167138 N

Dates
14/01/2025

Engineer
Danny Lusardi

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-0.80	D			66.90	(0.10)	TOPSOIL Soft dark brown silty sandy organic CLAY.		
					(0.70)	MADE GROUND - Soft dark brown silty sandy gravelly CLAY. Gravel is fine to coarse, angular to rounded of brick, concrete and flint		
0.80 0.80-1.00 1.00 1.00-1.45 1.00-1.50	PP 50kPa D PP 75kPa SPT N=6 D		50,50,50/Av. 50.00 1,1/1,1,2,2	66.20	0.80 (1.20)	BAGSHOT FORMATION - Firm mottled light brown silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
1.50 1.50-2.00	PP 75kPa D							
2.00-2.45 2.00-2.60	SPT N=10 D		1,2/2,2,3,3	65.00	2.00 (0.60)	BAGSHOT FORMATION - Medium dense yellowish brown slightly clayey very sandy SILT		
2.60 2.60-3.00	PP 50kPa D		50,50,50/Av. 50.00	64.40	2.60 (0.40)	BAGSHOT FORMATION - Firm mottled light brown silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
3.00-3.45 3.00-3.40	SPT N=22 D		4,4/5,5,6,6	64.00	3.00 (0.40)	BAGSHOT FORMATION - Medium dense yellowish brown slightly clayey very sandy SILT		
3.50 3.50-4.00	PP 83.33kPa D		75,100,75/Av. 83.33 Water strike(1) at 3.70m.	63.60	3.40	BAGSHOT FORMATION - Firm to stiff mottled light brown silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		▽1
4.00 4.00-4.45 4.00-4.50	PP 75kPa SPT N=20 D		75,75,75/Av. 75.00 3,4/4,5,5,6		(1.60)			
4.50 4.50-5.00	PP 75kPa D							
5.00-5.45	SPT N=20		4,4/4,4,6,6	62.00	5.00	Complete at 5.00m		

Remarks

Scale
(approx)
1:40

Logged
By
HF

Figure No.
24-12-06.CT2





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01280 816409

Site
land at Barkham Road, Wokingham, RG41 4TG

Number
CT3

Machine : Window Sampling Rig
Method : Drive-in Windowless
Sampler

Dimensions
87mm to 2.00m 57mm to 5.00m
77mm to 3.00m
67mm to 4.00m

Ground Level (mOD)
63.00

Client
Abbeymill Homes

Job
Number
24-12-06

Location (Handheld GPS)
478492 E 167154 N

Dates
14/01/2025

Engineer
Danny Lusardi

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D			62.85 62.75	(0.15) (0.15) (0.25)	TOPSOIL Soft dark brown silty sandy organic CLAY.		
0.50 0.50-1.00	PP 50kPa D		50,50,50/Av. 50.00			MADE GROUND - Soft brown silty sandy gravelly organic CLAY. Gravel is fine to coarse, angular brick and flint		
1.00 1.00-1.45 1.00-1.50	PP 66.67kPa SPT N=9 D		50,75,75/Av. 66.67 1,2/2,2,3,2		(2.25)	BAGSHOT FORMATION - Firm mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
1.50 1.50-2.00	PP 75kPa D							
2.00 2.00-2.45 2.00-2.50	PP 58.33kPa SPT N=15 D		50,75,50/Av. 58.33 2,2/3,3,4,5					
2.50 2.50-3.00	PP 83.33kPa D		75,100,75/Av. 83.33	60.50	2.50	BAGSHOT FORMATION - Firm to stiff mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
3.00 3.00-3.45 3.00-3.50	PP 125kPa SPT N=22 D		3,4/4,5,6,7		(1.45)			
3.50 3.50-4.00	PP 150kPa D							
4.00 4.00-4.45 4.00-4.50	PP 125kPa SPT N=21 D		4,5/4,5,6,6	59.05	3.95	LONDON CLAY FORMATION - Stiff dark brown silty slightly sandy CLAY		
4.50 4.50-5.00	PP 150kPa D				(0.70)			
				58.35	4.65	LONDON CLAY FORMATION - Stiff grey silty CLAY		
					(0.35)			
5.00-5.45	SPT N=21		4,5/4,5,6,6	58.00	5.00	Complete at 5.00m		

Remarks

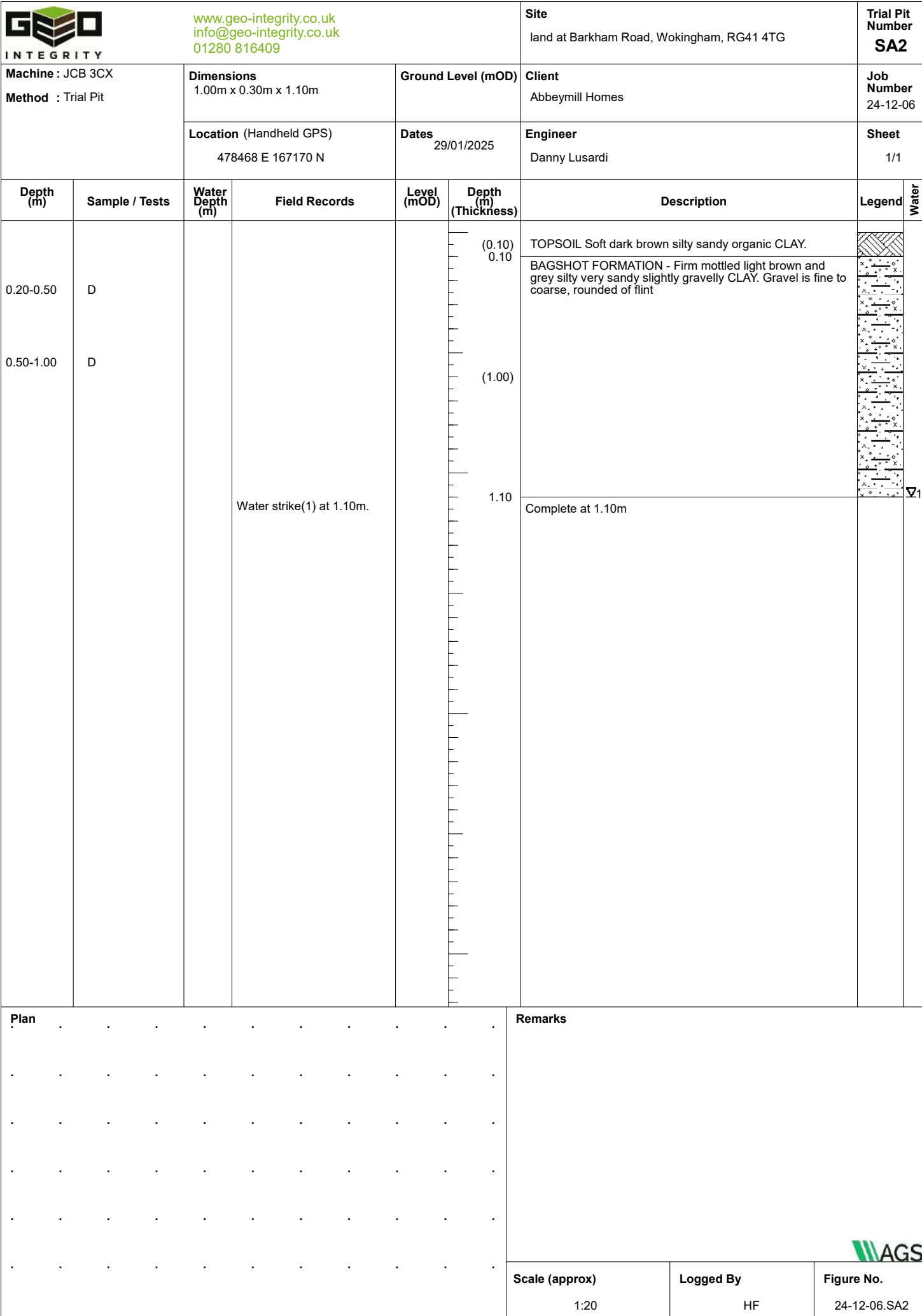
Scale
(approx)
1:40

Logged
By
HF

Figure No.
24-12-06.CT3



 www.geo-integrity.co.uk info@geo-integrity.co.uk 01280 816409					Site land at Barkham Road, Wokingham, RG41 4TG		Trial Pit Number SA1			
Machine : JCB 3CX Method : Trial Pit		Dimensions 1.40m x 0.30m x 0.85m		Ground Level (mOD)		Client Abbeymill Homes		Job Number 24-12-06		
		Location (Handheld GPS) 478458 E 167189 N		Dates 29/01/2025		Engineer Danny Lusardi		Sheet 1/1		
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water	
0.20	D				(0.10) 0.10	TOPSOIL Soft dark brown silty sandy organic CLAY. BAGSHOT FORMATION - Firm mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint Land drain at 0.30m				
0.50	D			(0.75)						
				0.85	Complete at 0.85m					
Plan • • • • • • • • • •					Remarks • • • • • • • • • •					
					Scale (approx) 1:20		Logged By HF		Figure No. 24-12-06.SA1	





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01280 816409

Site
land at Barkham Road, Wokingham, RG41 4TG

Trial Pit
Number
SA3

Machine : JCB 3CX
Method : Trial Pit

Dimensions
1.00m x 0.30m x 1.20m

Ground Level (mOD)

Client
Abbeymill Homes

Job
Number
24-12-06

Location (Handheld GPS)
478488 E 167137 N

Dates
29/01/2025

Engineer
Danny Lusardi

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D				(0.45)	TOPSOIL Soft dark brown silty sandy organic CLAY.		
0.50-1.00	D				0.45 (0.75) 1.20	BAGSHOT FORMATION - Firm mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
						Complete at 1.20m		

Plan

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Remarks

Scale (approx)	Logged By	Figure No.
1:20	HF	24-12-06.SA3



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01280 816409

Site

land at Barkham Road, Wokingham, RG41 4TG

**Trial Pit
Number**
TP1

Machine : JCB 3CX

Method : Trial Pit

Dimensions

2.10m x 0.45m x 2.50m

Ground Level (mOD)

Client	
---------------	--

Abbeymill Homes

Job Number
24-12-06

Location (Handheld GPS)

478445 E 167154 N

Dates

29/01/2025

Engineer

Danny Lusardi

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D				(0.35)	TOPSOIL Soft dark brown silty sandy organic CLAY.		
0.50-1.00	D				0.35	BAGSHOT FORMATION - Firm mottled light brown and grey silty very sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded of flint		
1.00-1.50	D							
1.50-2.00	D				(2.15)			
2.00-2.50	D							
					2.50	Complete at 2.50m		

Plan

Remarks

Scale (approx)

1:20

Logged By

HF

Figure No.

24-12-06.TP1

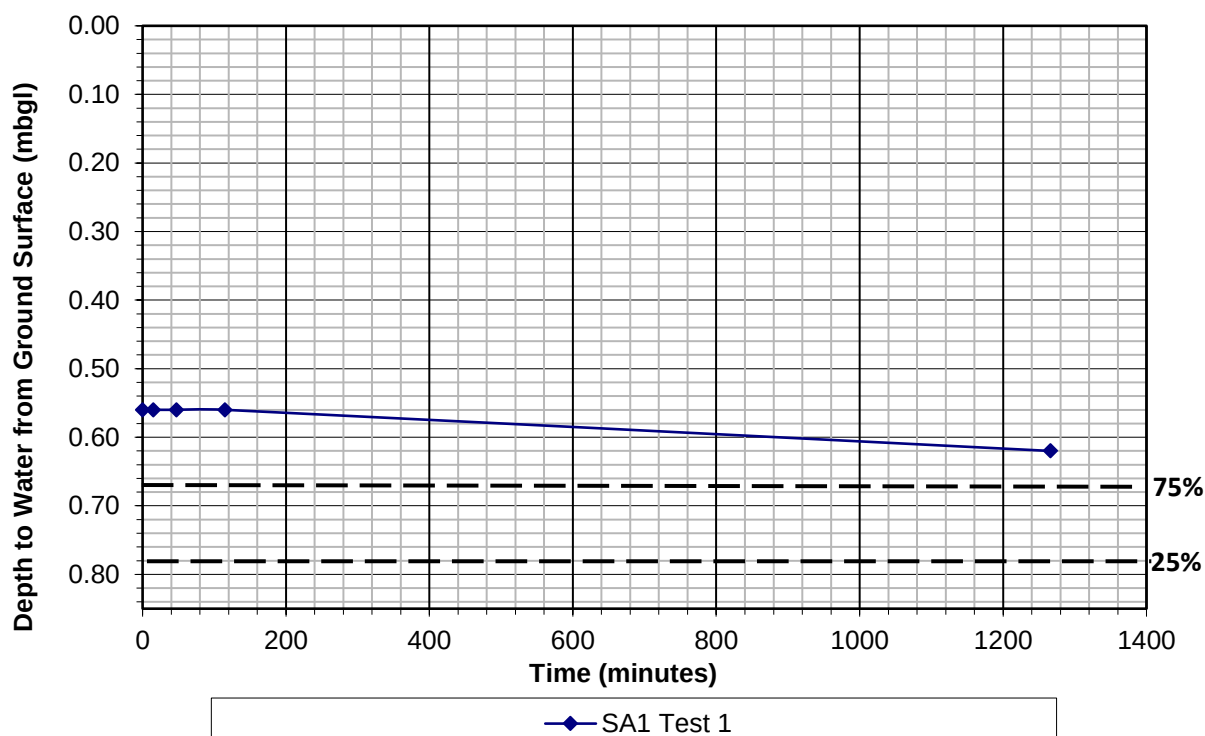
Trial Pit Infiltration Testing to BRE Digest 365

Client:	Abbeymill Homes	Report No:	24/12/2006
Site:	Coppid Hill House, Wokingham	Date Tested	14/01/2025
Dimensions:	0.30m x 1.4m x 0.85m (width x length x depth)	Test Locatic	SA1

Test Response Zone Description - : Bagshot Formation

Time	Depth BGL	Time	Depth BGL	Time	Depth BGL
0	0.56				
15	0.56				
47	0.56				
115	0.56				
1266	0.62				

Insufficient Data to Calculate Soil Infiltration Rate



Trial Pit Infiltration Testing to BRE Digest 365

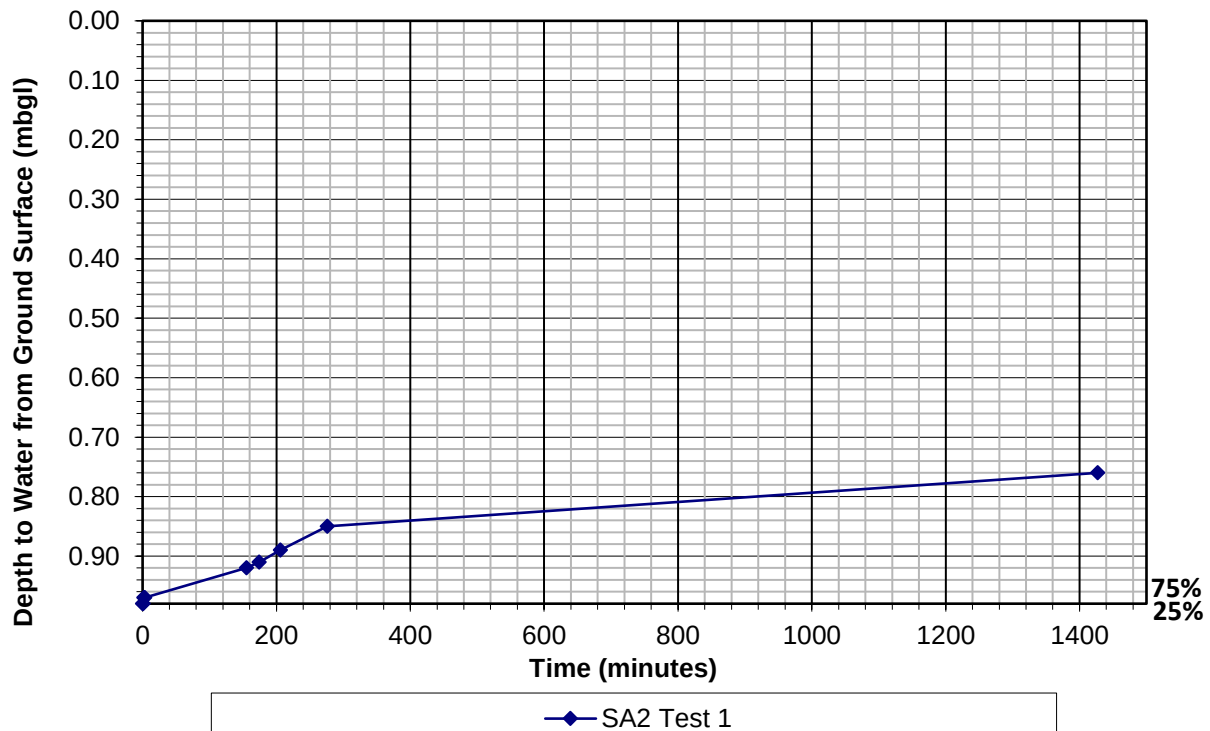
Client: Abbeymill Homes
Site: Coppid Hill House, Wokingham
Dimensions: 0.30m x 1.00m x 0.98m
 (width x length x depth)

Report No: 24/12/2006
Date Tested: 14/01/2025
Test Locatic: SA2

Test Response Zone Description - : Bagshot Formation

Time	Depth BGL	Time	Depth BGL	Time	Depth BGL
0	0.98	276	0.85		
1	0.98	1427	0.76		
2	0.97				
3	0.97				
155	0.92				
174	0.91				
206	0.89				

Insufficient Data to Calculate Soil Infiltration Rate



Trial Pit Infiltration Testing to BRE Digest 365

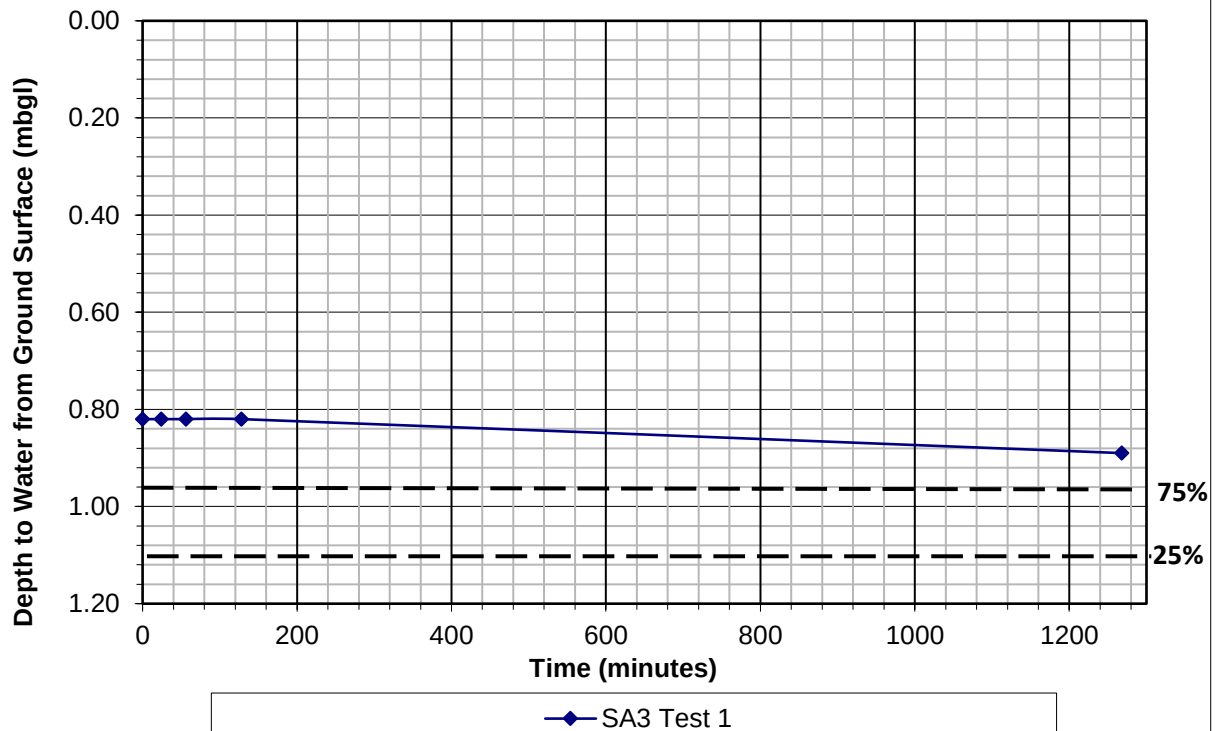
Client: Abbeymill Homes
Site: Coppid Hill House, Wokingham
Dimensions: 0.30m x 1.00m x 1.20m
 (width x length x depth)

Report No: 24/12/2006
Date Tested: 14/01/2025
Test Locatic: SA3

Test Response Zone Description - : Bagshot Formation

Time	Depth BGL	Time	Depth BGL	Time	Depth BGL
0	0.82				
24	0.82				
56	0.82				
128	0.82				
1268	0.89				

Insufficient Data to Calculate Soil Infiltration Rate



TRL DYNAMIC CONE PENETROMETER RECORD

Job No:- 24-12-06

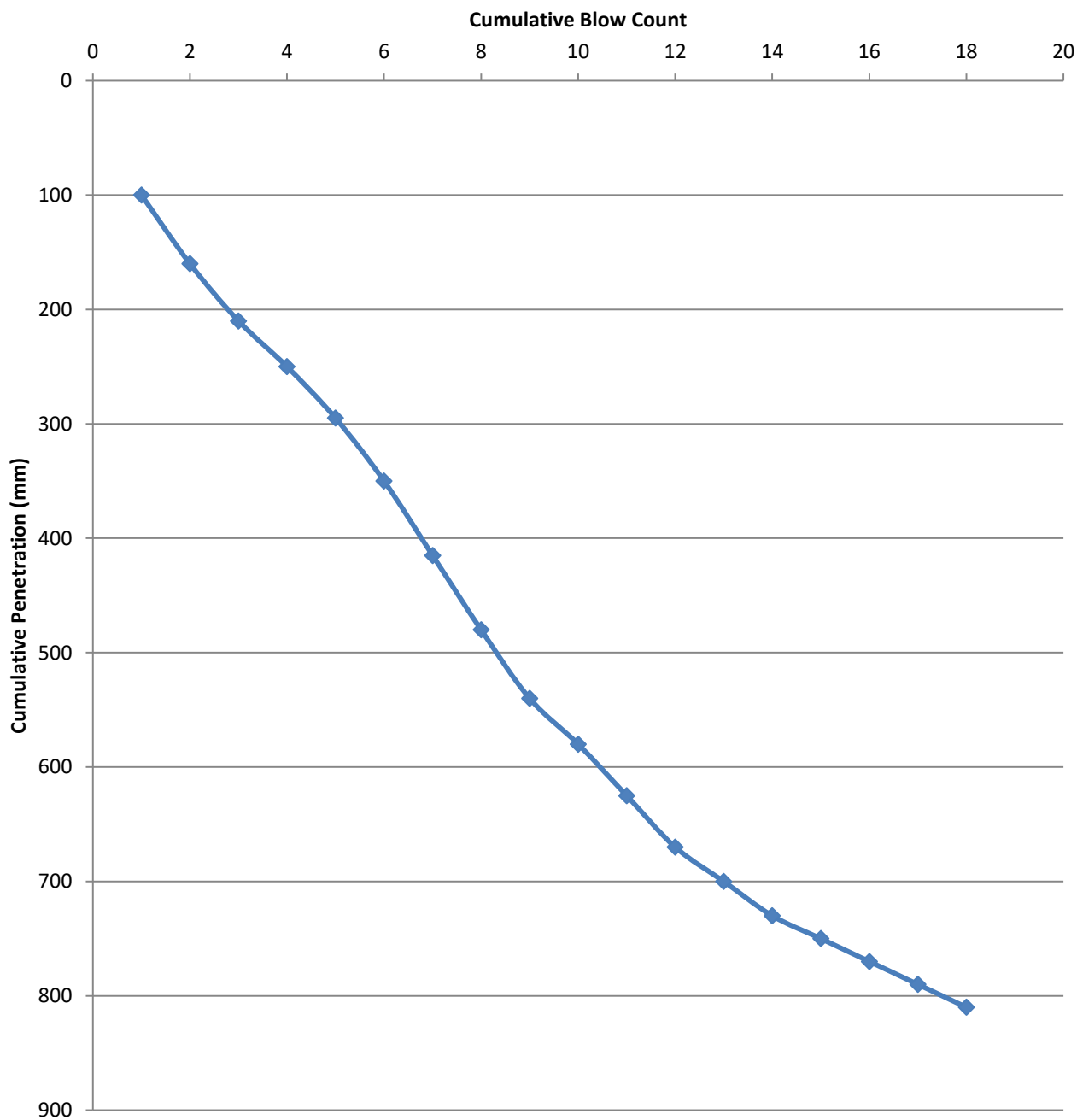
Job Name:- Coppid Hill House, Wokingham

Equivalent CBR:- 5%

Position:- CBR 1

Depth below ground level at start of test:- GL

Cumulative Blows Vs Penetration (mm)



TRL DYNAMIC CONE PENETROMETER RECORD

Job No:- 24-12-06

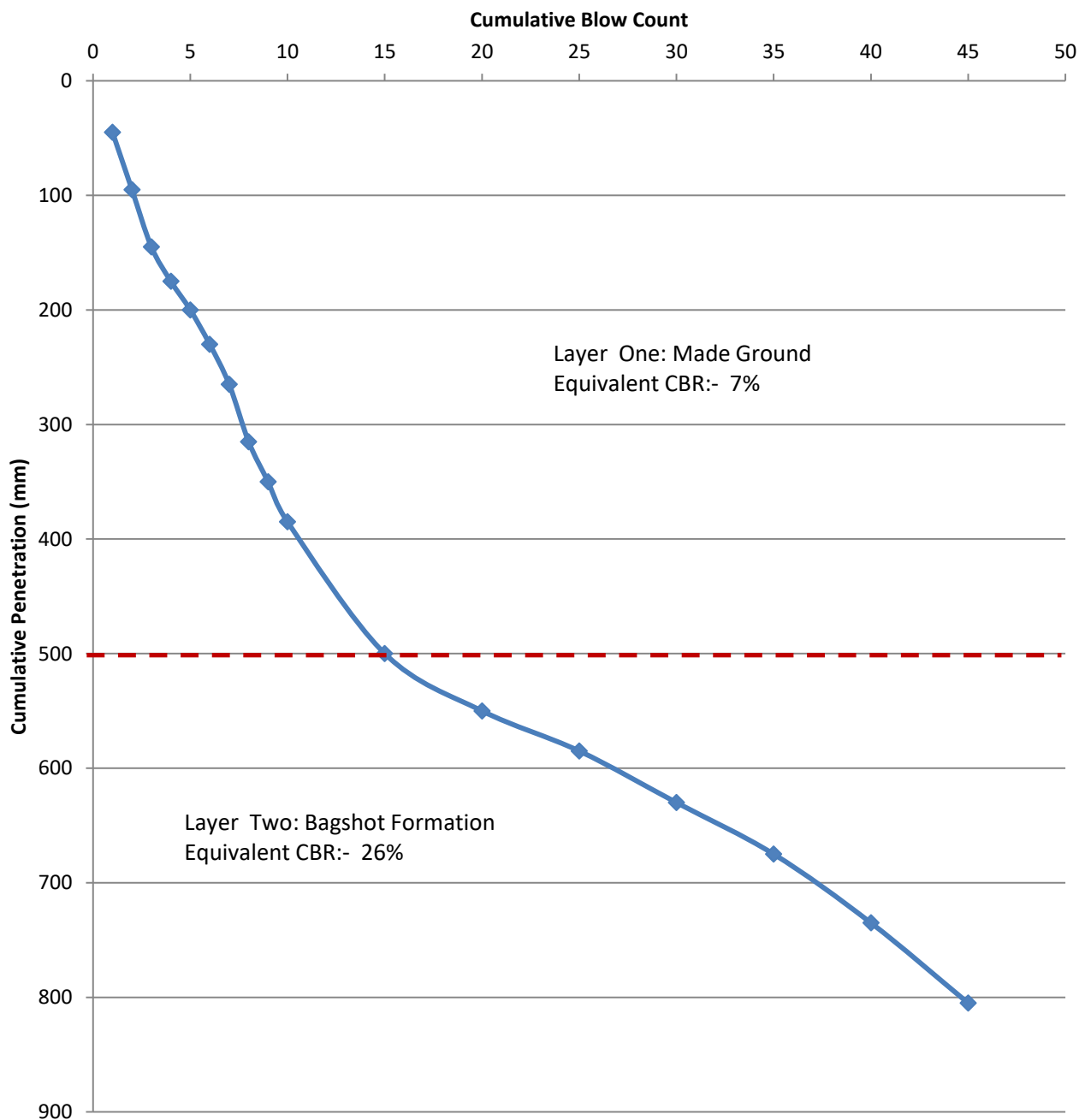
Job Name:- Coppid Hill House, Wokingham

Equivalent CBR:- 7-26%

Position:- CBR2

Depth below ground level at start of test:- GL

Cumulative Blows Vs Penetration (mm)



TRL DYNAMIC CONE PENETROMETER RECORD

Job No:- 24-12-06

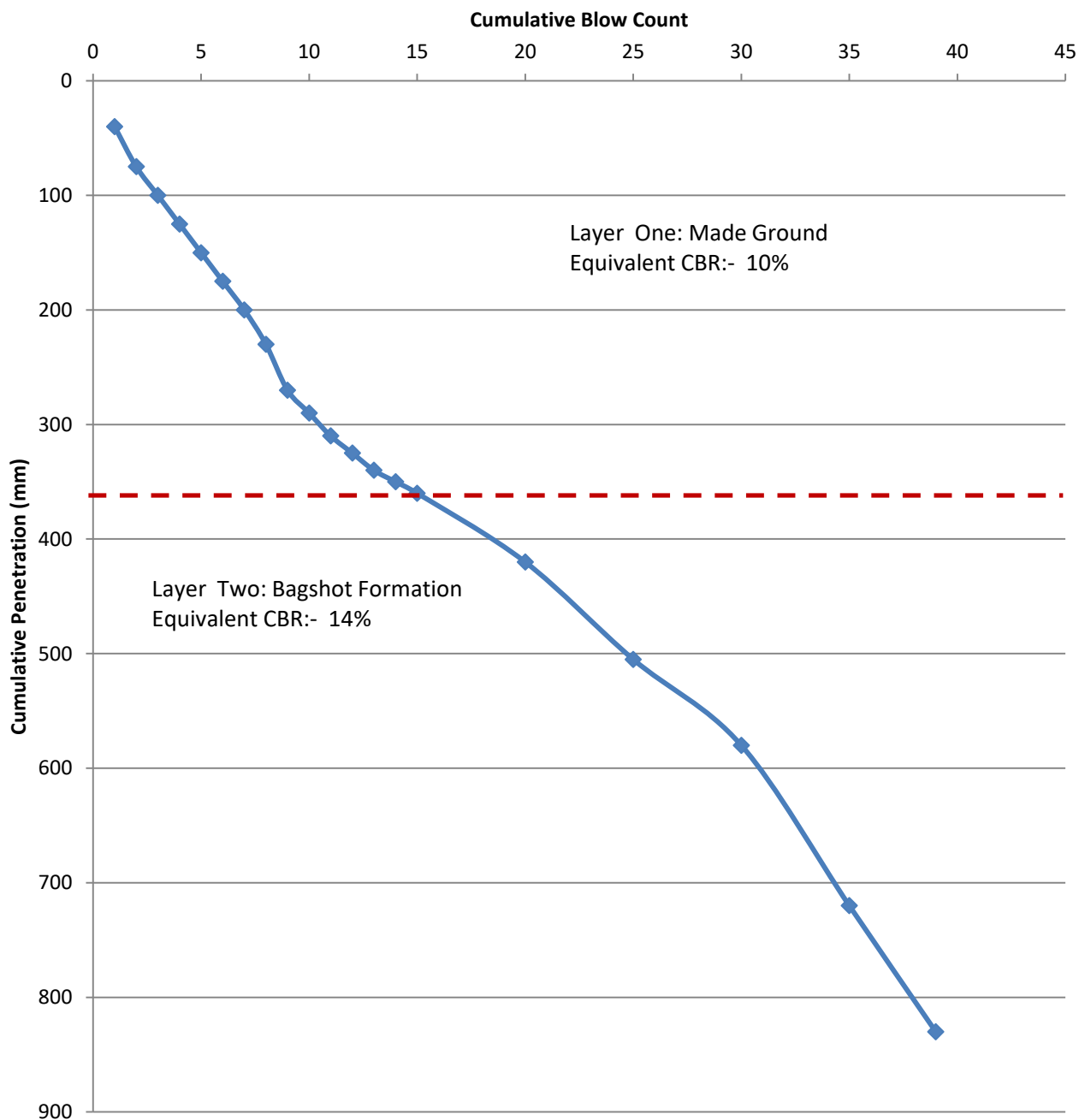
Job Name:- Coppid Hill House, Wokingham

Equivalent CBR:- 10-14%

Position:- CBR3

Depth below ground level at start of test:- GL

Cumulative Blows Vs Penetration (mm)





APPENDIX C



Geo-Integrity, - 07858 367 125 Email:- info@geo-integrity.co.uk

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone:- 01327 860947/860060

Email: lab@listersgeotechnics.co.uk

PROJECT INFORMATION		SAMPLE INFORMATION																																																								
Site Location:- Land At Coppid Hill, Brakham Road, Wokingham RG41 4TG	Laboratory Tests Undertaken:- <table border="1"> <thead> <tr> <th>TEST TYPE</th> <th>TEST METHOD</th> <th>TESTED</th> </tr> </thead> <tbody> <tr> <td>Natural Moisture Contents (MC%)</td> <td>(BS 1377:Part 2:1990 Clause 3.2)</td> <td>✓</td> </tr> <tr> <td>Liquid Limits (%)</td> <td>(BS 1377:Part 2:1990 Clause 4.3)</td> <td>✓</td> </tr> <tr> <td>Plastic Limits (%)</td> <td>(BS 1377:Part 2:1990 Clause 5.3)</td> <td>✓</td> </tr> <tr> <td>Plasticity Index (%)</td> <td>(BS 1377:Part 2:1990 Clause 5.4)</td> <td>✓</td> </tr> <tr> <td>Saturated Moisture Content (%)</td> <td>(BS1377 : Part 2 : 1990, clause 3.3)</td> <td></td> </tr> <tr> <td>PSD - Wet Sieving</td> <td>(BS 1377:Part 2:1990 Clause 9.2)</td> <td>✓</td> </tr> <tr> <td>Engineering Sample Descriptions</td> <td>(BS 5930 : Section 6)</td> <td></td> </tr> <tr> <td>Passing 425/63 (µm)</td> <td>-</td> <td>✓</td> </tr> <tr> <td>Hydrometer</td> <td>(BS 1377:Part 2:1990 Clause 9.5)</td> <td></td> </tr> <tr> <td>Loss on Ignition (%)</td> <td>-</td> <td></td> </tr> <tr> <td>Soil Suctions (kPa)</td> <td>BRE Digest IP 4/93, 1993</td> <td></td> </tr> <tr> <td>Bulk Density (Mg/m³)</td> <td>(BS 1377:Part 2:1990 Clause 7.2)</td> <td></td> </tr> <tr> <td>Strength Tests</td> <td>(BS 1377:Part 7:1990 Clause 8 & 9)</td> <td></td> </tr> <tr> <td>Soluble Sulphate Content (SO₄g/l)</td> <td>(BS 1377:Part 3:1990 Clause 5.3)</td> <td>✓</td> </tr> <tr> <td>pH value</td> <td>(BS 1377:Part 3:1990 Clause 9.4)</td> <td>✓</td> </tr> <tr> <td>California Bearing Ratios (CBR)</td> <td>(BS 1377:Part 4:1990 Clause 7)</td> <td></td> </tr> <tr> <td>Compaction Tests</td> <td>(BS 1377:Part 4:1990 Clauses 3.0-3.6)</td> <td></td> </tr> </tbody> </table>				TEST TYPE	TEST METHOD	TESTED	Natural Moisture Contents (MC%)	(BS 1377:Part 2:1990 Clause 3.2)	✓	Liquid Limits (%)	(BS 1377:Part 2:1990 Clause 4.3)	✓	Plastic Limits (%)	(BS 1377:Part 2:1990 Clause 5.3)	✓	Plasticity Index (%)	(BS 1377:Part 2:1990 Clause 5.4)	✓	Saturated Moisture Content (%)	(BS1377 : Part 2 : 1990, clause 3.3)		PSD - Wet Sieving	(BS 1377:Part 2:1990 Clause 9.2)	✓	Engineering Sample Descriptions	(BS 5930 : Section 6)		Passing 425/63 (µm)	-	✓	Hydrometer	(BS 1377:Part 2:1990 Clause 9.5)		Loss on Ignition (%)	-		Soil Suctions (kPa)	BRE Digest IP 4/93, 1993		Bulk Density (Mg/m ³)	(BS 1377:Part 2:1990 Clause 7.2)		Strength Tests	(BS 1377:Part 7:1990 Clause 8 & 9)		Soluble Sulphate Content (SO ₄ g/l)	(BS 1377:Part 3:1990 Clause 5.3)	✓	pH value	(BS 1377:Part 3:1990 Clause 9.4)	✓	California Bearing Ratios (CBR)	(BS 1377:Part 4:1990 Clause 7)		Compaction Tests	(BS 1377:Part 4:1990 Clauses 3.0-3.6)	
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Strength Tests	(BS 1377:Part 7:1990 Clause 8 & 9)																																																									
Soluble Sulphate Content (SO ₄ g/l)	(BS 1377:Part 3:1990 Clause 5.3)	✓																																																								
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California Bearing Ratios (CBR)	(BS 1377:Part 4:1990 Clause 7)																																																									
Compaction Tests	(BS 1377:Part 4:1990 Clauses 3.0-3.6)																																																									
Client Reference:- 																																																										
Date Samples Received:- 21 January 2025 Date Testing Completed:- 04 February 2025																																																										
The results relate only to the samples tested																																																										
This test-report may not be reproduced, except with full and written approval of GROUNDTECH LABORATORIES		Laboratory testing in accord with BS EN ISO/IEC 17025-2000 and Quality Management in accord with ISO 9001																																																								
Signed on behalf of GroundTech Laboratories:- _____			Technical Signatory 																																																							
			Quality Assured to ISO 9001																																																							
GEOTECHNICAL LABORATORY TEST RESULTS			Report No: 25.01.016																																																							

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone: 01327 860947/860060

Fax: 01327 860430

Email: groundtech@listersgeotechnics.co.uk

**Quality Assured
to ISO 9001**

SAMPLES				CLASSIFICATION TESTS							CLASSIFICATION TESTS							STRENGTH TESTS					CHEMICAL TESTS			
Test Location	Sample Type	Sample Depth -m	Test Type	WC %	LL %	PL %	PI %	Passing 425 µm %	Modified PI %	Class	Passing 63 µm %	WC/ LL	PL+ 2%	Liquidity Index	Loss on Ignition %	Soil Suction kPa	Bulk Density Mg/m³	Test Type	Cell Pressure kN/m²	Deviator Stress kN/m²	Apparent Cohesion kN/m²	φ	pH Value	Soluble Sulphate Content SO4 g/l		
CT 01	D	1.00	PI/63	27	36	21	15	98	15	CI	69	0.75	23	0.40												
	D	2.00	PI/63	25	36	20	16	100	16	CI	76	0.69	22	0.31												
CT 03	D	3.00	PSD																							
	D	0.50	PI/63	26	42	22	20	100	20	CI	89	0.62	24	0.20												
	D	1.50	PI/63	28	36	23	13	100	13	CI	85	0.78	25	0.38												
	D	2.50	PI/63	27	37	22	15	100	15	CI	84	0.73	24	0.33												
	D	3.50	PI/63	23	36	23	13	98	13	CI	79	0.64	25	0.00												
	D	4.00	PI/63	23	33	21	12	100	12	CL	76	0.70	23	0.17												
Symbols:				U	Undisturbed Sample					R	Remoulded				PI	Plasticity Index			T	Triaxial Undrained				L	100mm specimen	
				D	Disturbed Sample					63	Passing 63µm				F	Filter Paper Suction Tests			M	Multistage Triaxial				S	38mm specimen	
				B	Bulk Sample					H	Hydrometer				CC	Continuous Core			HP	Hand Penetrometer						
				W	Water Sample					PSD	Wet Sieving								V	Vane Test						
LABORATORY TEST RESULTS																					Project Reference 25.01.016					

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

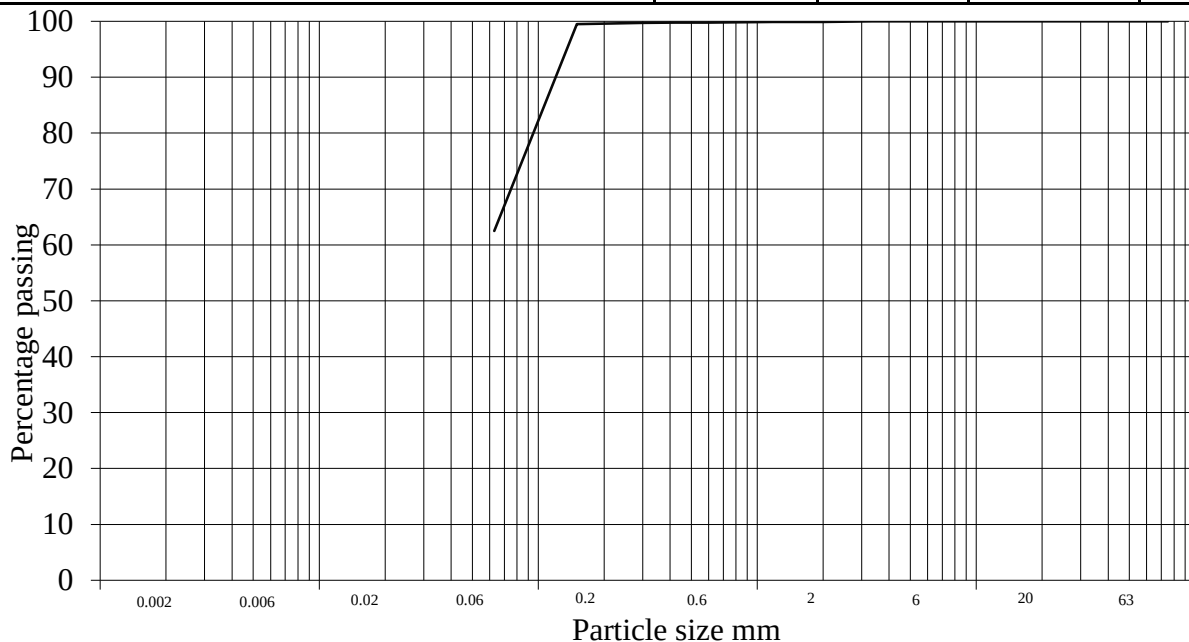
Telephone: 01327 860947/860060

Fax: 01327 860430

Email: groundtech@listersgeotechnics.co.uk

**Quality
Assured
ISO 9001**

		Test Method: BS 1377 : Part 2 : 1990 : 9.2			
		BS test sieve	Cumulative Passing - %	Hydrometer Particle Diameter	Cumulative Passing - %
Site: Land at Coppid Hill, Barkham Raod, Wokingham, RG41 4TG Test Location: CT 01 Sample Depth: 3.00m -3.50m Hydrometer No.: SG Gs: Water Visc. (N): Dry Mass of Soil after pretreatment (g):		75mm	100.00		
		63mm	100.00		
		50mm	100.00		
		37.5mm	100.00		
		26.5mm	100.00		
		20mm	100.00		
		14mm	100.00		
		10mm	100.00		
		6.3mm	100.00		
		5mm	100.00		
		3.5mm	100.00		
		2mm	99.90		
		1.18mm	99.90		
		600µm	99.80		
		425µm	99.80		



CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
63%				37%			0%			0%

PARTICLE SIZE DISTRIBUTION

Project Reference
25.01.016



4161



A PHENNA GROUP COMPANY

Geo-Integrity
4 Church Street
Buckingham
MK18 1QE

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: L25/00485/GIN - 25-55488

Your Project Reference: **Land at Coppid Hill, Barham Road, Wokingham, RG41 4TY 24-12-06**

Your Order Number: Q24-00626/1 Samples Received / Instructed: 17/01/2025 / 20/01/2025

Report Issue Number: 1 Sample Tested: 20/01 to 28/01/2025

Samples Analysed: 5 sample(s) Report issued: 28/01/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

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

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

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

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

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

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

Uncertainty of measurement values are available on request.

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

Asbestos

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

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

Deviating Samples

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

Accreditation Key

This report shall not be reproduced except in full

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

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

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

Date of Issue: 21.01.2025

Issued by: J. Gane

Issue No: 4

Rev No: 23



L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham
Road, Wokingham, RG41 4TY 24-12-06

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Results - Solid

Lab Reference			437944	437945	437946	437947
Client Sample ID			-	-	-	-
Client Sample Location			CT1	CT1	CT2	CT3
Client Sample Type			-	-	-	-
Client Sample Number			-	-	-	-
Depth - Top (m)			0.20	0.50	0.20	0.20
Depth - Bottom (m)			0.20	0.50	0.20	0.20
Date of Sampling			-	-	-	-
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay
Determinant	Units	Accreditation				
Arsenic	(mg/kg)	MCERTS	< 10	< 20.0	< 10	< 10
Cadmium	(mg/kg)	MCERTS	0.6	0.7	0.6	0.5
Chromium (Total)	(mg/kg)	UKAS	3.7	14	7.0	4.6
Copper	(mg/kg)	MCERTS	10	5.7	3.1	13
Lead	(mg/kg)	MCERTS	37	9.1	7.2	48
Mercury	(mg/kg)	UKAS	< 2.5	< 5.0	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	6.0	6.1	4.8	4.9
Selenium	(mg/kg)	u	< 8.0	< 16.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	42	27	26	27
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	< 1.0	< 1.0	< 1.0
Acenaphthene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene	(mg/kg)	UKAS	< 0.02	< 0.02	< 0.02	< 0.02
Anthracene	(mg/kg)	UKAS	< 0.02	< 0.02	< 0.02	< 0.02
Benzo (a) anthracene	(mg/kg)	MCERTS	0.03	< 0.02	< 0.02	0.03
Benzo (a) pyrene	(mg/kg)	MCERTS	0.03	< 0.02	< 0.02	0.04
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.04	< 0.02	< 0.02	0.04
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.03	< 0.02	< 0.02	0.03
Benzo (k) fluoranthene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Chrysene	(mg/kg)	MCERTS	0.04	< 0.02	< 0.02	0.04
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Fluoranthene	(mg/kg)	MCERTS	0.06	< 0.02	< 0.02	0.06
Fluorene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Naphthalene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
Pyrene	(mg/kg)	MCERTS	0.05	< 0.02	< 0.02	0.06
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	0.48	< 0.32	< 0.32	0.51
Asbestos	-	UKAS	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected



L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham
Road, Wokingham, RG41 4TY 24-12-06

7 - 11 Harding Street
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Analytical Test Results - Chemical Analysis

Lab Reference	437944	437945	437946	437948
Client Sample ID	-	-	-	-
Client Sample Location	CT1	CT1	CT2	CT3
Client Sample Type	-	-	-	-
Client Sample Number	-	-	-	-
Depth - Top (m)	0.20	0.50	0.20	4.65
Depth - Bottom (m)	0.20	0.50	0.20	4.65
Date of Sampling	-	-	-	-
Time of Sampling	-	-	-	-
Sample Matrix	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation		
Water soluble sulphate (as SO ₄)	(mg/l)	u	20	13
Acid Soluble Sulphate	(%)	u	51	71
Total Sulphur	(%)	UKAS	-	-
pH Value	pH Units	MCERTS	-	-
			6.6	6.7
			7.2	7.0



L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham
Road, Wokingham, RG41 4TY 24-12-06

7 - 11 Harding Street
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Analytical Test Results - VPH / EPH

Lab Reference	437944	437945	437946	437947
Client Sample ID	-	-	-	-
Client Sample Location	CT1	CT1	CT2	CT3
Client Sample Type	-	-	-	-
Client Sample Number	-	-	-	-
Depth - Top (m)	0.20	0.50	0.20	0.20
Depth - Bottom (m)	0.20	0.50	0.20	0.20
Date of Sampling	-	-	-	-
Time of Sampling	-	-	-	-
Sample Matrix	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation		
Benzene	(mg/kg)	MCERTS	< 0.01	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01	< 0.01
MTBE	(mg/kg)	MCERTS	< 0.01	< 0.01
Total >C ₅ to C ₄₀ [EH_2D+HS_1D_Total]	(mg/kg)	MCERTS	< 10	14
Total TPH >C ₅ to C ₆ [HS_MS_1D_TOTAL]	(mg/kg)	u	< 1.0	< 1.0
Total TPH >C ₆ to C ₇ [HS_MS_1D_TOTAL]	(mg/kg)	u	< 1.0	< 1.0
Total TPH >C ₇ to C ₈ [HS_MS_1D_TOTAL]	(mg/kg)	u	< 1.0	< 1.0
Total TPH >C ₈ to C ₁₀ [EH_2D_TOTAL]	(mg/kg)	MCERTS	< 5.0	< 5.0
Total TPH >C ₁₀ to C ₁₂ [EH_2D_TOTAL]	(mg/kg)	MCERTS	< 5.0	< 5.0
Total TPH >C ₁₂ to C ₁₆ [EH_2D_TOTAL]	(mg/kg)	MCERTS	< 5.0	< 5.0
Total TPH >C ₁₆ to C ₂₁ [EH_2D_TOTAL]	(mg/kg)	MCERTS	< 5.0	< 5.0
Total TPH >C ₂₁ to C ₃₅ [EH_2D_TOTAL]	(mg/kg)	MCERTS	< 10	< 10
Total TPH >C ₃₅ to C ₄₄ [EH_2D_TOTAL]	(mg/kg)	u	< 10	< 10



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L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham
Road, Wokingham, RG41 4TY 24-12-06

Analytical Test Results - VOC

Lab Reference	437945
---------------	--------

Client Sample ID -

Client Sample Location CT1

Client Sample Type -

Client Sample Number -

Depth - Top (m) 0.50

Depth - Bottom (m) 0.50

Date of Sampling -

Time of Sampling -

Sample Matrix Clay

Determinant	Units	Accreditation	
Benzene	(mg/kg)	MCERTS	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01
Dichlorodifluoromethane	(mg/kg)	UKAS	< 0.05
Chloromethane	(mg/kg)	UKAS	< 0.02
Vinyl Chloride	(mg/kg)	MCERTS	< 0.02
Bromomethane	(mg/kg)	u	< 0.05
Chloroethane	(mg/kg)	MCERTS	< 0.01
Trichlorofluoromethane	(mg/kg)	MCERTS	< 0.01
1,1-Dichloroethylene	(mg/kg)	MCERTS	< 0.01
Dichloromethane	(mg/kg)	u	< 0.10
MTBE	(mg/kg)	MCERTS	< 0.01
trans-1,2,-dichloroethylene	(mg/kg)	MCERTS	< 0.01
1,1-Dichloroethane	(mg/kg)	MCERTS	< 0.01
2,2-Dichloropropane	(mg/kg)	MCERTS	< 0.01
cis-1,2,-dichloroethylene	(mg/kg)	MCERTS	< 0.01
Bromochloromethane	(mg/kg)	MCERTS	< 0.05
Chloroform	(mg/kg)	MCERTS	< 0.01
1,1,1-Trichloroethane	(mg/kg)	MCERTS	< 0.01
1,1-Dichloropropene	(mg/kg)	MCERTS	< 0.01
Carbon Tetrachloride	(mg/kg)	MCERTS	< 0.01
1,2-dichloroethane	(mg/kg)	MCERTS	< 0.02
Trichloroethylene	(mg/kg)	MCERTS	< 0.01
1,2-Dichloropropane	(mg/kg)	MCERTS	< 0.01
Dibromomethane	(mg/kg)	MCERTS	< 0.02
Bromodichloromethane	(mg/kg)	MCERTS	< 0.01
cis-1,2-dichloropropylene	(mg/kg)	MCERTS	< 0.01
trans-1,3-dichloropropylene	(mg/kg)	MCERTS	< 0.01
1,1,2-Trichloroethane	(mg/kg)	MCERTS	< 0.01
1,3-Dichloropropane	(mg/kg)	MCERTS	< 0.01
Tetrachloroethylene	(mg/kg)	MCERTS	< 0.01
Chlorodibromomethane	(mg/kg)	MCERTS	< 0.01
1,2-Dibromoethane	(mg/kg)	MCERTS	< 0.01
Chlorobenzene	(mg/kg)	MCERTS	< 0.01
1,1,1,2-tetrachloroethane	(mg/kg)	MCERTS	< 0.01
Styrene	(mg/kg)	UKAS	< 0.01
Isopropylbenzene	(mg/kg)	MCERTS	< 0.01
Bromoform	(mg/kg)	MCERTS	< 0.05
1,1,2,2-Tetrachloroethane	(mg/kg)	MCERTS	< 0.01
1,2,3-Trichloropropane	(mg/kg)	MCERTS	< 0.02
n-Propylbenzene	(mg/kg)	MCERTS	< 0.01
Bromobenzene	(mg/kg)	MCERTS	< 0.01
1,3,5-Trimethylbenzene	(mg/kg)	UKAS	< 0.01
2-chlorotoluene	(mg/kg)	MCERTS	< 0.01
4-chlorotoluene	(mg/kg)	MCERTS	< 0.01
tert-butylbenzene	(mg/kg)	UKAS	< 0.01
1,2,4-trimethylbenzene	(mg/kg)	UKAS	< 0.01
sec-Butylbenzene	(mg/kg)	UKAS	< 0.01
4-Isopropyltoluene (P-Cymene)	(mg/kg)	UKAS	< 0.01
1,3-Dichlorobenzene	(mg/kg)	u	< 0.01
1,4-Dichlorobenzene	(mg/kg)	u	< 0.01
n-Butylbenzene	(mg/kg)	UKAS	< 0.01
1,2-Dichlorobenzene	(mg/kg)	MCERTS	< 0.01
1,2-Dibromo-3-chloropropane	(mg/kg)	u	< 0.05
1,2,4-Trichlorobenzene	(mg/kg)	u	< 0.05
Hexachlorobutadiene	(mg/kg)	u	< 0.05
Naphthalene	(mg/kg)	u	< 0.05
1,2,3-Trichlorobenzene	(mg/kg)	u	< 0.05

L25/00485/GIN - 25-55488

7 - 11 Harding Street
Leicester
LE1 4DH

**Project Reference - Land at Coppid Hill, Barham
Road, Wokingham, RG41 4TY 24-12-06**

Analytical Test Results - SVOC

Lab Reference		437945	
Client Sample ID	-		
Client Sample Location	CT1		
Client Sample Type	-		
Client Sample Number	-		
Depth - Top (m)	0.50		
Depth - Bottom (m)	0.50		
Date of Sampling	-		
Time of Sampling	-		
Sample Matrix	Clay		
Determinant	Units	Accreditation	
1,2,4-Trichlorobenzene	(mg/kg)	u	< 0.2
1,2-Dichlorobenzene	(mg/kg)	u	< 0.1
1,3-Dichlorobenzene	(mg/kg)	u	< 0.1
1,4-Dichlorobenzene	(mg/kg)	u	< 0.2
1-Chloronaphthalene	(mg/kg)	u	< 0.1
2,3,4,6-Tetrachlorophenol	(mg/kg)	u	< 0.6
2,4,5-Trichlorophenol	(mg/kg)	u	< 0.2
2,4,6-Trichlorophenol	(mg/kg)	u	< 0.3
2,4-Dichorophenol	(mg/kg)	u	< 0.2
2,4-Dimethyphenol	(mg/kg)	u	< 0.2
2,4-Dinitrophenol	(mg/kg)	u	< 2.0
2,6-Dichorophenol	(mg/kg)	u	< 0.3
2,6-Dinitrotoluene	(mg/kg)	u	< 0.6
2-Chlorophenol	(mg/kg)	u	< 0.2
2-Methylnaphthalene	(mg/kg)	u	< 0.2
2-Methylphenol	(mg/kg)	u	< 0.2
2-Nitroaniline	(mg/kg)	u	< 0.4
2-Nitrophenol	(mg/kg)	u	< 0.6
3,3-Dichlorobenzidine	(mg/kg)	u	< 0.3
3/4-Methylphenol	(mg/kg)	u	< 0.2
3-Nitroaniline	(mg/kg)	u	< 0.6
4-Chlorophenyl phenyl ether	(mg/kg)	u	< 0.2
4,6-Dinitro-2-methylphenol	(mg/kg)	u	< 1.0
4-Bromophenyl phenyl ether	(mg/kg)	u	< 0.2
4-Chloro-3-methylphenol	(mg/kg)	u	< 0.2
4-Chloroaniline	(mg/kg)	u	< 0.2
4-Nitroaniline	(mg/kg)	u	< 0.3
4-Nitrophenol	(mg/kg)	u	< 0.6
Acenaphthene	(mg/kg)	u	< 0.1
Acenaphthylene	(mg/kg)	u	< 0.1
Aniline	(mg/kg)	u	< 0.2
Anthracene	(mg/kg)	u	< 0.1
Azobenzene	(mg/kg)	u	< 0.2
Benzo[a]anthracene	(mg/kg)	u	< 0.1
Benzo[ghi]perylene	(mg/kg)	u	0.2
Benzo[a]pyrene	(mg/kg)	u	< 0.2
Benzo[b]fluoranthene	(mg/kg)	u	< 0.1
Benzo[k]fluoranthene	(mg/kg)	u	< 0.1
Benzyl Alcohol	(mg/kg)	u	< 0.3
Benzyl butyl phthalate	(mg/kg)	u	< 0.2
Bis(2-chloroethoxy)methane	(mg/kg)	u	< 0.1
Bis(2-chloroethyl)ether	(mg/kg)	u	< 0.2
Bis(2-chloroisopropyl)ether	(mg/kg)	u	< 0.2
Bis(2-ethylhexyl) phthalate	(mg/kg)	u	< 0.2
Chrysene	(mg/kg)	u	< 0.1
Dibenz(a,h)anthracene	(mg/kg)	u	< 0.2
Dibenzofuran	(mg/kg)	u	< 0.1
Dibutyl phthalate	(mg/kg)	u	< 0.1
Diethyl Phthalate	(mg/kg)	u	< 0.2
Dimethyl phthalate	(mg/kg)	u	< 0.2
Di-n-octyl phthalate	(mg/kg)	u	< 0.2
Diphenylamine	(mg/kg)	u	< 0.1
Fluoranthene	(mg/kg)	u	< 0.1
Fluorene	(mg/kg)	u	< 0.1
Hexachlorobenzene	(mg/kg)	u	< 0.3
Hexachlorobutadiene	(mg/kg)	u	< 0.3
Hexachlorocyclopentadiene	(mg/kg)	u	< 1.0
Hexachloroethane	(mg/kg)	u	< 0.2
Indeno[1,2,3-cd]pyrene	(mg/kg)	u	< 0.2
Isophorone	(mg/kg)	u	< 0.2
Methyl Methanesulfonate	(mg/kg)	u	< 0.3
Naphthalene	(mg/kg)	u	< 0.1
NitroBenzene	(mg/kg)	u	< 0.3
N-Nitrosodimethylamine	(mg/kg)	u	< 0.2

L25/00485/GIN - 25-55488

**Project Reference - Land at Coppid Hill, Barham
Road, Wokingham, RG41 4TY 24-12-06**

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Results - SVOC

Lab Reference		437945	
Client Sample ID		-	
Client Sample Location		CT1	
Client Sample Type		-	
Client Sample Number		-	
Depth - Top (m)		0.50	
Depth - Bottom (m)		0.50	
Date of Sampling		-	
Time of Sampling		-	
Sample Matrix		Clay	
Determinant	Units	Accreditation	
Pentachlorophenol	(mg/kg)	u	< 1.0
Phenanthrene	(mg/kg)	u	< 0.1
Phenol	(mg/kg)	u	< 0.1
Pyrene	(mg/kg)	u	< 0.1



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Project Reference - Land at Coppid Hill, Barham Road, Wokingham, RG41 4TY 24-12-06

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
437944	-	CT1	-	-	Brown slightly gravelly silty clay with occasional organic matter rootlets	9.2	62	86
437945	-	CT1	-	-	Brown silty clay	24	< 0.1	100
437946	-	CT2	-	-	Brown slightly gravelly silty clay	15	< 0.1	71
437947	-	CT3	-	-	Brown slightly gravelly silty clay with occasional organic matter rootlets	17	12	-
437948	-	CT3	-	-	Brown silty clay	-	-	100



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7 - 11 Harding Street
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L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham Road, Wokingham, RG41 4TY 24-12-06

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
437944	-	CT1	-	-	VPH/BTEX - Sample taken from container with head space.
437945	-	CT1	-	-	VPH/BTEX - Sample taken from container with head space.VOC - Sample taken from container with headspace.
437946	-	CT2	-	-	VPH/BTEX - Sample taken from container with head space.
437947	-	CT3	-	-	VPH/BTEX - Sample taken from container with head space.
437948	-	CT3	-	-	



7 - 11 Harding Street
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L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham Road, Wokingham, RG41 4TY 24-12-06

Analysis Methodologies

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



7 - 11 Harding Street
Leicester
LE1 4DH

L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham Road, Wokingham, RG41 4TY 24-12-06

Sample Deviations

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

Observations on receipt

A - No date of sampling provided

W - No time of sampling provided for water sample

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

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

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
437944	-	CT1	-	-		A
437945	-	CT1	-	-		A
437946	-	CT2	-	-		A
437947	-	CT3	-	-		A
437948	-	CT3	-	-		A

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in **pale yellow**.



3Y253-MT17E-5ZK9H

Report is invalid if pages are removed.

Job name

Land At Barkham Road, Wokingham, RG41 4TG

Description/Comments

Project

24-12-06

Site

Land At Barkham Road, Wokingham, RG41 4TG

Classified by

Name: **Danny Lusardi**
Date: **07 Mar 2025 09:10 GMT**
Telephone: **01280 816409**
Company: **Geo-Integrity Limited**
Geo-Integrity Limited

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

2 - Material Characterisation

Address of the waste

Land At Barkham Road, Wokingham, RG41 4TG

Post Code RG41 4TG

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Proposed redevelopment of site - construction

Description of the specific process, sub-process and/or activity that created the waste

Potential waste to be created by grading and/or excavation of the site underlying ground (soils/materials) - only applies to excess material with no intended usage.

Description of the waste

Made Ground and Natural soils

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	CT1	0.20	Non Hazardous		3
2	CT1[2]	0.50	Non Hazardous		5
3	CT2	0.20	Non Hazardous		7
4	CT3	0.20	Non Hazardous		9

Related documents

#	Name	Description
1	WM3 v1.2 2021 compliant	waste stream template used to create this Job

Report

Created by: Danny Lusardi

Created date: 07 Mar 2025 09:10 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	12
Appendix B: Rationale for selection of metal species	13
Appendix C: Version	13

Classification of sample: CT1

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:	
CT1	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.20 m		
Moisture content:		
9.2%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	 pH		PH		6.6 pH		6.6 pH	6.6 pH		
2	 arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	10 mg/kg	1.32	11.989 mg/kg	0.0012 %	✓	
3	 cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4	0.6 mg/kg	1.855	1.01 mg/kg	0.000101 %	✓	
4	 chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	3.7 mg/kg	1.462	4.91 mg/kg	0.000491 %	✓	
5	 copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8	10 mg/kg	3.929	35.676 mg/kg	0.00357 %	✓	
6	 mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	2.5 mg/kg	1.353	3.072 mg/kg	0.000307 %	✓	
7	 nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	6 mg/kg	2.976	16.215 mg/kg	0.00162 %	✓	
8	 lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	37 mg/kg	1.56	52.404 mg/kg	0.00336 %	✓	
9	 selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			8 mg/kg	1.405	10.206 mg/kg	0.00102 %	✓	
10	 zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	42 mg/kg	2.774	105.795 mg/kg	0.0106 %	✓	
11	 chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
12	 TPH (C6 to C40) petroleum group		TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	 naphthalene	601-052-00-2	202-049-5	91-20-3	0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
14	 acenaphthylene		205-917-1	208-96-8	0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
15	 acenaphthene		201-469-6	83-32-9	0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	fluorene	201-695-5	86-73-7		0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
17	phenanthrene	201-581-5	85-01-8		0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
18	anthracene	204-371-1	120-12-7		0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
19	fluoranthene	205-912-4	206-44-0		0.06 mg/kg		0.0545 mg/kg	0.00000545 %	✓	
20	pyrene	204-927-3	129-00-0		0.05 mg/kg		0.0454 mg/kg	0.00000454 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		0.03 mg/kg		0.0272 mg/kg	0.00000272 %	✓	
22	chrysene	601-048-00-0	205-923-4		0.04 mg/kg		0.0363 mg/kg	0.00000363 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.04 mg/kg		0.0363 mg/kg	0.00000363 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.03 mg/kg		0.0272 mg/kg	0.00000272 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.02 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		0.03 mg/kg		0.0272 mg/kg	0.00000272 %	✓	
29	PAHs (total)				0.48 mg/kg		0.436 mg/kg	0.0000436 %	✓	
30	benzene	601-020-00-8	200-753-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
31	toluene	601-021-00-3	203-625-9		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
32	ethylbenzene	601-023-00-4	202-849-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
33	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
Total:								0.0235 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: CT1[2]

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
CT1[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
24%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 24% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		pH				6.7	pH		6.7	pH	6.7 pH		
				PH									
2		arsenic { arsenic trioxide }				20	mg/kg	1.32	20.069	mg/kg	0.00201 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
3		cadmium { cadmium sulfate }				0.7	mg/kg	1.855	0.987	mg/kg	0.0000987 %	✓	
		048-009-00-9	233-331-6	10124-36-4									
4		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				14	mg/kg	1.462	15.551	mg/kg	0.00156 %	✓	
			215-160-9	1308-38-9									
5		copper { copper sulphate pentahydrate }				5.7	mg/kg	3.929	17.021	mg/kg	0.0017 %	✓	
		029-023-00-4	231-847-6	7758-99-8									
6		mercury { mercury dichloride }				5	mg/kg	1.353	5.143	mg/kg	0.000514 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel chromate }				6.1	mg/kg	2.976	13.798	mg/kg	0.00138 %	✓	
		028-035-00-7	238-766-5	14721-18-7									
8		lead { lead chromate }			1	9.1	mg/kg	1.56	10.788	mg/kg	0.000692 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
9		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				16	mg/kg	1.405	17.085	mg/kg	0.00171 %	✓	
		034-002-00-8											
10		zinc { zinc chromate }				27	mg/kg	2.774	56.925	mg/kg	0.00569 %	✓	
		024-007-00-3	236-878-9	13530-65-9									
11		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
12		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
				TPH									
13		naphthalene				0.02	mg/kg		0.0152	mg/kg	0.00000152 %	✓	
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				0.02	mg/kg		0.0152	mg/kg	0.00000152 %	✓	
			205-917-1	208-96-8									
15		acenaphthene				0.02	mg/kg		0.0152	mg/kg	0.00000152 %	✓	
		201-469-6		83-32-9									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	fluorene	201-695-5	86-73-7		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
17	phenanthrene	201-581-5	85-01-8		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
18	anthracene	204-371-1	120-12-7		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
19	fluoranthene	205-912-4	206-44-0		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
20	pyrene	204-927-3	129-00-0		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
22	chrysene	601-048-00-0	205-923-4		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		0.02 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
29	PAHs (total)				0.32 mg/kg		0.243 mg/kg	0.0000243 %	✓	
30	benzene	601-020-00-8	200-753-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
31	toluene	601-021-00-3	203-625-9		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
32	ethylbenzene	601-023-00-4	202-849-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
33	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
Total:								0.0166 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: CT2

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
CT2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 15% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		pH				7.2	pH		7.2	pH	7.2 pH		
				PH									
2		arsenic { arsenic trioxide }				10	mg/kg	1.32	11.223	mg/kg	0.00112 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
3		cadmium { cadmium sulfate }				0.6	mg/kg	1.855	0.946	mg/kg	0.0000946 %	✓	
		048-009-00-9	233-331-6	10124-36-4									
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7	mg/kg	1.462	8.696	mg/kg	0.00087 %	✓	
			215-160-9	1308-38-9									
5		copper { copper sulphate pentahydrate }				3.1	mg/kg	3.929	10.353	mg/kg	0.00104 %	✓	
		029-023-00-4	231-847-6	7758-99-8									
6		mercury { mercury dichloride }				2.5	mg/kg	1.353	2.876	mg/kg	0.000288 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel chromate }				4.8	mg/kg	2.976	12.143	mg/kg	0.00121 %	✓	
		028-035-00-7	238-766-5	14721-18-7									
8		lead { lead chromate }			1	7.2	mg/kg	1.56	9.546	mg/kg	0.000612 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
9		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				8	mg/kg	1.405	9.554	mg/kg	0.000955 %	✓	
		034-002-00-8											
10		zinc { zinc chromate }				26	mg/kg	2.774	61.309	mg/kg	0.00613 %	✓	
		024-007-00-3	236-878-9	13530-65-9									
11		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
12		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
				TPH									
13		naphthalene				0.02	mg/kg		0.017	mg/kg	0.0000017 %	✓	
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				0.02	mg/kg		0.017	mg/kg	0.0000017 %	✓	
			205-917-1	208-96-8									
15		acenaphthene				0.02	mg/kg		0.017	mg/kg	0.0000017 %	✓	
		201-469-6		83-32-9									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	fluorene	201-695-5	86-73-7		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
17	phenanthrene	201-581-5	85-01-8		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
18	anthracene	204-371-1	120-12-7		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
19	fluoranthene	205-912-4	206-44-0		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
20	pyrene	204-927-3	129-00-0		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
22	chrysene	601-048-00-0	205-923-4		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		0.02 mg/kg		0.017 mg/kg	0.0000017 %	✓	
29	PAHs (total)				0.32 mg/kg		0.272 mg/kg	0.0000272 %	✓	
30	benzene	601-020-00-8	200-753-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
31	toluene	601-021-00-3	203-625-9		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
32	ethylbenzene	601-023-00-4	202-849-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
33	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
Total:								0.0136 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: CT3

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:	
CT3	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.20 m		
Moisture content:		
17%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	 pH		PH		7 pH		7 pH	7pH		
2	 arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	10 mg/kg	1.32	10.959 mg/kg	0.0011 %	✓	
3	 cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4	0.5 mg/kg	1.855	0.77 mg/kg	0.000077 %	✓	
4	 chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	4.6 mg/kg	1.462	5.58 mg/kg	0.000558 %	✓	
5	 copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8	13 mg/kg	3.929	42.394 mg/kg	0.00424 %	✓	
6	 mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	2.5 mg/kg	1.353	2.808 mg/kg	0.000281 %	✓	
7	 nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	4.9 mg/kg	2.976	12.104 mg/kg	0.00121 %	✓	
8	 lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	48 mg/kg	1.56	62.143 mg/kg	0.00398 %	✓	
9	 selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			8 mg/kg	1.405	9.329 mg/kg	0.000933 %	✓	
10	 zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	27 mg/kg	2.774	62.169 mg/kg	0.00622 %	✓	
11	 chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
12	 TPH (C6 to C40) petroleum group		TPH		14 mg/kg		11.62 mg/kg	0.00116 %	✓	
13	 naphthalene	601-052-00-2	202-049-5	91-20-3	0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
14	 acenaphthylene		205-917-1	208-96-8	0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
15	 acenaphthene		201-469-6	83-32-9	0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	fluorene	201-695-5	86-73-7		0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
17	phenanthrene	201-581-5	85-01-8		0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
18	anthracene	204-371-1	120-12-7		0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
19	fluoranthene	205-912-4	206-44-0		0.06 mg/kg		0.0498 mg/kg	0.00000498 %	✓	
20	pyrene	204-927-3	129-00-0		0.06 mg/kg		0.0498 mg/kg	0.00000498 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		0.03 mg/kg		0.0249 mg/kg	0.00000249 %	✓	
22	chrysene	601-048-00-0	205-923-4		0.04 mg/kg		0.0332 mg/kg	0.00000332 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.04 mg/kg		0.0332 mg/kg	0.00000332 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.04 mg/kg		0.0332 mg/kg	0.00000332 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.02 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		0.03 mg/kg		0.0249 mg/kg	0.00000249 %	✓	
29	PAHs (total)				0.51 mg/kg		0.423 mg/kg	0.0000423 %	✓	
30	benzene	601-020-00-8	200-753-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
31	toluene	601-021-00-3	203-625-9		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
32	ethylbenzene	601-023-00-4	202-849-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
33	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
Total:								0.02 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 500 mg/kg (0.05%) because: HP 3 Flammable : components of concern : TPH HP 3 can be discounted as this is a solid waste without a free draining liquid phase. Ref:Guidance on the classification and assessment of waste (1st Edition v1.1) Technical Guidance WM3, 2021.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."



Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00116%)

Appendix A: Classifier defined and non GB MCL determinands

• pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

• chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

• acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

• acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

• fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

• anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

• **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **PAHs (total)**

Description/Comments: Worst case scenario combining risk phrases and substance specific thresholds from benzo[a]pyrene (CLP# 601-032-00-3) and benzo[a]anthracene (CLP# 601-033-00-9)

Data source: 2008/1272/EC – Table 3.2 of Annex VI of regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures and 2009/790/EC Annex IV – Annex IV of regulation 2009/790/EC - 1st Adaptation to Technical Progress for European Regulation 1272/2008

Data source date: 16 Dec 2008

Hazard Statements: Skin Sens. 1; H317 , Carc. 1B; H350 , Carc. 1B; H350 >= 0.01 % , Muta. 1B; H340 , Aquatic Acute 1; H400 (M=100) , Aquatic Chronic 1; H410 (M=100) , Repr. 1B; H360FD

• **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds

cadmium {cadmium sulfate}

Worst Case Species Selected

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

(enter justification for selecting this species)

copper {copper sulphate pentahydrate}

Worst Case Species Selected

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight

lead {lead chromate}

Worst Case Species Selected

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

(enter justification for selecting this species)

zinc {zinc chromate}

Worst Case Species Selected

chromium in chromium(VI) compounds {chromium(VI) oxide}

(enter justification for selecting this species)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021

HazWasteOnline Classification Engine Version: 2025.65.6483.11817 (06 Mar 2025)

HazWasteOnline Database: 2025.65.6483.11817 (06 Mar 2025)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK:

2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024



APPENDIX D



Geo-Integrity, - 07858 367 125 Email:- info@geo-integrity.co.uk

COPPID HILL BARN, BARKHAM ROAD, BARKHAM, WOKINGHAM, RG41 4TG

Order Details

Date: 08/01/2025
Your ref: 24-12-06
Our Ref: GS-28Z-P1Z-9EP-VTS

Site Details

Location: 478469 167164
Area: 0.71 ha
Authority: [Wokingham Borough Council](#) ↗



[Summary of findings](#)

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

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#) [Insight User Guide](#) ↗

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	0	2	3	-
16	1.2	Historical tanks	0	0	0	0	-
16 >	1.3 >	Historical energy features >	0	0	1	3	-
17	1.4	Historical petrol stations	0	0	0	0	-
17 >	1.5 >	Historical garages >	0	0	3	0	-
17	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
18 >	2.1 >	Historical industrial land uses >	0	0	3	3	-
19	2.2	Historical tanks	0	0	0	0	-
19 >	2.3 >	Historical energy features >	0	0	4	8	-
20	2.4	Historical petrol stations	0	0	0	0	-
20 >	2.5 >	Historical garages >	0	0	5	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
21	3.1	Active or recent landfill	0	0	0	0	-
21	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
22	3.5	Historical waste sites	0	0	0	0	-
22 >	3.6 >	Licensed waste sites >	0	0	0	2	-
23 >	3.7 >	Waste exemptions >	0	18	0	5	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
26 >	4.1 >	Recent industrial land uses >	0	1	1	-	-
27 >	4.2 >	Current or recent petrol stations >	0	0	1	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-



27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
28	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
28	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29 >	4.13 >	<u>Licensed Discharges to controlled waters ></u>	0	0	5	0	-
30	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30 >	4.18 >	<u>Pollution Incidents (EA/NRW) ></u>	0	0	2	0	-
31	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
32 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
33 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
34 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
35	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
35	5.5	Groundwater vulnerability- local information	None (within 0m)				
36 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	8
39 >	5.7 >	<u>Surface water abstractions ></u>	0	0	0	0	4
40 >	5.8 >	<u>Potable abstractions ></u>	0	0	0	0	1
40	5.9	Source Protection Zones	0	0	0	0	-
41	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
42 >	6.1 >	<u>Water Network (OS MasterMap) ></u>	0	0	13	-	-



44 >	6.2 >	Surface water features >	0	0	6	-	-
44 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
44 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
45 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
46	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
46	7.2	Historical Flood Events	0	0	0	-	-
46	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
47	7.5	Flood Storage Areas	0	0	0	-	-
48	7.6	Flood Zone 2	None (within 50m)				
48	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
49	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
50 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
51 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1
52	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
52	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
52	10.4	Special Protection Areas (SPA)	0	0	0	0	0
52	10.5	National Nature Reserves (NNR)	0	0	0	0	0
53 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
53 >	10.7 >	Designated Ancient Woodland >	0	0	0	1	24
55	10.8	Biosphere Reserves	0	0	0	0	0
55	10.9	Forest Parks	0	0	0	0	0
55	10.10	Marine Conservation Zones	0	0	0	0	0
55	10.11	Green Belt	0	0	0	0	0
55	10.12	Proposed Ramsar sites	0	0	0	0	0



56	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
56	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
56	10.15	Nitrate Sensitive Areas	0	0	0	0	0
56 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	3
58 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
59 >	10.18 >	SSSI Units >	0	0	0	0	2
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
61	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61	11.4	Listed Buildings	0	0	0	-	-
62	11.5	Conservation Areas	0	0	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
64	12.2	Open Access Land	0	0	0	-	-
64	12.3	Tree Felling Licences	0	0	0	-	-
64	12.4	Environmental Stewardship Schemes	0	0	0	-	-
65	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	13.1 >	Priority Habitat Inventory >	0	0	1	-	-
67	13.2	Habitat Networks	0	0	0	-	-
67	13.3	Open Mosaic Habitat	0	0	0	-	-
67	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
68 >	14.1 >	10k Availability >	Identified (within 500m)				
69	14.2	Artificial and made ground (10k)	0	0	0	0	-
70 >	14.3 >	Superficial geology (10k) >	0	0	0	1	-

71	14.4	Landslip (10k)	0	0	0	0	-
72 >	14.5 >	Bedrock geology (10k) >	1	0	1	0	-
73	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
74 >	15.1 >	50k Availability >	Identified (within 500m)				
75	15.2	Artificial and made ground (50k)	0	0	0	0	-
75	15.3	Artificial ground permeability (50k)	0	0	-	-	-
76 >	15.4 >	Superficial geology (50k) >	0	0	0	1	-
77	15.5	Superficial permeability (50k)	None (within 50m)				
77	15.6	Landslip (50k)	0	0	0	0	-
77	15.7	Landslip permeability (50k)	None (within 50m)				
78 >	15.8 >	Bedrock geology (50k) >	1	0	1	0	-
79 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
79	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
80	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
81 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
82 >	17.2 >	Running sands >	Low (within 50m)				
83 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
84 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
85 >	17.5 >	Landslides >	Very low (within 50m)				
86 >	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
88	18.1	BritPits	0	0	0	0	-
88	18.2	Surface ground workings	0	0	0	-	-
88	18.3	Underground workings	0	0	0	0	0
88	18.4	Underground mining extents	0	0	0	0	-
89	18.5	Historical Mineral Planning Areas	0	0	0	0	-



89	18.6	Non-coal mining	0	0	0	0	0
89	18.7	JPB mining areas	None (within 0m)				
89	18.8	The Coal Authority non-coal mining	0	0	0	0	-
90	18.9	Researched mining	0	0	0	0	-
90	18.10	Mining record office plans	0	0	0	0	-
90	18.11	BGS mine plans	0	0	0	0	-
90	18.12	Coal mining	None (within 0m)				
90	18.13	Brine areas	None (within 0m)				
91	18.14	Gypsum areas	None (within 0m)				
91	18.15	Tin mining	None (within 0m)				
91	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
92	19.1	Natural cavities	0	0	0	0	-
92	19.2	Mining cavities	0	0	0	0	0
92	19.3	Reported recent incidents	0	0	0	0	-
92	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
94 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
96 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	0	-	-	-
96	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
96	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
97	22.1	Underground railways (London)	0	0	0	-	-
97	22.2	Underground railways (Non-London)	0	0	0	-	-
97	22.3	Railway tunnels	0	0	0	-	-
97	22.4	Historical railway and tunnel features	0	0	0	-	-
97	22.5	Royal Mail tunnels	0	0	0	-	-
98	22.6	Historical railways	0	0	0	-	-

98	22.7	Railways	0	0	0	-	-
98	22.8	Crossrail 2	0	0	0	0	-
98	22.9	HS2	0	0	0	0	-



Recent aerial photograph



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Capture Date: 30/04/2022

Site Area: 0.71ha



Recent site history - 2019 aerial photograph



Capture Date: 29/06/2019

Site Area: 0.71ha



Recent site history - 2010 aerial photograph



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Capture Date: 25/09/2010

Site Area: 0.71ha



Recent site history - 2005 aerial photograph



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Capture Date: 12/07/2005

Site Area: 0.71ha



Recent site history - 1999 aerial photograph



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Capture Date: 04/09/1999

Site Area: 0.71ha



OS MasterMap site plan

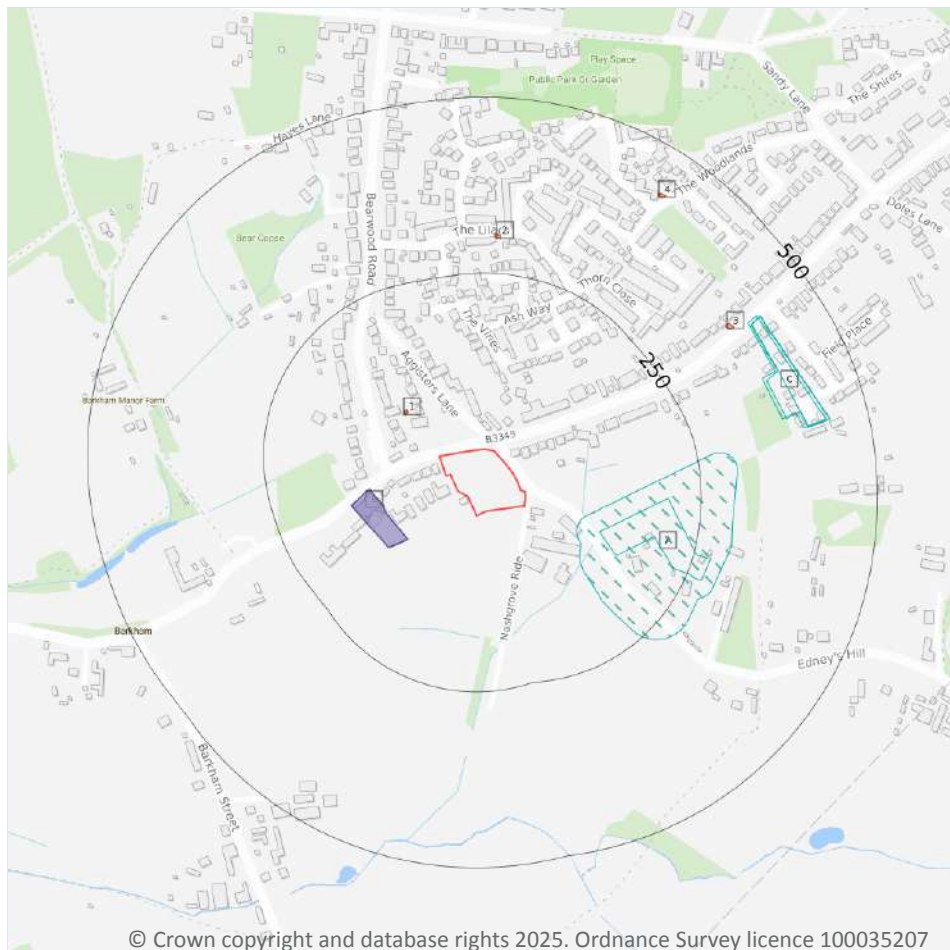


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Site Area: 0.71ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

5

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	81m SE	Nursery	1938 - 1961	1983316



ID	Location	Land use	Dates present	Group ID
A	113m SE	Nursery	1932	1958155
C	373m E	Nursery	1961	1998505
C	378m E	Nursery	1932	1969123
C	398m NE	Nursery	1938	1932873

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

4

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

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

ID	Location	Land use	Dates present	Group ID
1	76m NW	Electricity Substation	1981 - 1993	228296
2	300m N	Electricity Substation	1989 - 1993	226393
3	368m NE	Electricity Substation	1981 - 1993	222193
4	431m NE	Electricity Substation	1989 - 1993	218319

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m**3**

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

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

ID	Location	Land use	Dates present	Group ID
B	98m W	Garage	1993	68702
B	98m W	Garage	1967	68413
B	99m W	Garage	1981 - 1989	72240

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.



ID	Location	Land Use	Date	Group ID
F	373m E	Nursery	1961	1998505
F	378m E	Nursery	1932	1969123
F	398m NE	Nursery	1938	1932873

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

0

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'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

12

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 18 >](#)

ID	Location	Land Use	Date	Group ID
A	76m NW	Electricity Substation	1981	228296
A	76m NW	Electricity Substation	1987	228296
A	76m NW	Electricity Substation	1989	228296
A	76m NW	Electricity Substation	1993	228296
D	300m N	Electricity Substation	1989	226393
D	302m N	Electricity Substation	1993	226393
E	368m NE	Electricity Substation	1981	222193
E	368m NE	Electricity Substation	1987	222193
E	368m NE	Electricity Substation	1989	222193
E	369m NE	Electricity Substation	1993	222193



ID	Location	Land Use	Date	Group ID
G	431m NE	Electricity Substation	1989	218319
G	432m NE	Electricity Substation	1993	218319

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0
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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	5
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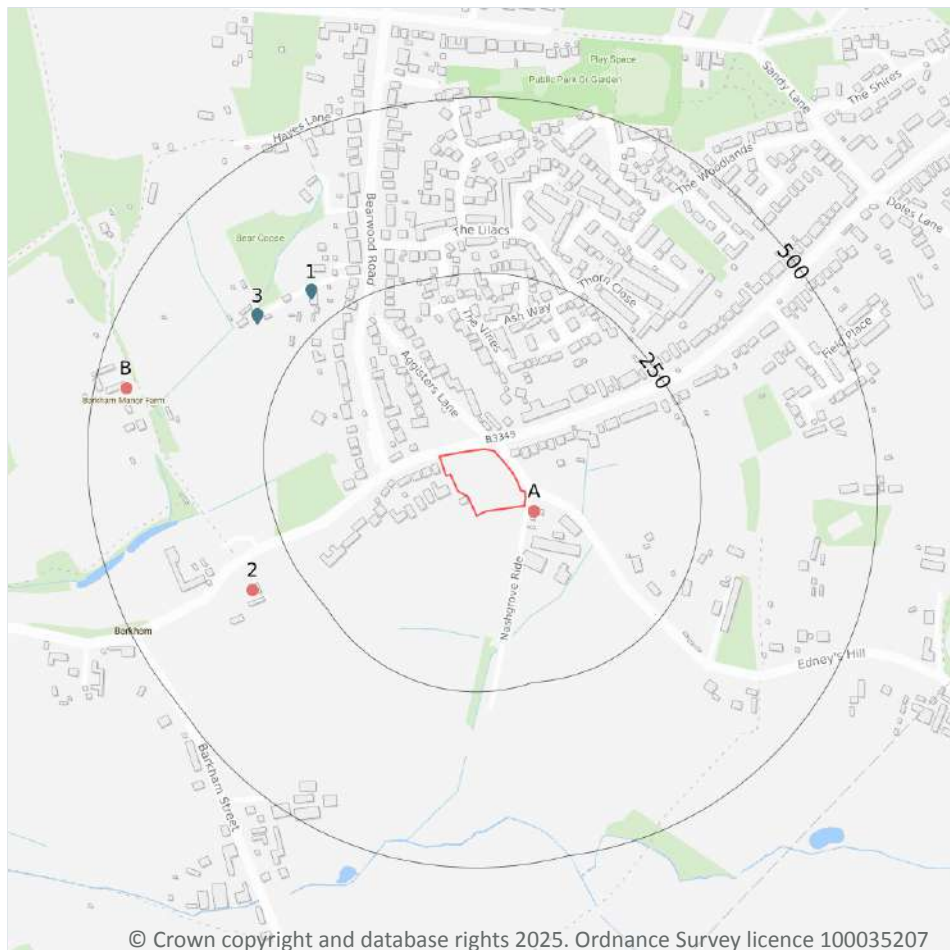
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 18 >](#)

ID	Location	Land Use	Date	Group ID
C	98m W	Garage	1993	68702
C	98m W	Garage	1967	68413
C	99m W	Garage	1987	72240
C	99m W	Garage	1989	72240
C	99m W	Garage	1981	72240

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m	0
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Landfill sites identified from Local Authority records and high detail historical mapping.

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0
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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.

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

3.5 Historical waste sites

Records within 500m	0
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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	2
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on [page 21 >](#)

ID	Location	Details		
1	296m NW	Site Name: Andrew Bond Limited Site Address: 41, Bearwood Road, Barkham, Wokingham, Berkshire, RG41 4SX Correspondence Address: -	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AND001 EPR reference: PP3799EW/A001 Operator: Andrew Bond Motor Company Limited Waste Management licence No: 83618 Annual Tonnage: 0	Issue Date: 28/02/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

ID	Location	Details		
3	326m NW	Site Name: Andrew Bond Limited Site Address: 41, Bearwood Road, Barkham, Wokingham, Berkshire, RG41 4SX Correspondence Address: -	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 649565 EPR reference: EA/EPR/PP3799EW Operator: Andrew Bond Motor Company Limited Waste Management licence No: 83618 Annual Tonnage: 2499	Issue Date: 28/02/2007 Effective Date: 28/02/2007 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired

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

3.7 Waste exemptions

Records within 500m	23
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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 21 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX302684	Storing waste exemption	On a farm	Storage of waste in a secure place
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX302684	Storing waste exemption	On a farm	Storage of waste in secure containers
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX302684	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX302684	Disposing of waste exemption	On a farm	Burning waste in the open
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX302684	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX302684	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit



ID	Location	Site	Reference	Category	Sub-Category	Description
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX168490	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX168490	Disposing of waste exemption	On a farm	Burning waste in the open
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX168490	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX168490	Storing waste exemption	On a farm	Storage of waste in a secure place
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX168490	Storing waste exemption	On a farm	Storage of waste in secure containers
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX168490	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX003594	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX003594	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX003594	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX003594	Using waste exemption	On a farm	Use of waste for a specified purpose
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX003594	Disposing of waste exemption	On a farm	Burning waste in the open
A	16m SE	Mortimer Lodge Farm, Edneys Hill, Wokingham, Rg41 4dp	WEX003594	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit

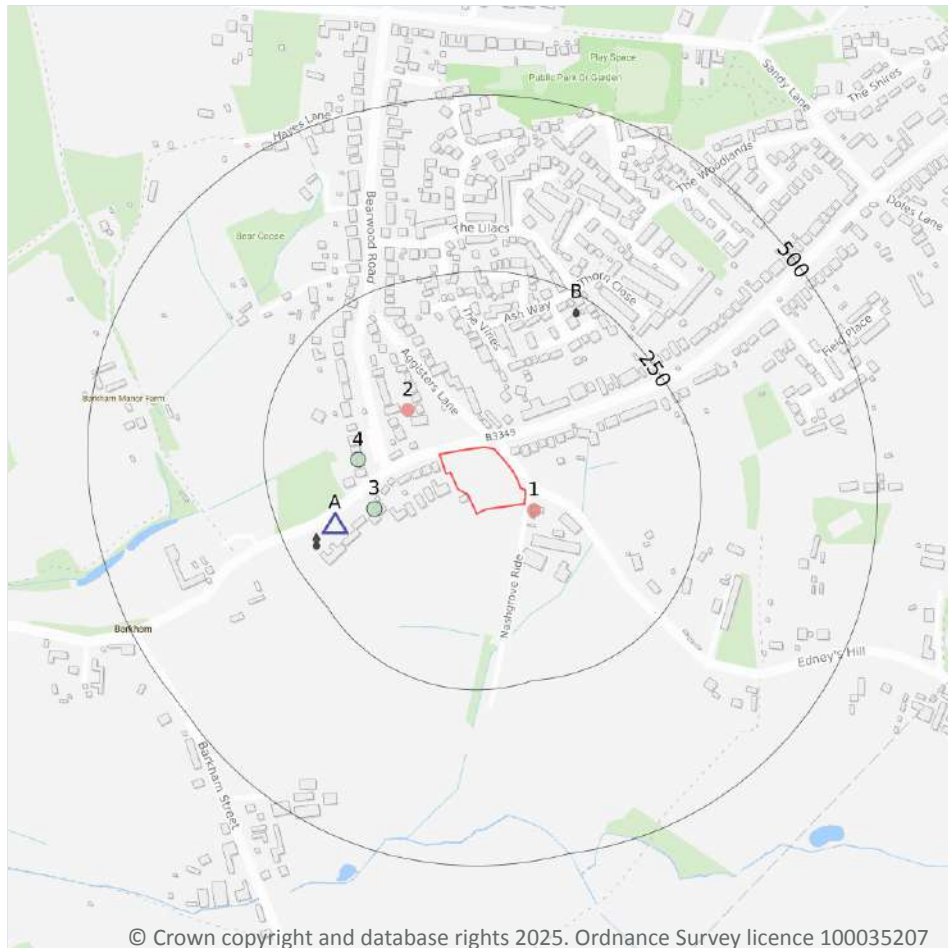


ID	Location	Site	Reference	Category	Sub-Category	Description
2	320m SW	Home Farm Buildings Adjoining The Baliffs Cottage Barkham Road Barkham Berkshire Rg41 4tg	EPR/YE5944N M/A001	Using waste exemption	Non- agricultura l waste only	Use of waste in construction
B	456m W	Barkham Manor Farm, Barkham Manor, Barkham, Wokingham, Rg41 4dq	WEX230226	Using waste exemption	On a farm	Use of waste in construction
B	456m W	Barkham Manor Farm, Barkham Manor, Barkham, Wokingham, Rg41 4dq	WEX230226	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
B	456m W	Barkham Manor Farm, Barkham Manor, Barkham, Wokingham, Rg41 4dq	WEX230226	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
B	456m W	Barkham Manor Farm, Barkham Manor, Barkham, Wokingham, Rg41 4dq	WEX230226	Using waste exemption	On a farm	Use of mulch

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
- △ Current or recent petrol stations
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 26 >](#)

ID	Location	Company	Address	Activity	Category
1	16m SE	P Thomas	Mortimer Lodge Farm, Edneys Hill, Barkham, Berkshire, RG41 4DP	Livestock Farming	Farming
2	77m NW	Electricity Sub Station	Berkshire, RG41	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.



4.2 Current or recent petrol stations

Records within 500m**1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 26](#) >

ID	Location	Company	Address	LPG	Status
A	173m W	OBSOLETE	Barkham Road, Wokingham, Wokingham, RG41 4TG	Not Applicable	Obsolete

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

5

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 26 >](#)

ID	Location	Address	Details	
A	206m W	ADJSUNNYRIDGE,BARKHAMROAD,BARKHAM,BE RKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTWC.0744 Permit Version: 1 Receiving Water: LOWER BAGSHOT BEDS	Status: TRANSFERRED FROM COPA 1974 Issue date: 19/03/1986 Effective Date: 19/03/1986 Revocation Date: -
A	211m W	ADJSUNNYRIDGE,BARKHAMROAD,BARKHAM,BE RKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTWC.0745 Permit Version: 1 Receiving Water: LOWER BAGSHOT BEDS	Status: TRANSFERRED FROM COPA 1974 Issue date: 19/03/1986 Effective Date: 19/03/1986 Revocation Date: -
B	227m NE	Arborfield,Arborfield	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TEMP.2352 Permit Version: 2 Receiving Water: Barkham Brook	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 21/11/2017
B	227m NE	ARBORFIELDWWTW,W OODLANE,READING,BE RKSHIRE, RG414TS	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCR.0589 Permit Version: 1 Receiving Water: BARKHAM BROOK	Status: REVOKED - UNSPECIFIED Issue date: 22/02/1963 Effective Date: 31/01/1985 Revocation Date: 01/11/1989
B	227m NE	Arborfield,Arborfield	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TEMP.2352 Permit Version: 1 Receiving Water: BARKHAM BROOK	Status: TEMPORARY CONSENTS (WATER ACT 1989, SECTION 113) Issue date: 02/11/1989 Effective Date: 02/11/1989 Revocation Date: 02/09/2010



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

2

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 26 >](#)

ID	Location	Details	
3	113m W	Incident Date: 07/01/2003 Incident Identification: 129710 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4	116m W	Incident Date: 11/09/2001 Incident Identification: 30288 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	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.

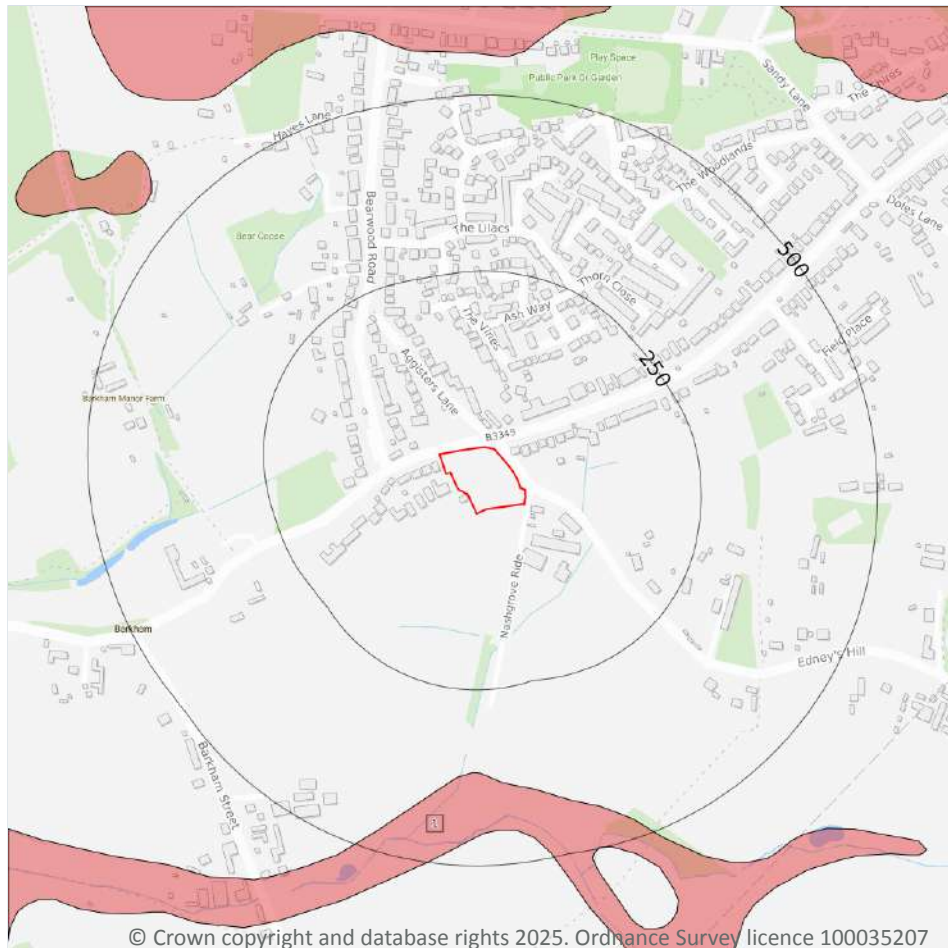
4.21 Pollution inventory radioactive waste

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

1

Aquifer status of groundwater held within superficial geology.

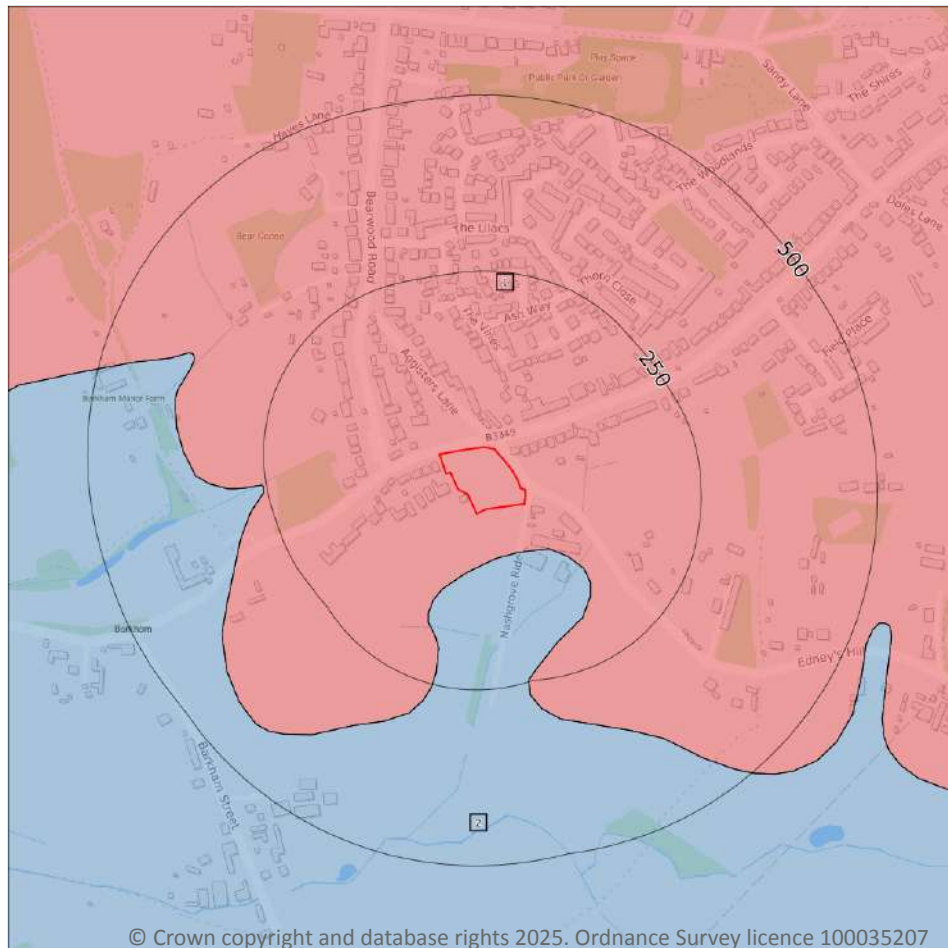
Features are displayed on the Hydrogeology map on [page 32 >](#)

ID	Location	Designation	Description
1	368m S	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.



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

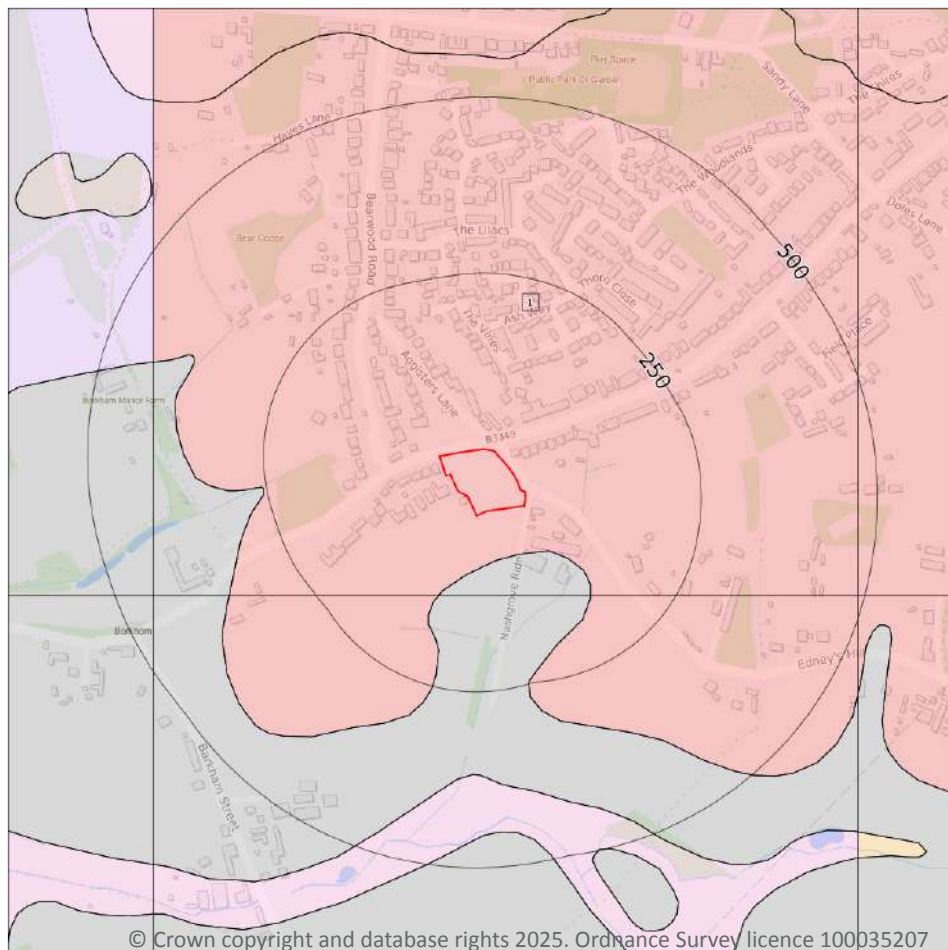
Features are displayed on the Bedrock aquifer map on [page 33](#) >

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	67m SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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

1

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 34](#) >



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Medium	Vulnerability: High Aquifer type: Secondary 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.

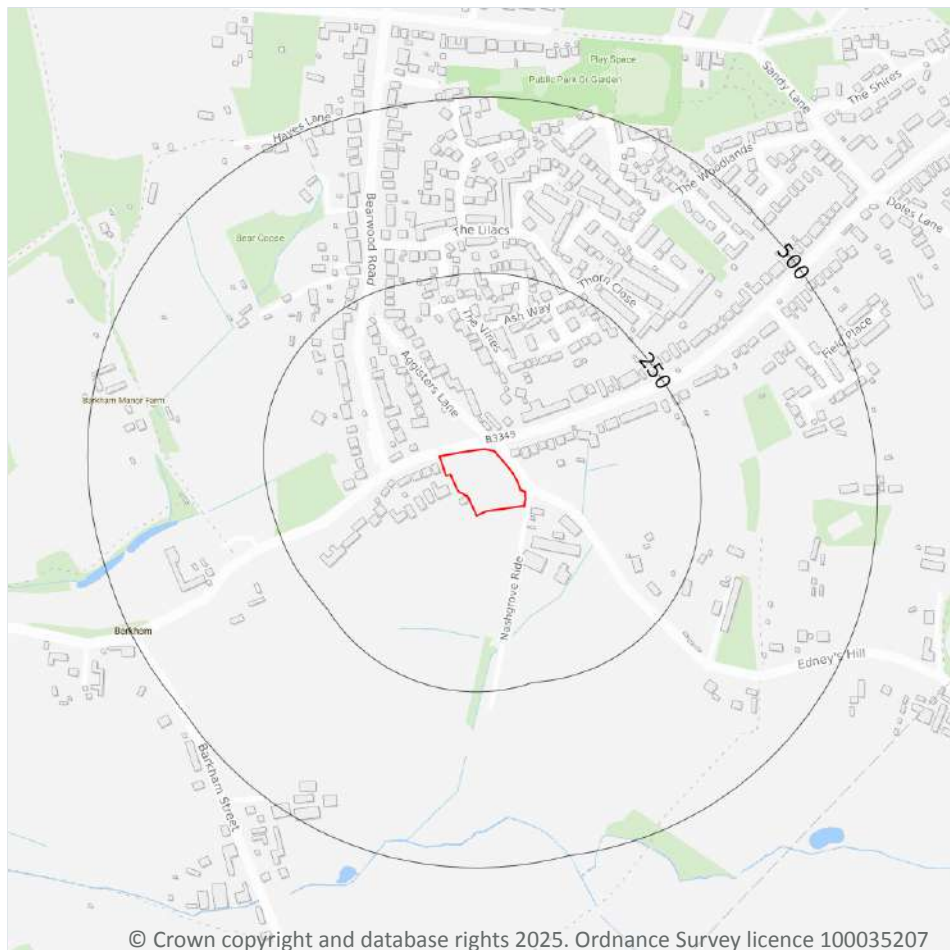
5.5 Groundwater vulnerability- local information

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 enquiries@environment-agency.gov.uk ↗.

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

Abstractions and Source Protection Zones



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

5.6 Groundwater abstractions

Records within 2000m

8

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 36 >](#)

ID	Location	Details	
-	1831m SE	Status: Active Licence No: 28/39/24/0250/R01 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SANDMARTINS GOLF CLUB WOKINGHAM-BOREHOLE 'B' Data Type: Point Name: SANDMARTINS GOLF CLUB LIMITED Easting: 480112 Northing: 166212	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 150 Original Application No: NPS/WR/019290 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2021 Version End Date: -
-	1831m SE	Status: Historical Licence No: 28/39/24/0250 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SANDMARTINS GOLF CLUB WOKINGHAM-BOREHOLE 'B' Data Type: Point Name: SANDMARTINS GOLF CLUB LIMITED Easting: 480112 Northing: 166212	Annual Volume (m ³): 30000 Max Daily Volume (m ³): 150 Original Application No: - Original Start Date: 31/08/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 31/08/2006 Version End Date: -
-	1835m SE	Status: Historical Licence No: 28/39/24/0250 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SANDMARTINS GOLF CLUB WOKINGHAM-BOREHOLE 'B' Data Type: Point Name: SANDMARTINS GOLF CLUB LIMITED Easting: 480110 Northing: 166200	Annual Volume (m ³): 30000 Max Daily Volume (m ³): 150 Original Application No: - Original Start Date: 31/08/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 31/08/2006 Version End Date: -
-	1842m NW	Status: Historical Licence No: 28/39/24/0102 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: WELL AT NEWLANDS, ARBORFIELD Data Type: Point Name: HATCH FARM DAIRIES LTD Easting: 476800 Northing: 168100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/05/1967 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2001 Version End Date: -



ID	Location	Details	
-	1870m SE	Status: Historical Licence No: 28/39/24/0250 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SANDMARTINS GOLF CLUB WOKINGHAM -BOREHOLE 'A' Data Type: Point Name: SANDMARTINS GOLF CLUB LIMITED Easting: 480150 Northing: 166200	Annual Volume (m ³): 30000 Max Daily Volume (m ³): 150 Original Application No: - Original Start Date: 31/08/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 31/08/2006 Version End Date: -
-	1906m SE	Status: Active Licence No: 28/39/24/0250/R01 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SANDMARTINS GOLF CLUB WOKINGHAM -BOREHOLE 'A' Data Type: Point Name: SANDMARTINS GOLF CLUB LIMITED Easting: 480169 Northing: 166161	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 150 Original Application No: NPS/WR/019290 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2021 Version End Date: -
-	1906m SE	Status: Historical Licence No: 28/39/24/0250 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SANDMARTINS GOLF CLUB WOKINGHAM -BOREHOLE 'A' Data Type: Point Name: SANDMARTINS GOLF CLUB LIMITED Easting: 480169 Northing: 166161	Annual Volume (m ³): 30000 Max Daily Volume (m ³): 150 Original Application No: - Original Start Date: 31/08/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 31/08/2006 Version End Date: -
-	1996m N	Status: Historical Licence No: 28/39/24/0152 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BEAR WOOD, SINDLESHAM - BOREHOLE 'A' Data Type: Point Name: ROYAL MERCHANT NAVY SCHOOL FOUNDATION Easting: 477800 Northing: 169100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 100 Version Start Date: 05/03/1980 Version End Date: -

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



5.7 Surface water abstractions

Records within 2000m

4

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 36 >](#)

ID	Location	Details	
-	1470m NW	Status: Historical Licence No: 28/39/24/0223 Details: Spray Irrigation - Direct Direct Source: THAMES SURFACE WATER - NON TIDAL Point: BEARWOOD LAKE AT BEARWOOD LAKES GOLF CLUB Data Type: Point Name: WARD WILSON INVESTMENTS LTD Easting: 477560 Northing: 168400	Annual Volume (m ³): 26940 Max Daily Volume (m ³): 427 Original Application No: - Original Start Date: 02/05/1996 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 21/05/1998 Version End Date: -
-	1470m NW	Status: Historical Licence No: 28/39/24/0251 Details: Spray Irrigation - Direct Direct Source: THAMES SURFACE WATER - NON TIDAL Point: BEARWOOD LAKE AT BEARWOOD LAKES GOLF CLUB Data Type: Point Name: WARD WILSON INVESTMENTS LTD Easting: 477560 Northing: 168400	Annual Volume (m ³): 26940 Max Daily Volume (m ³): 427 Original Application No: - Original Start Date: 01/01/2007 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 01/04/2012 Version End Date: -
-	1470m NW	Status: Historical Licence No: 28/39/24/0251/R01 Details: Spray Irrigation - Direct Direct Source: THAMES SURFACE WATER - NON TIDAL Point: BEARWOOD LAKE AT BEARWOOD LAKES GOLF CLUB Data Type: Point Name: WARD WILSON INVESTMENTS LTD Easting: 477560 Northing: 168400	Annual Volume (m ³): 26940 Max Daily Volume (m ³): 427 Original Application No: - Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2016 Version End Date: -



ID	Location	Details	
-	1470m NW	Status: Historical Licence No: 28/39/24/0251/R01 Details: Spray Irrigation - Storage Direct Source: THAMES SURFACE WATER - NON TIDAL Point: BEARWOOD LAKE AT BEARWOOD LAKES GOLF CLUB Data Type: Point Name: WARD WILSON INVESTMENTS LTD Easting: 477560 Northing: 168400	Annual Volume (m ³): 36000 Max Daily Volume (m ³): 854 Original Application No: NPS/WR/029765 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 3 Version Start Date: 01/04/2019 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	1
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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 36 >](#)

ID	Location	Details	
-	1996m N	Status: Historical Licence No: 28/39/24/0152 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BEAR WOOD, SINDLESHAM - BOREHOLE 'A' Data Type: Point Name: ROYAL MERCHANT NAVY SCHOOL FOUNDATION Easting: 477800 Northing: 169100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 100 Version Start Date: 05/03/1980 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

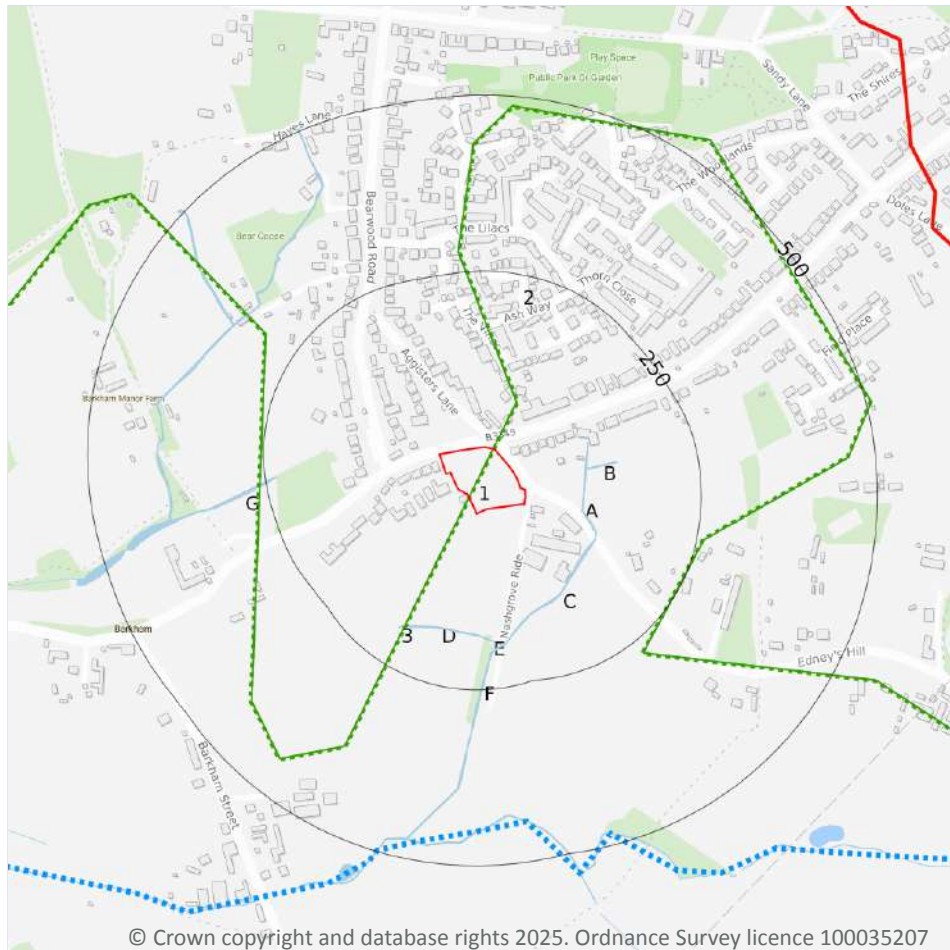
0

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.

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

13

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 42](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
A	83m E	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
B	91m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	91m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	109m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	109m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
D	169m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	173m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	178m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	189m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	192m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
F	193m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	194m SW	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	234m W	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

6

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 42 >](#)

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 42 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Barkham Brook	GB106039017400	Loddon	Loddon and Trib

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

6.4 WFD Surface water bodies

Records identified

1

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 42 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
10	443m S	River	Barkham Brook	GB106039017400 ↗	Moderate	Fail	Moderate	2019

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



6.5 WFD Groundwater bodies

Records on site

1

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.

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

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Farnborough Bagshot Beds	GB40602G601300 ↗	Good	Good	Good	2019

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



7 River and coastal flooding

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**0**

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.

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

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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.

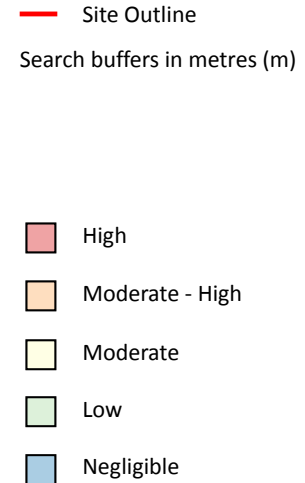
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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

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

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

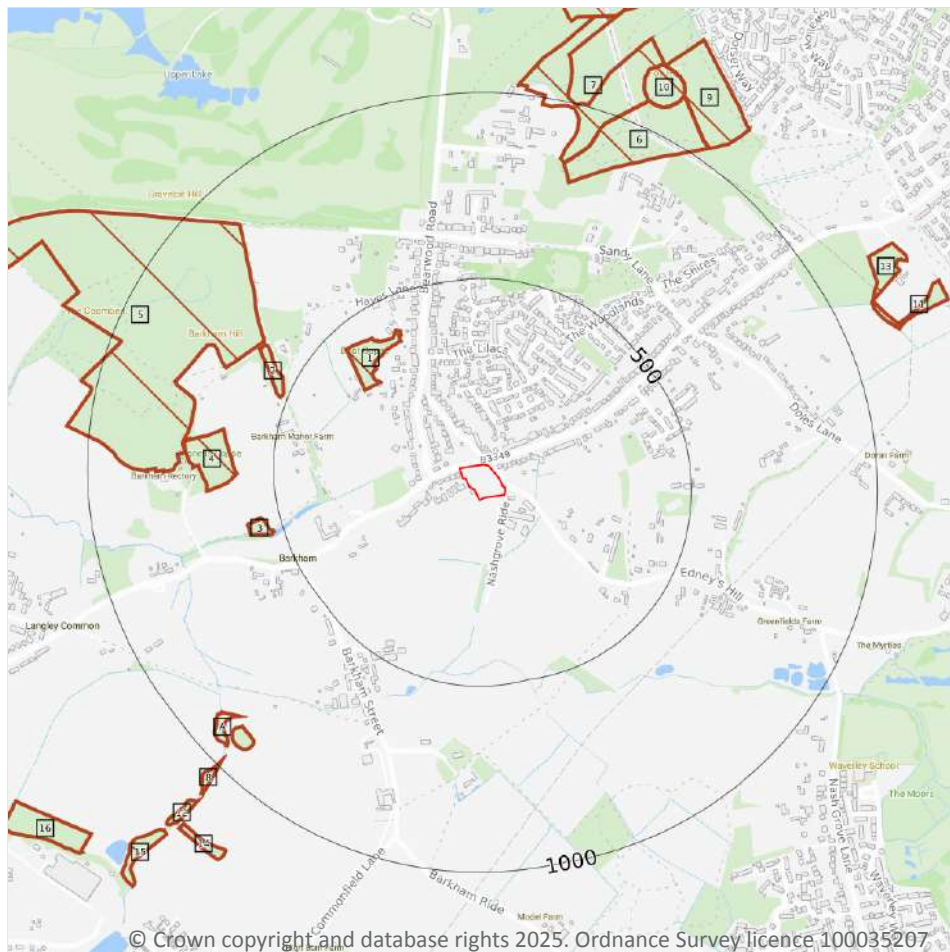
Negligible

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 50 >](#)

This data is sourced from Ambient Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Local Nature Reserves (LNR)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

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 51](#) >

ID	Location	Name	Data source
-	1629m S	Longmoor Bog	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

0

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.

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

1

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.

Features are displayed on the Environmental designations map on [page 51 >](#)

ID	Location	Name	Data source
-	1627m S	Longmoor Bog	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

25

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 51 >](#)

ID	Location	Name	Woodland Type
1	315m NW	Bears Copse(tithe:bears Coppice)	Ancient & Semi-Natural Woodland
2	515m NW	The Coombes	Ancient & Semi-Natural Woodland
3	527m W	(Tithe:little Coppice)	Ancient & Semi-Natural Woodland
4	599m W	Bignell's Copse(tithe:bignolds Coppice)	Ancient & Semi-Natural Woodland
5	627m NW	The Coombes	Ancient & Semi-Natural Woodland
6	791m N	Unknown	Ancient & Semi-Natural Woodland
7	839m N	Unknown	Ancient & Semi-Natural Woodland
A	866m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland



ID	Location	Name	Woodland Type
A	879m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland
8	982m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland
9	1039m NE	Unknown	Ancient & Semi-Natural Woodland
10	1067m NE	Fox Hill(tithe: Fox Hill)	Ancient & Semi-Natural Woodland
11	1102m NE	Bottle Copse(tithe: Bottle Coppice)	Ancient & Semi-Natural Woodland
12	1106m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland
13	1108m NE	Bottle Copse(tithe: Bottle Coppice)	Ancient & Semi-Natural Woodland
14	1161m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland
B	1216m N	Round Hill(tithe: 363=limma Hill Plantation)	Ancient & Semi-Natural Woodland
15	1225m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland
B	1275m N	Unknown	Ancient & Semi-Natural Woodland
16	1375m SW	Kidgem Copse (Tithe:kitchem Coppice)(tithe:kitchen Coppice)(osd=kidghans (?) Coppice)	Ancient & Semi-Natural Woodland
-	1575m N	Gully Copse	Ancient & Semi-Natural Woodland
-	1591m N	Gully Copse	Ancient & Semi-Natural Woodland
-	1659m N	Bob's Copse (Tithe: Bobs Coppice)	Ancient & Semi-Natural Woodland
-	1725m W	(Epo2: Hazeltons Copse; Tithe:hazletons Copse)	Ancient & Semi-Natural Woodland
-	1886m SW	(Tithe=411=the Clumps; Osd=long Moor)	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	Barkham Brook NVZ	Surface Water	449	Existing

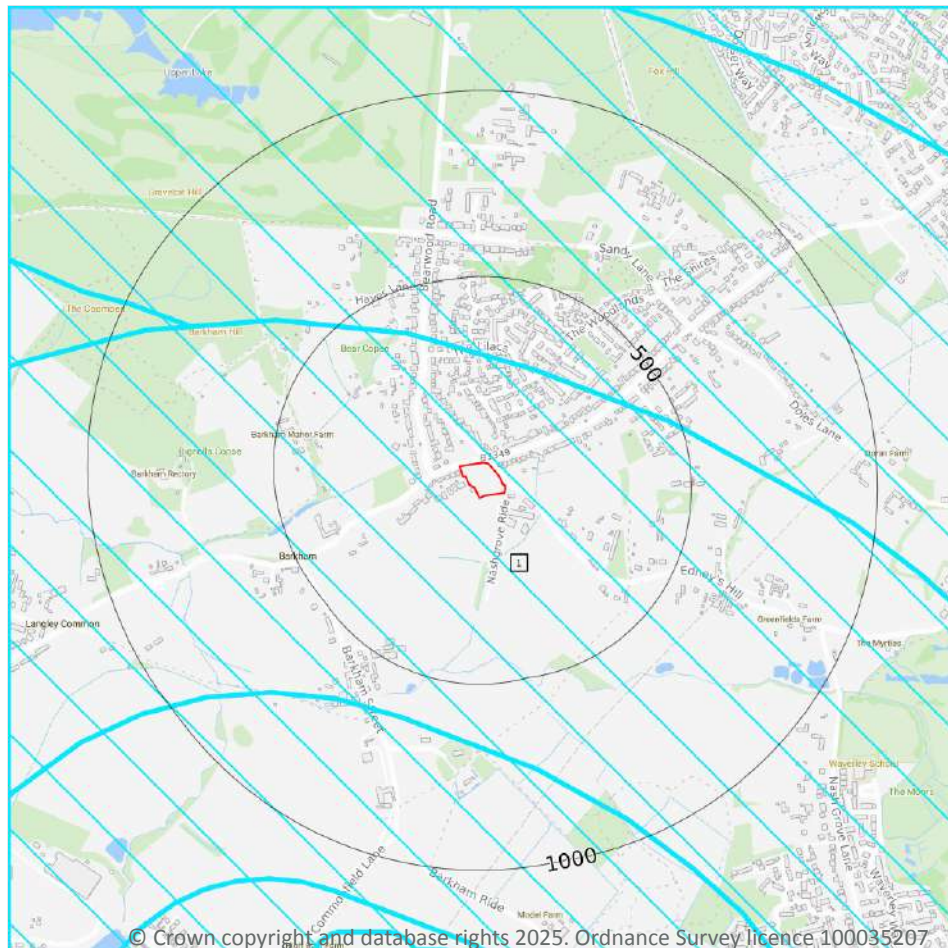


Location	Name	Type	NVZ ID	Status
692m N	Emm Brook NVZ	Surface Water	460	Existing
1132m S	Barkham Brook NVZ	Surface Water	449	Existing
1946m SE	Emm Brook NVZ	Surface Water	460	Existing

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

1

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 58](#) >

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. 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. 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 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more. 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.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	2
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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 58 >](#)

ID: -
 Location: 1629m S
 SSSI name: Longmoor Bog
 Unit name: Wdc
 Broad habitat: Fen, Marsh And Swamp - Lowland
 Condition: Unfavourable - Recovering
 Reportable features:

Feature name	Feature condition	Date of assessment
Lowland fens, including basin, flood-plain, open water transition and valley fens	Unfavourable - Recovering	22/07/2013
Lowland wet heath	Unfavourable - Recovering	22/07/2013
Wet woodland	Favourable	22/07/2013



ID: -
Location: 1909m S
SSSI name: Longmoor Bog
Unit name: California
Broad habitat: Fen, Marsh And Swamp - Lowland
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
Lowland wet heath	Unfavourable - No change	22/07/2013

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

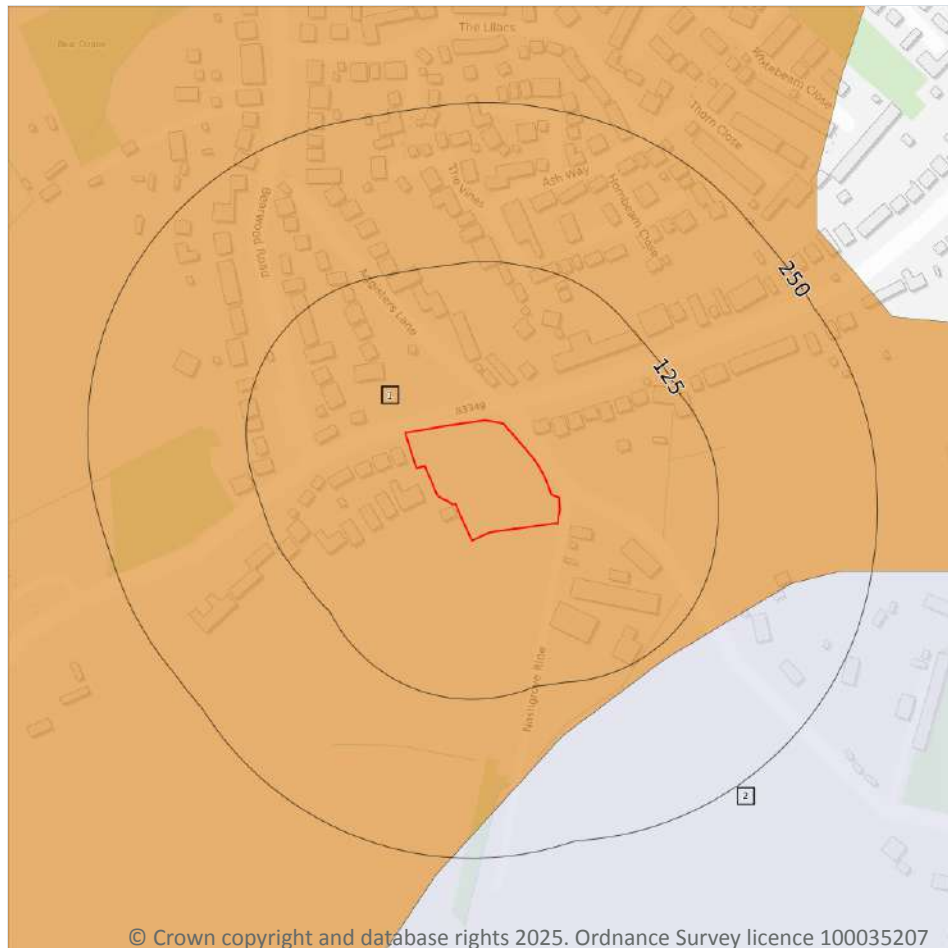
0

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 63](#) >

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	136m SE	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
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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	0
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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.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0
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Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



13 Habitat designations



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

13.1 Priority Habitat Inventory

Records within 250m

1

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 66](#) >

ID	Location	Main Habitat	Other habitats
1	145m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

0

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.

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

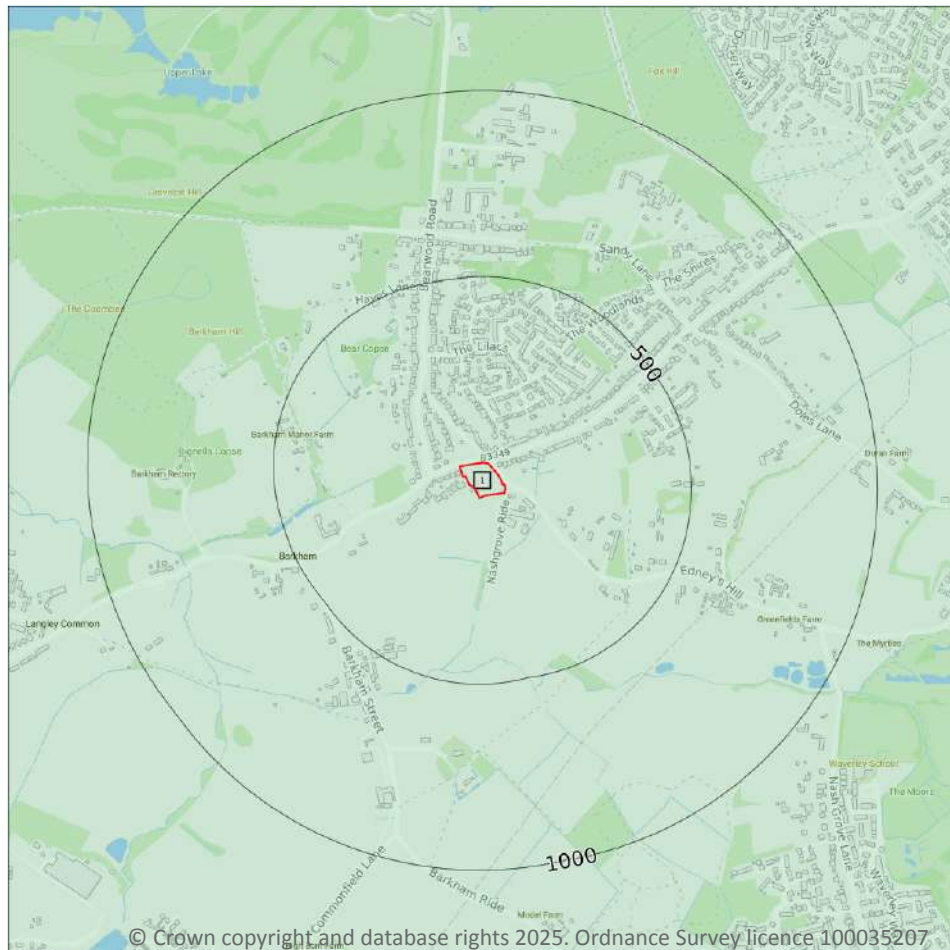
0

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 68](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU76NE

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

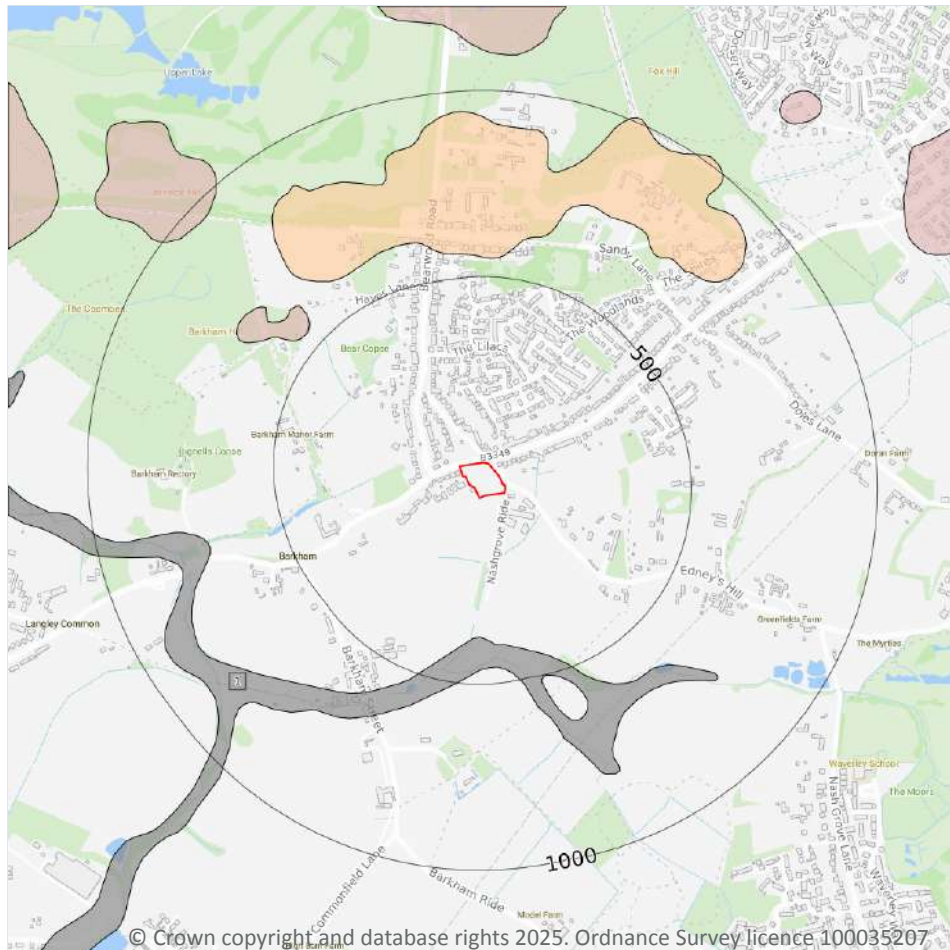
0

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.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

1

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 70](#) >

ID	Location	LEX Code	Description	Rock description
1	374m S	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

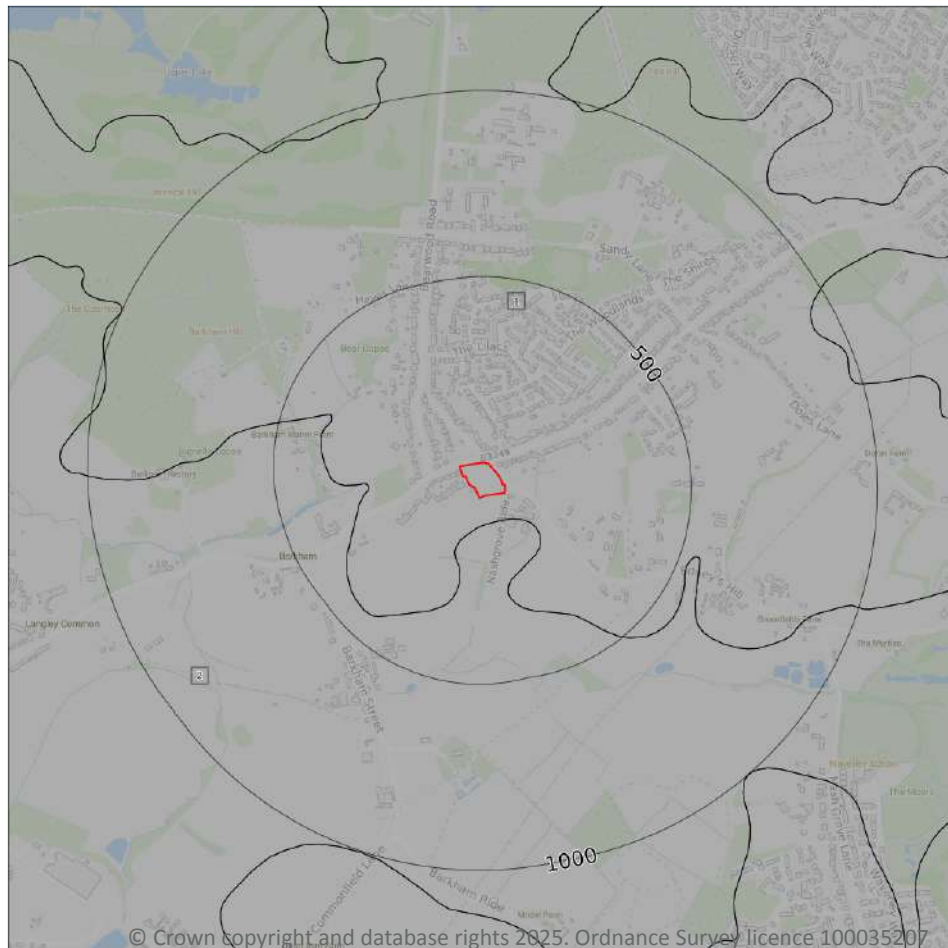
0

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

2

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 72 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	BGS-SANDU	Bagshot Formation - Sand	Eocene Epoch
2	71m SE	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	Eocene Epoch

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

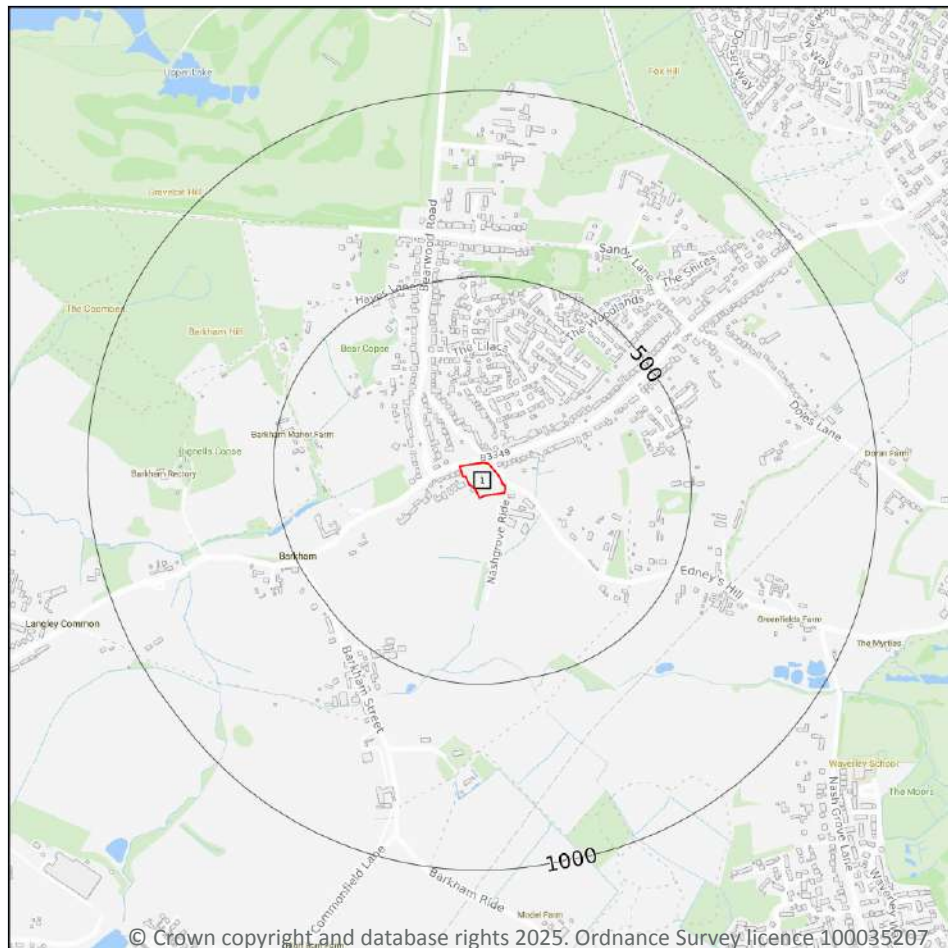
0

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 74](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	EW268_reading_v4

This data is sourced from the British Geological Survey.



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

15.2 Artificial and made ground (50k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

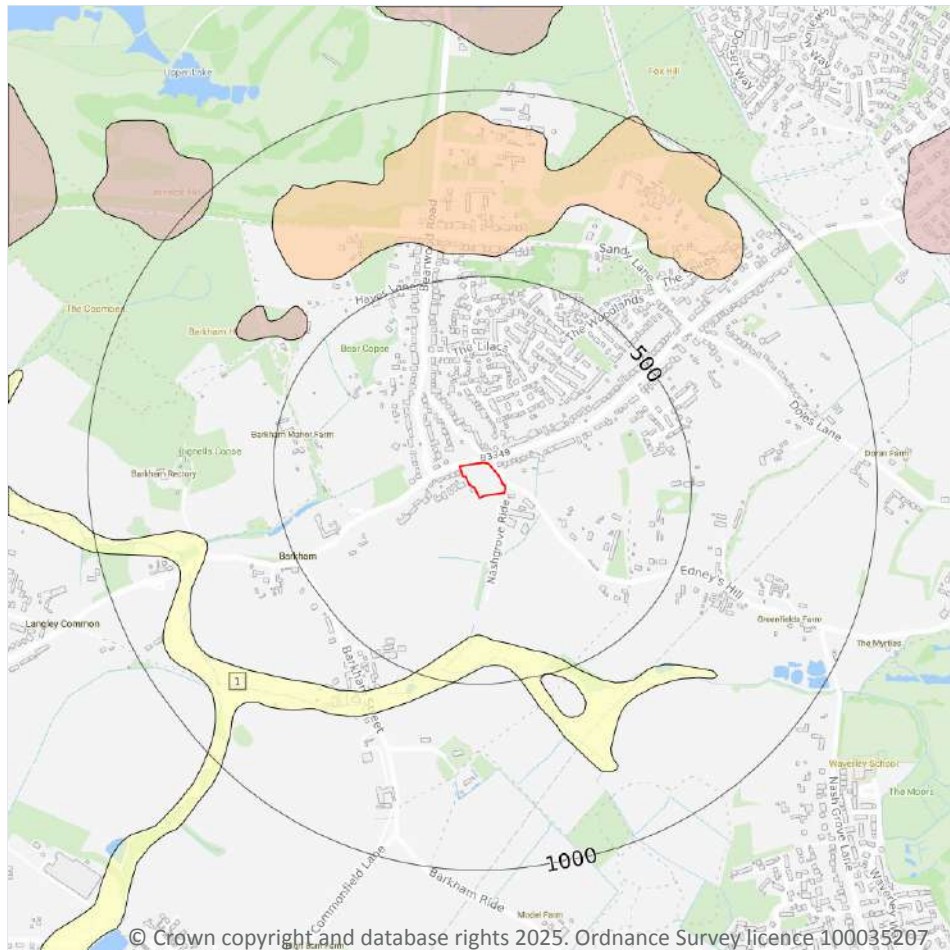
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial 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 - Superficial



15.4 Superficial geology (50k)

Records within 500m

1

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 76](#) >

ID	Location	LEX Code	Description	Rock description
1	368m S	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial 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 superficial deposits (the zone between the land surface and the water table).

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

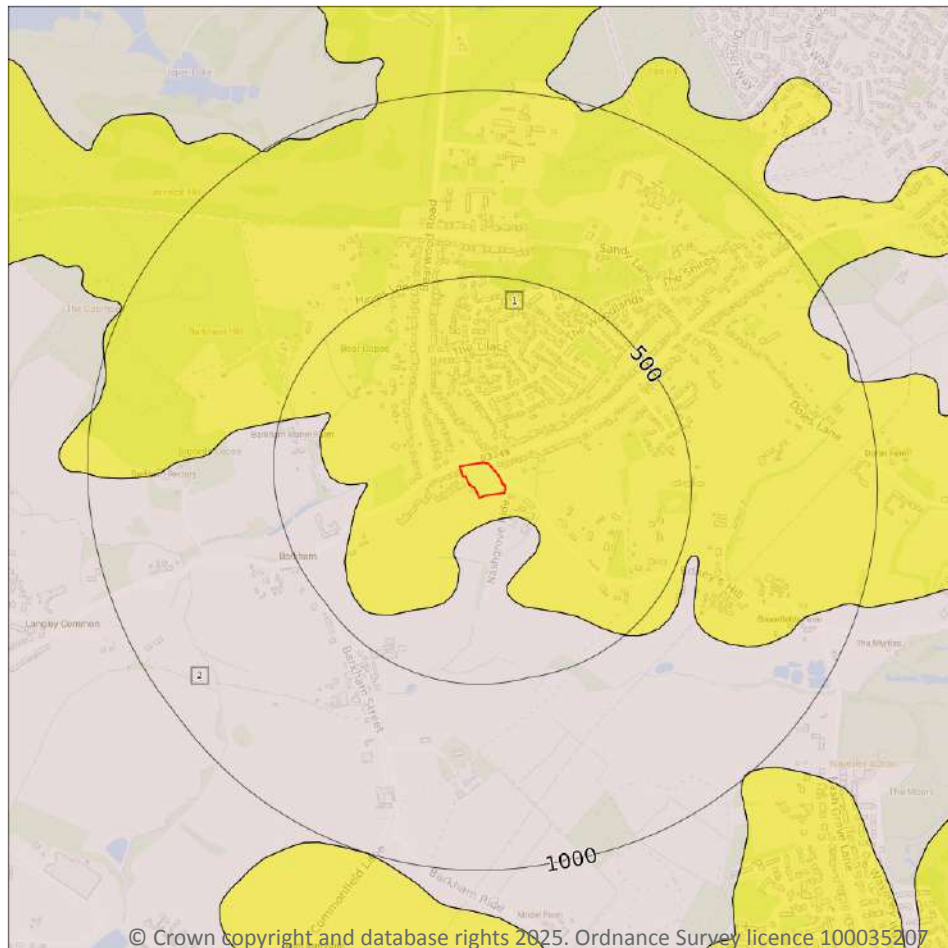
0

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

2

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 78 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	BGS-S	BAGSHOT FORMATION - SAND	YPRESIAN
2	67m SE	LC-XCZS	LONDON CLAY FORMATION - CLAY, SILT AND SAND	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	Intergranular	High	High

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

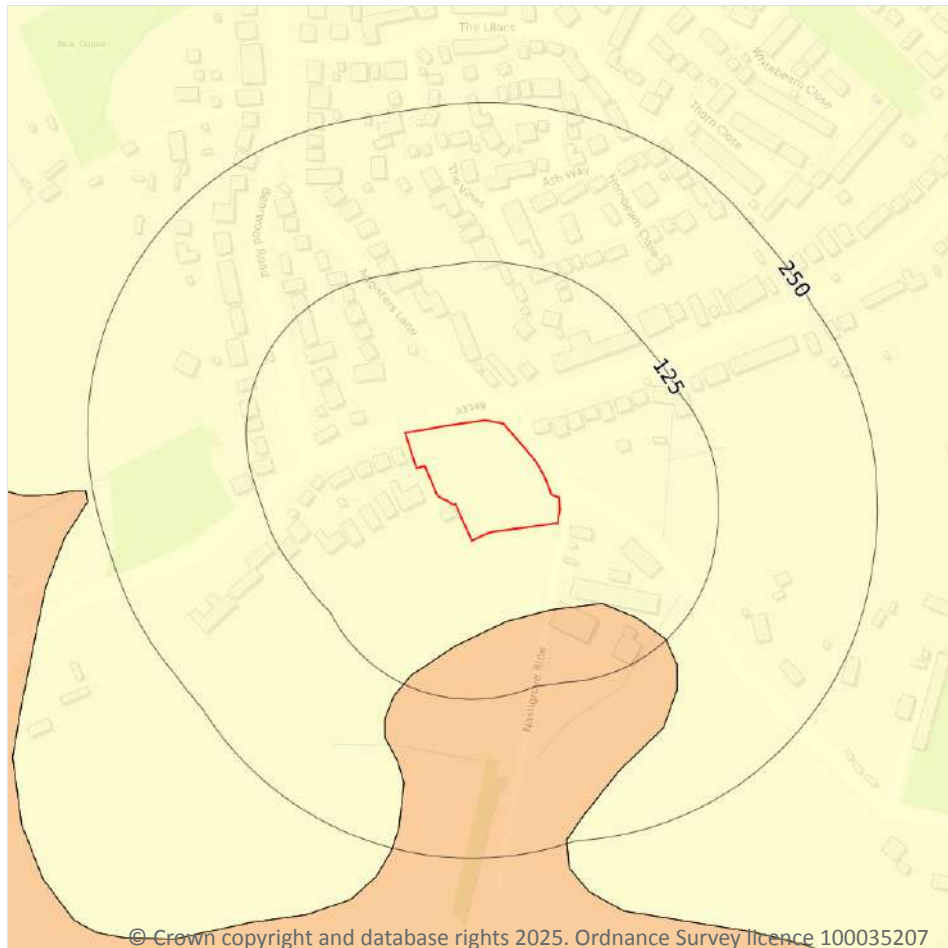
0

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.

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

1

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).

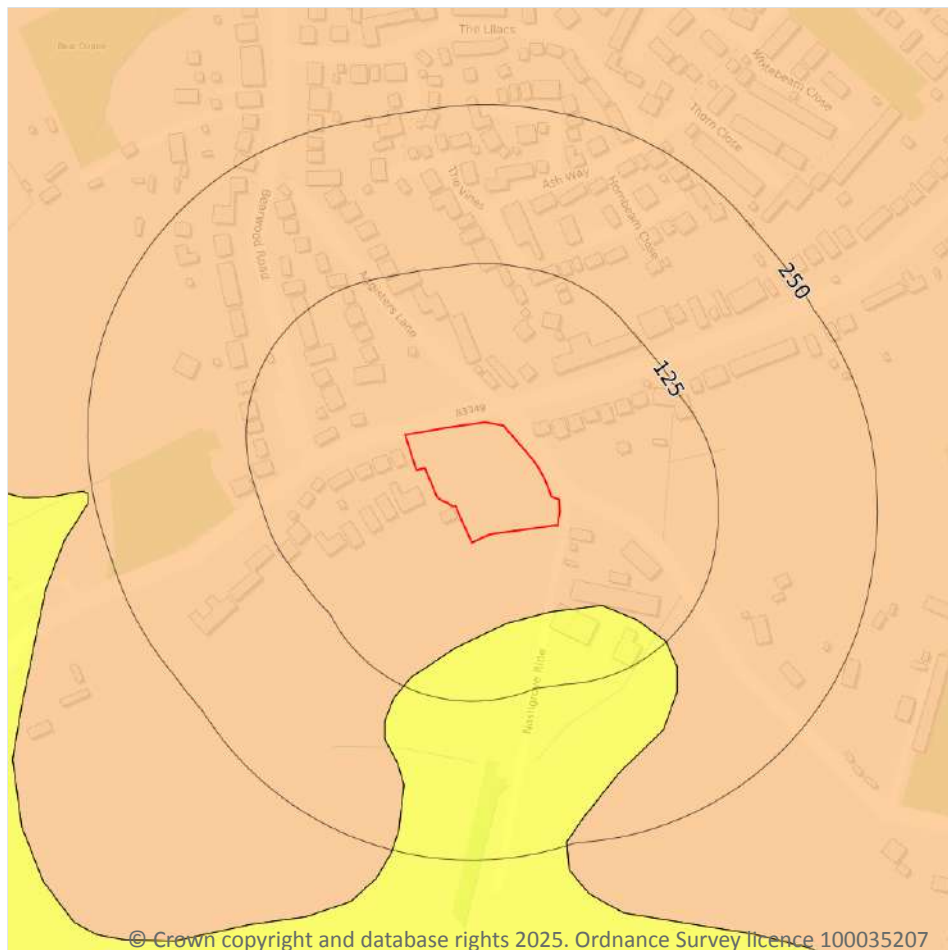
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 81](#) >

Location	Hazard rating	Details
On site	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 82 >](#)

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

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

1

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.

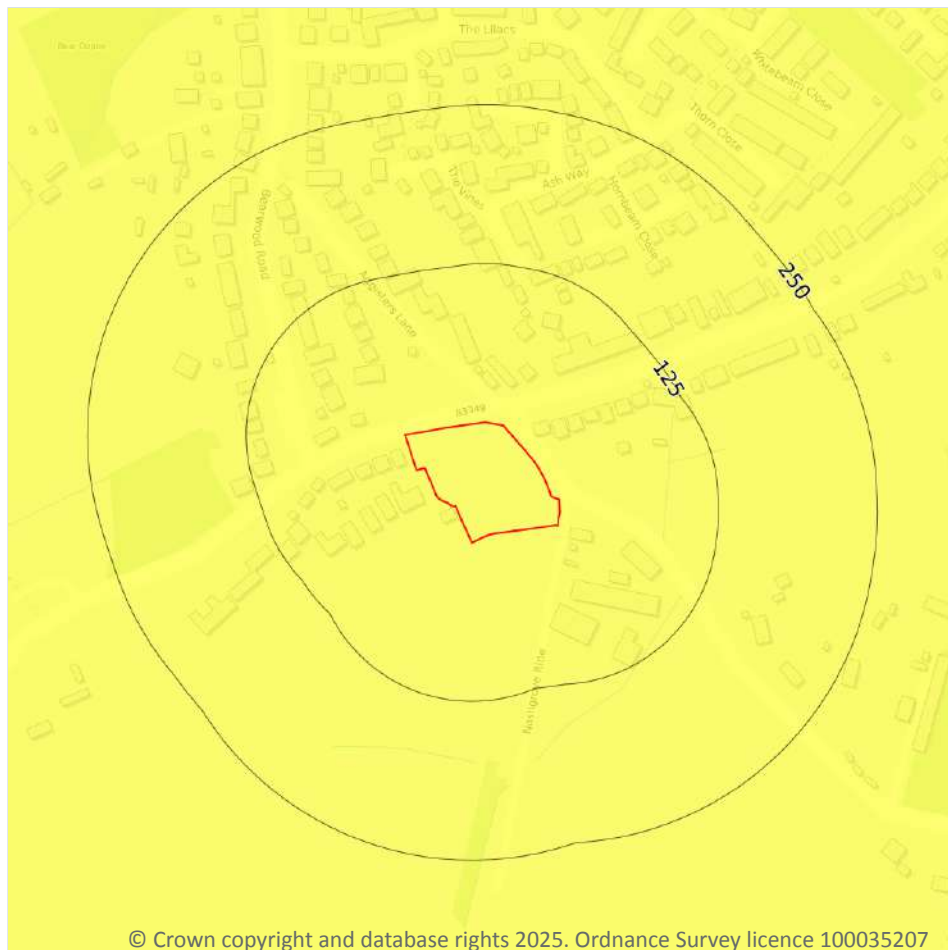
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 83](#) >

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

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.

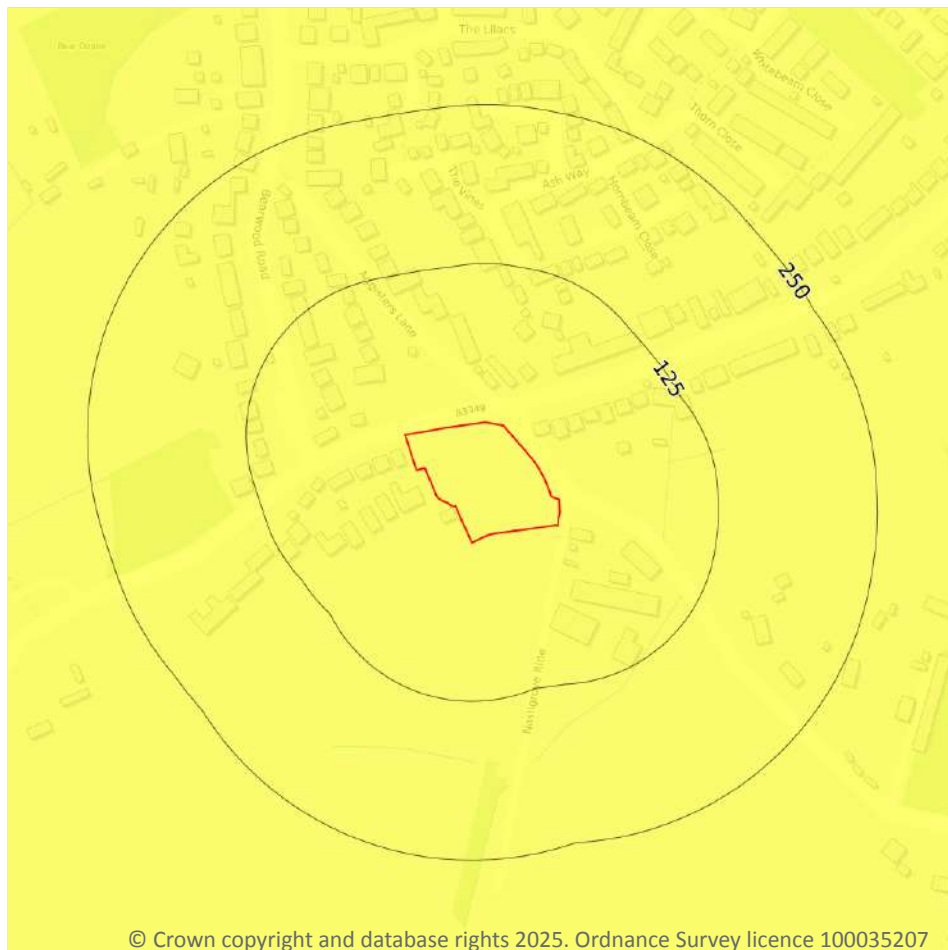
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 84 >](#)

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

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17.5 Landslides

Records within 50m

1

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 85](#) >

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.

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 86](#) >

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

18.1 BritPits

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

0

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.

This 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 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

0

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.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

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).

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.

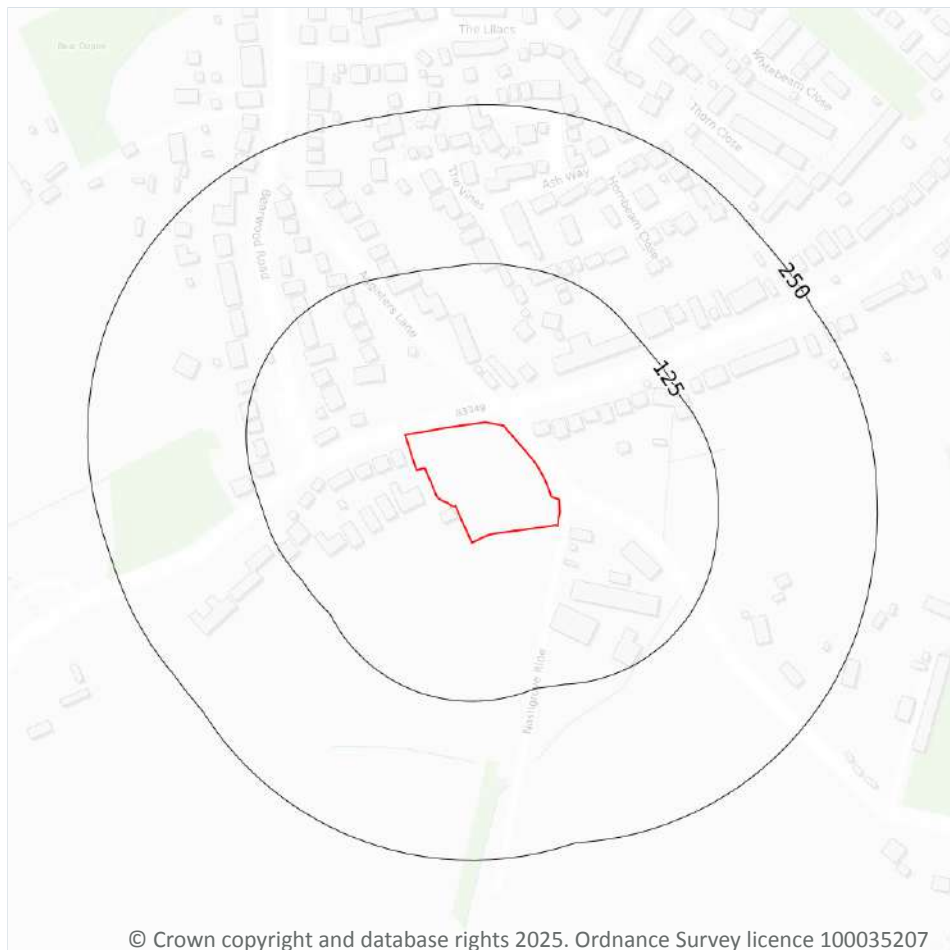
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



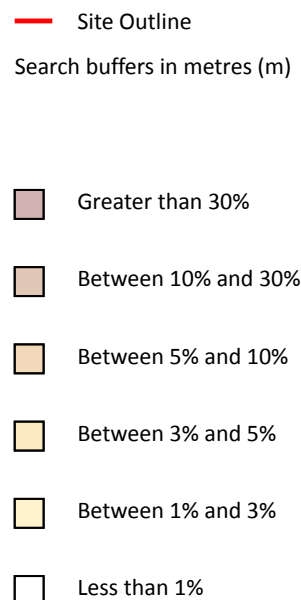
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20 Radon



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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 94](#) >

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

2

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 km². 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 km²; 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 - 25 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 - 25 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 km²).

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 km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

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**0**

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.

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m**0**

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

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L25/00485/GIN - 25-55488

Project Reference - Land at Coppid Hill, Barham Road, Wokingham, RG41 4TY 24-12-06

HWOL TPH Acronym Index

7 - 11 Harding Street
Leicester
LE1 4DH

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

Site Details:

COPPID HILL BARN, BARKHAM
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WOKINGHAM, RG41 4TG

Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: County Series

Map date: 1899

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1899
Revised 1899
Edition N/A
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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: County Series

Map date: 1911

Scale: 1:2,500

Printed at: 1:2,500



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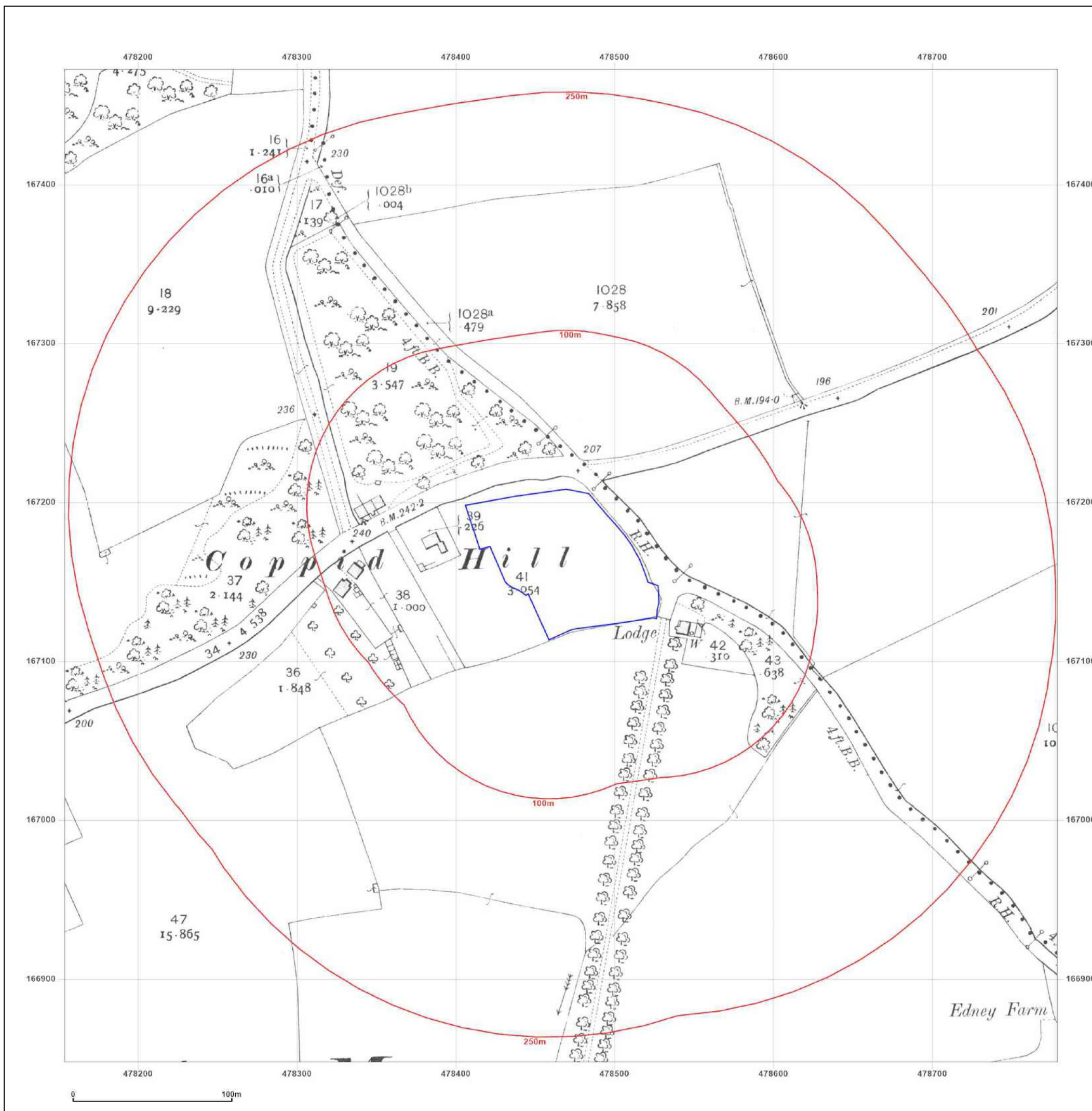


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: County Series

Map date: 1933

Scale: 1:2,500

Printed at: 1:2,500



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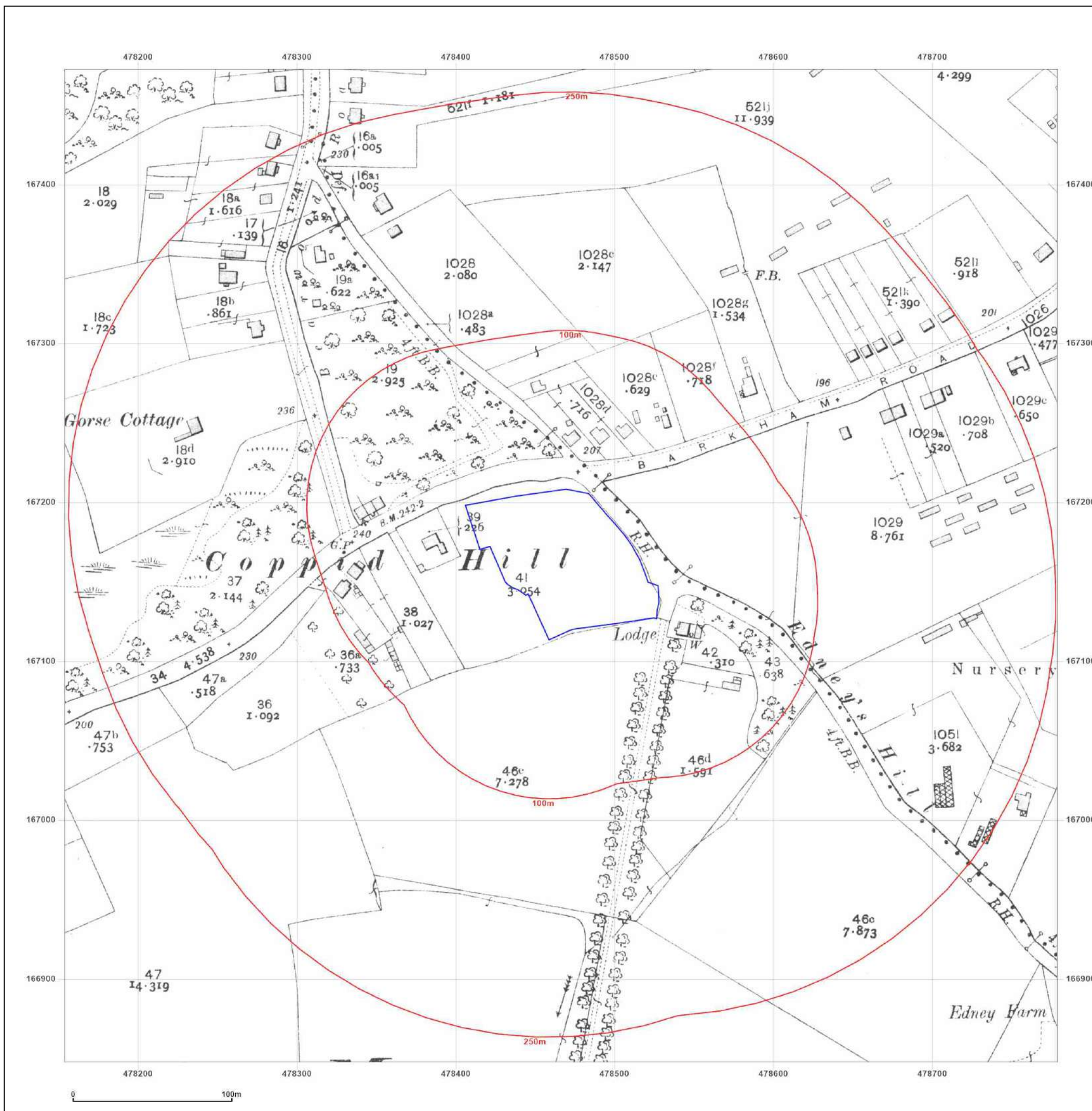


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1967

Scale: 1:2,500

Printed at: 1:2,500



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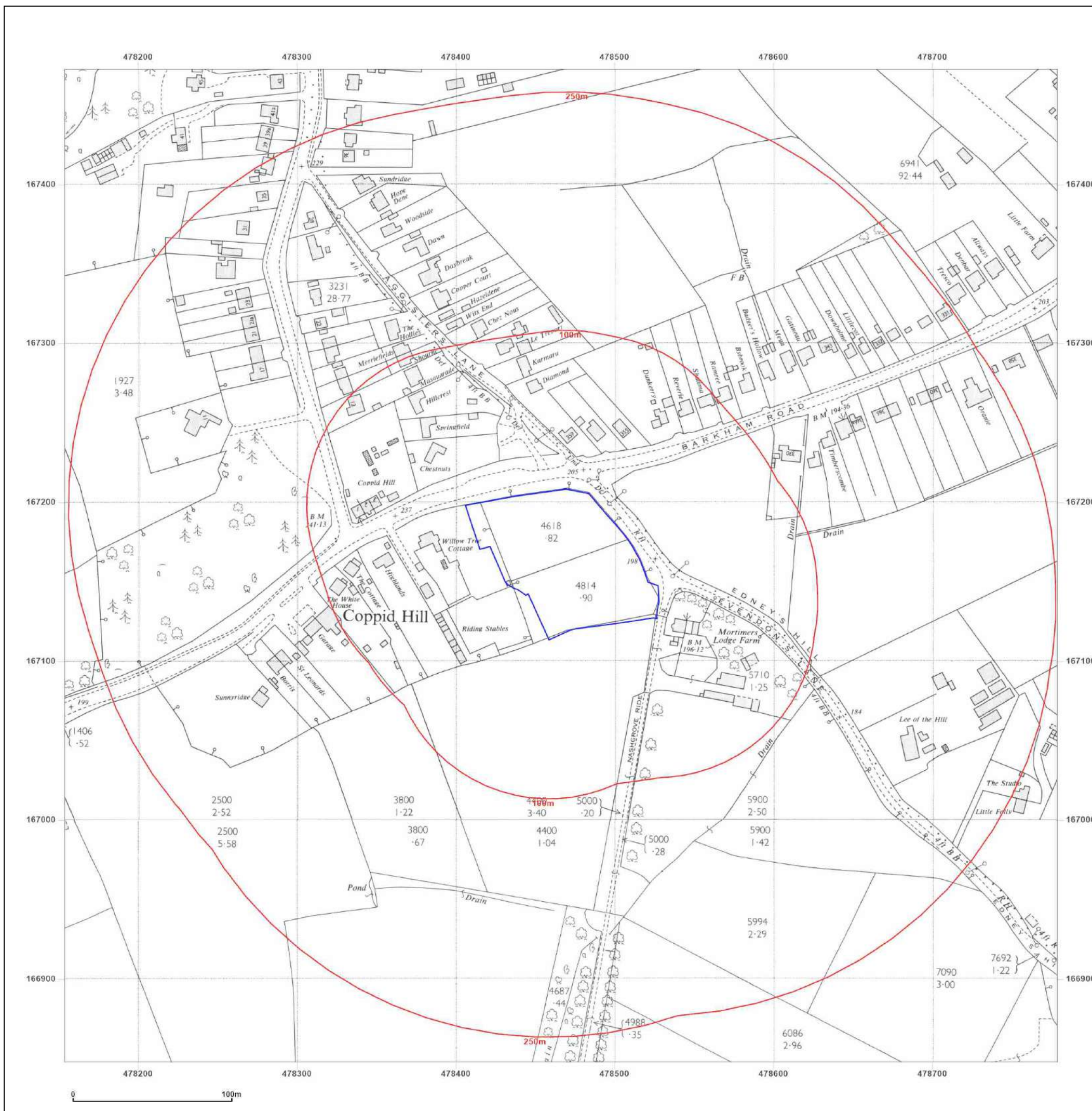


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1967

Scale: 1:2,500

Printed at: 1:2,500



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Client Ref: 24-12-06
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Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1981

Scale: 1:2,500

Printed at: 1:2,500



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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

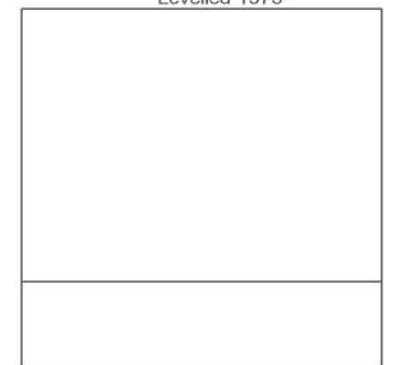
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Scale: 1:2,500

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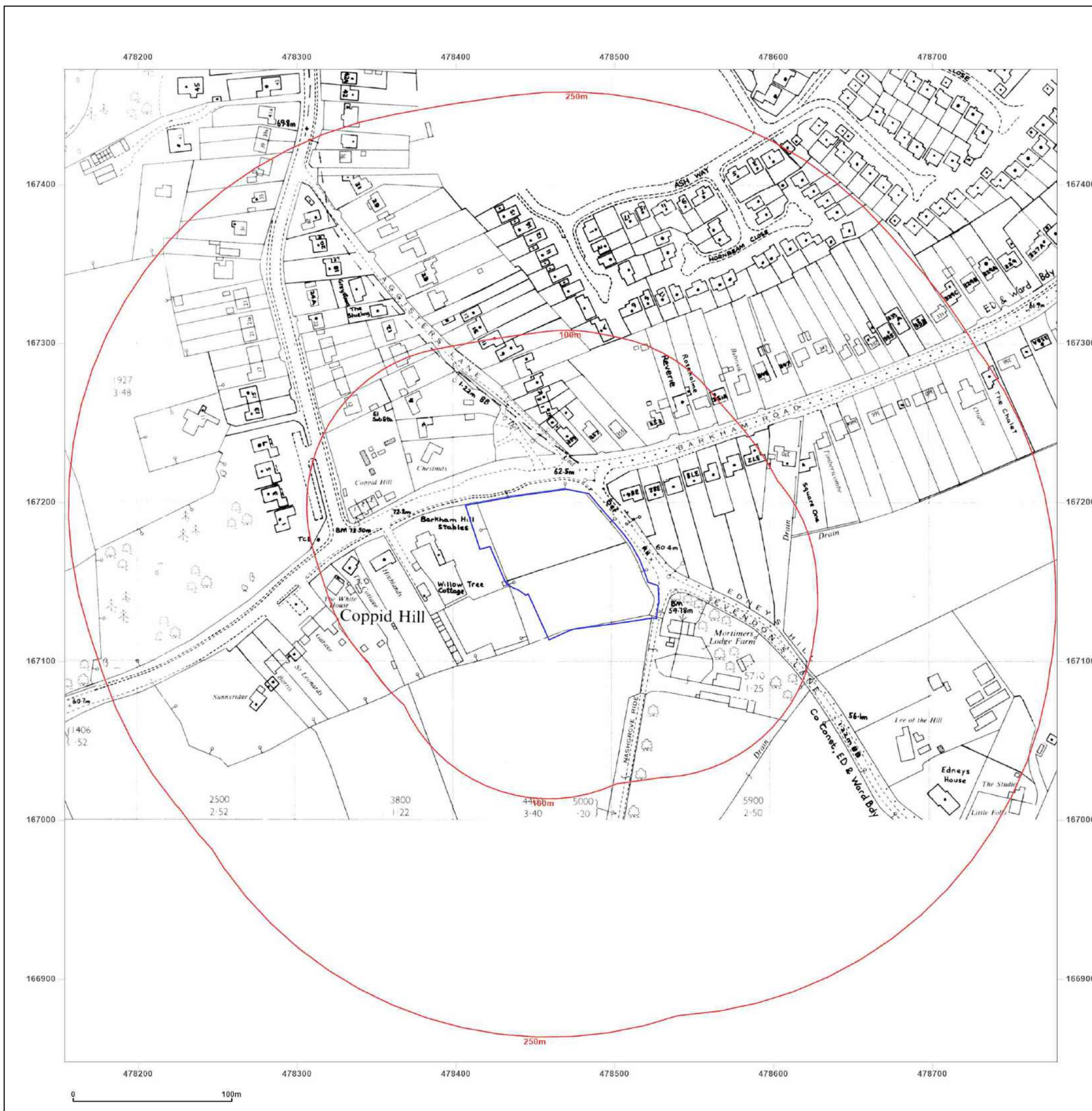


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1993
Revised 1993
Edition N/A
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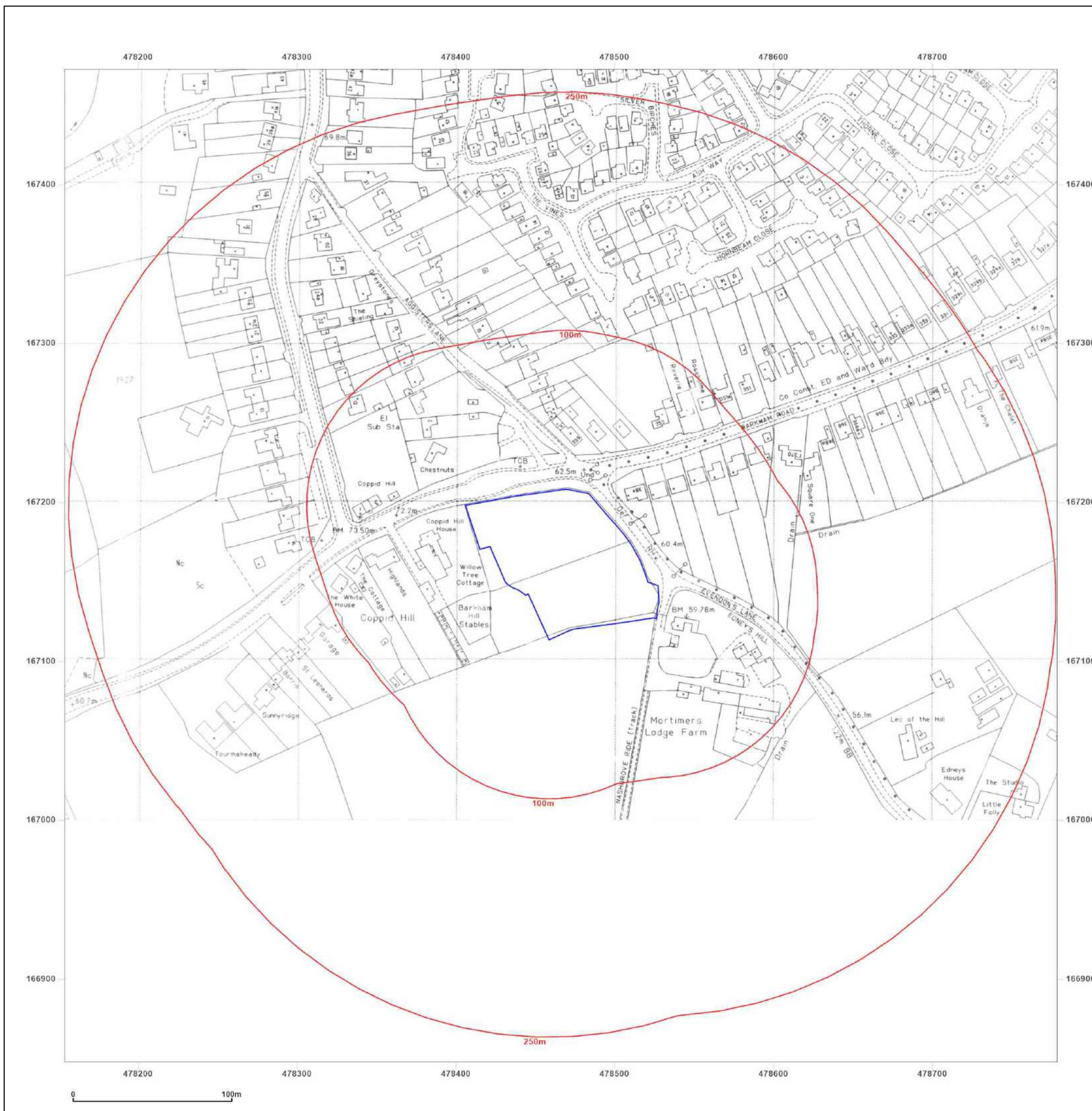


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1989-1993

Scale: 1:2,500

Printed at: 1:2,500



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 Edition N/A
 Copyright 1993
 Levelled N/A

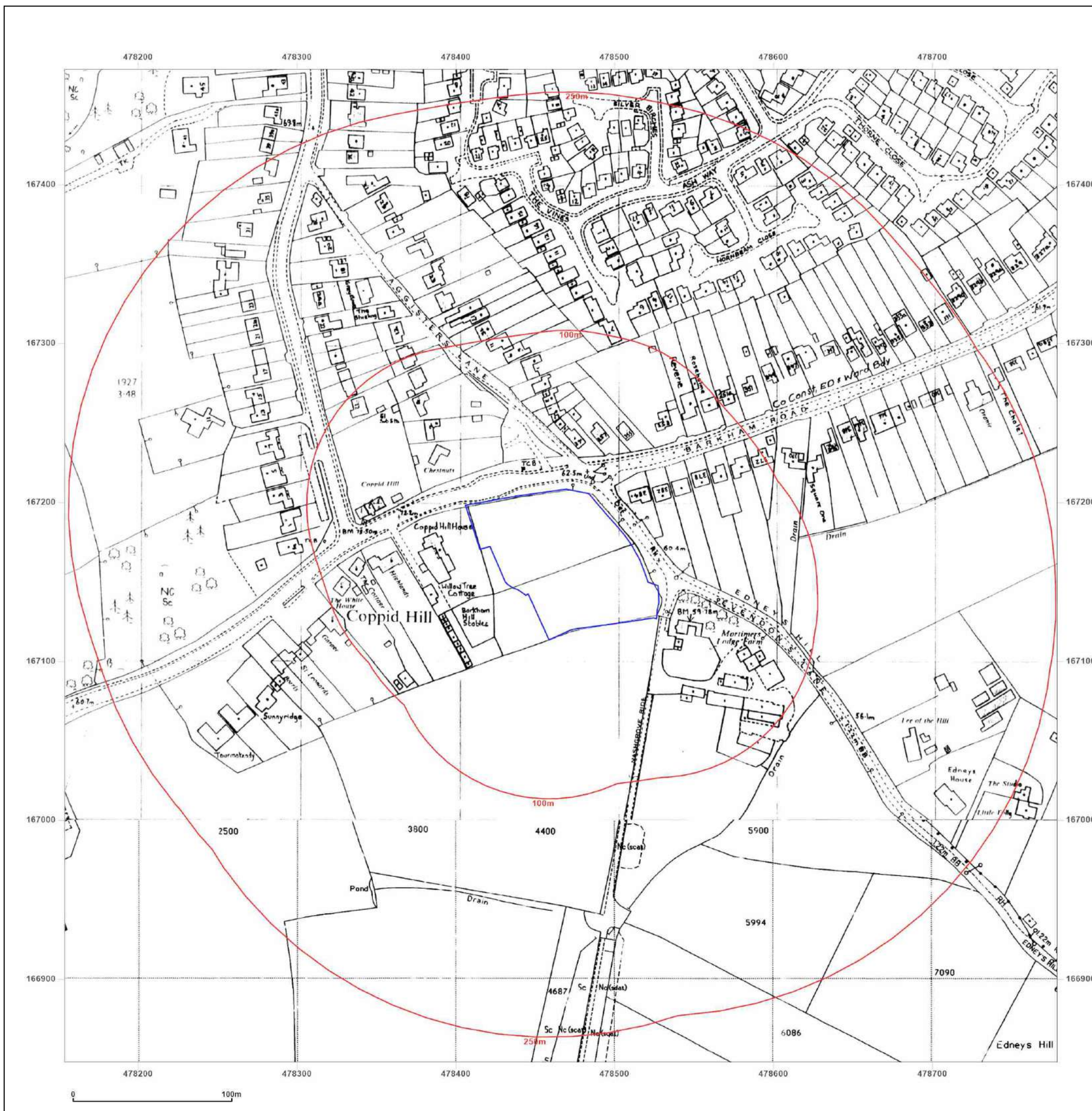


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Site Details:

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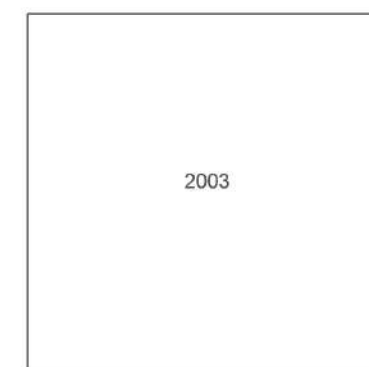
Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Site Details:

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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: County Series

Map date: 1898

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1872
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

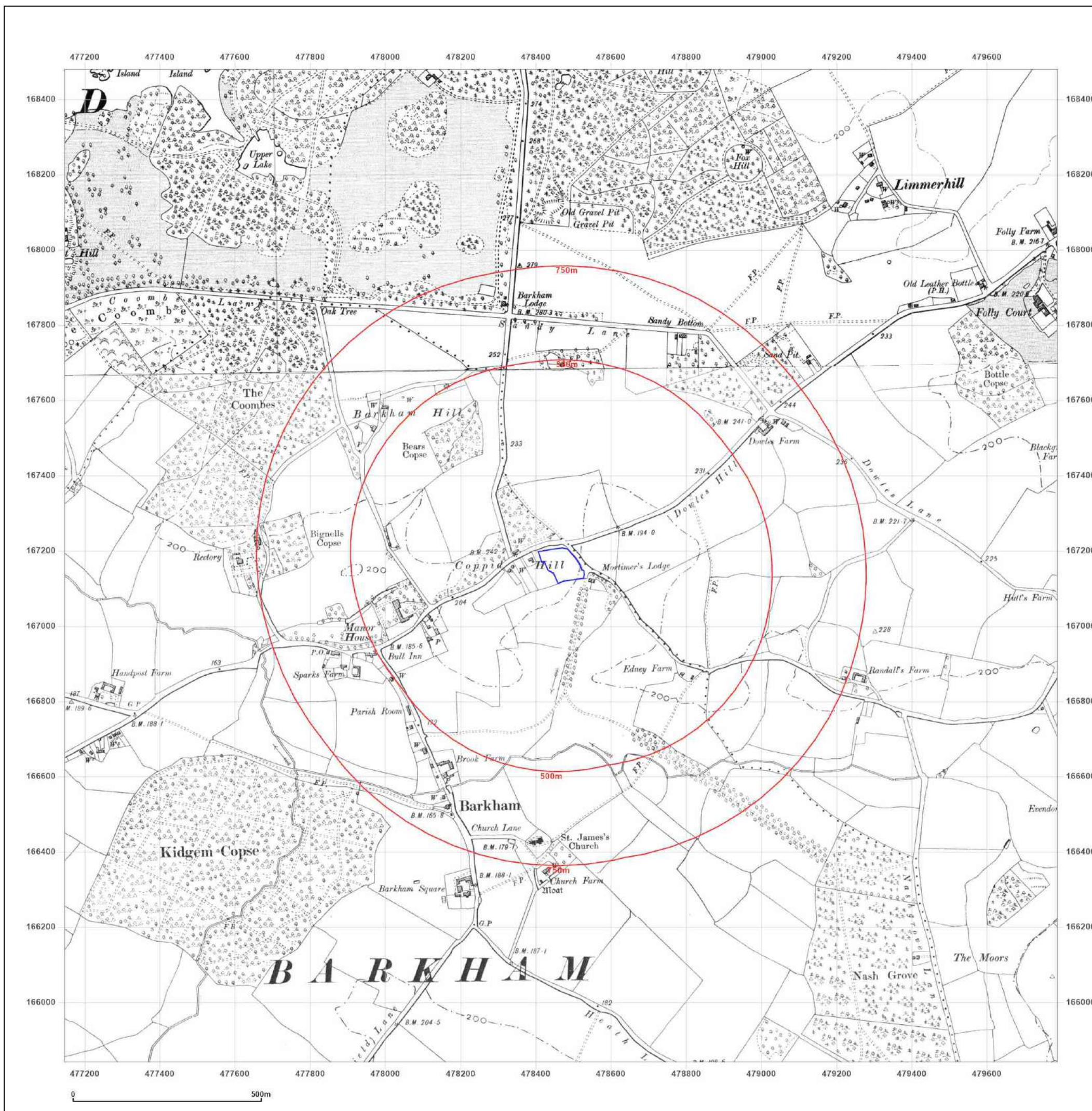


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Site Details:

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WOKINGHAM, RG41 4TG

Client Ref:

24-12-06

Report Ref:

GS-H4D-GHS-WYM-JCB

Grid Ref:

478466, 167160

Map Name:

County Series

Map date:

1898

Scale:

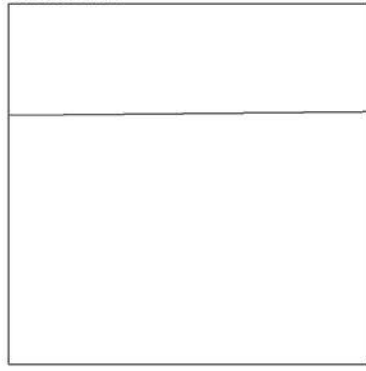
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Printed at:

1:10,560



Surveyed 1871
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A



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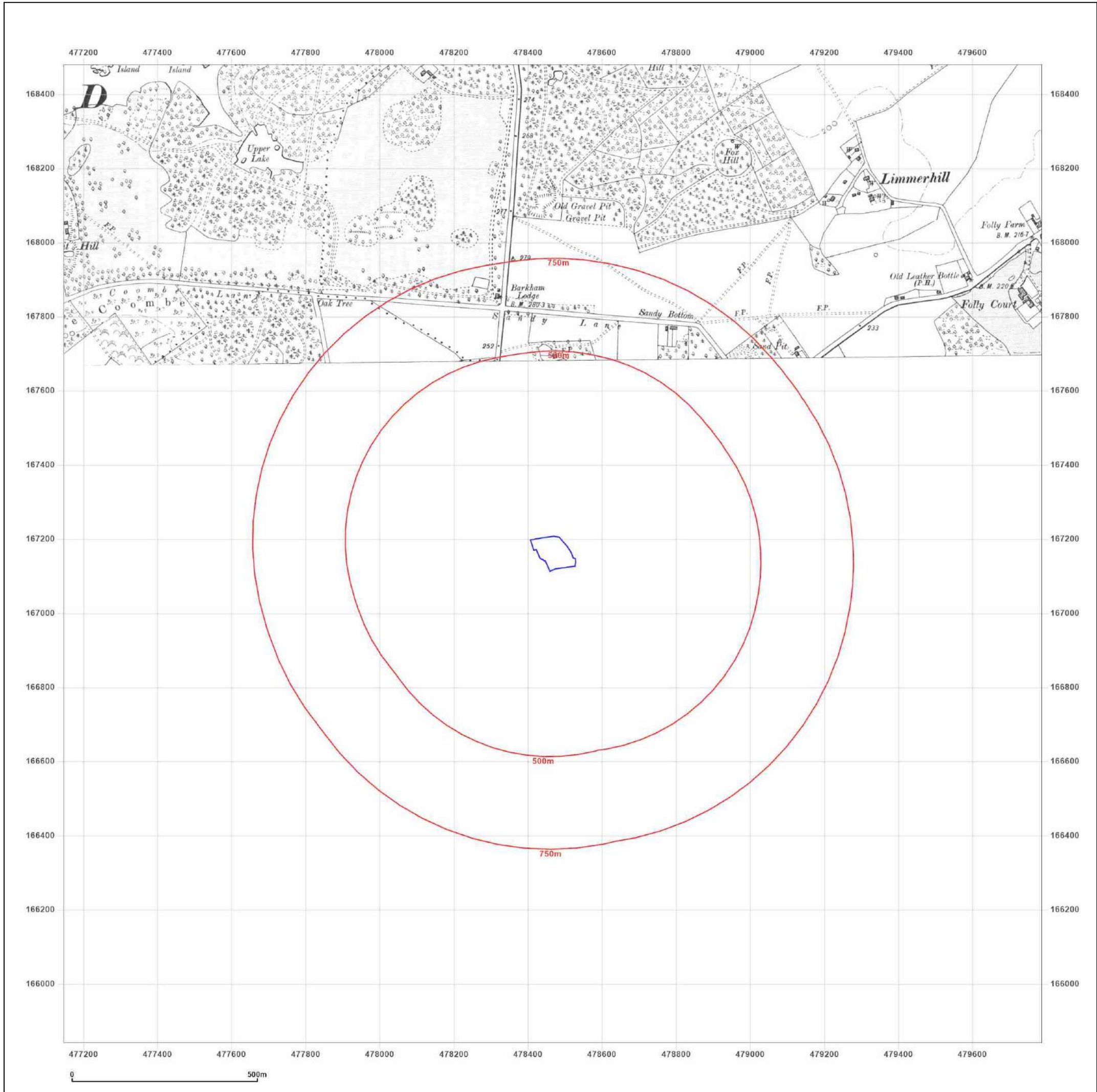


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Site Details:

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ROAD, BARKHAM,
WOKINGHAM, RG41 4TG

Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: County Series

Map date: 1909-1910

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1871
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1871
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

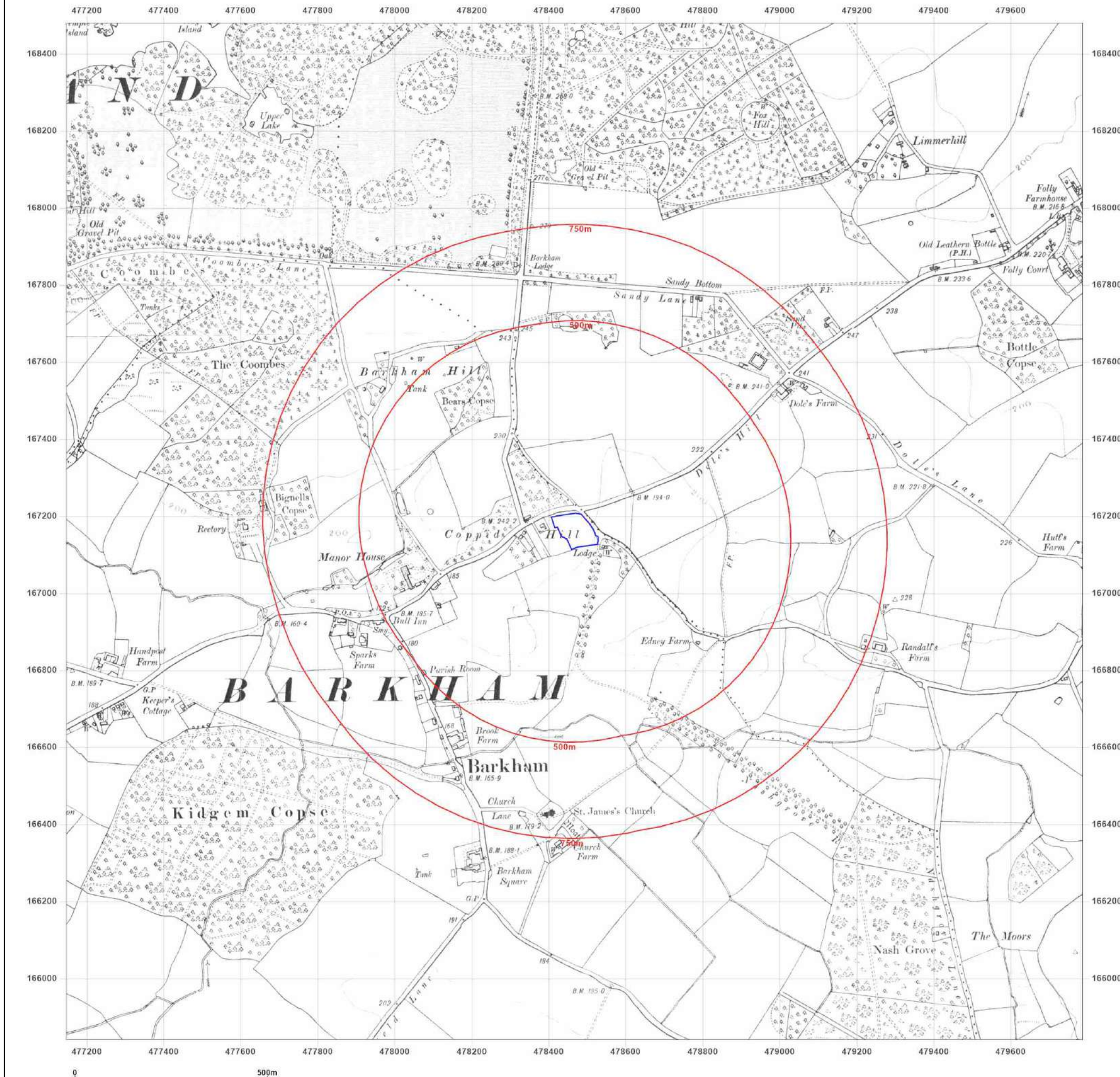


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Site Details:

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WOKINGHAM, RG41 4TG

Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1871
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1871
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

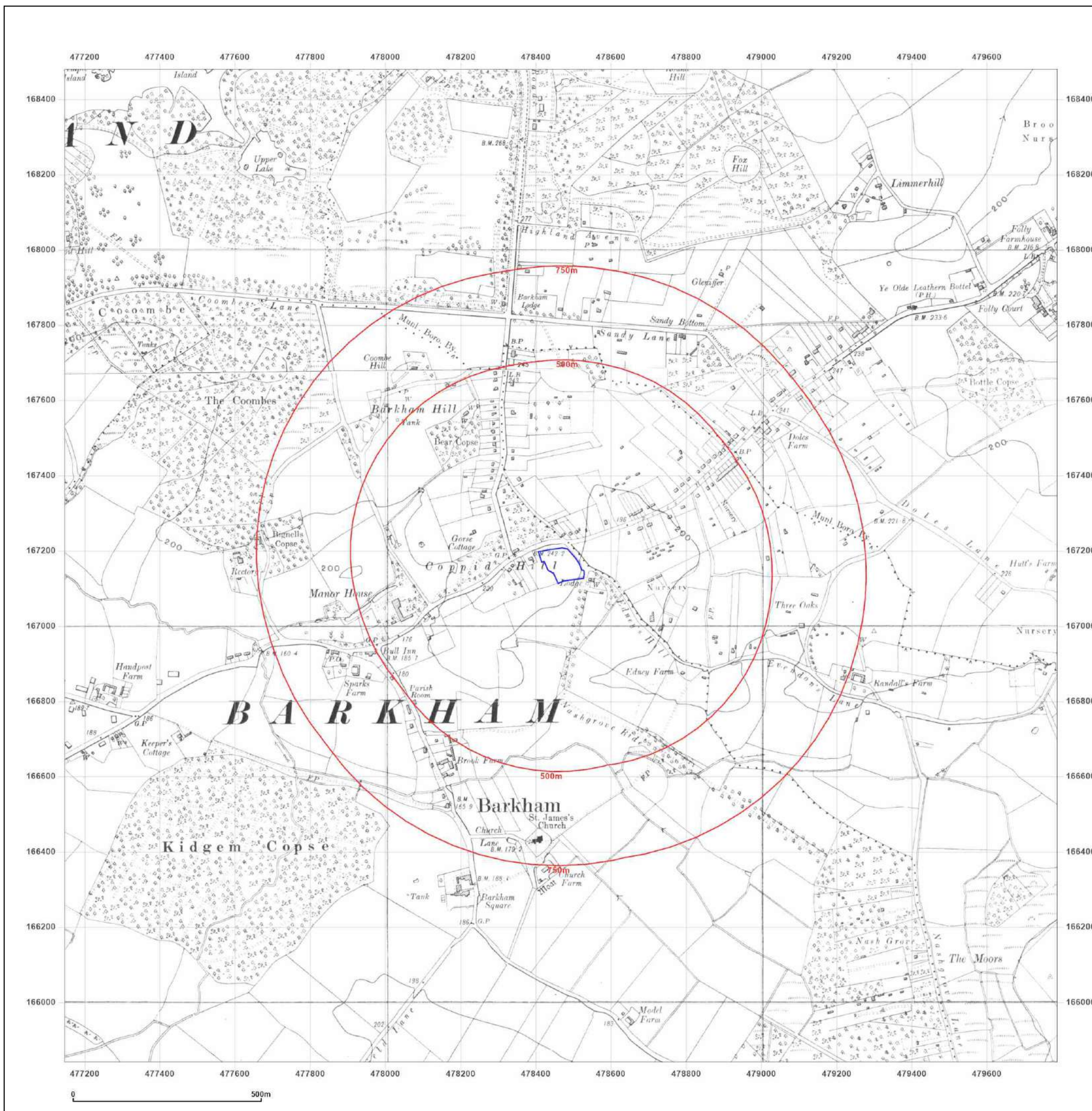


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: Provisional

Map date: 1961

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1956
Revised 1956
Edition N/A
Copyright 1961
Levelled N/A

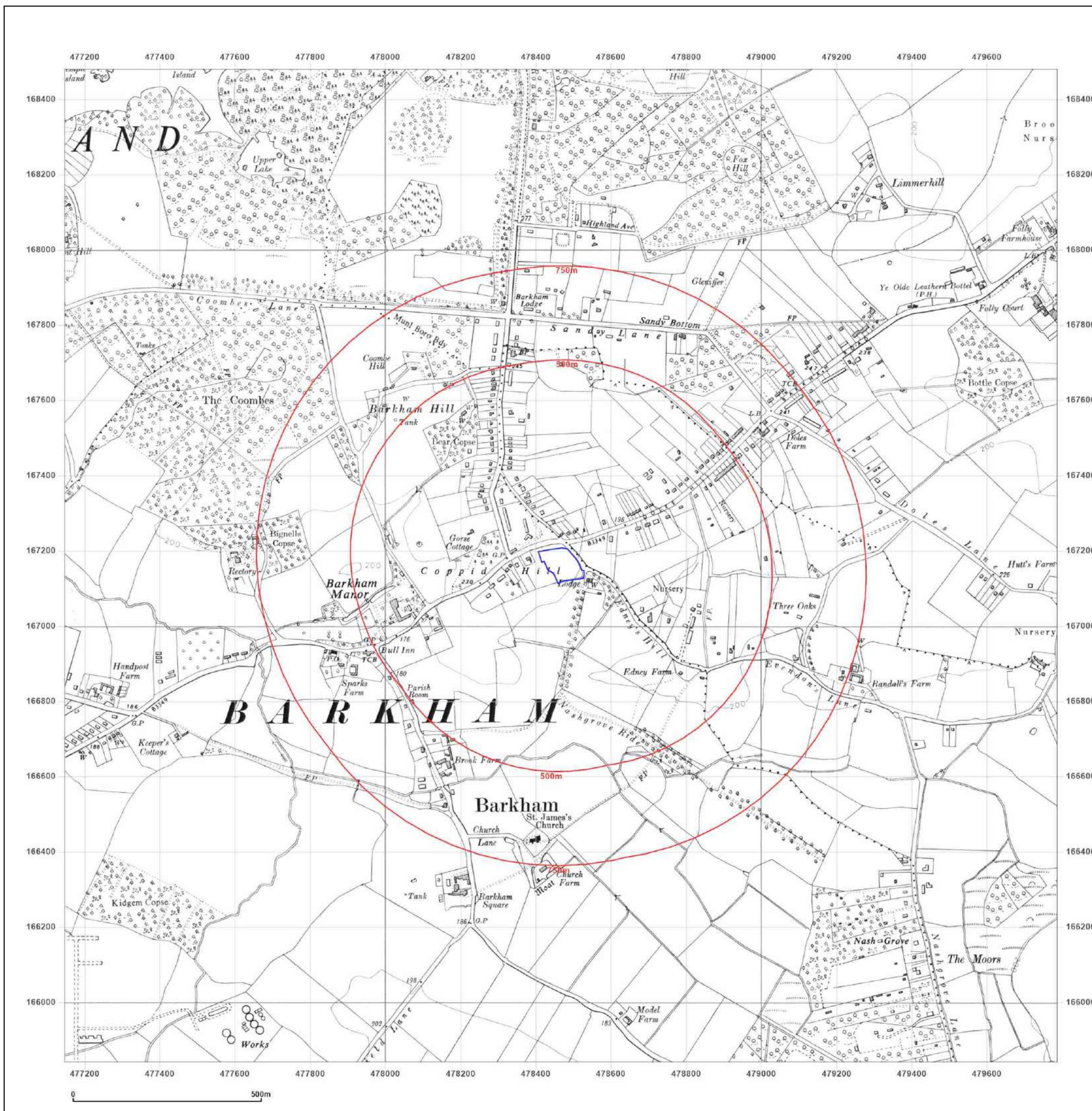


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Site Details:

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WOKINGHAM, RG41 4TG

Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1969

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

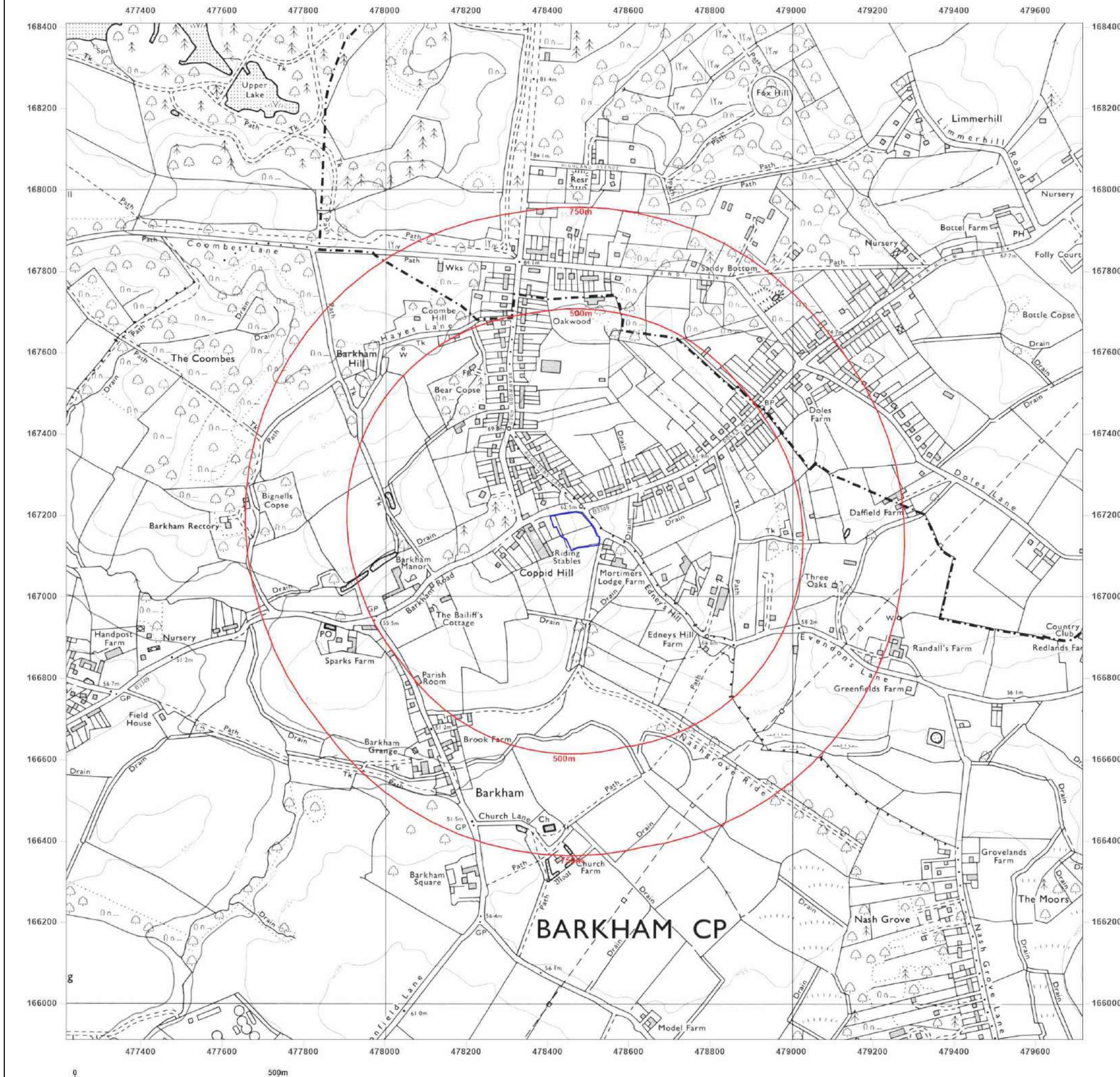


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Site Details:

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WOKINGHAM, RG41 4TG

Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1979

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1976
Revised 1979
Edition N/A
Copyright 1979
Levelled 1969

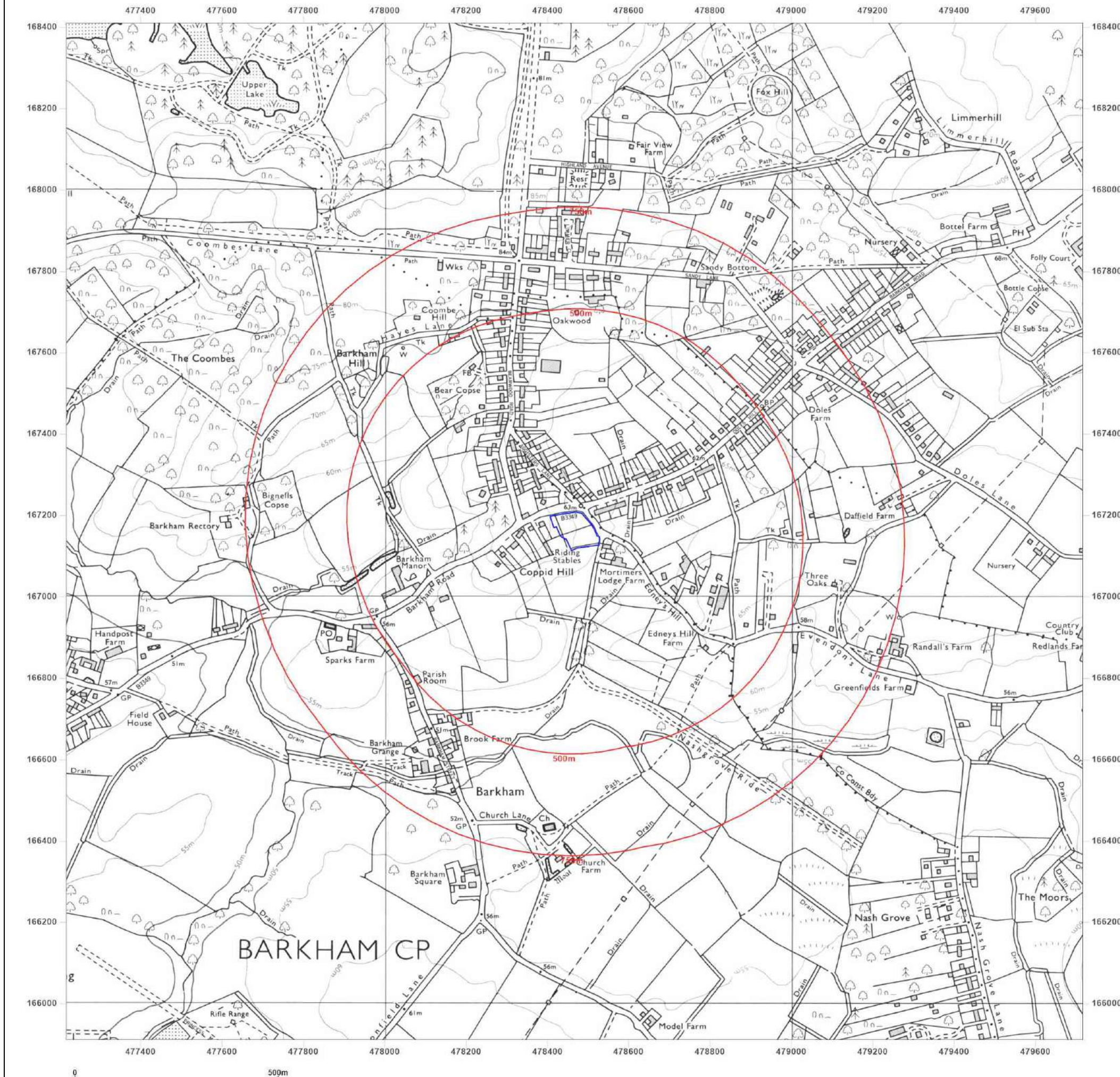


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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1988
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

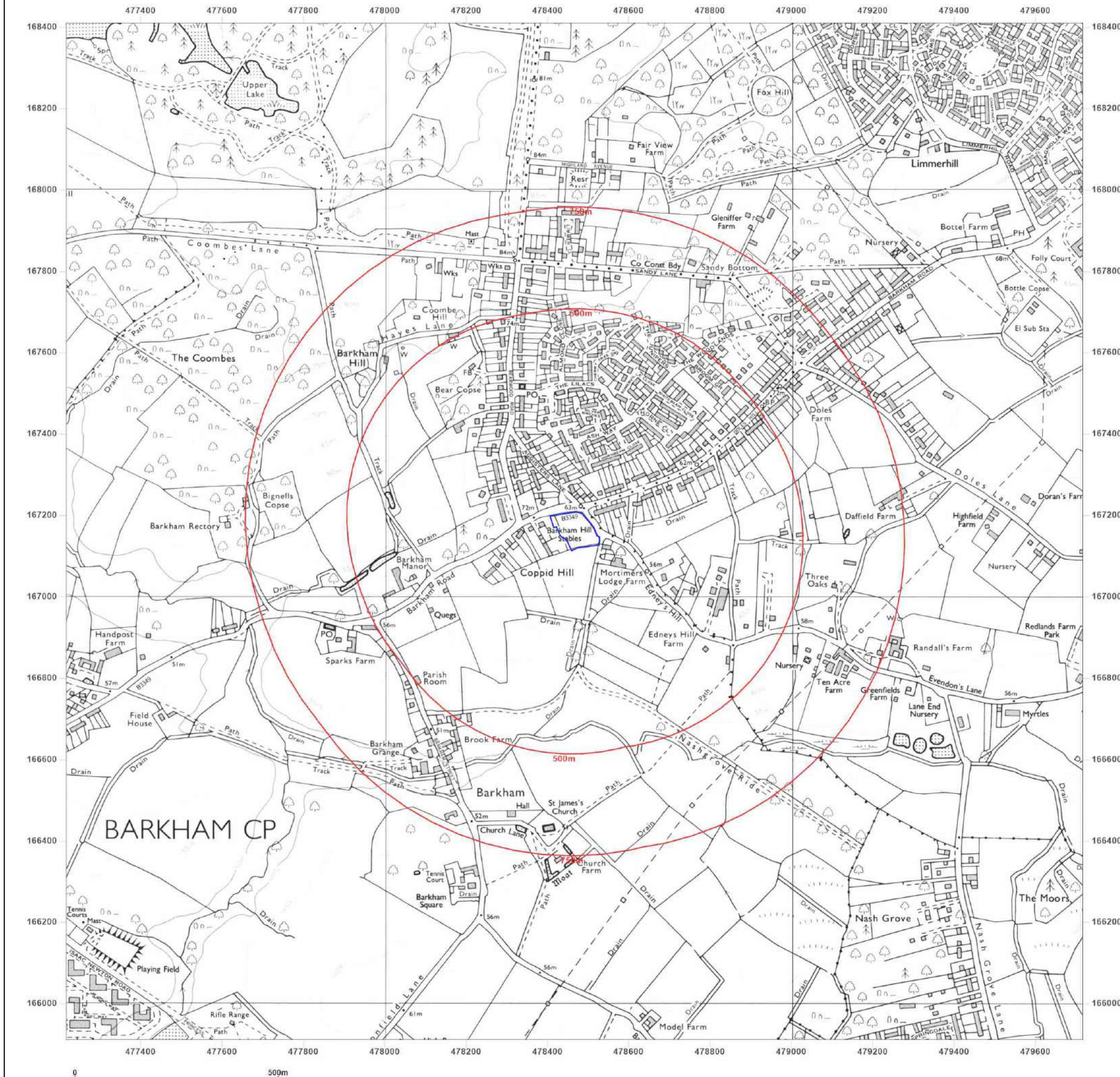


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Site Details:

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WOKINGHAM, RG41 4TG

Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001



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Site Details:

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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010



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Client Ref: 24-12-06
Report Ref: GS-H4D-GHS-WYM-JCB
Grid Ref: 478466, 167160

Map Name: National Grid

Map date: 2025

Scale: 1:10,000

Printed at: 1:10,000



2025



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