



# BROWN FISHER ENVIRONMENTAL REPORTS 4 PLANNING

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## PHASE I & PHASE II CONTAMINATION RISK ASSESSMENT

FORMER CHICKEN SHED AT STOKES FARM  
BINFIELD ROAD  
BINFIELD  
WOKINGHAM  
RG40 5PR

Consultant:  
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Consultant in Contaminated Land

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## Executive Summary

Reports 4 Planning have been commissioned by Sophie Baker of Stokes Farm to undertake a combined Phase I and Phase II Contamination Risk Assessment of an agricultural property located off Binfield Road, Binfield, Wokingham, RG40 5PR.

The property is located in a rural setting and represents a single agricultural barn which was used for some time as a poultry shed. The property has not been actively used for two years. The barn consists of openings on each end with much of the building given over to open-plan. A series of hatches are present along each long elevation providing access to the adjacent field for the free-range chickens which were raised at the site. The building has a substantial concrete floor, is steel-framed with a pitched corrugated roof. It is proposed that a Part Q prior approval is submitted to achieve consent for a Change of Use of the barn to residential use comprising of five individual dwellings.

Sophie Baker has commissioned this combined Phase I and Phase II assessment to better understand the environmental setting of the site and to identify any potential contaminative risks and if necessary, put actions in place to safeguard the below ground environment from any potential future contamination.

### Phase I Land Contamination Assessment

The process of assessing any risk from potential contamination commences with the preparation of a Phase I Desk study and Preliminary Risk Assessment. The purpose of the Preliminary Risk Assessment is to develop an initial conceptual model of the site and establish whether or not there are potentially unacceptable risks posed by contaminative sources from either historical or current, and either on-site or off-site previous land uses which may affect the site. Using recognised national guidance, a Phase I Land Contamination Desk Study has been undertaken utilising many different information sources and other external data providers, to gain an understanding of historical and/or current risks to the site.

For the first stage of this assessment a Deskstudy was undertaken supplemented with the observations of a site walkover visit. This information revealed that the site has comprised of open undeveloped land until a time between 1993-2003 when the poultry shed was constructed. The building was built upon a concrete slab, on virgin ground with a steel-portal frame and corrugated metal roof. Chickens had free access to the outside pasture through a series of doorways. A silo was present at the front of the building during the operation of the building but it is believed that this was used to store grain, and nothing hazardous. The silo was removed and the building has not been actively used for two years.

There is no recorded artificial or made ground nor superficial deposits at the site. Bedrock is a clay or silt of a low to high permeability. There are no watercourses in the immediate vicinity of the site.

The conceptual site model developed and based on this information revealed that there are no significant source-pathway-receptor pollutant linkages associated with on or off-site sources.

However, in recognition that the site was used for agricultural purposes the presence of organic matter at the site, particularly in the outdoor pasture is realised. The barn itself is entirely surfaced with concrete hardstanding which is clean and in good condition throughout.

As the outdoor space around the immediate footprint of the barn will entail future garden space this area was sampled for potential contaminants.

## **Phase II Land Contamination Assessment**

In order to assess risks associated with potential organic matter in the external areas around the barn, a limited Phase II Land Contamination Assessment was undertaken. The aim of the investigation was to determine if any significant levels of organic matter, particularly of a bacteria kind, is present in the near surface soils which may be hazardous to future users of the site.

Four sampling locations were chosen, equally spaced around the building. Each was dug by hand to around 300mm depth and inspected. Samples were collected immediately below the grass layer and submitted to the laboratory for testing for bacterial and organic compounds.

### **Superficial Soils**

It was noted that the superficial soils comprise a top grass surface beneath which a loamy topsoil is seen to shallow depth. No visual or olfactory evidence of contamination was noted or recorded during the works. As the fields are currently used by sheep then sheep droppings were noted nearby.

A number of soil samples were collected for analysis. Laboratory testing showed that organic contaminant levels are very low, and significantly below any method detection limit in most cases.

It was noted that one of the four samples returned a positive reading for e.coli and other bacterial compounds. This is likely due to the continued use of the field for sheep grazing and will be a localised issue and not present everywhere.

### **Mitigation:**

The presence of some bacterial compounds in the soil appears to be localised and not site-wide. The risk can be considered 'residual' and akin to any other soil. It is known that bacteria can only thrive in the right conditions, but can lay dormant beneath the surface (post introduction) for around 5 to 10 months depending on the soil conditions. It is viewed that given the isolated nature of the bacteria, that active eradication methods (steam injection / material removal etc) are either impractical or not environmentally proportionate. A more appropriate solution to remove any remaining legacy of bacteria is to treat soils across the garden areas with physical methods by first turned over to aerate the soil matrix and further expose it to sunlight. This will have the effect of destabilising the temperature and put the bacteria under pressure. It is recommended that this process of turning the soils is done a minimum of two times. Once complete then further retesting of the soils will be done to demonstrate that the soils within the completed gardens are E.Coli free before final landscaping is completed.

### **Controlled Waters**

No perched or standing groundwater was encountered within any of the trial pits and, as a consequence, no laboratory analysis of groundwater was completed.

### **Ground Gas Assessment**

The Desk study revealed that no made ground or other significant ground gas sources are identified from onsite sources at the site. No material of an organic nature was encountered within the trial holes.

## **Overall Conclusions & Recommendations**

The combined Phase I and Phase II Assessment has shown that there is a general low risk of contamination at the site and no significant risk are present which may unduly affect future users of the site. No significant off-site sources have been identified.

Due to the presence of some e-coli bacteria in the site soils, it is recommended (as described above) that the external garden areas of the new plots is 'turned' on a least two occasions once development commences to destabilise any residual bacteria from poultry/sheep droppings. Further validation testing of the soils to be undertake prior to any final landscaping being put in place.

Reasonable skill and care have been exercised in preparation of this report in accordance with the technical requirements of the brief. Notwithstanding the efforts made by the professional team in undertaking this contamination assessment, it is possible that ground conditions other than that potentially indicated by this report may exist at the site. This assessment provides a baseline study of current environmental ground conditions at the site. The client should be made aware that this data applies only to those samples collected at the locations described in the report and on the dates mentioned. The report provides a good site coverage targeting know pathways of contamination to known receptors. Future operational activity on the site may result in changes to the soil, groundwater and ground gas condition at the site. The client should take note of the recommendations in the report.

The report is supplied subject to our standard terms and conditions, and these should be read alongside the report.

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## 1.0 INTRODUCTION

Reports 4 Planning have been commissioned by Sophie Baker of Stokes Farm to undertake a combined Phase I and Phase II Contamination Risk Assessment of an agricultural property located at Stokes Farm, off Binfield Road, Binfield, Wokingham, RG40 5PR.

The property is located in a rural setting and represents a single agricultural barn which was used for some time as a poultry shed. The property has not been actively used for two years. The barn consists of openings on each end with much of the building given over to open-plan. A series of hatches are present along each long elevation providing access to the adjacent field for the free-range chickens which were raised at the site. The building has a substantial concrete floor, is steel-framed with a pitched corrugated roof. It is proposed that a Part Q prior approval is submitted to achieve consent for a Change of Use of the barn to residential use comprising of five individual dwellings.

In order to inform the site investigation, environmental data relating to current and historical activities at the site and within its vicinity were assessed. This informed a preliminary risk assessment and conceptual site model for the site. The purpose of this Phase I Deskstudy and Preliminary Risk Assessment report is to gather information on the site to develop an initial conceptual site model (CSM) and establish whether or not there are any potentially unacceptable risks posed by either current or historical use of the land or the surrounding area which may affect the proposed development.

The consultant who has prepared this report is a Contaminated Land Consultant with over twenty years' experience in Brownfield Development, Contaminated Land, Risk Assessment, and Land Condition Surveys. He is a member of the Institute of Environmental Management and Assessment. The Preliminary Risk Assessment report was undertaken based on Desk Study findings utilising publicly available data, along with data sourced directly and indirectly from various providers including the Environment Agency, the Local Authority, the British Geological Survey, The Coal Authority and Ordnance Survey. This has allowed characterization of the site with respect to its Geology, Hydrology, Hydrogeology, History and Environmental Setting. The Site Characterisation has been undertaken in general accordance with the procedures of the new LCRM methods as released in October 2020.

Predominantly these procedures relate to 'past' contamination, and assume that legislative controls such as Pollution Prevention and Control authorisations control current potentially polluting activities. Emphasis is therefore upon historic site use and how this may affect potential future users of the site and the natural environment. A Preliminary Environmental Risk Assessment contained in this report has considered the relevant Receptors, potential Pathways, and Sources of contamination and assessed these for the level of risk posed to the site and future site users.

As a result of information collated on the historical use of the general area, including an area of infilled ground to the east of the site, further intrusive assessment was recommended to further define the Conceptual Site Model. The findings of this intrusive assessment and recommendations for remedial works at the site are contained within this report.

Reasonable skill and care have been exercised in preparation of this report in accordance with the technical requirements of the brief. Notwithstanding the efforts made by the professional team in undertaking this contamination assessment, it is possible that ground conditions other than that potentially indicated by this report may exist at the site.

## **2.0 SOURCES OF INFORMATION**

This report draws upon many different information sources in order to gain a full understanding of the environmental setting of the site. These are summarized below:

### **2.1 Internet Sources**

- British Geological Survey Borehole Database
- Environment Agency Pollution Inventory Database
- Multi-Agency Geographic Information for the Countryside Database
- 1:50,000 British Geological Survey Digital Map of Great Britain

### **2.2 Reports**

- Groundsure Data Report - GS-Y6F-SPV-3TG-AHV
- Historical Mapping - GS-D2L-N9S-LEX-I26

### **2.3 Site Observations**

- Site observations have been made during a site reconnaissance on 20<sup>th</sup> October 2024 and photographic evidence is provided in Appendix B.

## **3.0 SITE RECONNAISSANCE**

### **3.1 Site Location**

The proposed development property is located at Stokes Farm, off Binfield Road, Binfield, Wokingham, RG40 5PR. The grid reference of the site is 483318 169499. The property is located within a rural at the grid reference of 483318 169499.

Figures 1 to 3 show the location and layout of the existing site. Figure 4 - Proposed Site Plan shows how the new development will look once the existing barn has been reconfigured through the Part Q permission.

### **3.2 Site Access**

The site can be accessed directly from a track leading from Binfield Road.

### **3.3 Site Description**

The site is rectangular in shape, measuring approximately 42m long by 16m in width. The barn has been built on green-field land across a concrete slab which is located throughout. The concrete slab is noted through inspection to be in a very good condition with no notable staining. The barn is constructed from a steel frame with a pitched corrugated metal roof. Steel panels make up most of the building sides. The building is largely empty since the building was vacated around two years ago following use as a chicken shed. To allow the free-range farming of poultry on site several hatches are present along both long sides of the barn to allow access to the adjacent field space.

To the front of the building there is some gravel hardstanding and recent stockpiles of road chippings.

An aerial photograph showing the site is provided as Figure 3 with photographs taken during the site reconnaissance provided in Appendix A.

#### **3.3.1 Site Topography**

The plot is reasonably flat with no discernible changes in topography across the site.

#### **3.3.2 Structures**

The only structure located on site is the main agricultural barn which was built between 1993 and 2003. Typical of an agricultural barn the building is built from a steel-frame with a pitched metal roof upon robust concrete slab. There are no obvious structural defects with the building at time of inspection.

#### **3.3.3 Surfacing**

All internal and external areas of the site were observed as part of a site walkover, and no evidence of staining could be seen.

#### **3.3.4 Vegetation**

External vegetation around the barn appears to be heathy and no evidence of distress was noted.

#### **3.3.5 Underground and Aboveground Storage Tanks**

It is understood that there are no below or above ground fuel storage tanks located at the site. A silo, understood to have been used for the storage of grain, was previously located at the front of the building but was removed two years ago.

### **3.3.6 Raw Material and Chemical Use and Storage**

No evidence of any potentially harmful raw material or chemical use and/or storage was observed at the site at the time of the survey.

### **3.3.7 Solid Wastes**

No evidence of potentially harmful solid wastes were observed at the site at the time of the survey.

### **3.3.8 Hazardous and Industrial Waste**

No potentially hazardous industrial wastes have been observed.

### **3.3.9 Air Emissions**

No air emission sources are present on the site except for standard domestic boiler output.

### **3.3.10 Wastewater / Sewers**

No information is known on any wastewater mains system currently at the site.

### **3.3.11 Stormwater**

Stormwater from the site building appears to be directed to drains beneath the site. The condition of such drains is unknown.

### **3.3.12 Asbestos Containing Materials (ACM)**

No certified asbestos survey was undertaken as part of this assessment.

It is now illegal to use asbestos in the construction of buildings in the UK. However, it is not illegal for properties to contain asbestos that was installed prior to the introduction of the 1999 regulations.

As the building was constructed prior to 1999 it is possible that asbestos may be present within the building structure, although none was obviously and immediately observed as part of this survey. Prior to any demolition or renovation, a full certified asbestos survey should be undertaken.

### **3.3.13 Polychlorinated Biphenyls (PCBs)**

PCBs were historically used as a dielectric filler liquid in some types of transformers, switchgear, capacitors and the starter units in some fluorescent lights and fractional horsepower motors. Typically, these are large pieces of electrical equipment commonly found on power lines. They were used because of their good electrical insulation properties, fire resistance and chemical stability. An international agreement in 1986 (EU Directive 96/59/EC) banned most of these uses and agreement was also reached to phase out remaining uses and safely dispose of PCBs by the end of 2010. It should be assumed that any capacitor or transformer made before 1976 contains PCBs unless it is known otherwise. PCBs are known to harm the environment and can damage health.

### **3.3.14 Ionising Radiation**

No evidence of Ionising Radiation sources was made at the site.

### **3.3.15 Spills and Releases**

All external areas of the site were inspected no significant areas of staining associated with spills and/or releases could be seen.

### **3.4 Surrounding Land Use**

#### **3.4.1 North**

The site is bordered to the north by agricultural field. A large agricultural barn is located 110m north west.

#### **3.4.2 East**

The site is bordered to the north by agricultural field.

#### **3.4.3 South**

The site is bordered to the north by agricultural field.

#### **3.4.4 West**

The site is bordered to the north by agricultural field.

A selection of photographs is provided in Appendix A.

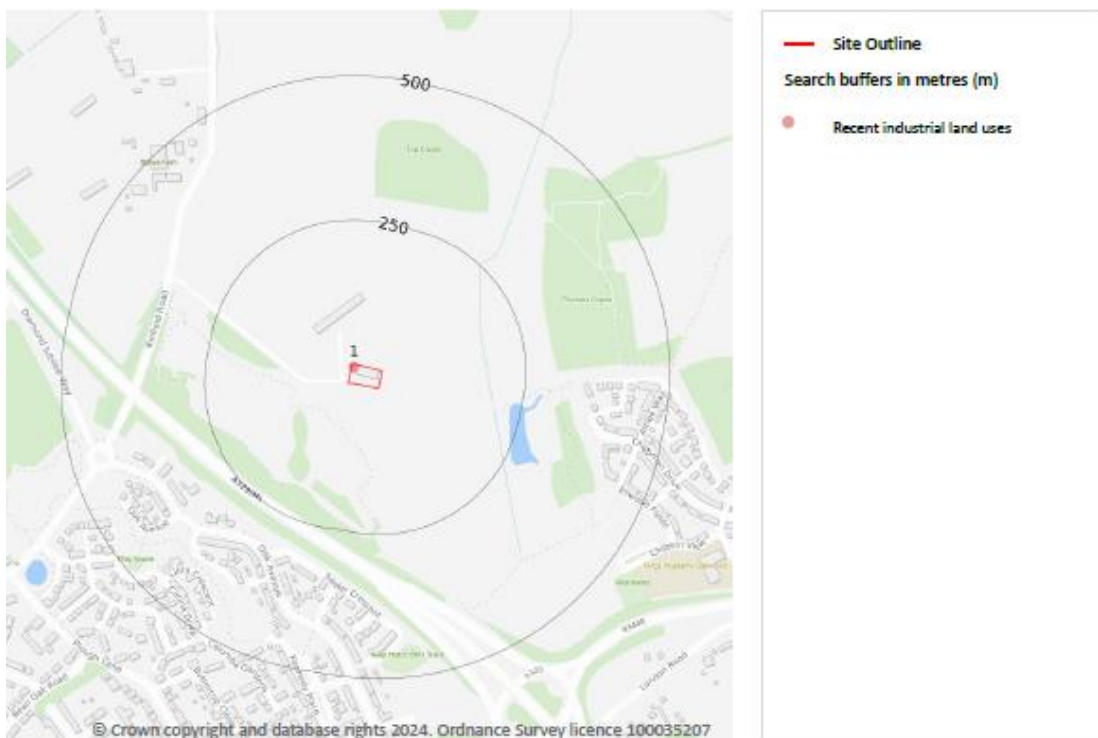
## 4.0 CURRENT LAND USES

### 4.1 Current Site Use

The agricultural building is a former chicken shed which has not been used for approximately two years.

### 4.2 Potentially Contaminative Current Surrounding Land Use

The following records of potentially contaminative sites are made within 250m of the site:



**Table 1: Potentially Contaminative Current Surrounding Land Use**

| Location | Company     | Activity | Category     |
|----------|-------------|----------|--------------|
| On Site  | Stokes Farm | Silo     | Agricultural |

It is noted from a very recent site inspection that the silo is no longer present on site and was removed two years ago.

### 4.3 Petrol and Fuel Sites

There are no records of any petrol and/or fuel sites within 250m of the site.

### 4.4 Underground High Voltage Electricity Cables and High Pressure Gas Transmission Pipelines

There are no records of any such feature within 100m of the site.

### 4.5 Sites Determined as Contaminated Land

There are no records of any sites registered on the database as a potentially contaminated site under the Part2a Environmental Protection Act 1990.

### 4.6 Control of Major Accident Hazards (COMAH)

There are no records of any COMAH Sites within 500m of the site.

#### **4.7 Regulated Explosive Sites**

There are no records of any regulated explosive sites within 500m of the site.

#### **4.8 Hazardous Substance Storage**

There are no records of any Hazardous Substance Storage sites within 500m of the site.

#### **4.9 Historical Licensed Industrial Activities**

There are no records of any IPC records of substance releases to air, land and water.

#### **4.10 Licensed Industrial Activities (Part A1)**

There are no records of any Part A(1) installations regulated under the Environmental Permitting Regulations 2016.

#### **4.11 Licensed Pollutant Releases**

There are no records of any Licensed Pollutant Releases within 500m of the site.

#### **4.12 Radioactive Substance Release**

There are no records of any Radioactive Substance Releases within 500m of the site.

## 5.0 HISTORICAL LAND USES

### 5.1 Site Observational Evidence

The site comprises of an agricultural building which comprises of a former chicken shed. It is understood that the building has not been used actively for around two years.

### 5.2 Historical Maps Assessment

Several historical maps have been reviewed for evidence which may indicate potentially contaminative land uses for either the site or surrounding land within at least 500m of the site. Copies of the historical maps are provided in Appendix C and are discussed below:

**Table 2 Historical Land Use**

| Map Year (Scale) | Site Use                                                                                                                     | Surrounding Land Use                                                                                             |
|------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1871 (1:2,500)   | The site is shown as undeveloped and forms part of a larger field extending to the north and south. No discernible features. | The following notable features / changes are observed:<br><b>All Directions:</b><br>Agricultural land.           |
| 1899 (1:2,500)   | No changes shown to site                                                                                                     | No changes shown to surrounding area.                                                                            |
| 1912 (1:2,500)   | No changes shown to site                                                                                                     | No changes shown to surrounding area.                                                                            |
| 1933 (1:2,500)   | No changes shown to site                                                                                                     | No changes shown to surrounding area.                                                                            |
| 1965 (1:2,500)   | No changes shown to site                                                                                                     | The following notable features / changes are observed:<br><b>West:</b><br>Possible stream shown 80m west         |
| 1978 (1:2,500)   | No significant changes                                                                                                       | The following notable features / changes are observed:<br><b>West:</b><br>A329 motorway located 220m south west. |
| 1993 (1:2,500)   | No changes shown to site                                                                                                     | No changes shown to surrounding area.                                                                            |
| 2003 (1:2,500)   | Single agricultural barn shown with single (grain) silo located at the front of the property.                                | No changes shown to surrounding area.                                                                            |

### 5.3 Other Historical Information

No other information has been gained on site history from other sources.

### 5.4 Potentially Contaminative Historical Uses

The following records are available of potentially contaminative historical land uses at and within 250m of the site:



**Table 3: Potentially Contaminative Historical Land Uses (<100m)**

| Distance | Direction | Activity                    | Date        |
|----------|-----------|-----------------------------|-------------|
| 221m     | SW        | Cuttings                    | 1980 - 1988 |
| 320m     | SW        | Unspecified Ground Workings | 1988        |
| 360m     | W         | Unspecified Pit             | 1980        |
| 493m     | SW        | Brick Works                 | 1909        |

#### 5.5 Historical Tank Database

There are no records of any historical tanks within 500m of the site.

#### 5.6 Historical Energy Features Database

There are no records of any historical tanks within 500m of the site.

#### 5.7 Historical Petrol and Fuel Sites

There are no records of any sites with historical petrol and fuel features within 500m.

#### 5.8 Historical Garages

There are no records of any historical garages within 250m.

#### 5.9 Historical Military Land

There are no records of any historical military land within 500m of the site.

#### 5.10 Department of Environment (DEFRA) Industry Profiles

The old Department of Environment (now DEFRA) Profiles provide information on the processes, materials and waste associated with individual industries with regard to land contamination. DOE Industry Profiles provide information on the processes, materials and wastes associated with individuals' industries. They are not definitive studies but they introduce some of the technical considerations that need to be borne in mind at the start of an investigation for possible contamination.



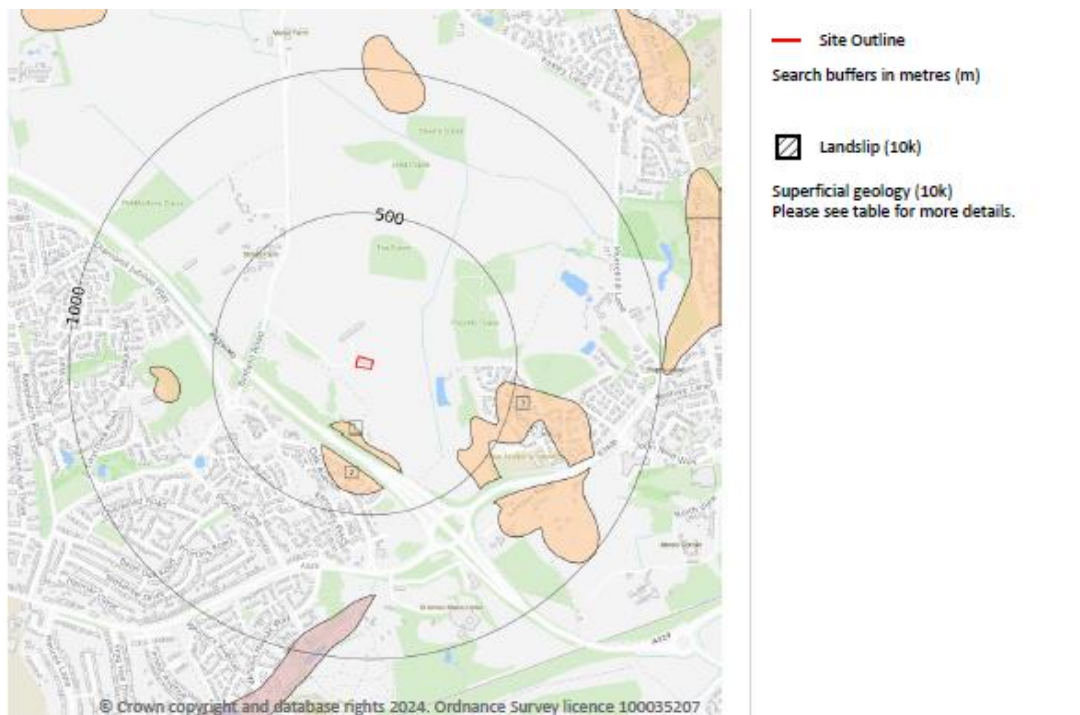
## 6.0 GEOLOGY

### 6.1 Artificial and Made Ground

There are no records of Artificial or Made Ground recorded at the site. Records of infilled ground is recorded 221m SW of the site.

### 6.2 Superficial and Drift Geology

The British Geological Survey 1:50,000 Geological Map of Great Britain shows that there are no deposits of superficial soils at the site.



### 6.3 Solid Geology

The British Geological Survey 1:10,000 Geological Map of Great Britain shows that the solid geology beneath, or within 50m, of the site is recorded as being of the Claygate Member consisting of Clay and Silt.

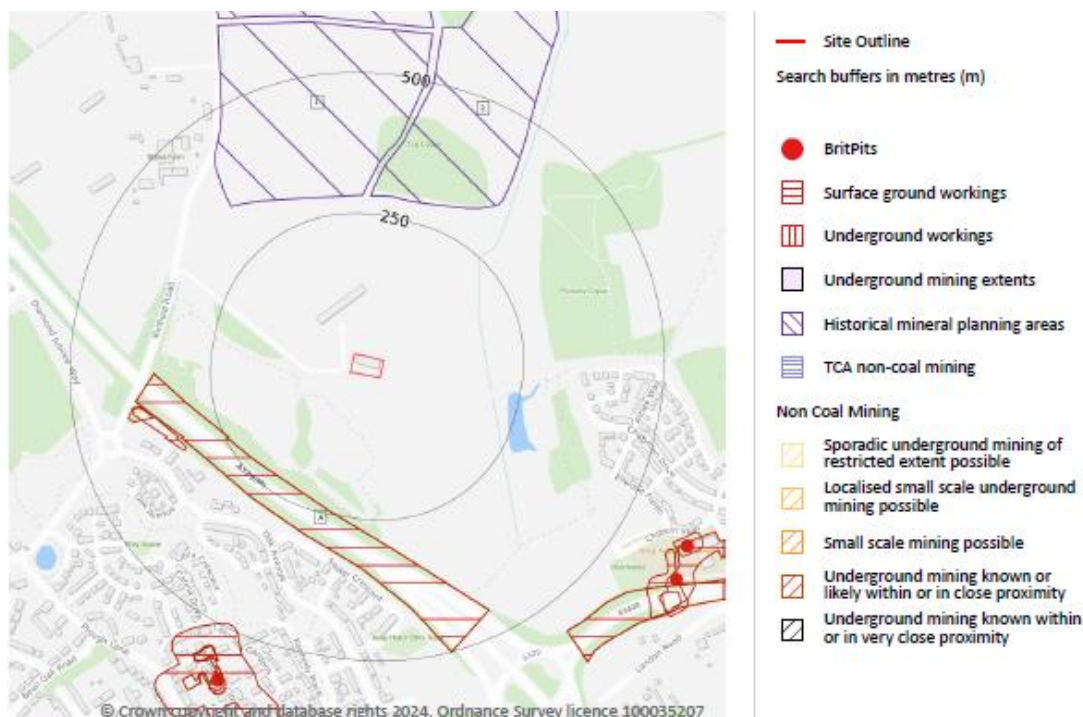
There are no records of geological faults located within a 1km radius of the site.

The permeability of the bedrock is Very Low to High.



## 6.4 Mining

Information provided by the Coal Authority indicates that the site is not located within a coal mining area.



There are no records of any BritPits within 500m of the site.

Surface Ground Workings consisting of cuttings are located 221m SW of the site.

There are no recorded underground workings within 1,000m of the site.

There are no natural cavities expected at the site.

#### **6.5 Non-coal Mining**

There are no non-coal mining features within 1,000m from the site.

#### **6.6 Brine Affected Areas**

There are no brine affected areas within 75m of the site.

#### **6.7 Shrink Swell**

The maximum Shrink Swell Hazard for the site has been rated by the BGS as Low.

#### **6.8 Landslides**

The maximum Landslide Hazard for the site has been rated by the BGS as Very Low. Slope instability problems are unlikely to be present.

#### **6.9 Soluble Rocks**

There is a negligible risk of soluble rocks and these are unlikely to be present.

#### **6.10 Compressible Ground**

The maximum Compressible Ground Hazard for the site has been rated by the BGS as Negligible. No special actions are required.

#### **6.11 Collapsible Rocks**

The maximum Collapsible Rocks Hazard for the site has been rated by the BGS as Very Low.

#### **6.12 Running Sand**

There is a very low potential for running sand problems if the water table rises or if sandy strata is exposed to water. No special actions are required.

#### **6.13 Radon**

The Indicative Atlas of Radon in England and Wales as prepared by both the Health Protection Agency and the British Geological Survey shows that the site is not located in a radon area as less than 1% of properties are above the Action Level. No mitigation is expected.

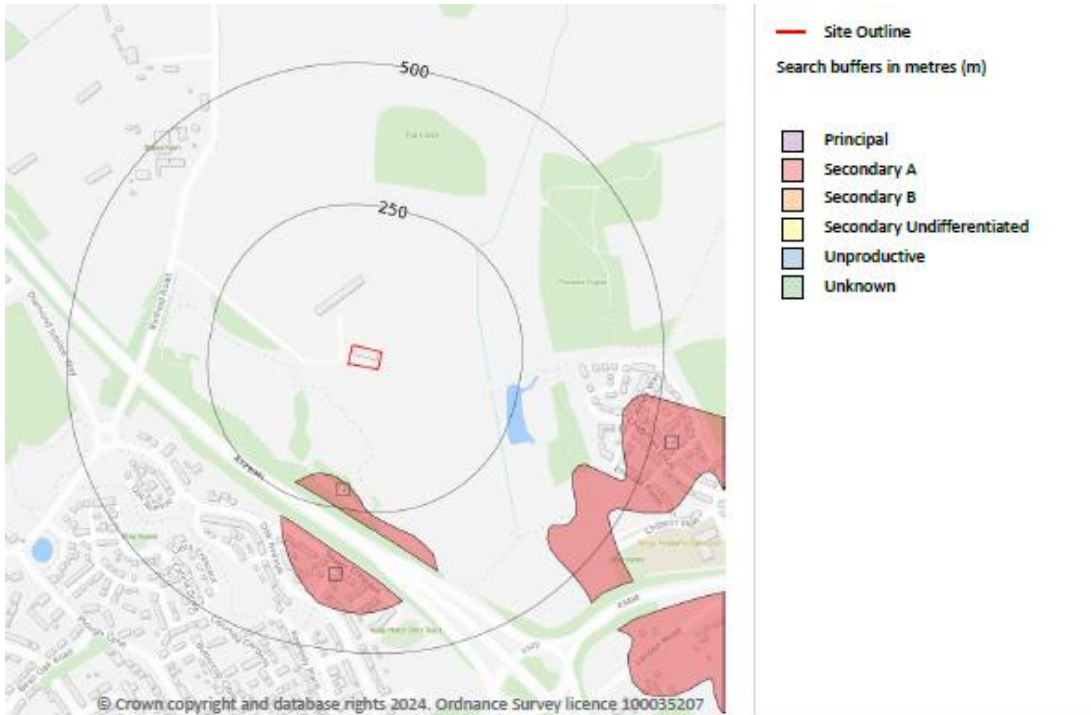
#### **6.14 Natural Soil Chemistry**

It is estimated that the likely background concentrations may be found at the site: Arsenic 15mg/kg, Lead 100mg/kg, Cadmium 1.8mg/kg, Chromium 60-90mg/kg, Nickel 15-30 mg/kg.

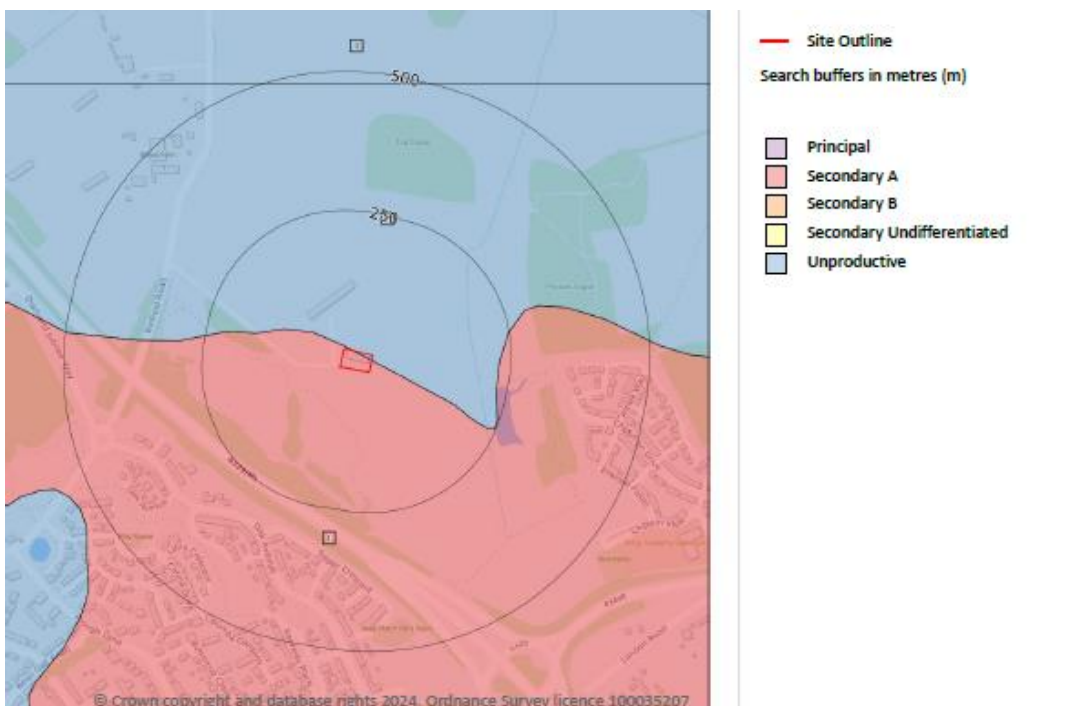
## 7.0 HYDROGEOLOGY

### 7.1 Groundwater Vulnerability and Soil Classification

The site is not located on superficial deposits where an aquifer is present. A secondary aquifer is located 195m south of the site. These are deposits with Permeable layers capable of supporting water supplies at a local rather than strategic scale.



The underlying bedrock is classified as a secondary aquifer which has predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, horizons and weathering. The bedrock has a medium vulnerability.



## **7.2 Groundwater Abstraction Licences**

There are reportedly no current licensed groundwater abstractions within 1,000m of the site.

## **7.3 Licensed Discharges to Controlled Waters**

There are no licences in place within 500m of the site for discharges to controlled waters.

## **7.4 Pollutant Release to Surface Waters (Red List)**

There are no records of any licenses issued to sites at or within 500m of the site for a pollutant release to a surface water (Red List).

## **7.5 Pollutant Release to a Public Sewer**

There are no records of any pollutant releases to a public sewer within 500m of the site.

## **7.6 List 1 and List 2 Dangerous Substances**

There are no records of any discharges of substances as identified on Lists 1 and 2 of European Directive E 2006/11/EC and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015 within 500m of the site.

## **7.7 Pollution Incidents**

There have not been any recorded and substantiated pollution incidents recorded within 500m of the site.

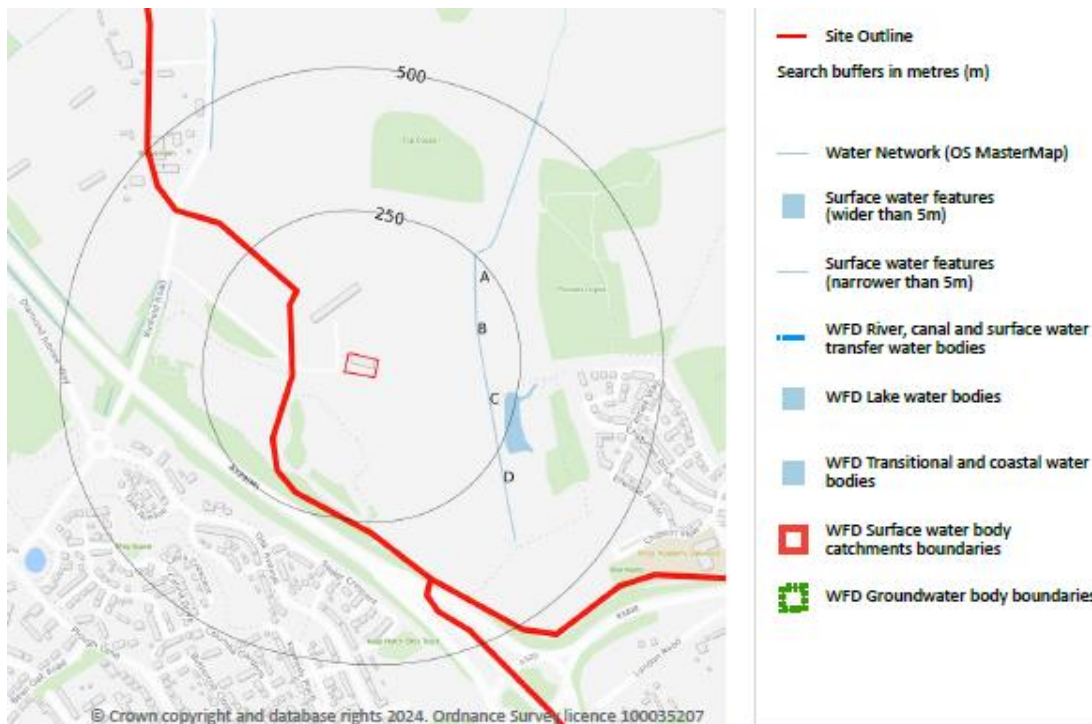
## **7.8 Pollution Inventory Substances**

There are no records of any pollution inventory (substances) including reporting on annual emission of certain regulated substances to air, controlled waters and land at or within 250m of the site.

## **7.9 Source Protection Zones**

The site is not located within a Source Protection Zone.

## 8.0 HYDROLOGY



### 8.1 Surface Waters

The nearest surface water feature, an inland river, is located 180m east.

### 8.2 Surface Water Abstraction Licenses

There are reportedly no active licensed surface water abstractions within 2000m of the site.

### 8.3 Potable Water Abstraction Licenses

There are reportedly no licensed current potable water abstractions recorded within 2,000m of the site.

### 8.4 Flooding

#### 8.4.1 Risk of Flooding from Rivers and Seas (RoFRaS)

The site is not at risk of flooding from Rivers or Sea.

#### 8.4.2 Historical Flood Events

There are no records of historical flood events in the vicinity of the subject site.

#### 8.4.3 River and Coastal Flooding (Flood Zones)

The Environment Agency Flood map (from rivers and the sea) shows that the site is not located within a Flood Zone 2 or 3.

#### 8.4.4 Surface Water Flooding

There is a negligible risk of flooding on site from surface water features.

#### 8.4.5 Groundwater Flooding

There is reported to be a negligible risk of groundwater flooding across the site.

#### **8.4.6 Flood Defences**

The site is not located in an area that benefits from flood defences, that are owned, managed or inspected by the Environment Agency.

#### **8.4.7 Areas Benefiting from Flood Defences**

The site is not located in an area 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.

#### **8.4.8 Flood Storage Areas**

The site is not located in an area that acts as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by a downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

## 9.0 WASTE

### 9.1 Landfill Sites



There are no Environment Agency records of active or recent landfill sites within 500m of the site.

There are no BGS records of any historical landfill site within 500m of the site.

There are no LA records of any historical landfill site within 500m of the site.

There are no Local Authority records of any historical waste sites within 500m of the site.

There are no Environment Agency records of any Licensed Waste Sites within 500m of the site.

There are nine records of waste exemptions within 500m of the site. The nearest being 461m east of the site relating to storage of waste materials.

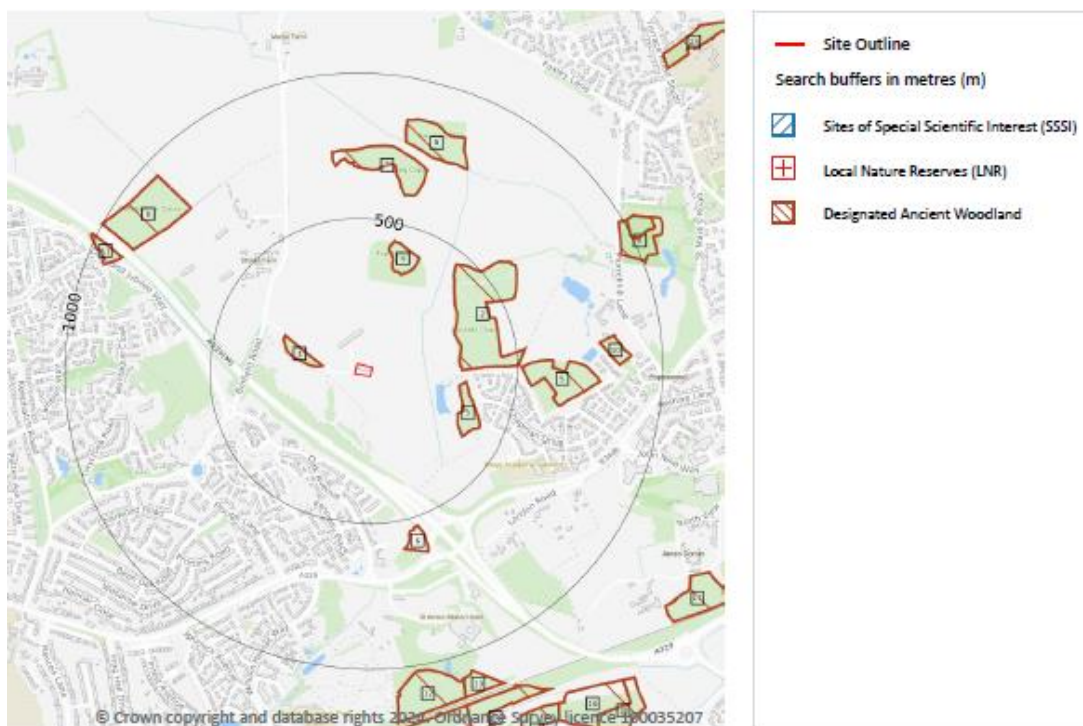
### 9.2 Pollution Inventory Waste Transfers

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. There are no records of such transfers within 250m of the site.

### 9.3 Pollution Inventory Radioactive Waste

There are no records of any pollution inventory (radioactive wastes) including reporting on annual releases of radioactive substances from a site within 500m of the site.

## 10.0 DESIGNATED ENVIRONMENTALLY SENSITIVE SITES



Wykery Copse is designated as a SSSI and is located 1853m SE of the site.

Farley Copse is designated as a Local Nature Reserve and is located 1421m east of the site.

There are 61 records of ancient woodland within 2,000m of the site. The nearest located 115m west.

## 11.0 VISUAL AND CULTURAL DESIGNATIONS

There are no Visual or Cultural Designations located within 500m of the site.

## 12.0 HABITAT DESIGNATIONS

There are no Habitat Designations located within 250m of the site.

## 13.0 PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

### 13.1 Introduction

The current contaminated land regime is explained in Part IIA of the Environmental Protection Act 1990 and was introduced on the 1<sup>st</sup> April 2000 in England. Also, this assessment has been completed taking into account the advice and guidance contained in the NPPF and particularly paragraphs 109 (fourth and fifth bullet points) and the new LCRM regulations which is the latest guidelines issued by Government Environment Agency Published on 08/10/2020. In general, the purpose of these aspects of the legislation is to achieve the identification of contaminated land and the remediation of contaminated land to ensure the such land poses no significant risk to human health and/or the environment.

Contaminated Land is defined as:

*‘any land which appear to the local authority in whose area it is situated, to be in such a condition, by reason or substances in, on, or under the land, that: significant harm is being caused or there is a significant possibility of such harm being caused; or pollution of controlled water is being or is likely to be caused.’*

For land to be classified as contaminated land a relevant Pollutant Linkage must be identified. A Pollutant Linkage will only be present where the Source-Pathway-Receptor factors are all present and where they are not all present, no risk assessment is possible.

| Statutory Definitions              |                                                                                                                                                                                                                                                                           |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contaminant Source (Hazard)</b> | A substance which is in, on or under the land and which has the potential to cause harm or cause pollution of controlled waters                                                                                                                                           |
| <b>Receptor (Target)</b>           | A living organism or group of organisms, an ecological system or property, controlled waters which are or could be polluted by a contaminant                                                                                                                              |
| <b>Pathway (Route)</b>             | One or more routes or means which either allows the contaminant to cause significant harm to that receptor, or that there is a significant possibility of such harm being caused to the receptor, or that pollution of controlled waters is being or likely to be caused. |

A Preliminary Environmental Risk Assessment involves assessing the likely probability and consequence of a Pollutant Linkage and determining a consequent level of risk.

The term ‘risk’ is widely used in different contexts and situation but a prescriptive definition is provided by the Guidelines for Environmental Risk Assessment and Management (DEFRA et al, 2000):

*Risk is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequence of the occurrence’.*

A hazard is defined as *‘a property or situation that in particular circumstance could lead to harm’.*

The risk category for a particular scenario can be assessed in terms of the consequences and probability of an occurrence which can be defined as follows:

## Classification of a Consequence

### Classification

Severe

### Definition

1 – short term (acute) risk to human health likely to result in significant harm

2 – short term risk to controlled waters

3 – catastrophic damage to buildings / structures

4 – short term risk to an ecosystem or organism within the particular ecosystem.

Medium

1 – chronic damage to human health (long term risk)

2 – pollution of a sensitive water resource

3 – a significant change in an ecosystem or organism within the ecosystem

Mild

1 – pollution of non-sensitive water resources

2 – significant damage to buildings / structures

Minor

1 – harm (not necessarily significant) which may result in financial loss;

2 – non permanent health effects to humans (easily prevented by PPE for example)

3 – easily repairable effects of structural (building damage).

## Classification of a Probability

### Classification

High

### Definition

1 – there is a complete pollution linkage and an event appears very likely to occur in the short term and is inevitable in the long term

2 – evidence of harm to the receptor

Medium

1 – there is a complete pollution linkage which means that it is probable that an event will occur

2 – the event is not inevitable but possible in the short term and likely in the long term

Low

1 – there is a complete pollution linkage and circumstance are possible under which an event could occur

2 – it is not certain that an event will occur in the long term, and it is less likely to occur in the short term

Unlikely

1 – there is a complete pollution linkage but circumstance are such that is improbable that an event would occur even in the long term.

The consequences of a risk and the probability of an event taking place can be assessed and the likely risk category can be determined as follows:

| Probability | Consequence |               |               |              |              |
|-------------|-------------|---------------|---------------|--------------|--------------|
|             |             | <i>Severe</i> | <i>Medium</i> | <i>Mild</i>  | <i>Minor</i> |
|             | High        | Very High     | High          | Medium       | Medium / Low |
|             | Medium      | High          | Medium        | Medium / Low | Low          |
|             | Low         | Medium        | Medium / Low  | Low          | Very Low     |
|             | Unlikely    | Medium / Low  | Low           | Very Low     | Very Low     |

**High Risk** – there is a high probability that severe harm could risk a receptor, or there is evidence that a receptor is being harmed. The risk is realised is likely to result in liability and/or significant harm, and urgent investigation or remediation will be required.

**Medium Risk** - it is probable that harm will arise to a receptor. However it is relatively unlikely that such harm would be severe, or if harm does occur then the harm is likely to be relatively mild. Investigation will be required to determine the liability, and some remedial works may be required in the long term.

**Low Risk** – it is possible that harm may arise to a receptor, but it is likely that the harm would be mild.

**Near Zero Risk** – There is a very low risk of harm to the receptor. In the event of harm being realised the harm is not likely to be severe.

### 13.2 Potential Sources

The current and historical use of the site has been carefully assessed. All potential risks have been determined and assessed as part of this study.

A number of Potential on-site, and off-site Areas of Concern (PAC) have been identified as follows:

- Onsite: Organic compounds associated with agricultural use (oils and fuels from machinery, silo);
- Onsite: Bacterial compounds associated with organic animal wastes;
- Onsite: Asbestos within building materials;
- Off site: Cuttings, 221m SW
- Off site: Ground Works, 320m SW

### 13.3 Potential Pathways

Exposure pathways link any contamination to the receptor. All or any of the following potential pathways may apply:

#### Future Site Users, Occasional Visitors and Neighbouring Residents including Children

##### *Oral Pathway (O-O)*

Indoor ingestion of dust (post construction)  
Outdoor ingestion of soil (post construction)  
Indoor/outdoor ingestion of Flora/Fauna

##### *Inhalation Pathway (O-I)*

Outdoor inhalation of fugitive dust  
Indoor inhalation of fugitive dust (post construction)  
Outdoor inhalation of soil vapour  
Indoor inhalation of soil vapour (post construction)

|                             |                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------|
| <i>Dermal Pathway (O-D)</i> | Outdoor exposure to soil through dermal contact<br>Indoor exposure to soil dust through dermal contact |
|-----------------------------|--------------------------------------------------------------------------------------------------------|

Flora (potential new on-site or off-site flora affected by potential contamination on the site, or migrating onto or from the site).

|                             |                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------|
| <i>Plant Uptake (FI-PU)</i> | General uptake of contaminants by plants growing in the vicinity of, or on, the site |
|-----------------------------|--------------------------------------------------------------------------------------|

Fauna (on-site or off-site affected by potential contamination on the site, or migrating from the site)

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| <i>Oral Pathway (Fa-OP)</i> | Consumption of contaminated Flora located on site |
|-----------------------------|---------------------------------------------------|

#### Water Resources

|                                         |                                                                                                                                                                                      |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Surface Water Mobilisation (SWM)</i> | Surface water features including brooks/streams to the west of the site with surface waters potentially migrating in these directions;<br>Also infiltration into the site from site. |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### *Groundwater Mobilisation (Leaching Potential)*

|              |                                                                                                                           |
|--------------|---------------------------------------------------------------------------------------------------------------------------|
| <i>(GWM)</i> | Percolation and mobilisation of contaminants within the soil into waters held locally within pore space beneath the site. |
|--------------|---------------------------------------------------------------------------------------------------------------------------|

### 13.4 Potential Receptors

The following potential receptors have been identified for the site:

|                          |                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------|
| Human Receptors (H)      | Site construction workers, children, male and female future residents.                            |
| Flora and Fauna (FL, FA) | None. Defined as the plants and/or animals of a particular region, habitat, or geological period; |
| Water Resources (SW, GW) | Bedrock Secondary Aquifer.                                                                        |
| Site Infrastructure (SI) | Existing and future foundations and drainage services                                             |
| Environmental            | SSSI, LNR.                                                                                        |

Under the existing residential arrangement at the site, the Critical Human Receptor for this site will be a **female child future resident**.

### 13.5 Qualitative Risk Assessment

A qualitative risk assessment has been undertaken to provide an initial assessment of the potential risks caused by contaminant sources identified during this assessment to potential future users of the site, building structures, and the aquatic environment. **The assessment has been made on the understanding that the site is used for long term residential use.** This is detailed in the table below:

**Table 4: Preliminary Risk Assessment – Desk Study**

| Hazard Identification                     |          |                                                                                          | Hazard Assessment                                 |               | Risk Estimation          |                        |                | Risk Evaluation                                                                                                                                                                                                                                 |
|-------------------------------------------|----------|------------------------------------------------------------------------------------------|---------------------------------------------------|---------------|--------------------------|------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sources                                   | Location | Potential Contaminants                                                                   | Pathway                                           | Receptor      | Magnitude of Consequence | Probability Occurrence | Risk Appraisal | Rationale                                                                                                                                                                                                                                       |
| Historical use of site:<br>Agricultural   | On site  | Organic compounds associated with agricultural use (oils and fuels from machinery, silo) | W-O, W-I, W-D, O-O, O-I, O-D, FLPU, FaOP SWM, GWM | H, SW, GW, SI | Minor                    | Medium                 | Low            | <ul style="list-style-type: none"> <li>- Low – no evidence from site observations of any oil or fuel spillage in internal or external areas;</li> <li>- <b>No further assessment required.</b></li> </ul>                                       |
| Historical use of site:<br>Agricultural   | On site  | Bacterial compounds associated with organic animal wastes;                               | W-O, W-I, W-D, O-O, O-I, O-D, FLPU, FaOP SWM, GWM | H, SW, GW, SI | Mild                     | Medium                 | Medium         | <ul style="list-style-type: none"> <li>- Medium – possibility of bacteria within shallow soils in external areas due to continued use by livestock;</li> <li>- <b>Further assessment required.</b></li> </ul>                                   |
| Historical use of site:<br>Agricultural   | On site  | Asbestos within building materials                                                       | W-O, W-I, W-D, O-O, O-I, O-D, FLPU, FaOP SWM, GWM | H, SW, GW, SI | Mild                     | Low                    | Low            | <ul style="list-style-type: none"> <li>- Low – No evidence of asbestos although possibility of asbestos within guttering or other building fabric</li> <li>- <b>Asbestos survey to be completed prior to building refurbishment.</b></li> </ul> |
| Cuttings and Groundworks 250m+ from site; | 221m SW  | Infilled materials                                                                       | W-O, W-I, W-D, O-O, O-I, O-D, FLPU, FaOP SWM, GWM | H, SW, GW, SI | Minor                    | Low                    | Very Low       | <ul style="list-style-type: none"> <li>- Features located at significant distance from site, no material impact;</li> <li>- <b>No further assessment required.</b></li> </ul>                                                                   |

The Risk Assessment shown above has shown that there are some viable source-pathway-receptor linkages from the Deskstudy and site walkover information relating to the possible presence of shallow soils being impacted by organic animal wastes near the building in external areas. Possible impacts of bacteria (e.g. ecoli etc).

Risks were generally identified as low to medium, and as such an intrusive assessment was recommended to provide confirmation that the soils at the site are free from impacts to shallow soils.

## **14.0 INTRUSIVE PHASE II SITE ASSESSMENT**

The aim of the investigation was to provide additional information on the shallow soils in external areas around the barn and determine if proposed garden areas are impacted by elevated contaminant or bacterial concentrations. The Deskstudy outlined in earlier sections of this report identified possible risks associated with organic animal waste materials close to the building in greenfield areas used by poultry and sheep.

The investigation was conducted on the 20<sup>th</sup> October 2024.

In order to assess ground conditions across the site a total of four hand-dug holes were excavated around the barn where livestock have grazed. Shallow holes were dug by manual methods to an approximate depth of 300mm.

The locations of the exploratory holes are shown in Figure 5.

### **14.1 METHODOLOGY**

#### **14.1.1 Health and Safety**

Prior to commencement of any site activity the supervising engineers undertook a site clearance check of any underground utility services. Discussion was had with the site owner to identify any other underground services.

Prior to any intrusive works taking place the supervising engineer undertook a scan of the ground to ensure that no electric cables were present.

#### **14.1.2 Excavations**

Each of the four holes were manually dug by hand (spade and pick) to achieve a depth of approximately 300mm. With the aim of investigating the shallow soils immediately below the natural grasses this depth was deemed sufficient. The site soils were removed slowly and carefully with grass and topsoil placed separately from the rest of the material recovered. Photographs were taken of the recovered strata (Appendix B).

#### **14.1.3 Controlled Waters Assessment**

It was noted from the findings of the Deskstudy and the on-site topographical gradients that pathways to nearby surface water features would be unlikely. There is no superficial aquifer at the site and no groundwater would be expected at the shallow depths sampled. Therefore no Controlled Waters Assessment was undertaken as part of this study.

#### **14.1.4 Ground Gas Assessment**

The initial site investigation was focussed on obtaining preliminary soil data to determine if any contaminant and/or bacterial concentrations are present. Should any waste materials be present then the need for a gas assessment would be reviewed.

## **14.2 FIELD OBSERVATIONS**

The encountered geology at shallow depths of 300mm consisted of grasses with roots, over a loamy brown fine/medium sandy topsoil with some gravel. No non-natural materials were recorded.

No perched groundwaters were observed in any of the shallow holes dug.

## **14.3 SAMPLE ANALYSIS**

Following inspection of the site soils and the noted natural formation, one sample was collected from each of the trial pits for analysis.

Disposable gloves were used during all sampling activities and replaced between locations. Soil samples were placed in special containers supplied by the laboratory which comprised of 1-litre plastic tubs for metals and inorganic analyses, 500ml glass jars, and 40ml glass vials for general organic analyses which were supplied by Derwentside Environmental Testing Services (DETS) located Consett, County Durham, England. Samples were stored in cool boxes with ice packs for transportation to the laboratory. DETS are accredited by the United Kingdom Accreditation Service (UKAS). Each soil sample container was labelled with the date, site reference, project code, and sample identification prior to dispatch to the laboratory, with appropriate chain of custody documentation.

Samples collected were analysed for the following parameters:

- Metals and other inorganics;
- Cyanide;
- pH;
- Organic matter;
- Phenol;
- Petroleum Hydrocarbons;
- Polycyclic Aromatic Hydrocarbons;
- Bacterial compounds

## **14.4 GROUNDWATER ANALYSIS**

No perched or resting groundwater was noted so no samples were collected for analysis.

## **14.5 RESULTS**

### **14.5.1 Soils**

The human health risk assessment has been undertaken using the guidance provided in the Environment Agency's publication CLR11, Model Procedures for the Management of Contaminated Land, published in September 2004. Human health assessment criteria used are based upon the proposed final land use of the site. In this case and to be conservative, 'Residential with homegrown produce' have been used.

Currently in the UK, no statutory limits for the presence of contaminants in soils or groundwater exist. Therefore, the results of the soil samples tested are compared to the following environmental quality standards:

#### ***Category 4 Screening Levels (C4SLs)***

Published in March 2014 by DEFRA, C4SLs were primarily produced to support the revised Statutory Guidance to support Part 2A of the Environmental Protection Act 1990, which was published in April 2012.

This Guidance introduced a new four-category system for classifying land under Part 2A for cases of a Significant Possibility of Significant Harm to human health, where Category 1 includes land where the level of risk is clearly unacceptable and Category 4 includes land where the level of risk posed is acceptably low.

With regards to using the C4SLs for planning purposes the DEFRA letter of 3rd September 2014 from Lord de Mauley established that they are also meant for use in planning situations, as does the DCLGs 'Planning Portal' document 2014.

#### ***Suitable 4 Use Levels (S4ULs)***

As well as limited number of C4SLs (and where C4SLs are not available), the set of S4ULs produced by Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH) in 2015 using the CLEA software, are used as a screening tool.

The CLEA software was released in October 2009 and is a deterministic exposure model with altered exposure data to the original model. The model allows the creation of a generic assessment criteria database with which to screen laboratory testing results. These generic assessment criteria are conservative and based upon common assumptions.

#### ***Detailed Quantitative Risk Assessment (DQRA)***

Should any results exceed the C4SLs or S4ULs, then a DQRA is undertaken to establish site specific assessment criteria. This final stage uses specific information regarding the contamination and its potential receptors and pathways. The CLEA software was updated to version 1.071 in November 2015 to enable both site specific C4SLs and S4ULs to be determined, which produces less conservative, more accurate, site specific soil assessment criteria (SACs).

#### **The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment**

Where the Environment Agency has not officially released toxicological data to enable assessment criteria to be developed, data has been used as derived from a well-respected research project undertaken jointly by the Chartered Institute of Environmental Health (CIEH) and Land Quality Management (LQM).

Since the initial implementation of Part2A in 2000 very little guidance had been released in the following few years to assist practitioners in applying the Act on a practical level. Across the industry a reliable, transparent, and consistent approach was sought which was slow to emerge. Through the use of the first trial CLEA Models a set of Soil Guidelines were introduced which were limited in number and total agreement could not be achieved with regards to toxicological accuracy. In 2004 the government introduced a task force to move the process forward so that more sites could be investigated appropriately under the Part2A regime. The original SGVs were embraced by practitioners and many more equivalent Generic Assessment Criteria (GAC) values were generated similarly by a whole host of consultancies of which some are judged to be inappropriate or of uncertain derivation.

In order to derive as an authoritative set of guideline number as possible the Chartered Institute of Environmental Health in partnership with Land Quality Management (LQM) sponsored a workshop in 2006 to derive a set of GACs for 31 contaminants. This led to the 1<sup>st</sup> Edition of the Report.

In the following three years this data became obsolete as the old 'probabilistic' model has been replaced with a fully deterministic CLEA model. Following this change the previous workshop was repeated and new GACs derived in a second edition using CLEA v1.04 in July 2009.

The 2<sup>nd</sup> Edition represents to many 'relevant, appropriate, authoritative, and scientifically-based' guideline criteria if used appropriately and the assumptions made in deriving this data applies to the site in which it is used against. Mr. Tim Everett, Director of Policy at CIEH in 2009 stated that "the new LQM/CIEH GAC for 82 substances will play a welcome role in the risk assessment process which is at the heart of the regulation of and contamination and necessary for public peace of mind".

In the absence of any other form of publicly released data it is viewed that the research project of CIEH/LQM and the GACs derived from the study can be used with the required degree of appropriateness. The assumptions behind the study have been reviewed and are judged to be representative of the site.

There is currently some uncertainty in the UK regarding the assessment of human health risks from lead in soils. Assessing the risks from lead in soil is currently hindered due to the withdrawal of the 'old' SGV and the absence of any appropriate 'new' guidance. How risks to health from lead should be assessed in the UK is currently being considered by the Environment Agency. The 'old' SGV for lead was based on a blood lead concentration. The SGV was calculated to ensure that uptake of lead from soil, taking into account sources of lead other than soil and dust, in the general population, will not result in a blood level concentration of above 10  $\mu\text{g dL}^{-1}$ . This applied regardless of the origins of lead whether natural or man-made. At this time the UK Government considered this a minimum standard of health protection for all individuals. For comparative purposes only and in the absence of any other form of authoritative data this value has been used in this assessment.

A copy of the Soil Analysis Results with comparison against both the CLEA and CIEH/LQM guidelines are provided in Appendix D with a copy of the laboratory certificates provided in Appendix E. A brief comparison of the data is provided below.

## Analysis of Results

### Metals

Samples were collected of the shallow soils at all four locations. Concentrations of metals were detected in each of the sampled analysed. In general concentrations were noted to be very low and consistent across the site and dataset. All concentrations were reports well below the respective guideline value for residential with plant uptake site use.

### Inorganics

It is noted that concentrations of inorganics are generally low and either at, or marginally above, the method detection level in each case. Concentrations were consistent across the data set. The observed material was sand in nature and so an expected organic matter content of 2.5 – 3.4% was to be expected.

No asbestos materials were confirmed in any of the samples submitted for analysis.

pH ranged from 7.6 – 7.8 across the site.

### Hydrocarbons (Polycyclic Aromatic Hydrocarbons, Total Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons)

Analysis of petroleum hydrocarbons was made across the C5 – C10 range where no concentrations above the method detection limit was recorded.

Concentrations of total Diesel Range Organics (C10-C24) were detected to a maximum concentration of 58mg/kg. No concentration was recorded in three of the samples. Concentrations of Lube Range Organics (C24-C40) were detected to a maximum concentration of 66mg/kg. No concentration was recorded in three of the samples.

As no made ground material was observed and in three of the four locations no hydrocarbons were detected this would represent an isolated outlier possibly caused by use of this particular piece of land by machinery in the past. Concentrations are low and without need for remedial actions.

Concentrations of PAHs were not detected above the laboratory method detection limit in three of the four samples collected. At TP2 total (16 USEPA) concentrations were recorded at a very low level of 22mg/kg.

The sample from TP2 (and not the other three) confirmed a positive detection of E. coli, Faecal coliforms, and Total coliforms.

#### **14.5.2 Groundwater**

Groundwater was not observed within the test holes.

#### **14.5.3 Ground gas**

No ground gas assessment was undertaken as part of this investigation.

The shallow soil investigation did not reveal any made ground, infilled materials, or organic material within the shallow made ground which could be expected to be a viable source of ground gas.

## 15.0 QUALITY ASSURANCE

The quality assurance/quality control (QA/QC) program was designed to ensure that the quality of the samples submitted for analyses are representative of the field conditions without interferences from other sources.

Sampling protocols included the use of uncontaminated sampling material and equipment and a minimum of handling. Disposable nitrile gloves were worn during all the sampling work and replaced between monitoring wells. Samples were placed in laboratory supplied 1-litre plastic tubs for metals and inorganic analyses, 2 x 500ml glass bottles for general organic analyses, and 40ml glass vials for VOCs. The samples were stored in cool boxes for transport to DETS Lt, located in Consett, England. The laboratory is accredited by the United Kingdom Accreditation Service (UKAS). Each sample container was labelled with the date, site reference, project code and sample identification prior to dispatch to the laboratory with appropriate chain of custody documentation. All samples were analysed within the holding time limits established by the laboratory.

## 16.0 PROPOSED REMEDIAL ACTIONS AND CONCLUSIONS

The Phase I Contamination Deskstudy report and intrusive Phase II Investigation has shown that there is a general low level of contamination at the site. There are no documented onsite or off-site potential contaminative sources which are likely to result in adverse impacts to the site. Site observations have revealed no evidence of made ground, nor any staining or other contamination sources of concern.

Due to the adjacent fields being used historically for the grazing of poultry and currently by sheep some testing of the shallow soils was undertaken. The aim being to test the proposed garden areas to ensure they are suitable for end use.

Testing of the four samples revealed that in three, no evidence of any contamination or bacterial compounds are present. However, in a third, a very low concentration of hydrocarbons and bacterial presence was noted. It is recognised that only a positive result for such compounds was in one of the four samples, indicating that there is no site-wide issue. It would not be possible to remove the single source material as it is difficult to identify in the field.

The risk from bacterial compounds can be considered 'residual' and akin to any other soil. It is known that bacteria can only thrive in the right conditions, but can lay dormant beneath the surface (post introduction) for around 5 to 10 months depending on the soil conditions. It is viewed that given the isolated nature of the bacteria, that active eradication methods (steam injection / material removal etc) are either impractical or not environmentally proportionate.

A more appropriate solution to remove any remaining legacy of bacteria is to firstly isolate as soon as possible the proposed garden areas to stop the continued application of sheep droppings to the proposed garden areas. The to treat soils across the garden areas with physical methods by first turned over to aerate the soil matrix and further expose it to sunlight. This will have the effect of destabilising the temperature and put the bacteria under

pressure. It is recommended that this process of turning the soils is done a minimum of two times. All site construction workers to wear standard PPE consisting of gloves and overalls during this exercise to restrict direct exposure.

Once complete then further retesting of the proposed garden areas will be done to demonstrate that the soils within the completed gardens are E.Coli free before final landscaping is completed.

## **17.0 CONCLUSIONS**

The combined Phase I and Phase II Assessment has shown that there is a general low risk of contamination at the site and no significant risk are present from contamination which may unduly affect future users of the site.

A potential risk from residual bacteria within the soils from use of the field by chickens and sheep has been identified and for which the above mitigation is proposed.

Reasonable skill and care have been exercised in preparation of this report in accordance with the technical requirements of the brief. Notwithstanding the efforts made by the professional team in undertaking this contamination assessment, it is possible that ground conditions other than that potentially indicated by this report may exist at the site. This assessment provides a baseline study of current environmental ground conditions at the site. The client should be made aware that this data applies only to those samples collected at the locations described in the report and on the dates mentioned. The report provides a good site coverage targeting known pathways of contamination to known receptors. Future operational activity on the site may result in changes to the soil, groundwater and ground gas condition at the site. The client should take note of the recommendations in the report.

The report is supplied subject to our standard terms and conditions and these should be read alongside the report.

## FIGURES

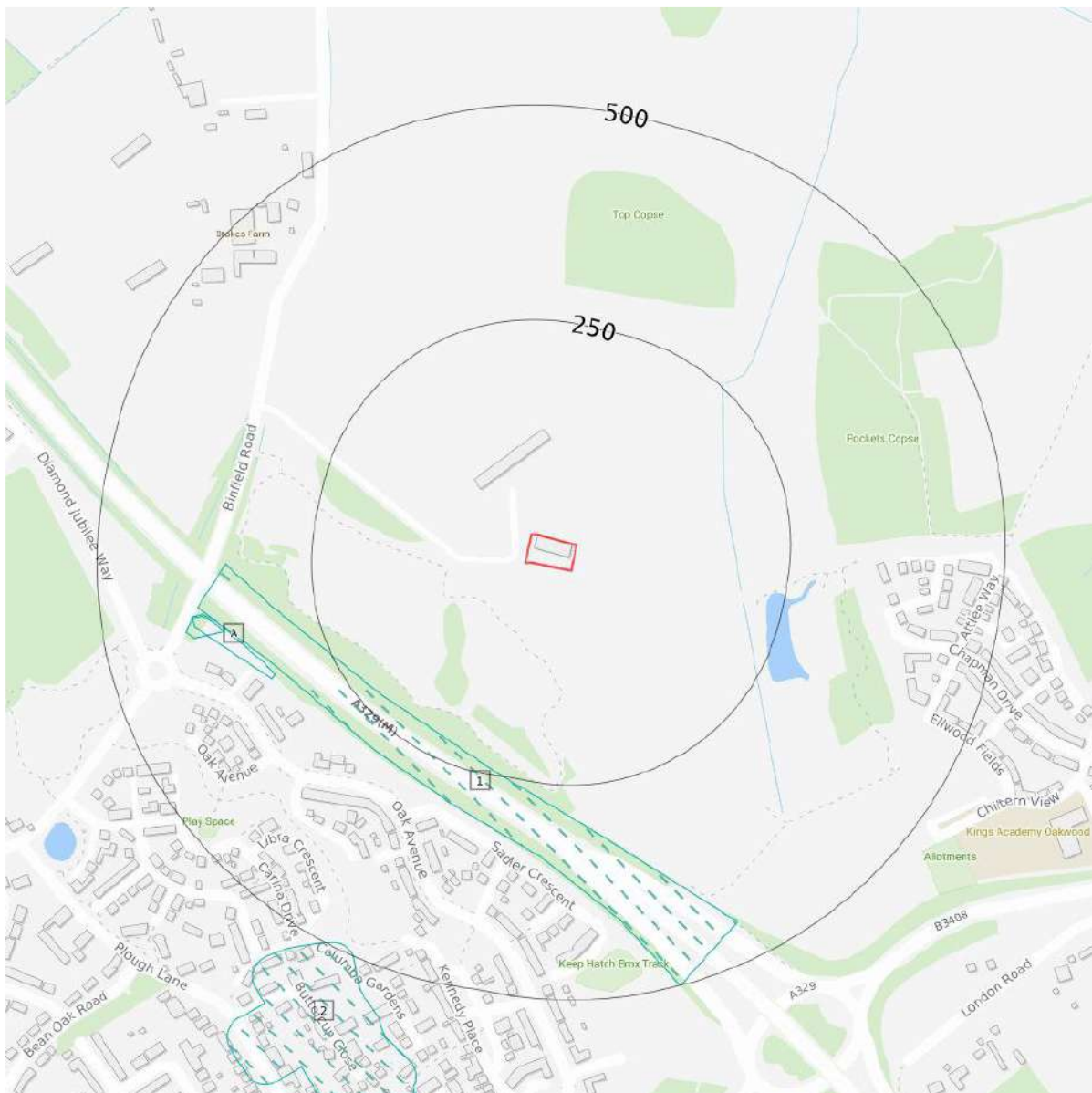


FIGURE 1

SITE LOCATION PLAN  
SMALL SCALE

BARN AT STOKES FARM  
BINFIELD ROAD  
BINFIELD  
WOKINGHAM  
RG40 5PR

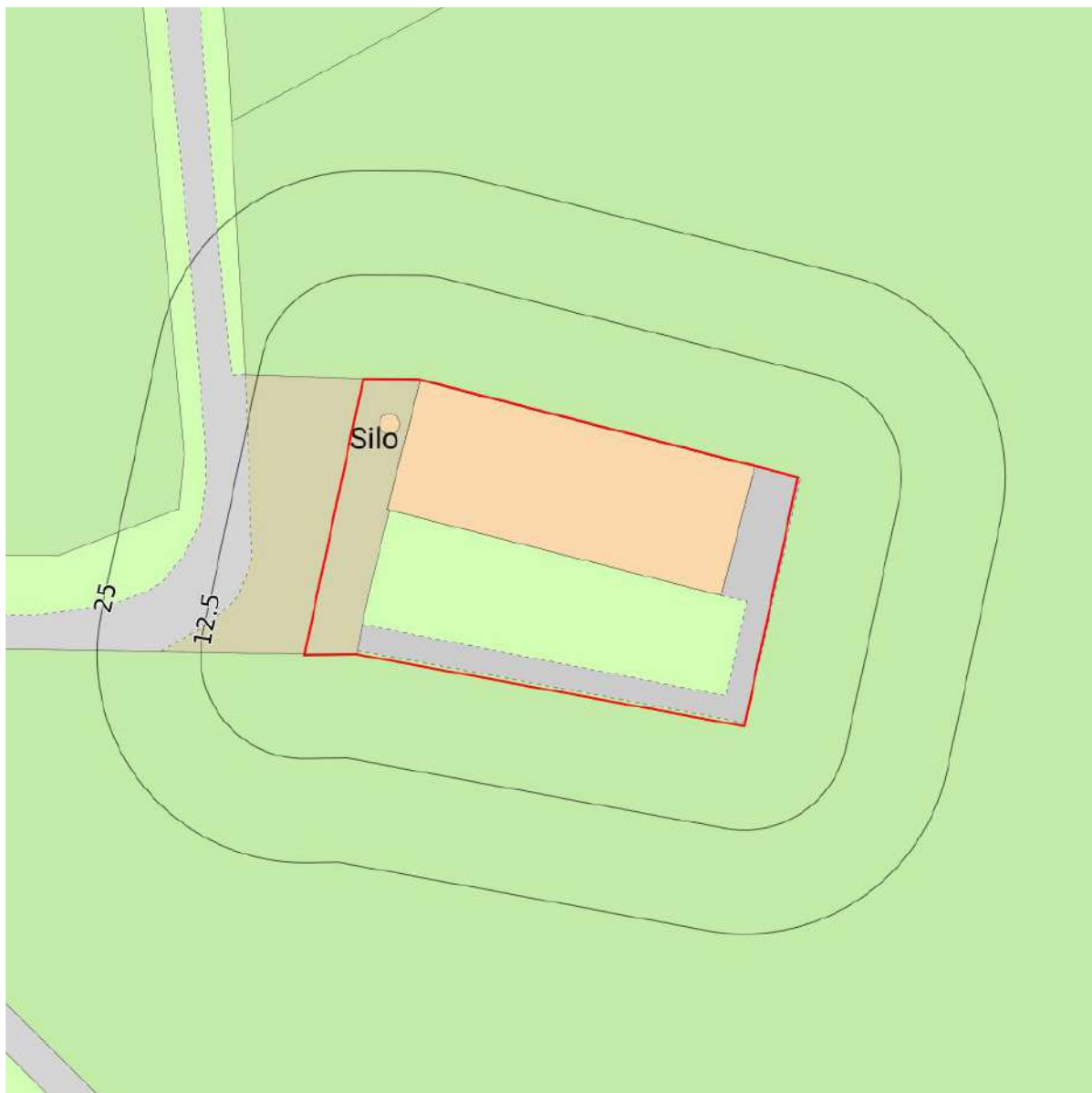


FIGURE 2

SITE LOCATION PLAN – LARGE SCALE

BARN AT STOKES FARM  
BINFIELD ROAD  
BINFIELD  
WOKINGHAM  
RG40 5PR



FIGURE 3

SITE AERIAL PHOTOGRAPH (2022)

BARN AT STOKES FARM  
BINFIELD ROAD  
BINFIELD  
WOKINGHAM  
RG40 5PR

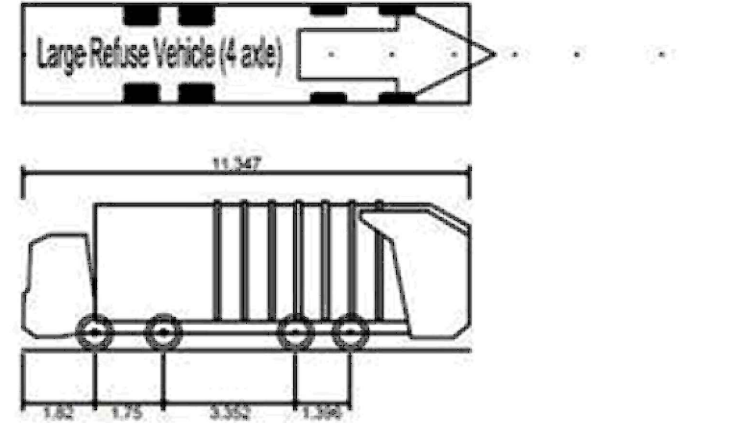
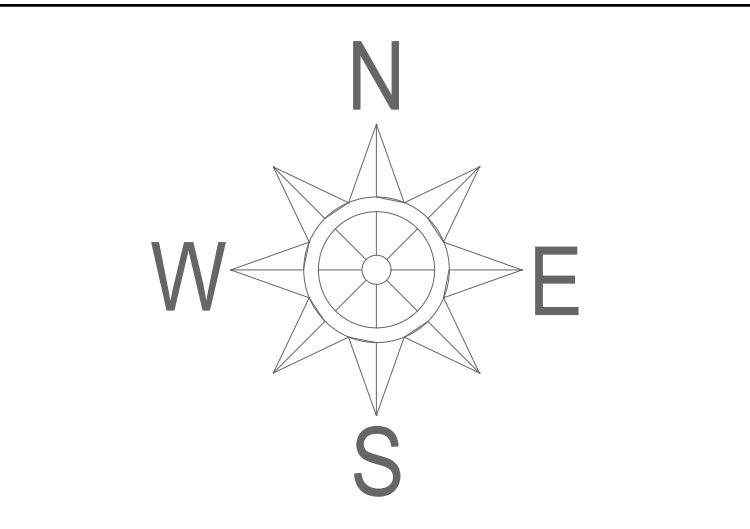
FIGURE 4

PROPOSED SITE LAYOUT PLAN

BARN AT STOKES FARM  
BINFIELD ROAD  
BINFIELD  
WOKINGHAM  
RG40 5PR



- Notes:
- 1) ALL DIMENSIONS, LEVELS AND CLEARANCES TO BE CHECKED ON SITE PRIOR TO WORKS COMMENCING
  - 2) THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER PROJECT RELATED DRAWINGS, SPECIFICATIONS AND DOCUMENTS
  - 3) ANY DISCREPANCY BETWEEN THIS DRAWING, OTHER DRAWINGS FORMING PART OF THIS CONTRACT, OR THE SPECIFICATION/BILLS OF QUANTITIES MUST BE CLARIFIED BEFORE COMMENCEMENT OF ANY WORK OR ORDERING OF ANY MATERIALS
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|                             |         |
|-----------------------------|---------|
| Overall Length              | 11.347m |
| Overall Width               | 2.500m  |
| Overall Body Height         | 3.751m  |
| Min Body Ground Clearance   | 0.304m  |
| Track Width                 | 2.500m  |
| Lock to Lock Time           | 6.00s   |
| Wall to Wall Turning Radius | 11.330m |

|                  |              |     |       |
|------------------|--------------|-----|-------|
| REV:             | DESCRIPTION: | BY: | DATE: |
| STATUS: Planning |              |     |       |

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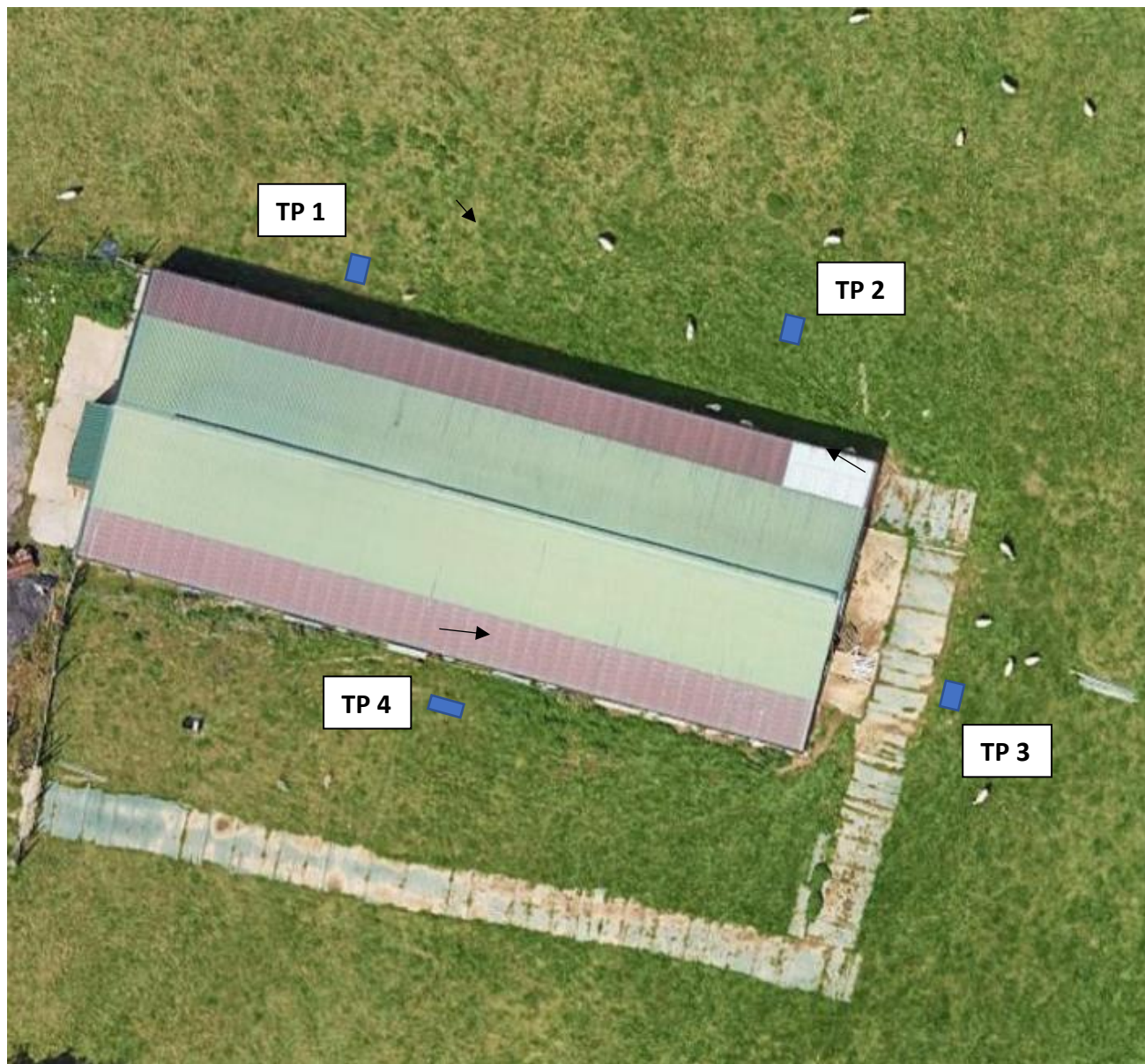
|         |                                                     |
|---------|-----------------------------------------------------|
| SITE:   | Stokes farm<br>Binfield Road, Wokingham<br>RG40 5PR |
| CLIENT: | Mr & Mrs Baker                                      |

|                                 |                       |                |                |
|---------------------------------|-----------------------|----------------|----------------|
| TITLE:<br>Proposed<br>Site Plan |                       |                |                |
| SCALE AT A1:<br>1:200           | DATE:<br>10/24        | DRAWN:<br>JN   | CHECKED:<br>CP |
| PROJECT:<br>FSFW6               | DRAWING NO:<br>PL_101 | REVISION:<br>B |                |

FIGURE 5

SAMPLING LOCATION PLAN

BARN AT STOKES FARM  
BINFIELD ROAD  
BINFIELD  
WOKINGHAM  
RG40 5PR



## APPENDICES

## APPENDIX A

### SITE PHOTOGRAPHS



Photograph 1: A view of the access track leading from Binfield Road towards the barn.



Photograph 2: A view of the former chicken shed



Photograph 3: A view of the graveled surface immediately in front of the former chicken shed. This area closely inspected and no evidence of staining can be seen.



Photograph 4: A view of stockpiled road chippings to the front of the barn

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Photograph 5: A view of concrete hardstanding to the front of the barn



Photograph 6: A view showing the northern elevation of the barn including outside grazing space.



Photograph 7: A view showing the barn as taken from north to south.



Photograph 8: A view showing the northern elevation of the barn.

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Photograph 9: A view showing concrete strip and plastic matting located outside of the main doorways.



Photograph 10: A view showing the eastern elevation.  
Note external chicken / sheep grazing land



Photograph 11: A further view showing the eastern elevation of the building.



Photograph 12: Internal concrete surfacing near the barn entrance.



Photograph 13: Painted concrete surfacing noted across the front of the barn.



Photograph 14: Internal view of the former chicken shed



Photograph 15: Further internal view across the barn.  
Note good quality concrete located throughout.



Photograph 16: Internal roofing detail



Photograph 17: Extended side section to the barn.  
Note extension of concrete slab across entire area.



Photograph 18: Internal area of the northern section of the barn.



Photograph 19: Hand digging to obtain a sample for testing outside one of the chicken doorways.



Photograph 20: Sampling to the rear of the building.



Photograph 21: Sampling along the eastern elevation of the building.

## APPENDIX B

### DATA REPORT



CHICKEN SHED, STOKES FARM, BINFIELD ROAD, BINFIELD, WOKINGHAM, RG40 5PR

## Order Details

**Date:** 17/10/2024  
**Your ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Our Ref:** GS-Y6F-SPV-3TG-AHV

## Site Details

**Location:** 483318 169499  
**Area:** 0.17 ha  
**Authority:** [Wokingham Borough Council](#) ↗



**Summary of findings**

[p. 2](#) >

**Aerial image**

[p. 9](#) >

**OS MasterMap site plan**

[p.14](#) >

[Insight User Guide](#) ↗

Contact us with any questions at:

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

01273 257 755

## Summary of findings

| Page                    | Section                  | <a href="#">Past land use &gt;</a>                   | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|-------------------------|--------------------------|------------------------------------------------------|---------|-------|---------|----------|-----------|
| <a href="#">15 &gt;</a> | <a href="#">1.1 &gt;</a> | <a href="#">Historical industrial land uses &gt;</a> | 0       | 0     | 1       | 3        | -         |
| 16                      | 1.2                      | Historical tanks                                     | 0       | 0     | 0       | 0        | -         |
| 16                      | 1.3                      | Historical energy features                           | 0       | 0     | 0       | 0        | -         |
| 16                      | 1.4                      | Historical petrol stations                           | 0       | 0     | 0       | 0        | -         |
| 17                      | 1.5                      | Historical garages                                   | 0       | 0     | 0       | 0        | -         |
| 17                      | 1.6                      | Historical military land                             | 0       | 0     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Past land use - un-grouped &gt;</a>      | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">18 &gt;</a> | <a href="#">2.1 &gt;</a> | <a href="#">Historical industrial land uses &gt;</a> | 0       | 0     | 2       | 3        | -         |
| 19                      | 2.2                      | Historical tanks                                     | 0       | 0     | 0       | 0        | -         |
| 19                      | 2.3                      | Historical energy features                           | 0       | 0     | 0       | 0        | -         |
| 19                      | 2.4                      | Historical petrol stations                           | 0       | 0     | 0       | 0        | -         |
| 19                      | 2.5                      | Historical garages                                   | 0       | 0     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Waste and landfill &gt;</a>              | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 20                      | 3.1                      | Active or recent landfill                            | 0       | 0     | 0       | 0        | -         |
| 20                      | 3.2                      | Historical landfill (BGS records)                    | 0       | 0     | 0       | 0        | -         |
| 21                      | 3.3                      | Historical landfill (LA/mapping records)             | 0       | 0     | 0       | 0        | -         |
| 21                      | 3.4                      | Historical landfill (EA/NRW records)                 | 0       | 0     | 0       | 0        | -         |
| 21                      | 3.5                      | Historical waste sites                               | 0       | 0     | 0       | 0        | -         |
| 21                      | 3.6                      | Licensed waste sites                                 | 0       | 0     | 0       | 0        | -         |
| <a href="#">21 &gt;</a> | <a href="#">3.7 &gt;</a> | <a href="#">Waste exemptions &gt;</a>                | 0       | 0     | 0       | 9        | -         |
| Page                    | Section                  | <a href="#">Current industrial land use &gt;</a>     | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">23 &gt;</a> | <a href="#">4.1 &gt;</a> | <a href="#">Recent industrial land uses &gt;</a>     | 1       | 0     | 0       | -        | -         |
| 24                      | 4.2                      | Current or recent petrol stations                    | 0       | 0     | 0       | 0        | -         |
| 24                      | 4.3                      | Electricity cables                                   | 0       | 0     | 0       | 0        | -         |
| 24                      | 4.4                      | Gas pipelines                                        | 0       | 0     | 0       | 0        | -         |
| 24                      | 4.5                      | Sites determined as Contaminated Land                | 0       | 0     | 0       | 0        | -         |



| 24                      | 4.6                      | Control of Major Accident Hazards (COMAH)         | 0                        | 0     | 0       | 0        | -         |
|-------------------------|--------------------------|---------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 25                      | 4.7                      | Regulated explosive sites                         | 0                        | 0     | 0       | 0        | -         |
| 25                      | 4.8                      | Hazardous substance storage/usage                 | 0                        | 0     | 0       | 0        | -         |
| 25                      | 4.9                      | Historical licensed industrial activities (IPC)   | 0                        | 0     | 0       | 0        | -         |
| 25                      | 4.10                     | Licensed industrial activities (Part A(1))        | 0                        | 0     | 0       | 0        | -         |
| 25                      | 4.11                     | Licensed pollutant release (Part A(2)/B)          | 0                        | 0     | 0       | 0        | -         |
| 26                      | 4.12                     | Radioactive Substance Authorisations              | 0                        | 0     | 0       | 0        | -         |
| 26                      | 4.13                     | Licensed Discharges to controlled waters          | 0                        | 0     | 0       | 0        | -         |
| 26                      | 4.14                     | Pollutant release to surface waters (Red List)    | 0                        | 0     | 0       | 0        | -         |
| 26                      | 4.15                     | Pollutant release to public sewer                 | 0                        | 0     | 0       | 0        | -         |
| 26                      | 4.16                     | List 1 Dangerous Substances                       | 0                        | 0     | 0       | 0        | -         |
| 27                      | 4.17                     | List 2 Dangerous Substances                       | 0                        | 0     | 0       | 0        | -         |
| 27                      | 4.18                     | Pollution Incidents (EA/NRW)                      | 0                        | 0     | 0       | 0        | -         |
| 27                      | 4.19                     | Pollution inventory substances                    | 0                        | 0     | 0       | 0        | -         |
| 27                      | 4.20                     | Pollution inventory waste transfers               | 0                        | 0     | 0       | 0        | -         |
| 27                      | 4.21                     | Pollution inventory radioactive waste             | 0                        | 0     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Hydrogeology &gt;</a>                 | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">28 &gt;</a> | <a href="#">5.1 &gt;</a> | <a href="#">Superficial aquifer &gt;</a>          | Identified (within 500m) |       |         |          |           |
| <a href="#">30 &gt;</a> | <a href="#">5.2 &gt;</a> | <a href="#">Bedrock aquifer &gt;</a>              | Identified (within 500m) |       |         |          |           |
| <a href="#">32 &gt;</a> | <a href="#">5.3 &gt;</a> | <a href="#">Groundwater vulnerability &gt;</a>    | Identified (within 50m)  |       |         |          |           |
| 33                      | 5.4                      | Groundwater vulnerability- soluble rock risk      | None (within 0m)         |       |         |          |           |
| 33                      | 5.5                      | Groundwater vulnerability- local information      | None (within 0m)         |       |         |          |           |
| 34                      | 5.6                      | Groundwater abstractions                          | 0                        | 0     | 0       | 0        | 0         |
| 34                      | 5.7                      | Surface water abstractions                        | 0                        | 0     | 0       | 0        | 0         |
| 34                      | 5.8                      | Potable abstractions                              | 0                        | 0     | 0       | 0        | 0         |
| 34                      | 5.9                      | Source Protection Zones                           | 0                        | 0     | 0       | 0        | -         |
| 35                      | 5.10                     | Source Protection Zones (confined aquifer)        | 0                        | 0     | 0       | 0        | -         |
| Page                    | Section                  | <a href="#">Hydrology &gt;</a>                    | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">36 &gt;</a> | <a href="#">6.1 &gt;</a> | <a href="#">Water Network (OS MasterMap) &gt;</a> | 0                        | 0     | 5       | -        | -         |



| <a href="#">37 &gt;</a> | <a href="#">6.2 &gt;</a>  | <a href="#">Surface water features &gt;</a>                      | 0                       | 0     | 3       | -        | -         |
|-------------------------|---------------------------|------------------------------------------------------------------|-------------------------|-------|---------|----------|-----------|
| <a href="#">37 &gt;</a> | <a href="#">6.3 &gt;</a>  | <a href="#">WFD Surface water body catchments &gt;</a>           | 1                       | -     | -       | -        | -         |
| <a href="#">38 &gt;</a> | <a href="#">6.4 &gt;</a>  | <a href="#">WFD Surface water bodies &gt;</a>                    | 0                       | 0     | 0       | -        | -         |
| 38                      | 6.5                       | WFD Groundwater bodies                                           | 0                       | -     | -       | -        | -         |
| Page                    | Section                   | River and coastal flooding                                       | On site                 | 0-50m | 50-250m | 250-500m | 500-2000m |
| 39                      | 7.1                       | Risk of flooding from rivers and the sea                         | None (within 50m)       |       |         |          |           |
| 39                      | 7.2                       | Historical Flood Events                                          | 0                       | 0     | 0       | -        | -         |
| 39                      | 7.3                       | Flood Defences                                                   | 0                       | 0     | 0       | -        | -         |
| 40                      | 7.4                       | Areas Benefiting from Flood Defences                             | 0                       | 0     | 0       | -        | -         |
| 40                      | 7.5                       | Flood Storage Areas                                              | 0                       | 0     | 0       | -        | -         |
| 41                      | 7.6                       | Flood Zone 2                                                     | None (within 50m)       |       |         |          |           |
| 41                      | 7.7                       | Flood Zone 3                                                     | None (within 50m)       |       |         |          |           |
| Page                    | Section                   | Surface water flooding                                           |                         |       |         |          |           |
| 42                      | 8.1                       | Surface water flooding                                           | Negligible (within 50m) |       |         |          |           |
| Page                    | Section                   | Groundwater flooding >                                           |                         |       |         |          |           |
| <a href="#">43 &gt;</a> | <a href="#">9.1 &gt;</a>  | <a href="#">Groundwater flooding &gt;</a>                        | Negligible (within 50m) |       |         |          |           |
| Page                    | Section                   | Environmental designations >                                     | On site                 | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">44 &gt;</a> | <a href="#">10.1 &gt;</a> | <a href="#">Sites of Special Scientific Interest (SSSI) &gt;</a> | 0                       | 0     | 0       | 0        | 1         |
| 45                      | 10.2                      | Conserved wetland sites (Ramsar sites)                           | 0                       | 0     | 0       | 0        | 0         |
| 45                      | 10.3                      | Special Areas of Conservation (SAC)                              | 0                       | 0     | 0       | 0        | 0         |
| 45                      | 10.4                      | Special Protection Areas (SPA)                                   | 0                       | 0     | 0       | 0        | 0         |
| 45                      | 10.5                      | National Nature Reserves (NNR)                                   | 0                       | 0     | 0       | 0        | 0         |
| <a href="#">46 &gt;</a> | <a href="#">10.6 &gt;</a> | <a href="#">Local Nature Reserves (LNR) &gt;</a>                 | 0                       | 0     | 0       | 0        | 1         |
| <a href="#">46 &gt;</a> | <a href="#">10.7 &gt;</a> | <a href="#">Designated Ancient Woodland &gt;</a>                 | 0                       | 0     | 1       | 3        | 57        |
| 48                      | 10.8                      | Biosphere Reserves                                               | 0                       | 0     | 0       | 0        | 0         |
| 49                      | 10.9                      | Forest Parks                                                     | 0                       | 0     | 0       | 0        | 0         |
| 49                      | 10.10                     | Marine Conservation Zones                                        | 0                       | 0     | 0       | 0        | 0         |
| 49                      | 10.11                     | Green Belt                                                       | 0                       | 0     | 0       | 0        | 0         |
| 49                      | 10.12                     | Proposed Ramsar sites                                            | 0                       | 0     | 0       | 0        | 0         |



| 49                   | 10.13                   | Possible Special Areas of Conservation (pSAC)      | 0                        | 0     | 0       | 0        | 0         |
|----------------------|-------------------------|----------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 50                   | 10.14                   | Potential Special Protection Areas (pSPA)          | 0                        | 0     | 0       | 0        | 0         |
| 50                   | 10.15                   | Nitrate Sensitive Areas                            | 0                        | 0     | 0       | 0        | 0         |
| <a href="#">50</a> > | <a href="#">10.16</a> > | <a href="#">Nitrate Vulnerable Zones</a> >         | 0                        | 0     | 1       | 0        | 1         |
| <a href="#">51</a> > | <a href="#">10.17</a> > | <a href="#">SSSI Impact Risk Zones</a> >           | 1                        | -     | -       | -        | -         |
| <a href="#">52</a> > | <a href="#">10.18</a> > | <a href="#">SSSI Units</a> >                       | 0                        | 0     | 0       | 0        | 1         |
| Page                 | Section                 | Visual and cultural designations                   | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 53                   | 11.1                    | World Heritage Sites                               | 0                        | 0     | 0       | -        | -         |
| 53                   | 11.2                    | Area of Outstanding Natural Beauty                 | 0                        | 0     | 0       | -        | -         |
| 53                   | 11.3                    | National Parks                                     | 0                        | 0     | 0       | -        | -         |
| 53                   | 11.4                    | Listed Buildings                                   | 0                        | 0     | 0       | -        | -         |
| 54                   | 11.5                    | Conservation Areas                                 | 0                        | 0     | 0       | -        | -         |
| 54                   | 11.6                    | Scheduled Ancient Monuments                        | 0                        | 0     | 0       | -        | -         |
| 54                   | 11.7                    | Registered Parks and Gardens                       | 0                        | 0     | 0       | -        | -         |
| Page                 | Section                 | <a href="#">Agricultural designations</a> >        | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">55</a> > | <a href="#">12.1</a> >  | <a href="#">Agricultural Land Classification</a> > | Grade 3b (within 250m)   |       |         |          |           |
| 56                   | 12.2                    | Open Access Land                                   | 0                        | 0     | 0       | -        | -         |
| 56                   | 12.3                    | Tree Felling Licences                              | 0                        | 0     | 0       | -        | -         |
| 56                   | 12.4                    | Environmental Stewardship Schemes                  | 0                        | 0     | 0       | -        | -         |
| 57                   | 12.5                    | Countryside Stewardship Schemes                    | 0                        | 0     | 0       | -        | -         |
| Page                 | Section                 | Habitat designations                               | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 58                   | 13.1                    | Priority Habitat Inventory                         | 0                        | 0     | 0       | -        | -         |
| 58                   | 13.2                    | Habitat Networks                                   | 0                        | 0     | 0       | -        | -         |
| 58                   | 13.3                    | Open Mosaic Habitat                                | 0                        | 0     | 0       | -        | -         |
| 58                   | 13.4                    | Limestone Pavement Orders                          | 0                        | 0     | 0       | -        | -         |
| Page                 | Section                 | <a href="#">Geology 1:10,000 scale</a> >           | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">59</a> > | <a href="#">14.1</a> >  | <a href="#">10k Availability</a> >                 | Identified (within 500m) |       |         |          |           |
| <a href="#">60</a> > | <a href="#">14.2</a> >  | <a href="#">Artificial and made ground (10k)</a> > | 0                        | 0     | 1       | 4        | -         |
| <a href="#">62</a> > | <a href="#">14.3</a> >  | <a href="#">Superficial geology (10k)</a> >        | 0                        | 0     | 1       | 2        | -         |

| 63                      | 14.4                      | Landslip (10k)                                           | 0                        | 0     | 0       | 0        | -         |
|-------------------------|---------------------------|----------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| <a href="#">64 &gt;</a> | <a href="#">14.5 &gt;</a> | <a href="#">Bedrock geology (10k) &gt;</a>               | 2                        | 1     | 0       | 2        | -         |
| 65                      | 14.6                      | Bedrock faults and other linear features (10k)           | 0                        | 0     | 0       | 0        | -         |
| Page                    | Section                   | <a href="#">Geology 1:50,000 scale &gt;</a>              | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <a href="#">66 &gt;</a> | <a href="#">15.1 &gt;</a> | <a href="#">50k Availability &gt;</a>                    | Identified (within 500m) |       |         |          |           |
| <a href="#">67 &gt;</a> | <a href="#">15.2 &gt;</a> | <a href="#">Artificial and made ground (50k) &gt;</a>    | 0                        | 0     | 0       | 1        | -         |
| 68                      | 15.3                      | Artificial ground permeability (50k)                     | 0                        | 0     | -       | -        | -         |
| <a href="#">69 &gt;</a> | <a href="#">15.4 &gt;</a> | <a href="#">Superficial geology (50k) &gt;</a>           | 0                        | 0     | 1       | 2        | -         |
| 70                      | 15.5                      | Superficial permeability (50k)                           | None (within 50m)        |       |         |          |           |
| 70                      | 15.6                      | Landslip (50k)                                           | 0                        | 0     | 0       | 0        | -         |
| 70                      | 15.7                      | Landslip permeability (50k)                              | None (within 50m)        |       |         |          |           |
| <a href="#">71 &gt;</a> | <a href="#">15.8 &gt;</a> | <a href="#">Bedrock geology (50k) &gt;</a>               | 2                        | 1     | 0       | 1        | -         |
| <a href="#">72 &gt;</a> | <a href="#">15.9 &gt;</a> | <a href="#">Bedrock permeability (50k) &gt;</a>          | Identified (within 50m)  |       |         |          |           |
| 72                      | 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 |
| 73                      | 16.1                      | BGS Boreholes                                            | 0                        | 0     | 0       | -        | -         |
| Page                    | Section                   | <a href="#">Natural ground subsidence &gt;</a>           |                          |       |         |          |           |
| <a href="#">74 &gt;</a> | <a href="#">17.1 &gt;</a> | <a href="#">Shrink swell clays &gt;</a>                  | Low (within 50m)         |       |         |          |           |
| <a href="#">75 &gt;</a> | <a href="#">17.2 &gt;</a> | <a href="#">Running sands &gt;</a>                       | Low (within 50m)         |       |         |          |           |
| <a href="#">77 &gt;</a> | <a href="#">17.3 &gt;</a> | <a href="#">Compressible deposits &gt;</a>               | Negligible (within 50m)  |       |         |          |           |
| <a href="#">78 &gt;</a> | <a href="#">17.4 &gt;</a> | <a href="#">Collapsible deposits &gt;</a>                | Very low (within 50m)    |       |         |          |           |
| <a href="#">79 &gt;</a> | <a href="#">17.5 &gt;</a> | <a href="#">Landslides &gt;</a>                          | Very low (within 50m)    |       |         |          |           |
| <a href="#">80 &gt;</a> | <a href="#">17.6 &gt;</a> | <a href="#">Ground dissolution of soluble rocks &gt;</a> | Negligible (within 50m)  |       |         |          |           |
| Page                    | Section                   | <a href="#">Mining and ground workings &gt;</a>          | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 82                      | 18.1                      | BritPits                                                 | 0                        | 0     | 0       | 0        | -         |
| <a href="#">83 &gt;</a> | <a href="#">18.2 &gt;</a> | <a href="#">Surface ground workings &gt;</a>             | 0                        | 0     | 2       | -        | -         |
| 83                      | 18.3                      | Underground workings                                     | 0                        | 0     | 0       | 0        | 0         |
| 83                      | 18.4                      | Underground mining extents                               | 0                        | 0     | 0       | 0        | -         |
| <a href="#">83 &gt;</a> | <a href="#">18.5 &gt;</a> | <a href="#">Historical Mineral Planning Areas &gt;</a>   | 0                        | 0     | 0       | 2        | -         |



| 84             | 18.6             | Non-coal mining                                            | 0                        | 0     | 0       | 0        | 0         |
|----------------|------------------|------------------------------------------------------------|--------------------------|-------|---------|----------|-----------|
| 84             | 18.7             | JPB mining areas                                           | None (within 0m)         |       |         |          |           |
| 84             | 18.8             | The Coal Authority non-coal mining                         | 0                        | 0     | 0       | 0        | -         |
| <b>85 &gt;</b> | <b>18.9 &gt;</b> | <b><u>Researched mining</u> &gt;</b>                       | 0                        | 0     | 0       | 1        | -         |
| 85             | 18.10            | Mining record office plans                                 | 0                        | 0     | 0       | 0        | -         |
| 85             | 18.11            | BGS mine plans                                             | 0                        | 0     | 0       | 0        | -         |
| 85             | 18.12            | Coal mining                                                | None (within 0m)         |       |         |          |           |
| 86             | 18.13            | Brine areas                                                | None (within 0m)         |       |         |          |           |
| 86             | 18.14            | Gypsum areas                                               | None (within 0m)         |       |         |          |           |
| 86             | 18.15            | Tin mining                                                 | None (within 0m)         |       |         |          |           |
| 86             | 18.16            | Clay mining                                                | None (within 0m)         |       |         |          |           |
| Page           | Section          | Ground cavities and sinkholes                              | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| 87             | 19.1             | Natural cavities                                           | 0                        | 0     | 0       | 0        | -         |
| 87             | 19.2             | Mining cavities                                            | 0                        | 0     | 0       | 0        | 0         |
| 87             | 19.3             | Reported recent incidents                                  | 0                        | 0     | 0       | 0        | -         |
| 87             | 19.4             | Historical incidents                                       | 0                        | 0     | 0       | 0        | -         |
| 88             | 19.5             | National karst database                                    | 0                        | 0     | 0       | 0        | -         |
| Page           | Section          | <u>Radon</u> >                                             |                          |       |         |          |           |
| <b>89 &gt;</b> | <b>20.1 &gt;</b> | <b><u>Radon</u> &gt;</b>                                   | Less than 1% (within 0m) |       |         |          |           |
| Page           | Section          | <u>Soil chemistry</u> >                                    | On site                  | 0-50m | 50-250m | 250-500m | 500-2000m |
| <b>91 &gt;</b> | <b>21.1 &gt;</b> | <b><u>BGS Estimated Background Soil Chemistry</u> &gt;</b> | 3                        | 2     | -       | -        | -         |
| 91             | 21.2             | BGS Estimated Urban Soil Chemistry                         | 0                        | 0     | -       | -        | -         |
| 92             | 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 |
| 93             | 22.1             | Underground railways (London)                              | 0                        | 0     | 0       | -        | -         |
| 93             | 22.2             | Underground railways (Non-London)                          | 0                        | 0     | 0       | -        | -         |
| 93             | 22.3             | Railway tunnels                                            | 0                        | 0     | 0       | -        | -         |
| 93             | 22.4             | Historical railway and tunnel features                     | 0                        | 0     | 0       | -        | -         |
| 93             | 22.5             | Royal Mail tunnels                                         | 0                        | 0     | 0       | -        | -         |



|    |       |                     |   |   |   |   |   |
|----|-------|---------------------|---|---|---|---|---|
| 94 | 22.6  | Historical railways | 0 | 0 | 0 | - | - |
| 94 | 22.7  | Railways            | 0 | 0 | 0 | - | - |
| 94 | 22.8  | Crossrail 1         | 0 | 0 | 0 | 0 | - |
| 94 | 22.9  | Crossrail 2         | 0 | 0 | 0 | 0 | - |
| 94 | 22.10 | HS2                 | 0 | 0 | 0 | 0 | - |

## Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2024. All Rights Reserved.

Capture Date: 30/04/2022

Site Area: 0.17ha



## Recent site history - 2019 aerial photograph



Capture Date: 29/06/2019

Site Area: 0.17ha



## Recent site history - 2013 aerial photograph



Capture Date: 11/07/2013

Site Area: 0.17ha



## Recent site history - 2006 aerial photograph



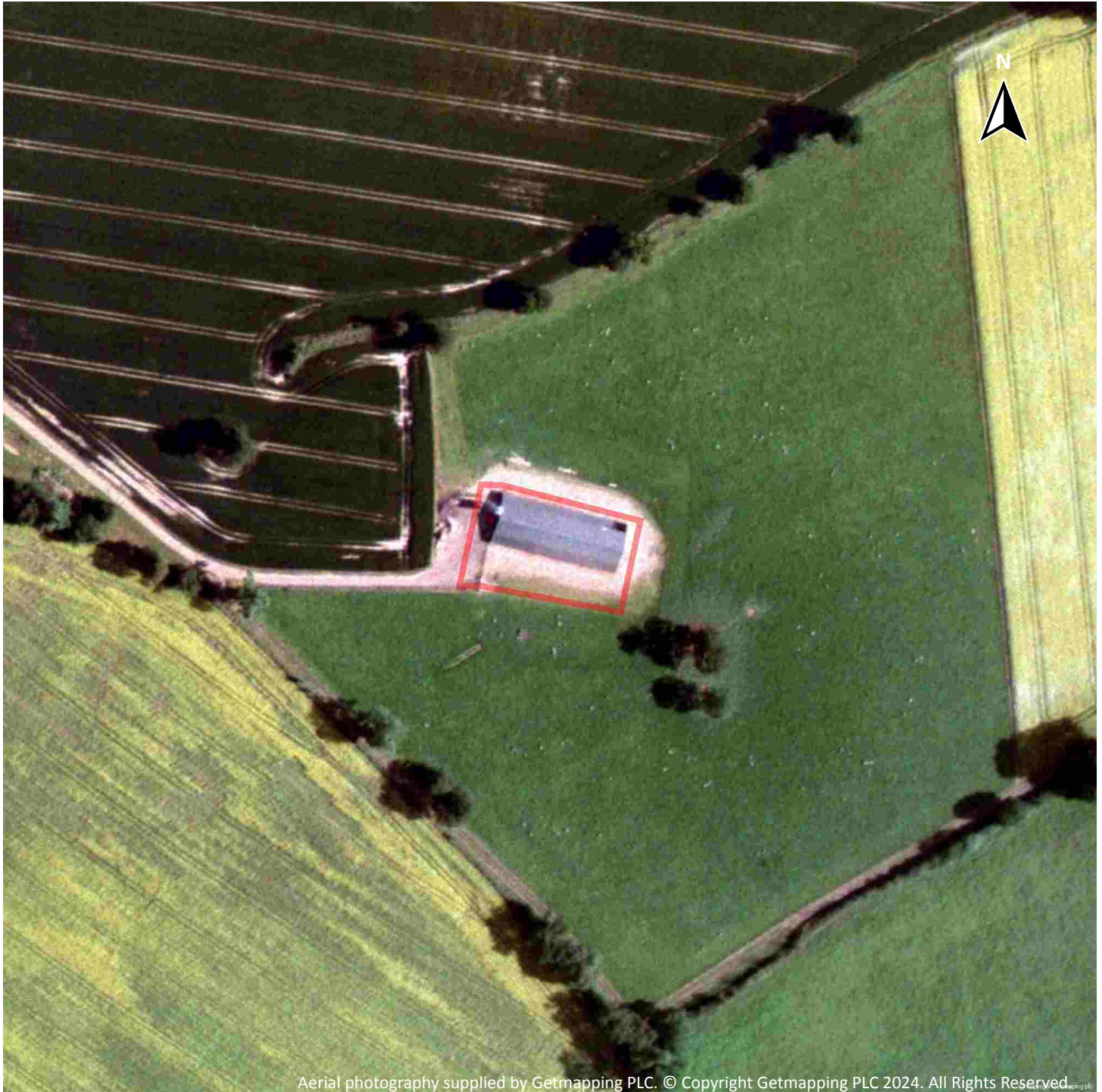
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2024. All Rights Reserved.

Capture Date: 29/07/2006

Site Area: 0.17ha



## Recent site history - 1999 aerial photograph



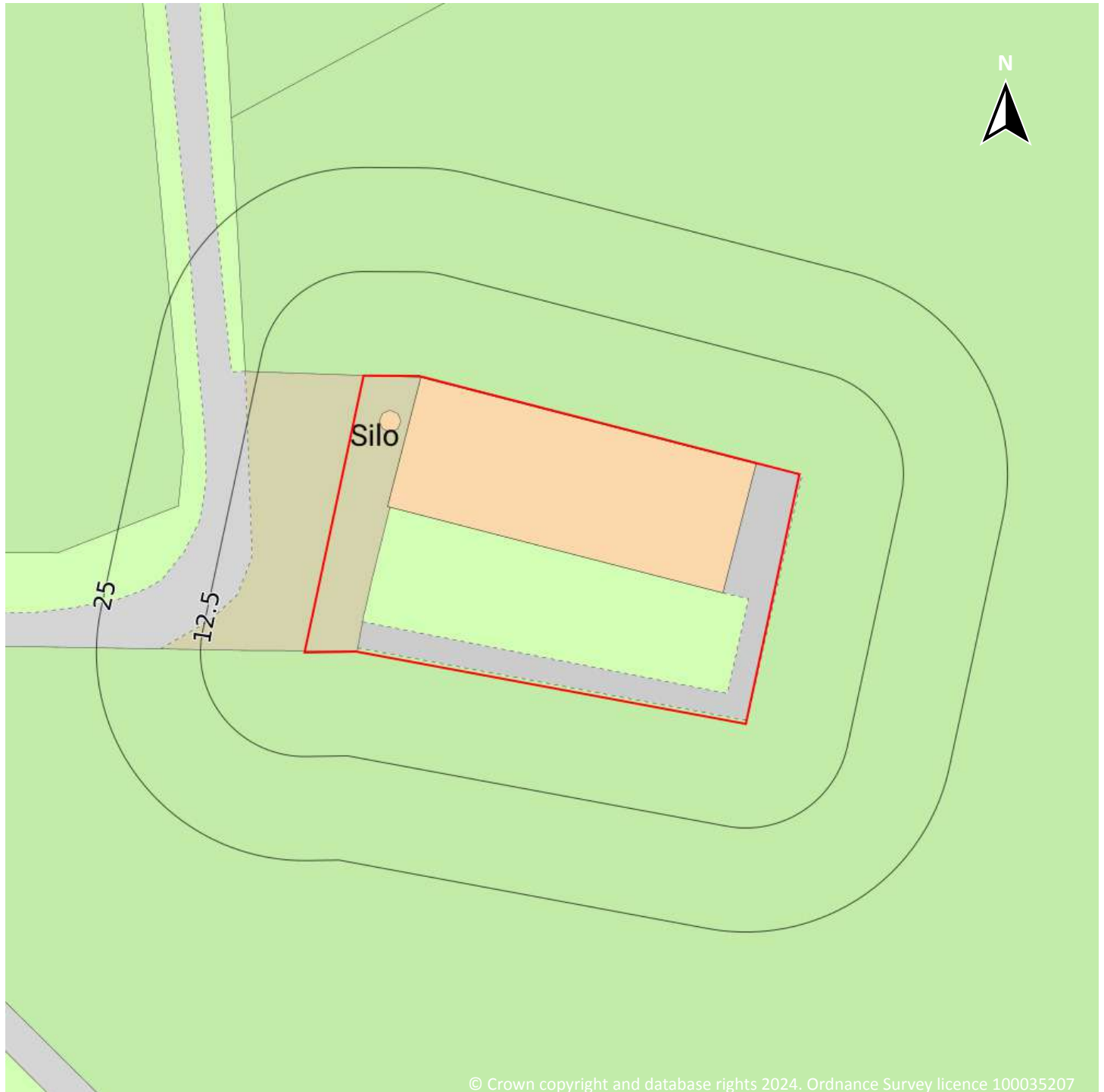
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2024. All Rights Reserved.

Capture Date: 19/06/1999

Site Area: 0.17ha



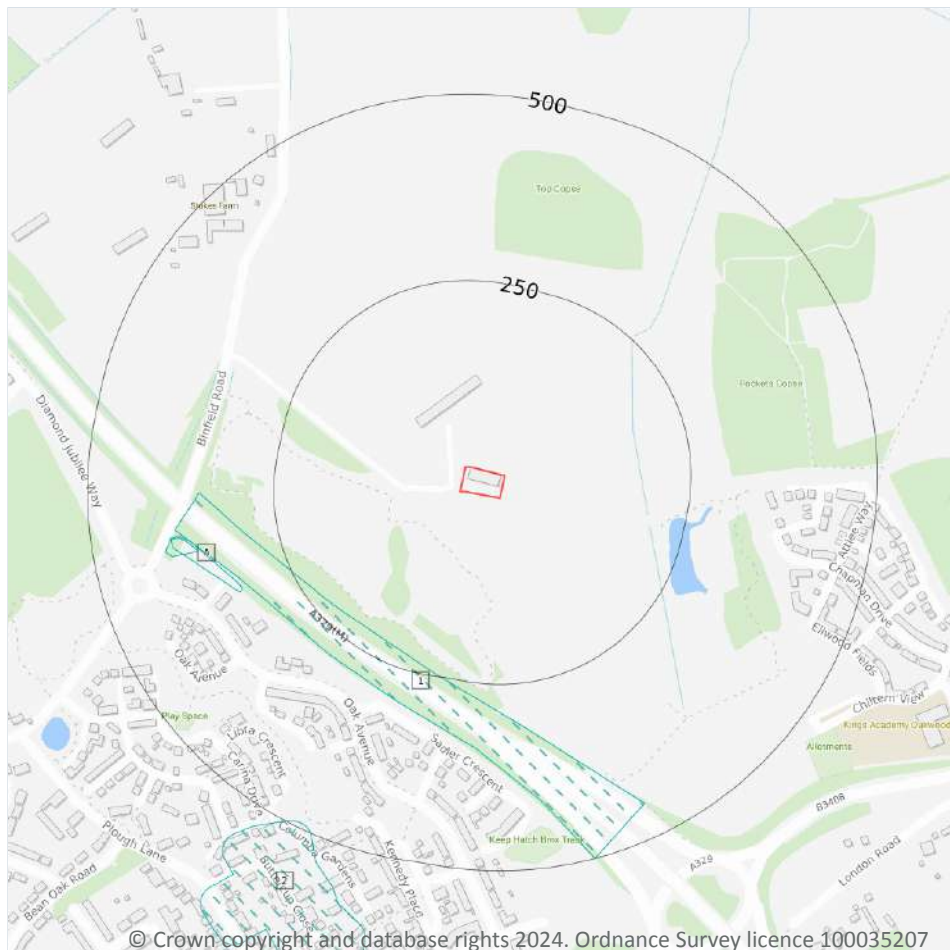
## OS MasterMap site plan



Site Area: 0.17ha



## 1 Past land use



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

### 1.1 Historical industrial land uses

#### Records within 500m

4

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 |
|----|----------|----------|---------------|----------|
| 1  | 221m SW  | Cuttings | 1980 - 1988   | 1936215  |



| ID | Location | Land use                    | Dates present | Group ID |
|----|----------|-----------------------------|---------------|----------|
| A  | 320m SW  | Unspecified Ground Workings | 1988          | 1880397  |
| A  | 360m W   | Unspecified Pit             | 1980          | 1903538  |
| 2  | 493m SW  | Brick Works                 | 1909          | 1897485  |

*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**

**0**

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'.

*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

0

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

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

## 1.6 Historical military land

Records within 500m

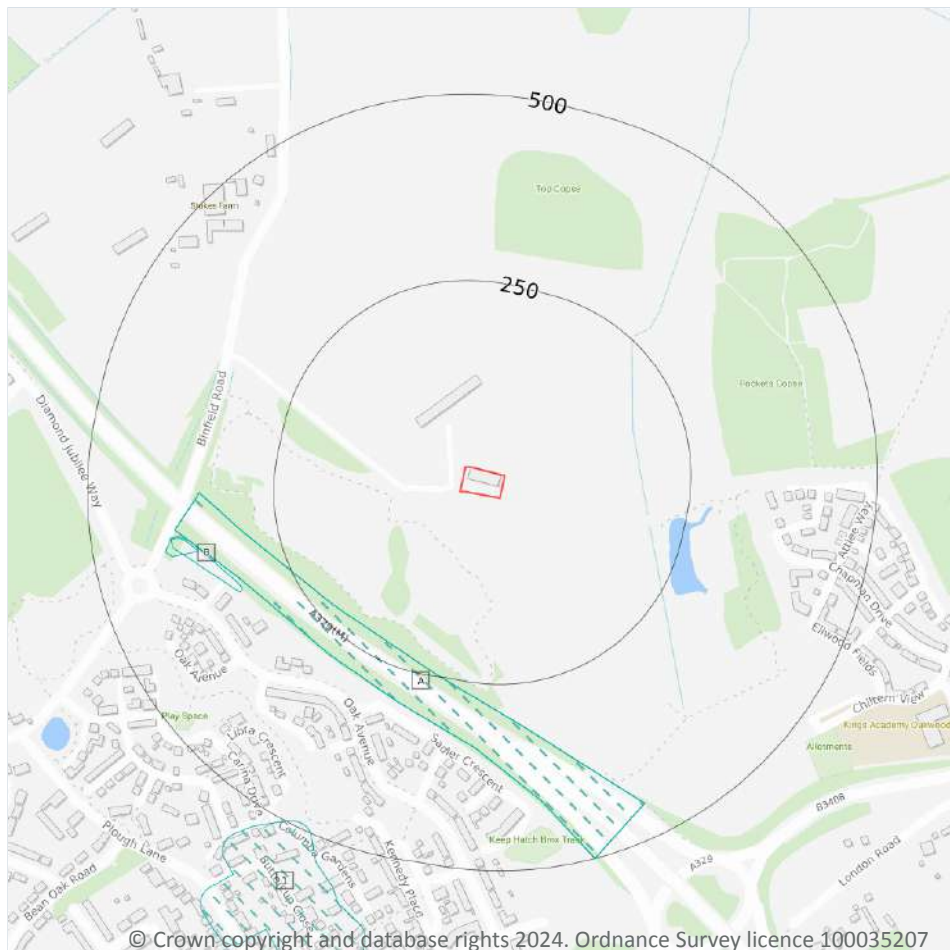
0

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

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



## 2 Past land use - un-grouped



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

### 2.1 Historical industrial land uses

Records within 500m

5

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

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

| ID | Location | Land Use                    | Date | Group ID |
|----|----------|-----------------------------|------|----------|
| A  | 221m SW  | Cuttings                    | 1988 | 1936215  |
| A  | 221m SW  | Cuttings                    | 1980 | 1936215  |
| B  | 320m SW  | Unspecified Ground Workings | 1988 | 1880397  |



| ID | Location | Land Use        | Date | Group ID |
|----|----------|-----------------|------|----------|
| B  | 360m W   | Unspecified Pit | 1980 | 1903538  |
| 1  | 493m SW  | Brick Works     | 1909 | 1897485  |

*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** **0**

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'.

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

## 2.4 Historical petrol stations

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

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

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

## 2.5 Historical garages

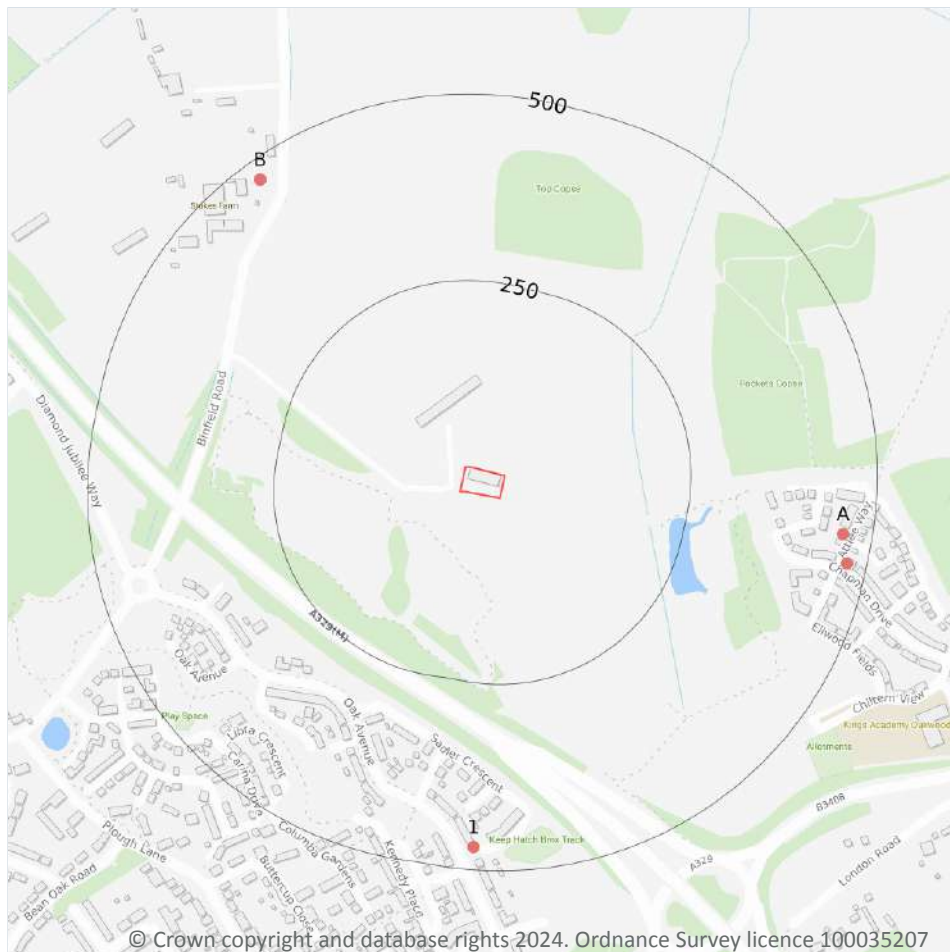
**Records within 500m** **0**

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

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



## 3 Waste and landfill



— Site Outline  
Search buffers in metres (m)  
● 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**

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**

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**

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

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

### 3.6 Licensed waste sites

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

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

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

### 3.7 Waste exemptions

**Records within 500m****9**

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.

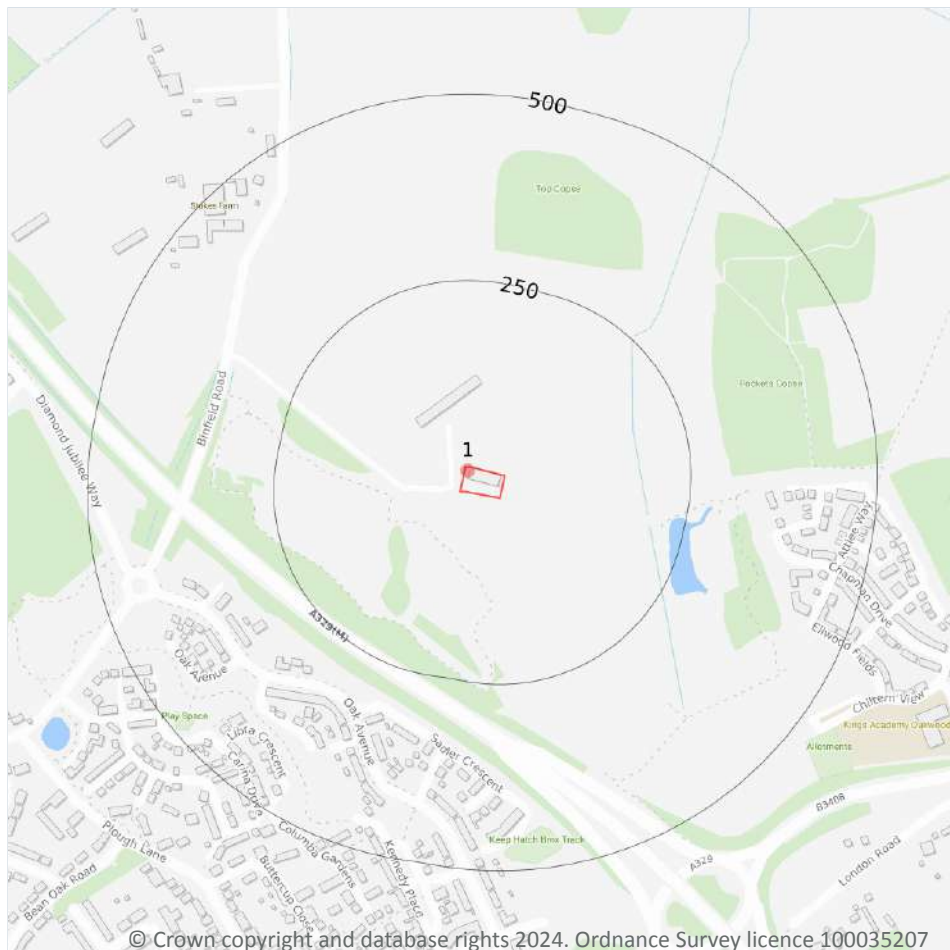
Features are displayed on the Waste and landfill map on [page 20](#) >

| ID | Location | Site                                            | Reference | Category                     | Sub-Category  | Description                                                                                   |
|----|----------|-------------------------------------------------|-----------|------------------------------|---------------|-----------------------------------------------------------------------------------------------|
| A  | 461m E   | 2, Attlee Way, Binfield, Bracknell, Rg42 4gg    | WEX386022 | Storing waste exemption      | Not on a farm | Storage of waste in a secure place                                                            |
| 1  | 470m S   | 22, Oak Avenue, Wokingham, Rg40 1lj             | WEX275618 | Using waste exemption        | Not on a farm | Use of waste in construction                                                                  |
| A  | 473m E   | 2, Attlee Way, Binfield, Bracknell, Rg42 4gg    | WEX253546 | Storing waste exemption      | Not on a farm | Storage of waste in a secure place                                                            |
| B  | 473m NW  | Stokes Farm, Binfield Road, Wokingham, Rg40 5pr | WEX002412 | Disposing of waste exemption | On a farm     | Deposit of waste from dredging of inland waters                                               |
| B  | 473m NW  | Stokes Farm, Binfield Road, Wokingham, Rg40 5pr | WEX002412 | Treating waste exemption     | On a farm     | Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising |
| B  | 473m NW  | Stokes Farm, Binfield Road, Wokingham, Rg40 5pr | WEX002412 | Using waste exemption        | On a farm     | Spreading of plant matter to confer benefit                                                   |
| B  | 473m NW  | Stokes Farm, Binfield Road, Wokingham, Rg40 5pr | WEX002412 | Using waste exemption        | On a farm     | Use of waste for a specified purpose                                                          |
| B  | 473m NW  | Stokes Farm, Binfield Road, Wokingham, Rg40 5pr | WEX002412 | Disposing of waste exemption | On a farm     | Burning waste in the open                                                                     |
| B  | 473m NW  | Stokes Farm, Binfield Road, Wokingham, Rg40 5pr | WEX002412 | Using waste exemption        | On a farm     | Spreading waste on agricultural land to confer benefit                                        |

*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

### 4.1 Recent industrial land uses

Records within 250m

1

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 23](#) >

| ID | Location | Company | Address         | Activity          | Category |
|----|----------|---------|-----------------|-------------------|----------|
| 1  | On site  | Silo    | Berkshire, RG42 | Hoppers and Silos | Farming  |

*This data is sourced from Ordnance Survey.*



## 4.2 Current or recent petrol stations

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

Open, closed, under development and obsolete petrol stations.

*This data is sourced from Experian.*

## 4.3 Electricity cables

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

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*

## 4.4 Gas pipelines

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

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

## 4.5 Sites determined as Contaminated Land

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

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

*This data is sourced from Local Authority records.*

## 4.6 Control of Major Accident Hazards (COMAH)

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

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

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

## 4.7 Regulated explosive sites

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

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

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

## 4.8 Hazardous substance storage/usage

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

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

*This data is sourced from Local Authority records.*

## 4.9 Historical licensed industrial activities (IPC)

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

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

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

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

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

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

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

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

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

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

*This data is sourced from Local Authority records.*



## 4.12 Radioactive Substance Authorisations

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

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

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

## 4.13 Licensed Discharges to controlled waters

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

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

*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

0

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

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

## 4.19 Pollution inventory substances

Records within 500m

0

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

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

## 4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

## 4.21 Pollution inventory radioactive waste

Records within 500m

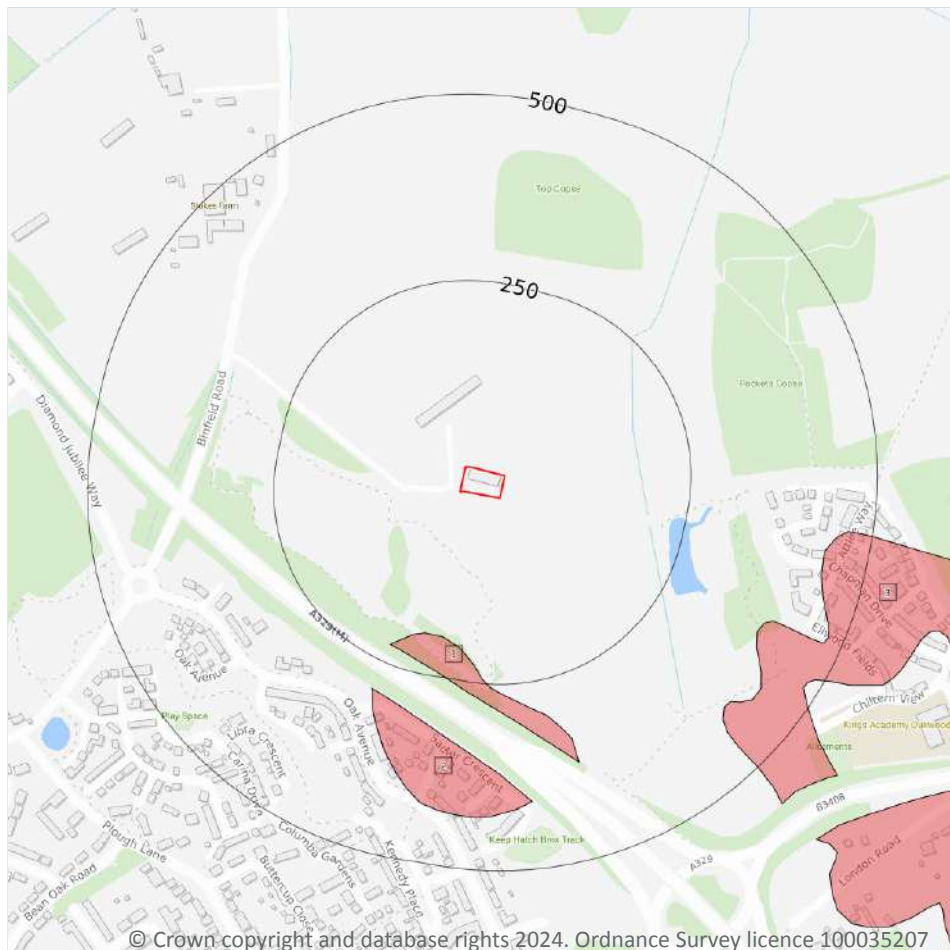
0

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

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



## 5 Hydrogeology - Superficial aquifer



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

### 5.1 Superficial aquifer

Records within 500m

3

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 28](#) >

| ID | Location | Designation | Description                                                                                                                                                                                                                            |
|----|----------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | 195m 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 |
| 2  | 289m SW  | Secondary A | Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers |

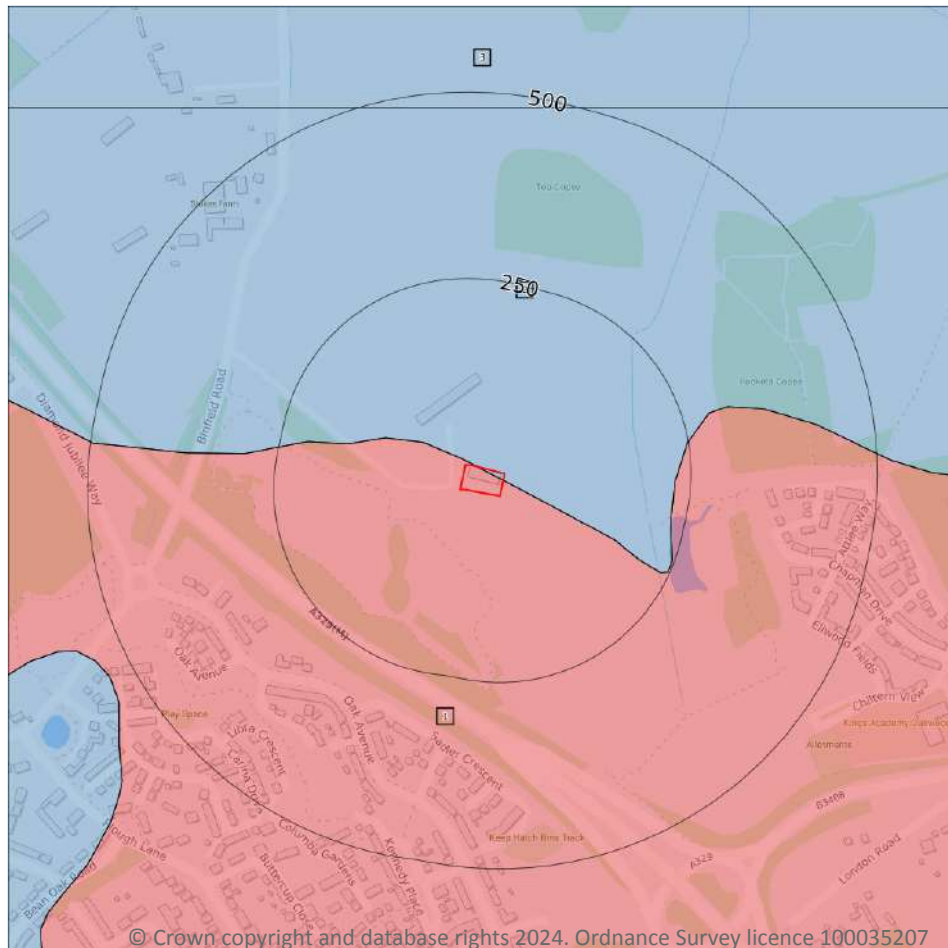


| ID | Location | Designation | Description                                                                                                                                                                                                                            |
|----|----------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | 389m SE  | 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

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### 5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 30](#) >

| 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  | On site  | Unproductive | These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow                                                                                                    |

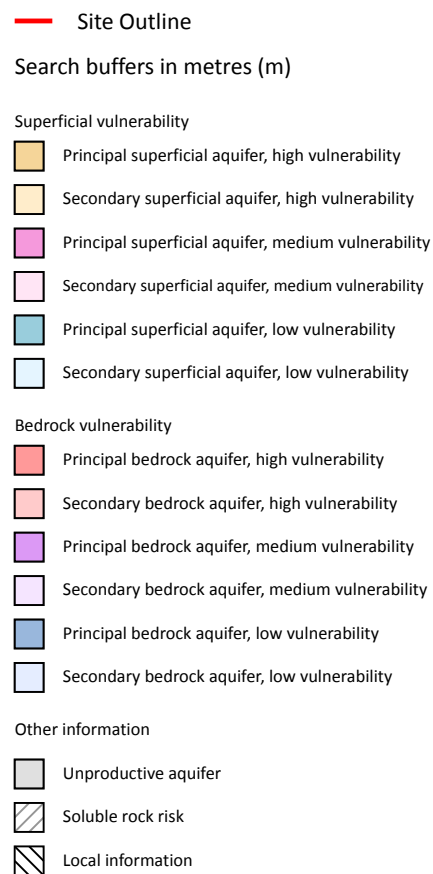
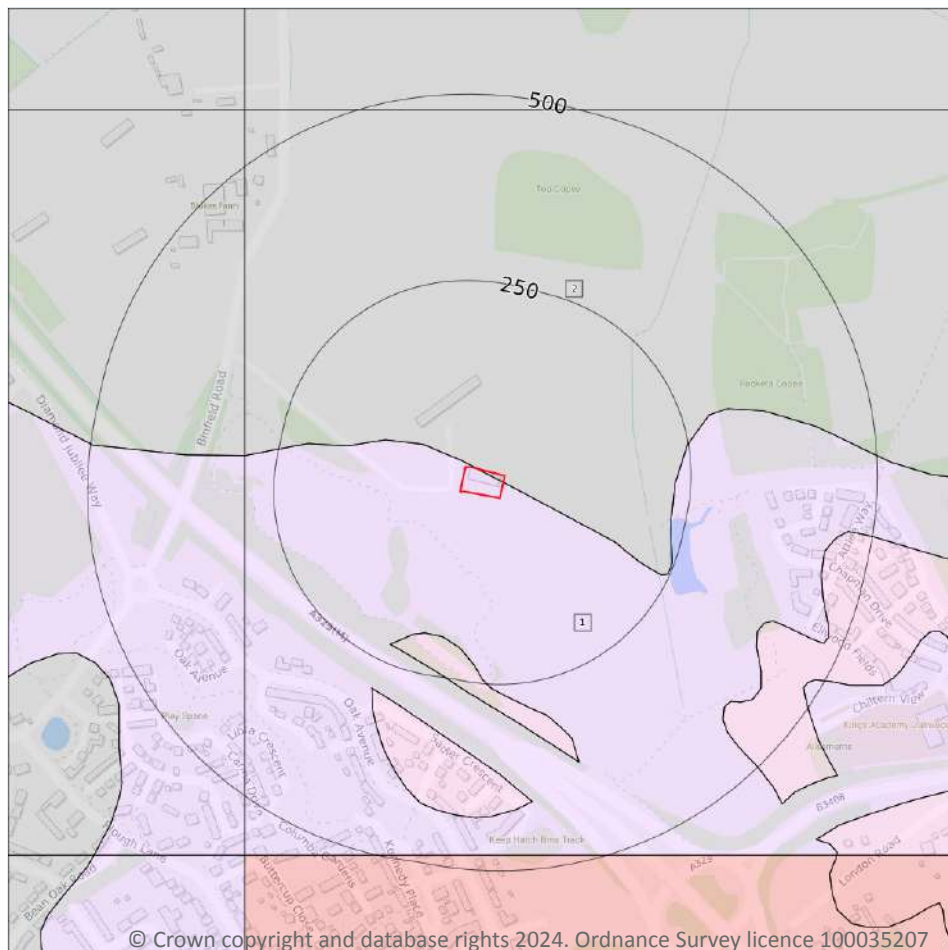


| ID | Location | Designation  | Description                                                                                                                         |
|----|----------|--------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 3  | 479m N   | 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



### 5.3 Groundwater vulnerability

#### Records within 50m

2

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

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

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



| ID | Location | Summary                                                                                                                                                                            | Soil / surface                                                                          | Superficial geology                                                                                               | Bedrock geology                                                                             |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 1  | On site  | Summary Classification:<br>Secondary bedrock aquifer -<br>Medium Vulnerability<br>Combined classification:<br>Productive Bedrock Aquifer,<br>No Superficial Aquifer                | Leaching class: Low<br>Infiltration value: 40-<br>70%<br>Dilution value:<br><300mm/year | Vulnerability: -<br>Aquifer type: -<br>Thickness: <3m<br>Patchiness value: <90%<br>Recharge potential: No<br>Data | Vulnerability: Medium<br>Aquifer type:<br>Secondary<br>Flow mechanism:<br>Mixed             |
| 2  | On site  | Summary Classification:<br>Unproductive aquifer (may<br>have productive aquifer<br>beneath)<br>Combined classification:<br>Unproductive Bedrock<br>Aquifer, No Superficial Aquifer | Leaching class: Low<br>Infiltration value: 40-<br>70%<br>Dilution value:<br><300mm/year | Vulnerability: -<br>Aquifer type: -<br>Thickness: <3m<br>Patchiness value: <90%<br>Recharge potential: No<br>Data | Vulnerability:<br>Unproductive<br>Aquifer type:<br>Unproductive<br>Flow mechanism:<br>Mixed |

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

## 5.4 Groundwater vulnerability- soluble rock risk

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

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

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

## 5.5 Groundwater vulnerability- local information

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

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

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

## Abstractions and Source Protection Zones

### 5.6 Groundwater abstractions

Records within 2000m

0

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.

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

### 5.7 Surface water abstractions

Records within 2000m

0

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.

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

### 5.8 Potable abstractions

Records within 2000m

0

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.

*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

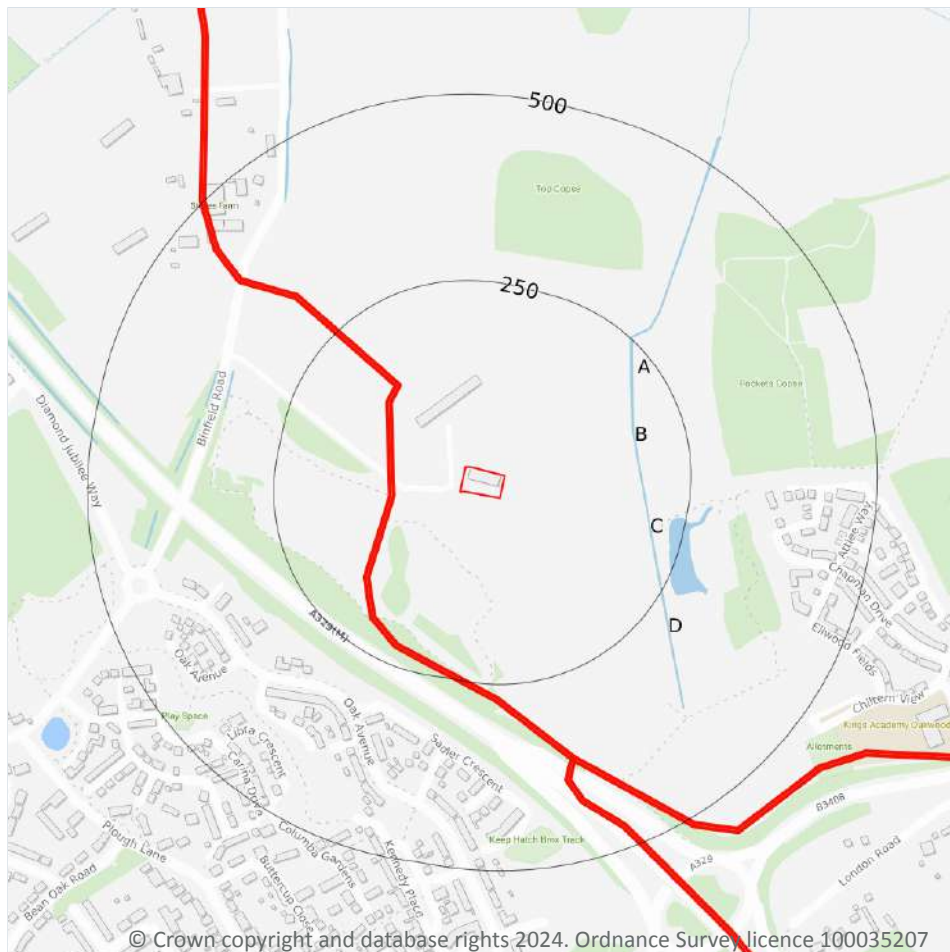
0

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

5

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 36](#) >

| ID | Location | Type of water feature                               | Ground level      | Permanence                                                      | Name |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|------|
| B  | 180m 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 |
|----|----------|-----------------------------------------------------|-------------------|-----------------------------------------------------------------|------|
| C  | 199m E   | Inland river not influenced by normal tidal action. | Underground       | Watercourse contains water year round (in normal circumstances) | -    |
| C  | 201m E   | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | -    |
| C  | 203m E   | Inland river not influenced by normal tidal action. | Underground       | Watercourse contains water year round (in normal circumstances) | -    |
| D  | 205m E   | 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

|                            |          |
|----------------------------|----------|
| <b>Records within 250m</b> | <b>3</b> |
|----------------------------|----------|

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 36 >](#)

*This data is sourced from the Ordnance Survey.*

## 6.3 WFD Surface water body catchments

|                        |          |
|------------------------|----------|
| <b>Records on site</b> | <b>1</b> |
|------------------------|----------|

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 36 >](#)

| ID | Location | Type  | Water body catchment | Water body ID  | Operational catchment | Management catchment |
|----|----------|-------|----------------------|----------------|-----------------------|----------------------|
| A  | On site  | River | Twyford Brook        | GB106039023190 | 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 36 >](#)

| ID | Location | Type  | Name          | Water body ID                    | Overall rating | Chemical rating | Ecological rating | Year |
|----|----------|-------|---------------|----------------------------------|----------------|-----------------|-------------------|------|
| -  | 5628m N  | River | Twyford Brook | <a href="#">GB106039023190</a> ↗ | Bad            | Fail            | Bad               | 2019 |

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

## 6.5 WFD Groundwater bodies

### Records on site

**0**

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

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

## 7 River and coastal flooding

### 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.

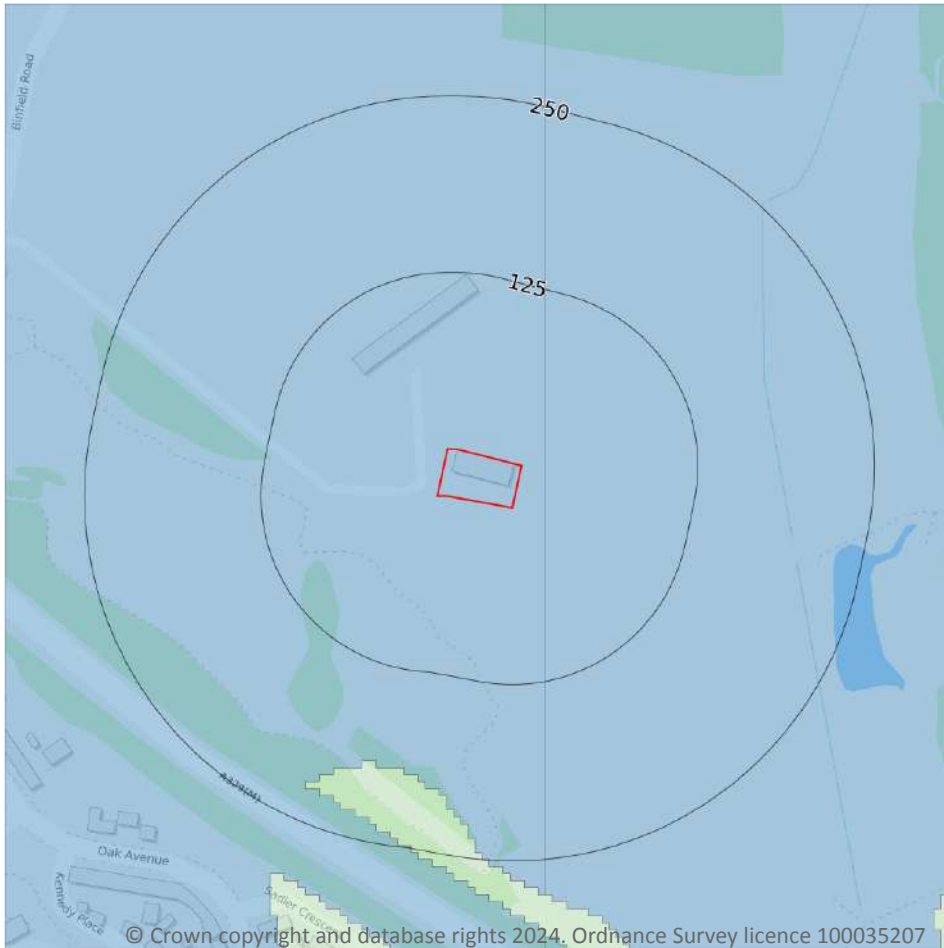
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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



— Site Outline  
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

### 9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

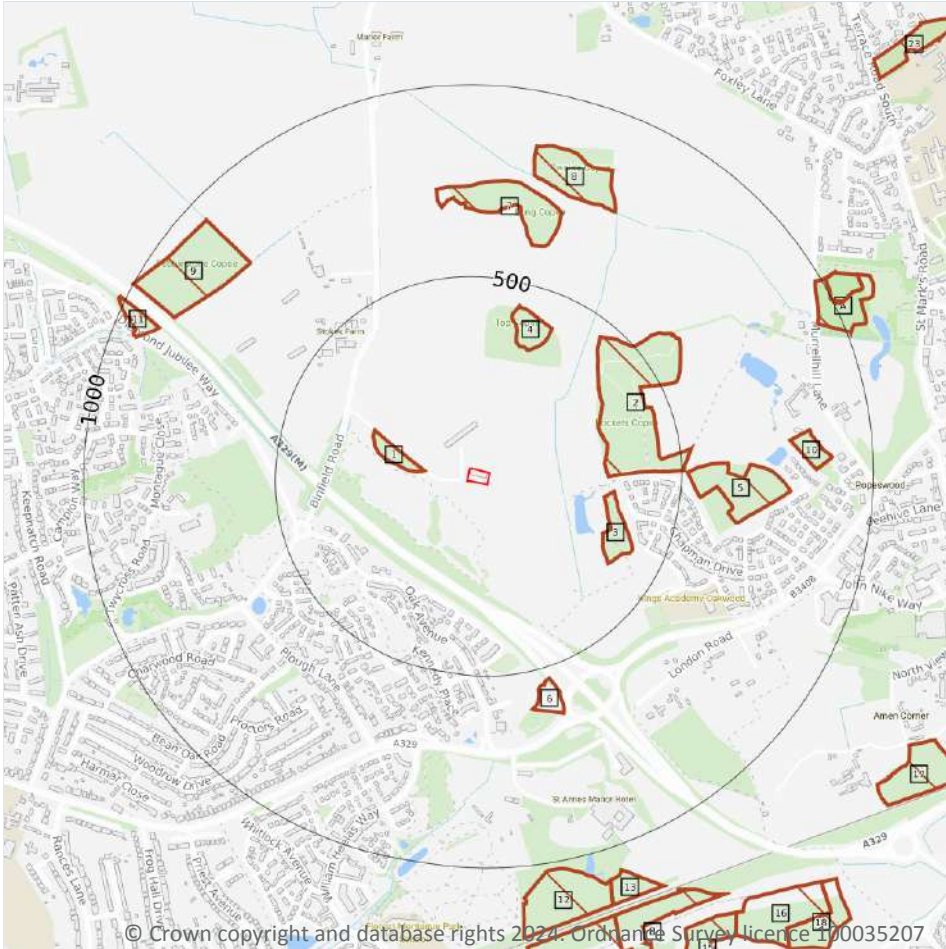
Negligible

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 43](#) >

*This data is sourced from Ambiantal 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 44](#) >

| ID | Location | Name         | Data source     |
|----|----------|--------------|-----------------|
| -  | 1853m SE | Wykery Copse | 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 44 >](#)

| ID | Location | Name         | Data source     |
|----|----------|--------------|-----------------|
| -  | 1421m E  | Farley Copse | Natural England |

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

## 10.7 Designated Ancient Woodland

| Records within 2000m | 61 |
|----------------------|----|
|----------------------|----|

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 44 >](#)

| ID | Location | Name                                          | Woodland Type                   |
|----|----------|-----------------------------------------------|---------------------------------|
| 1  | 115m W   | Unknown                                       | Ancient & Semi-Natural Woodland |
| 2  | 301m E   | Pocock's Copse(tithe: Pockocks Coppice)       | Ancient & Semi-Natural Woodland |
| 3  | 306m E   | Unknown                                       | Ancient & Semi-Natural Woodland |
| 4  | 335m N   | Unknown                                       | Ancient & Semi-Natural Woodland |
| 5  | 515m E   | Blackman's Copse(tithe: The Wood)             | Ancient & Semi-Natural Woodland |
| 6  | 530m S   | Unknown                                       | Ancient & Semi-Natural Woodland |
| 7  | 602m N   | (Tithe: Large Coppice)                        | Ancient & Semi-Natural Woodland |
| 8  | 750m N   | Swain's Copse(tithe: Swains Coppice)          | Ancient & Semi-Natural Woodland |
| 9  | 783m NW  | Pebblestone Copse(tithe: Pebblestone Coppice) | Ancient & Semi-Natural Woodland |
| 10 | 788m E   | (Tithe: The Grove)                            | Ancient & Semi-Natural Woodland |
| 11 | 889m NW  | Pebblestone Copse(tithe: Pebblestone Coppice) | Ancient & Semi-Natural Woodland |
| A  | 940m NE  | Applepie Green (Tithe: Furzes Coppice)        | Ancient & Semi-Natural Woodland |



| ID | Location | Name                                                                  | Woodland Type                   |
|----|----------|-----------------------------------------------------------------------|---------------------------------|
| A  | 998m NE  | (Tithe: Furzes Coppice)                                               | Ancient & Semi-Natural Woodland |
| 12 | 1019m S  | Big Wood (Osd: Oaken Coppice) (Tithe: Oaken Coppice)                  | Ancient Replanted Woodland      |
| 13 | 1063m S  | Big Wood (Osd: Oaken Coppice) (Tithe: Gorse Grove)                    | Ancient Replanted Woodland      |
| B  | 1169m S  | Big Wood. (Osd: Oaken Coppice) (Tithe: Gorse Grove)                   | Ancient & Semi-Natural Woodland |
| 14 | 1171m S  | Big Wood (Osd: Oaken Coppice) (Tithe: Oaken Coppice)                  | Ancient & Semi-Natural Woodland |
| 15 | 1268m SE | Big Wood (Osd: Oaken Coppice) (Tithe: Gorse Grove)                    | Ancient & Semi-Natural Woodland |
| B  | 1269m S  | Big Wood. (Osd: Oaken Coppice) (Tithe: Gorse Grove)                   | Ancient & Semi-Natural Woodland |
| -  | 1270m S  | Big Wood. (Osd: Oaken Coppice) (Tithe: Oaken Coppice)                 | Ancient & Semi-Natural Woodland |
| 16 | 1276m SE | Big Wood (Osd: Oaken Coppice) (Tithe: Fern Grove Coppice)             | Ancient & Semi-Natural Woodland |
| 17 | 1283m SE | Rigg's Copse(tithe: 716=part Of Peacock Farm. 732=bridle Coppice)     | Ancient & Semi-Natural Woodland |
| -  | 1342m S  | Big Wood. (Osd: Oaken Coppice) (Tithe: Oaken Coppice)                 | Ancient & Semi-Natural Woodland |
| 18 | 1353m SE | Big Wood (Osd: Oaken Coppice) (Tithe: Pullens Coppice)                | Ancient & Semi-Natural Woodland |
| -  | 1355m S  | Big Wood. (Osd: Oaken Coppice) (Tithe: Birchen Coppice)               | Ancient & Semi-Natural Woodland |
| -  | 1370m S  | Big Wood. (Osd: Oaken Coppice) (Tithe: Birchen Coppice)               | Ancient & Semi-Natural Woodland |
| -  | 1383m N  | Unknown                                                               | Ancient & Semi-Natural Woodland |
| -  | 1415m SE | Big Wood (Osd: Oaken Coppice) (Tithe: Gorse Grove)                    | Ancient & Semi-Natural Woodland |
| 23 | 1446m NE | Unknown                                                               | Ancient & Semi-Natural Woodland |
| -  | 1447m NE | (Tithe: Dean's Coppice)                                               | Ancient & Semi-Natural Woodland |
| -  | 1452m SE | Big Wood (Osd: Oaken Coppice) (Tithe: Gorse Grove)                    | Ancient Replanted Woodland      |
| -  | 1472m E  | Farley Moor Copse (Epoch2-3:farley moor)(tithe: Farley Moor Coppice)  | Ancient & Semi-Natural Woodland |
| -  | 1476m S  | Big Wood (Osd: Oaken Coppice) (Tithe: Oaken Coppice)                  | Ancient Replanted Woodland      |
| -  | 1509m E  | Farley Moor Copse (Epoch2-3:farley moor)(tithe: Farley Moor Coppice)  | Ancient & Semi-Natural Woodland |
| -  | 1524m E  | (Tithe: Allotment To Farley Moor Coppice)                             | Ancient & Semi-Natural Woodland |
| -  | 1540m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1551m E  | (Tithe: Dean's Coppice)                                               | Ancient & Semi-Natural Woodland |
| -  | 1555m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1556m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1583m N  | Tippen's Wood(tithe: Tippens Wood)                                    | Ancient & Semi-Natural Woodland |

| ID | Location | Name                                                                  | Woodland Type                   |
|----|----------|-----------------------------------------------------------------------|---------------------------------|
| -  | 1592m E  | (Tithe: Allotment To Farley Moor Coppice)                             | Ancient & Semi-Natural Woodland |
| -  | 1593m S  | Big Wood (Osd: Oaken Coppice) (Tithe: Gorse Grove)                    | Ancient Replanted Woodland      |
| -  | 1593m S  | Big Wood (Osd: Oaken Coppice) (Tithe: Gorse Grove)                    | Ancient Replanted Woodland      |
| -  | 1599m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1625m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1645m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1653m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1684m S  | Unknown                                                               | Ancient & Semi-Natural Woodland |
| -  | 1692m E  | Farley Moor Copse (Epoch2-3:farley Copse)(tithe: Farley Moor Coppice) | Ancient & Semi-Natural Woodland |
| -  | 1693m S  | Easthampstead Park                                                    | Ancient & Semi-Natural Woodland |
| -  | 1785m N  | Tippen's Wood (Tithe: Tippens Wood (Part Of))                         | Ancient & Semi-Natural Woodland |
| -  | 1788m N  | Tippen's Wood (Tithe: Tippens Wood (Part Of))                         | Ancient & Semi-Natural Woodland |
| -  | 1818m SE | Easthampstead Park: West Garden Copse                                 | Ancient & Semi-Natural Woodland |
| -  | 1854m SE | Wykery Copse(tithe: Wythery Coppice)                                  | Ancient & Semi-Natural Woodland |
| -  | 1867m SE | Tarman's Copse(tithe: Sketes Grove)                                   | Ancient & Semi-Natural Woodland |
| -  | 1903m SE | Wykery Copse                                                          | Ancient & Semi-Natural Woodland |
| -  | 1913m N  | Tippen's Wood                                                         | Ancient & Semi-Natural Woodland |
| -  | 1941m S  | Easthampstead Park(tithe: Long Meadow Coppice)                        | Ancient & Semi-Natural Woodland |
| -  | 1953m SE | Tarman's Copse(tithe: Sketes Grove)                                   | Ancient & Semi-Natural Woodland |
| -  | 1954m S  | Easthampstead Park(tithe: Long Meadow Coppice)                        | Ancient & Semi-Natural Woodland |
| -  | 1992m E  | (Tithe: Bulstreads Grove)                                             | 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****2**

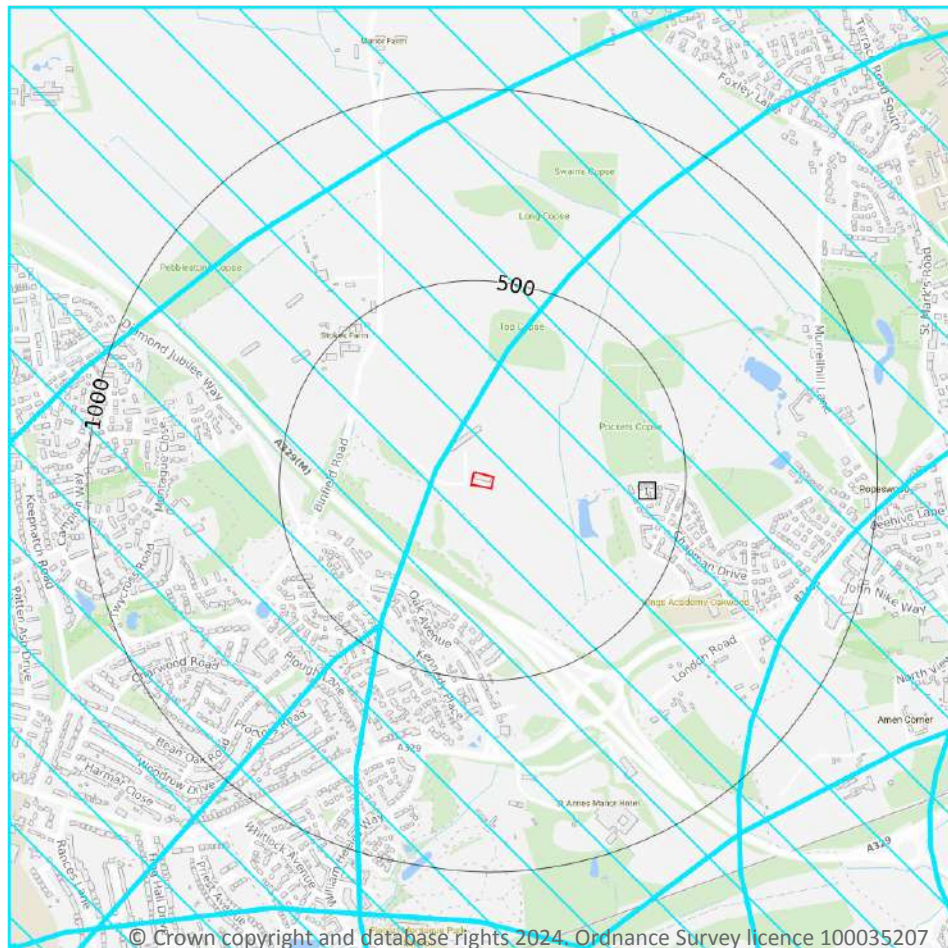
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

| Location | Name          | Type          | NVZ ID | Status   |
|----------|---------------|---------------|--------|----------|
| 224m SW  | Emm Brook NVZ | Surface Water | 460    | Existing |
| 1483m 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 51](#) >

| ID | Location | Type of developments requiring consultation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | On site  | <p><b>Infrastructure - Airports, helipads and other aviation proposals.</b></p> <p><b>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock &amp; poultry units with floorspace &gt; 500m<sup>2</sup>, slurry lagoons &amp; digestate stores &gt; 200m<sup>2</sup>, manure stores &gt; 250t).</b></p> <p><b>Combustion - General combustion processes &gt;20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</b></p> <p><b>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</b></p> <p><b>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.</b></p> <p><b>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.</b></p> |

*This data is sourced from Natural England.*

## 10.18 SSSI Units

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

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 51 >](#)

ID: -  
 Location: 1853m SE  
 SSSI name: Wykery Copse  
 Unit name: 1  
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland  
 Condition: Favourable  
 Reportable features:

| Feature name                     | Feature condition | Date of assessment |
|----------------------------------|-------------------|--------------------|
| Lowland mixed deciduous woodland | Favourable        | 30/09/2016         |
| Wet woodland                     | Favourable        | 30/09/2016         |

*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

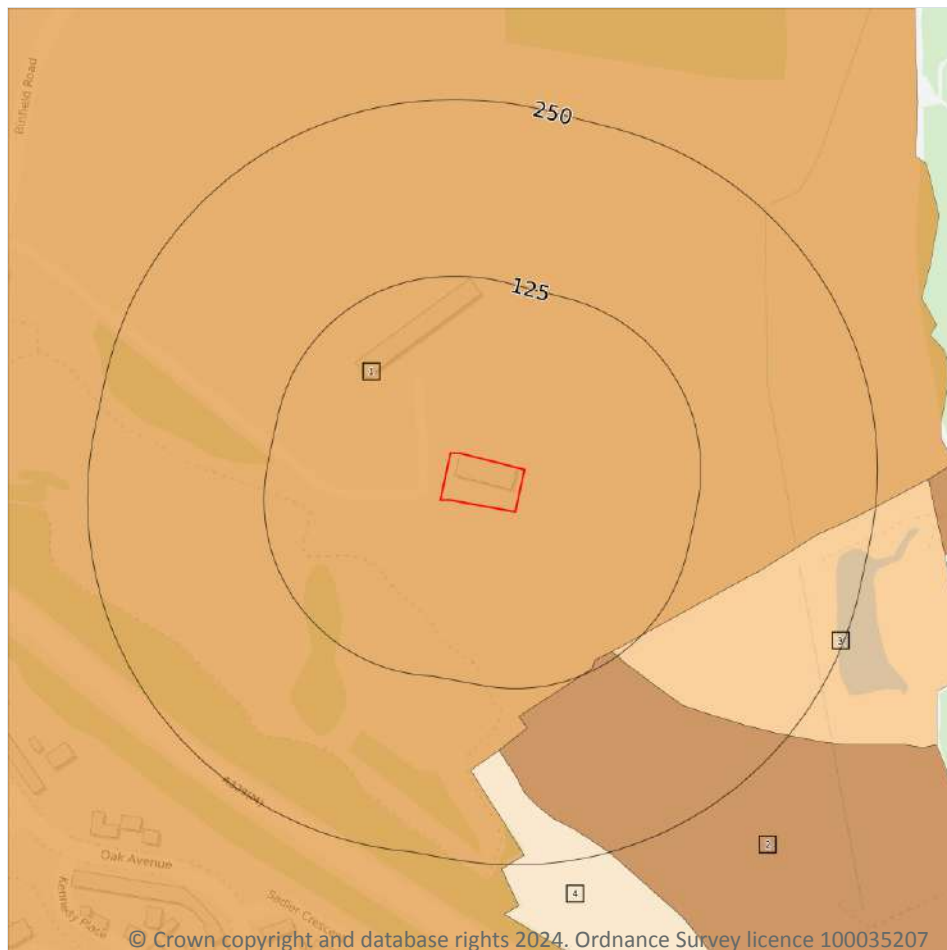
0

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

4

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 55](#) >

| 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  | 119m SE  | Grade 2        | Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1. |
| 3  | 120m SE  | Grade 3a       | Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.                                                                                                                                                                         |
| 4  | 169m S   | Grade 3b       | Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.                                                                                                                                                                                                                  |

*This data is sourced from Natural England.*

## 12.2 Open Access Land

**Records within 250m**

**0**

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

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

## 12.3 Tree Felling Licences

**Records within 250m**

**0**

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**

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

### 13.1 Priority Habitat Inventory

Records within 250m

0

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

*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

2

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.

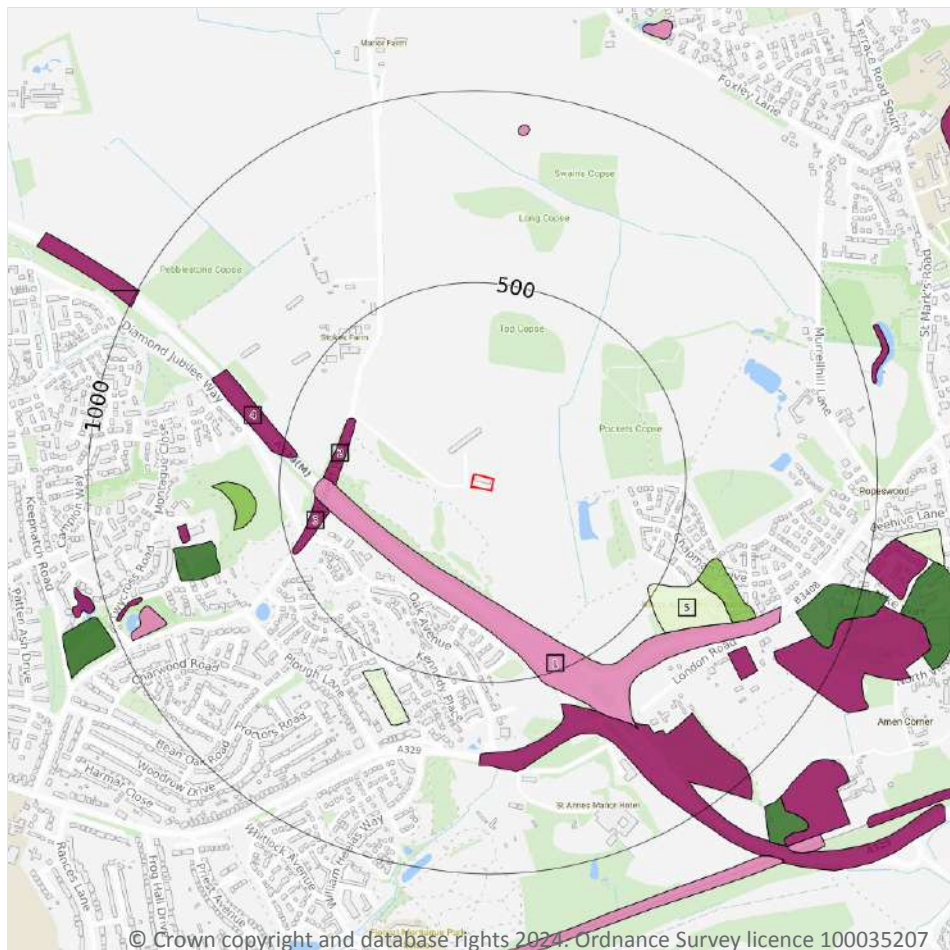
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 59](#) >

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No. |
|----|----------|------------|-------------|---------|---------------|-----------|
| 1  | On site  | Full       | Full        | Full    | No coverage   | SU86NW    |
| 2  | 479m N   | Full       | Full        | Full    | No coverage   | SU87SW    |

This data is sourced from the British Geological Survey.



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



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
  - Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

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

Records within 500m

5

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 60 >](#)

| ID | Location | LEX Code    | Description               | Rock description           |
|----|----------|-------------|---------------------------|----------------------------|
| 1  | 221m SW  | WGR-UNKNOWN | Worked Ground (Undivided) | Unknown/unclassified Entry |
| 2  | 333m W   | MGR-UNKNOWN | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 3  | 373m W   | MGR-UNKNOWN | Made Ground (Undivided)   | Unknown/unclassified Entry |
| 4  | 459m W   | MGR-UNKNOWN | Made Ground (Undivided)   | Unknown/unclassified Entry |

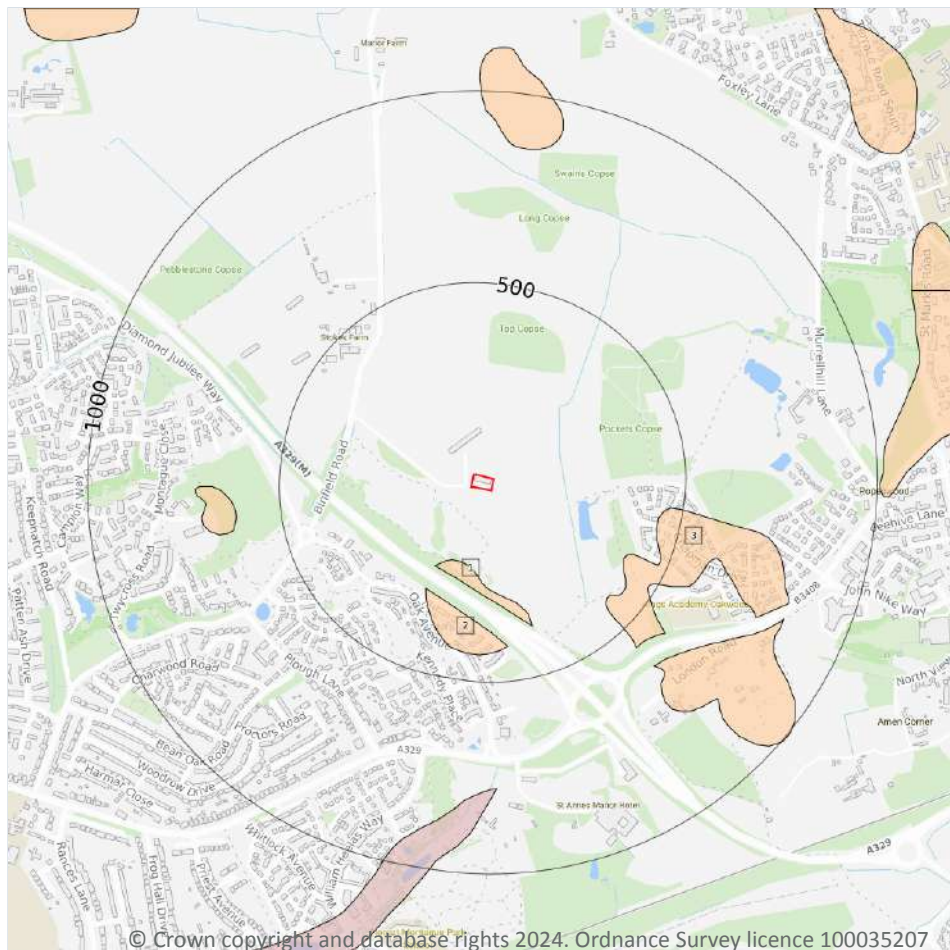


| ID | Location | LEX Code     | Description     | Rock description           |
|----|----------|--------------|-----------------|----------------------------|
| 5  | 480m SE  | WMGR-UNKNOWN | Infilled Ground | Unknown/unclassified Entry |

*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

3

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 62](#) >

| ID | Location | LEX Code | Description                                 | Rock description |
|----|----------|----------|---------------------------------------------|------------------|
| 1  | 195m S   | RTD8-XSV | River Terrace Deposits, 8 - Sand And Gravel | Sand And Gravel  |
| 2  | 289m SW  | RTD8-XSV | River Terrace Deposits, 8 - Sand And Gravel | Sand And Gravel  |
| 3  | 389m SE  | RTD8-XSV | River Terrace Deposits, 8 - Sand And Gravel | Sand And Gravel  |

This data is sourced from the British Geological Survey.



## 14.4 Landslip (10k)

Records within 500m

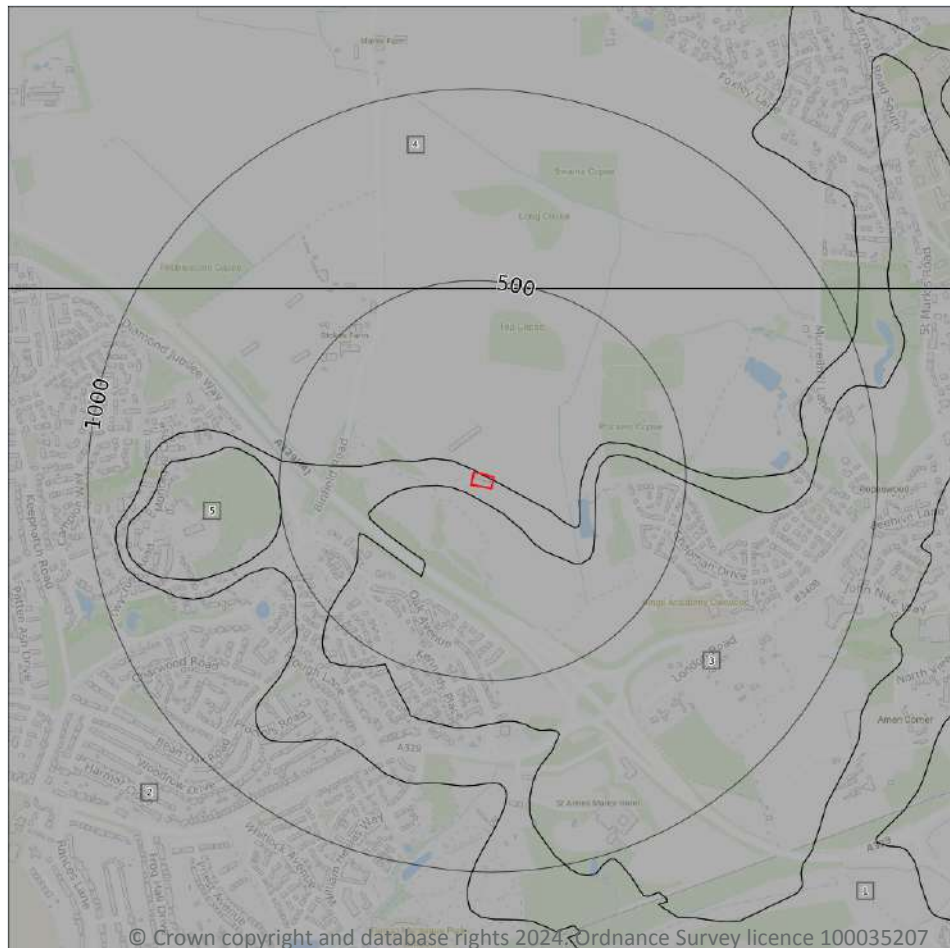
0

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

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



## Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

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

### 14.5 Bedrock geology (10k)

Records within 500m

5

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 64](#) >

| ID | Location | LEX Code  | Description                        | Rock age     |
|----|----------|-----------|------------------------------------|--------------|
| 1  | On site  | CLGB-CLSI | Claygate Member - Clay And Silt    | Eocene Epoch |
| 2  | On site  | LC-SICL   | London Clay Formation - Silty Clay | Eocene Epoch |
| 3  | 23m SW   | BGS-SANDU | Bagshot Formation - Sand           | Eocene Epoch |
| 4  | 479m N   | LC-SICL   | London Clay Formation - Silty Clay | Eocene Epoch |



| ID | Location | LEX Code  | Description              | Rock age     |
|----|----------|-----------|--------------------------|--------------|
| 5  | 500m W   | BGS-SANDU | Bagshot Formation - Sand | Eocene Epoch |

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

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

Records within 500m

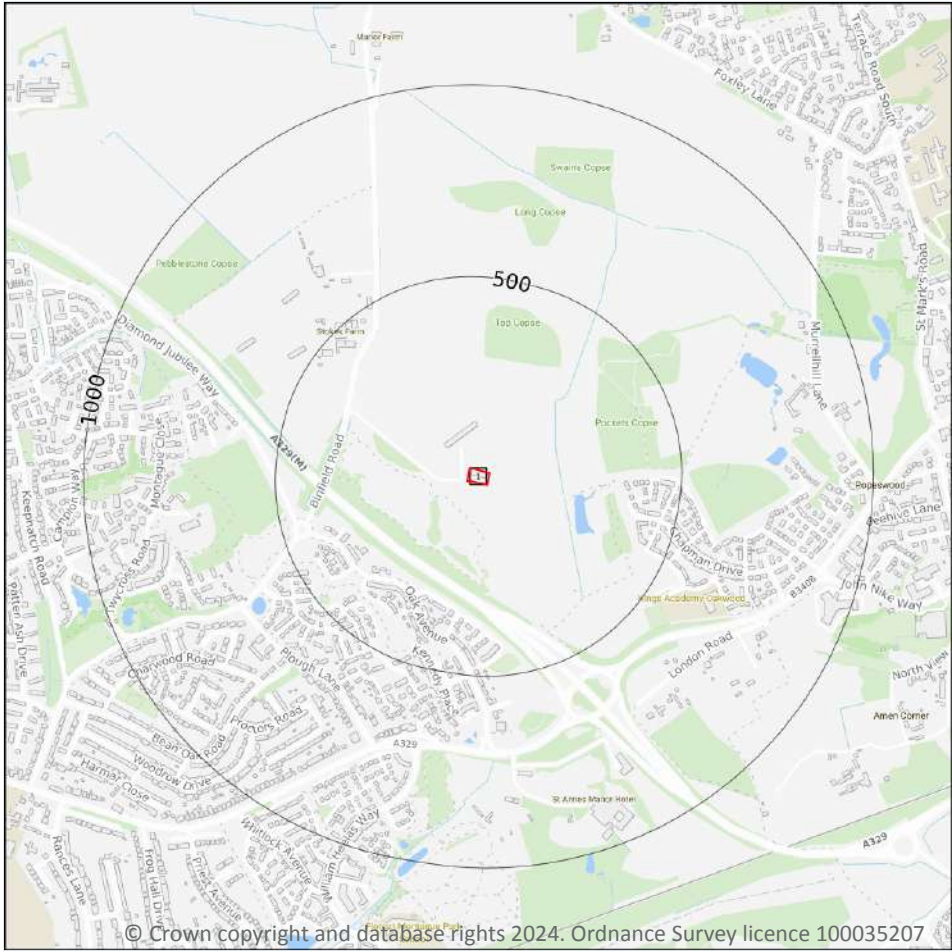
0

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 |
|---------------------|---|

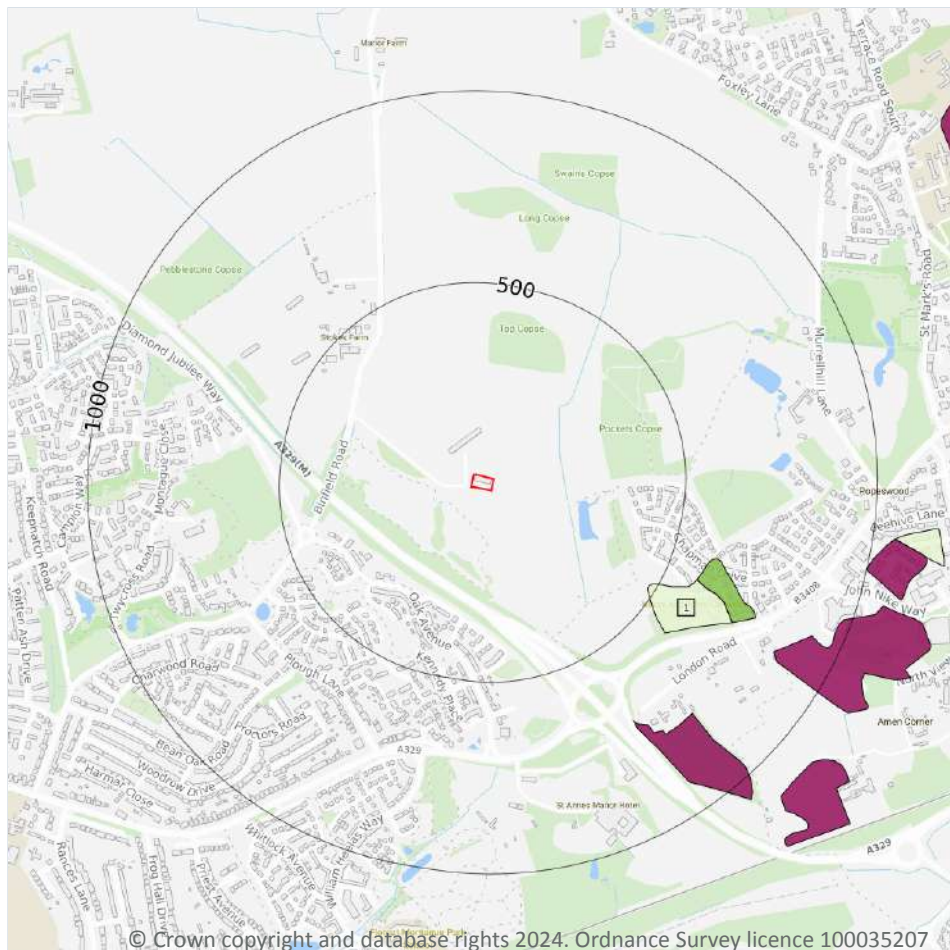
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 66](#) >

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No.        |
|----|----------|------------|-------------|---------|---------------|------------------|
| 1  | On site  | Full       | Full        | Full    | Full          | EW269_windsor_v4 |

This data is sourced from the British Geological Survey.

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



- Site Outline**
- Search buffers in metres (m)**
- Made ground
  - Worked ground
  - Infilled ground
  - Disturbed ground
  - Landscaped ground

### 15.2 Artificial and made ground (50k)

#### Records within 500m

1

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 67](#) >

| ID | Location | LEX Code   | Description     | Rock description   |
|----|----------|------------|-----------------|--------------------|
| 1  | 480m SE  | WMGR-ARTDP | INFILLED GROUND | ARTIFICIAL DEPOSIT |

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

## 15.3 Artificial ground permeability (50k)

Records within 50m

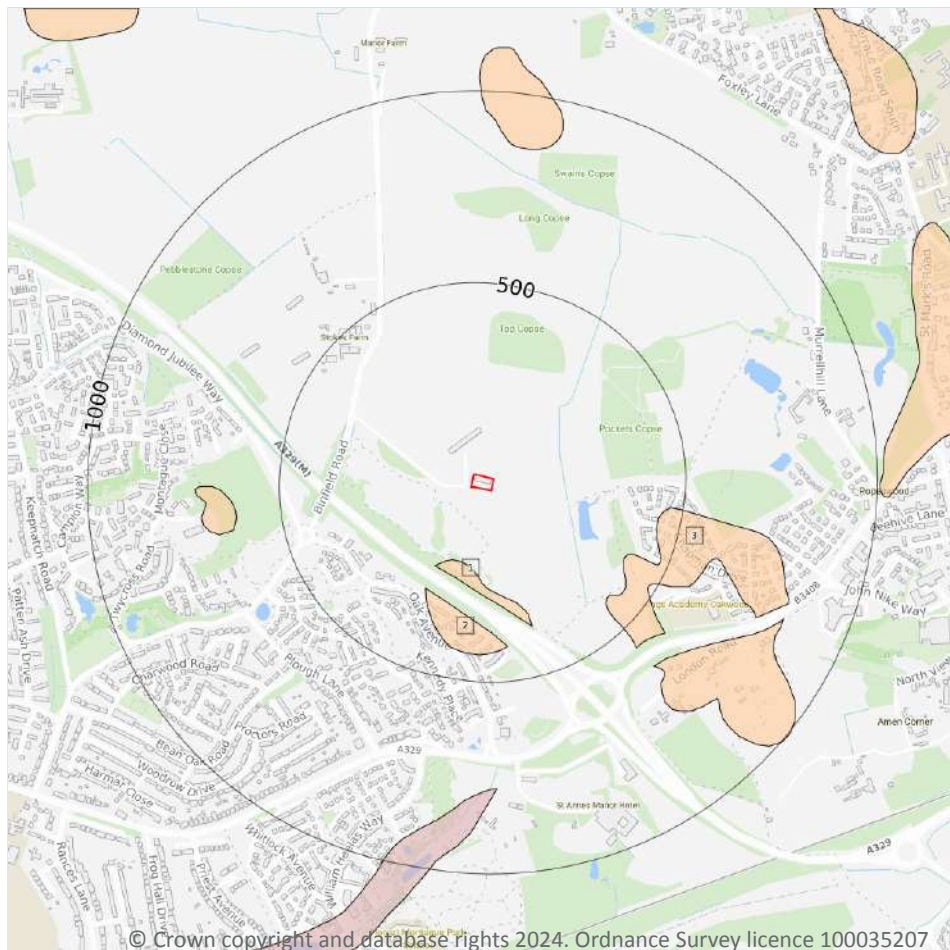
0

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



**Site Outline**

Search buffers in metres (m)

**Landslip (50k)**

**Superficial geology (50k)**  
Please see table for more details.

### 15.4 Superficial geology (50k)

#### Records within 500m

3

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 69](#) >

| ID | Location | LEX Code | Description               | Rock description |
|----|----------|----------|---------------------------|------------------|
| 1  | 195m S   | RTD8-XSV | RIVER TERRACE DEPOSITS, 8 | SAND AND GRAVEL  |
| 2  | 289m SW  | RTD8-XSV | RIVER TERRACE DEPOSITS, 8 | SAND AND GRAVEL  |
| 3  | 389m SE  | RTD8-XSV | RIVER TERRACE DEPOSITS, 8 | 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

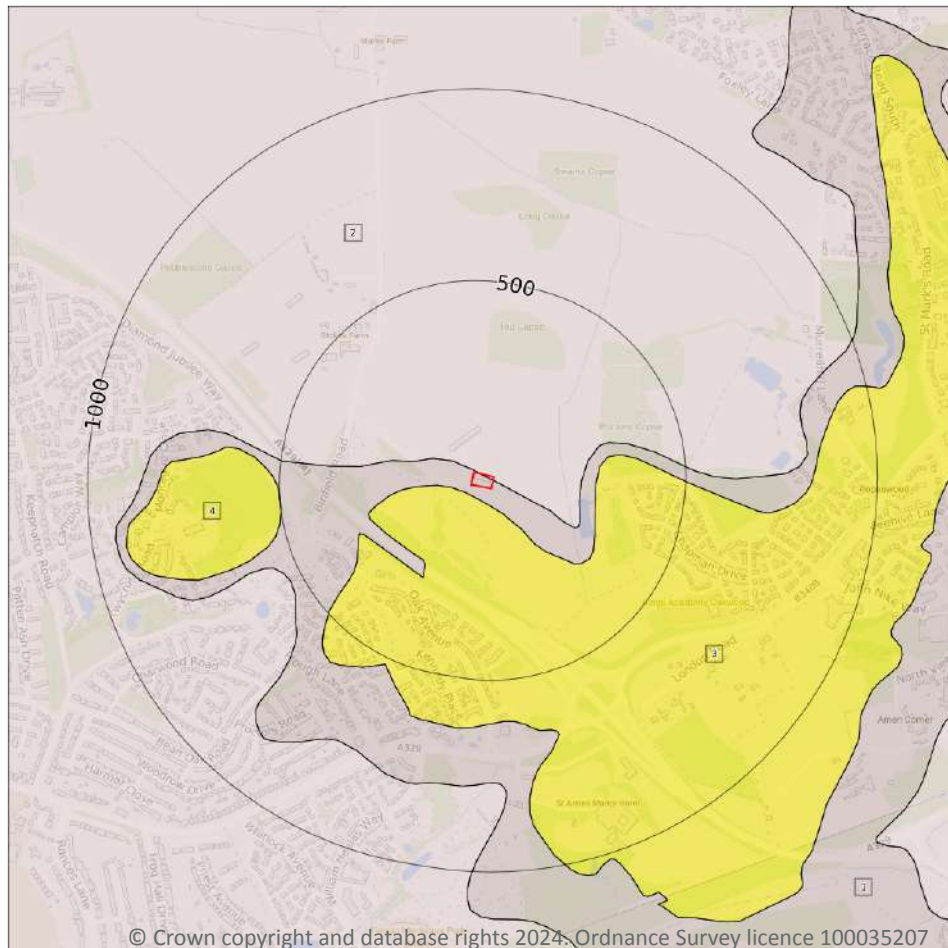
0

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

4

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 71 >](#)

| ID | Location | LEX Code  | Description                                 | Rock age |
|----|----------|-----------|---------------------------------------------|----------|
| 1  | On site  | CLGB-XSZC | CLAYGATE MEMBER - SAND, SILT AND CLAY       | YPRESIAN |
| 2  | On site  | LC-XCZS   | LONDON CLAY FORMATION - CLAY, SILT AND SAND | YPRESIAN |
| 3  | 24m SW   | BGS-S     | BAGSHOT FORMATION - SAND                    | YPRESIAN |
| 4  | 500m W   | BGS-S     | BAGSHOT FORMATION - SAND                    | YPRESIAN |

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

## 15.9 Bedrock permeability (50k)

Records within 50m

3

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                 | Low                  |
| On site  | Mixed         | Moderate             | Very Low             |
| 24m SW   | 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

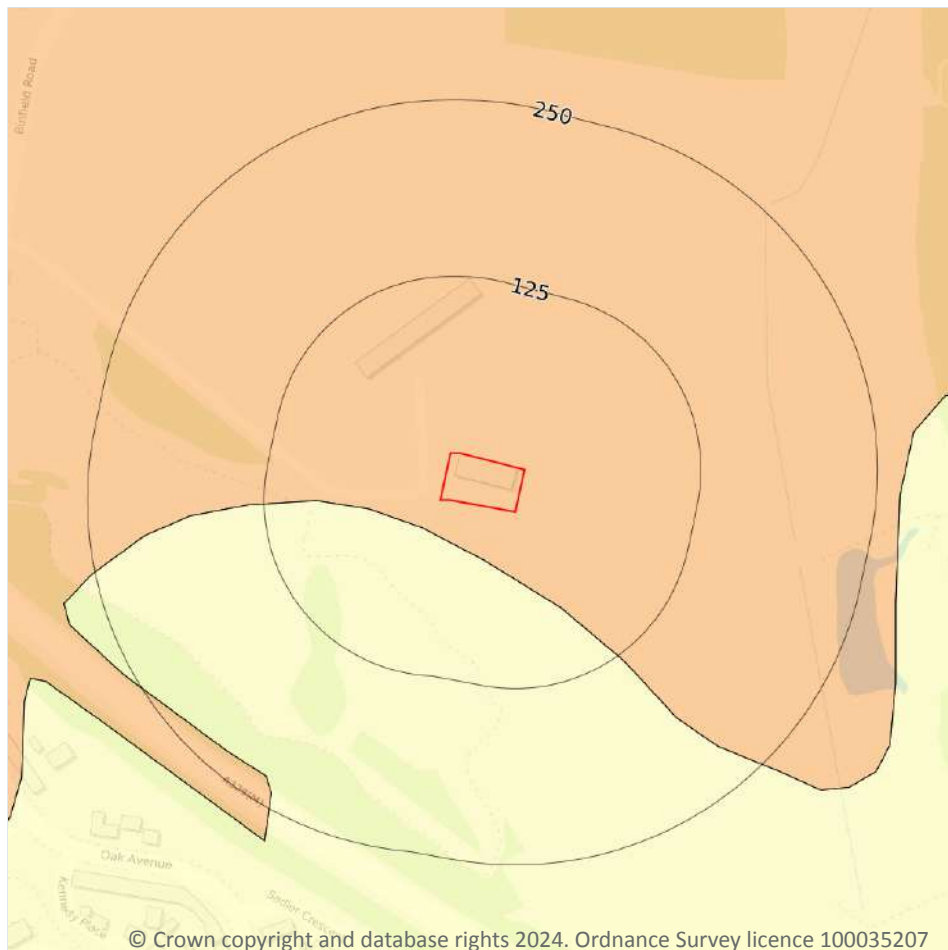
0

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

2

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

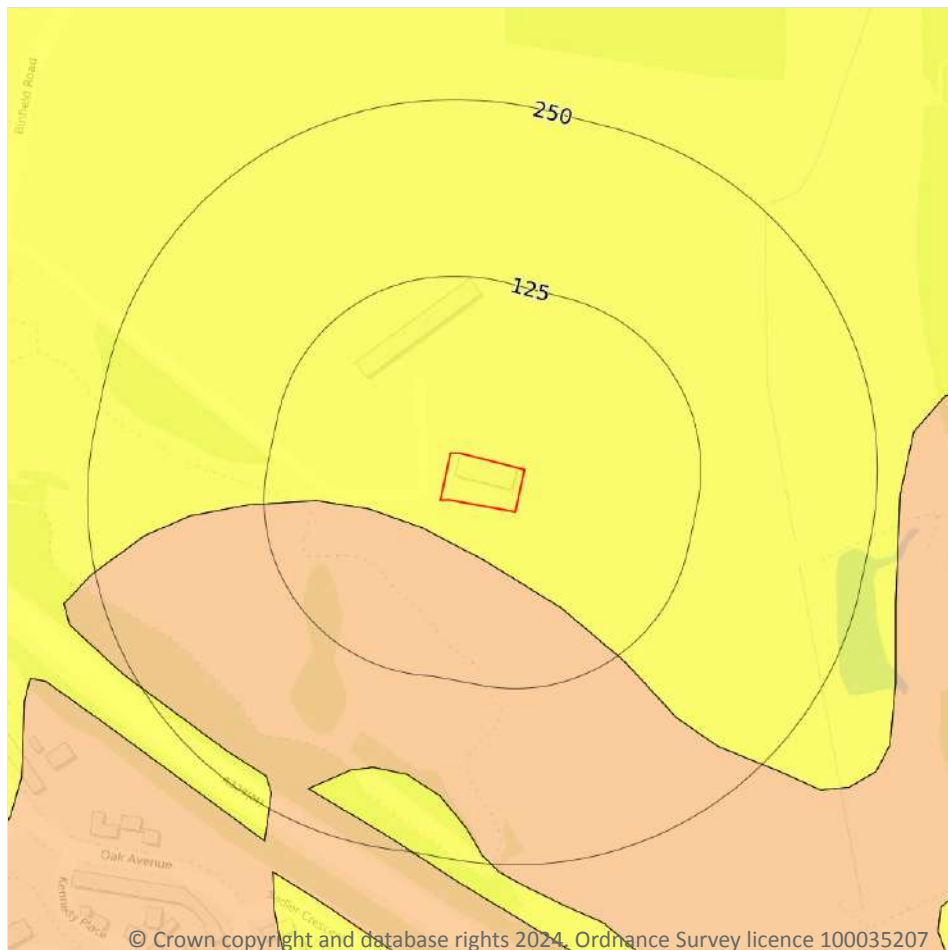
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 74 >](#)

| Location | Hazard rating | Details                                            |
|----------|---------------|----------------------------------------------------|
| On site  | Low           | Ground conditions predominantly medium plasticity. |
| 24m SW   | 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

2

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 75 >](#)

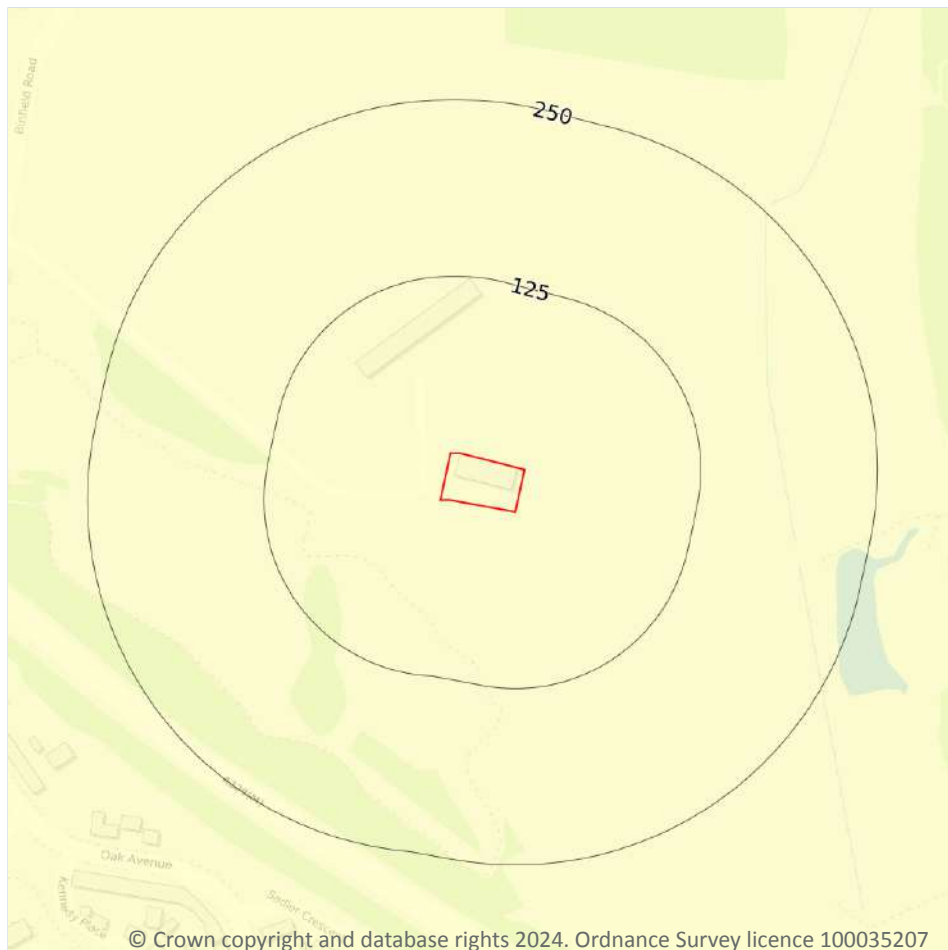
| Location | Hazard rating | Details                                                                                                                                 |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Very low      | Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly. |

| Location | Hazard rating | Details                                                                                                                              |
|----------|---------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 24m SW   | 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.

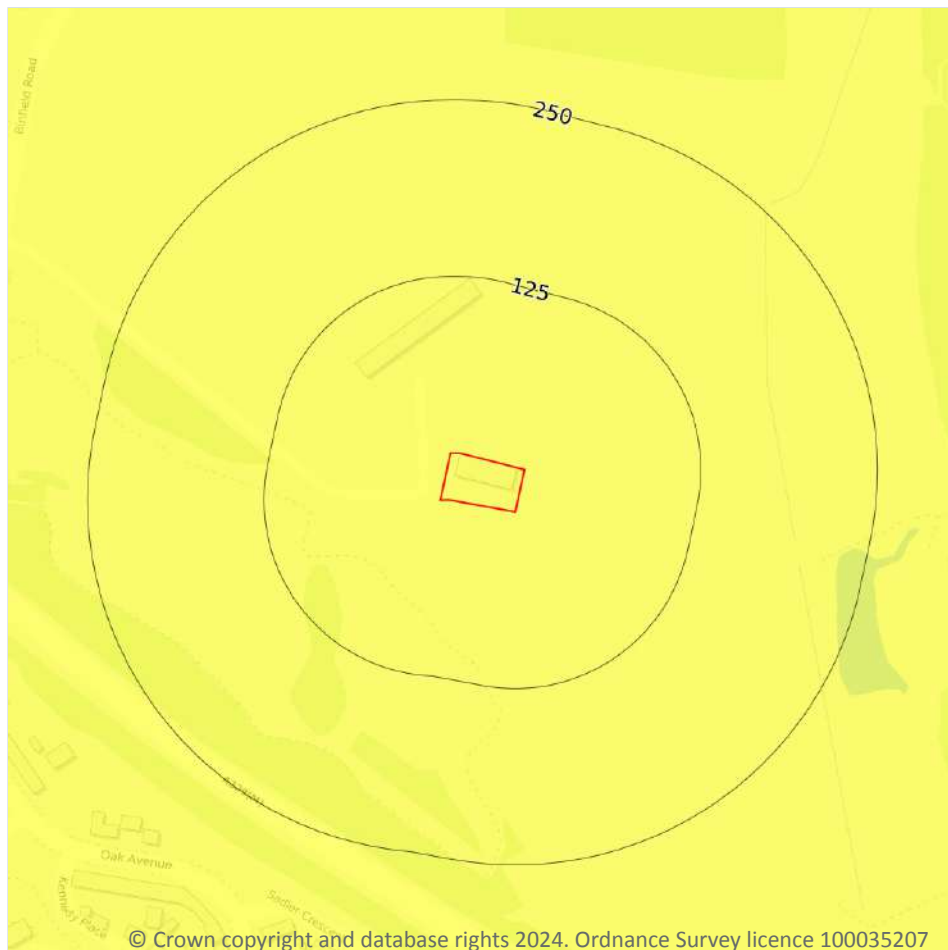
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 77 >](#)

| 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.

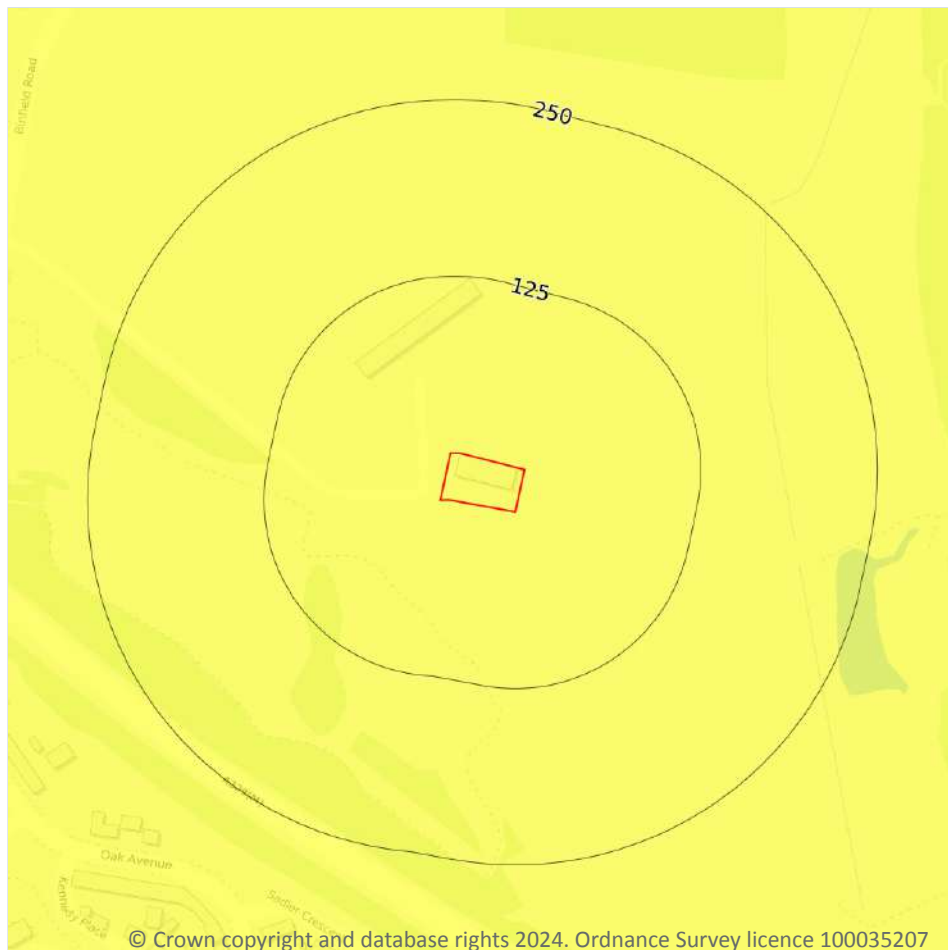
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 78 >](#)

| Location | Hazard rating | Details                                                                                   |
|----------|---------------|-------------------------------------------------------------------------------------------|
| On site  | Very low      | Deposits with potential to collapse when loaded and saturated are unlikely to be present. |

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



## Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.5 Landslides

#### Records within 50m

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.

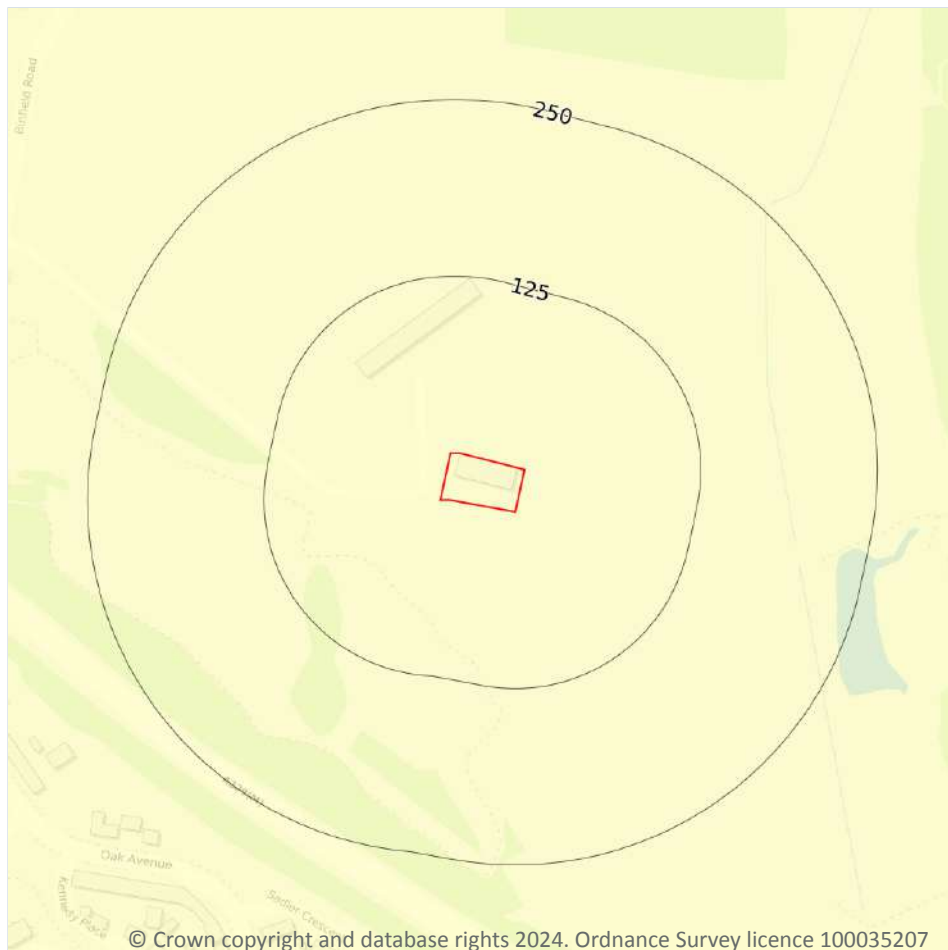
Features are displayed on the Natural ground subsidence - Landslides map on [page 79 >](#)

| 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 80](#)

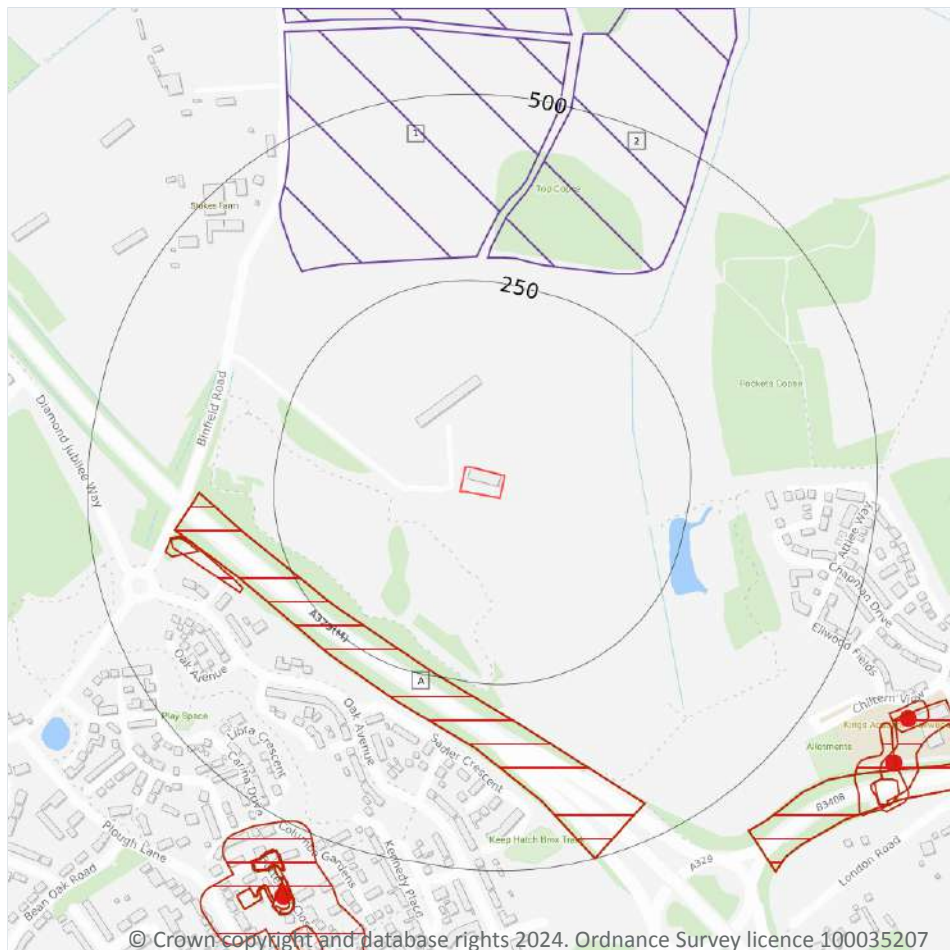
| Location | Hazard rating | Details                                                                                                                                             |
|----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| On site  | Negligible    | Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present. |



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



## 18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- ▭ Surface ground workings
- ▨ Underground workings
- ▭ Underground mining extents
- ▨ Historical mineral planning areas
- ▨ TCA non-coal mining
- Non Coal Mining
- ▨ Sporadic underground mining of restricted extent possible
- ▨ Localised small scale underground mining possible
- ▭ Small scale mining possible
- ▨ Underground mining known or likely within or in close proximity
- ▭ Underground mining known within or in very close proximity

### 18.1 BritPits

#### Records within 500m

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

**2**

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 82 >](#)

| ID | Location | Land Use | Year of mapping | Mapping scale |
|----|----------|----------|-----------------|---------------|
| A  | 221m SW  | Cuttings | 1980            | 1:10000       |
| A  | 221m SW  | Cuttings | 1988            | 1:10000       |

*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

**2**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

Features are displayed on the Mining and ground workings map on [page 82 >](#)



| ID | Location | Site Name   | Mineral         | Type                    | Planning Status | Planning Status Date |
|----|----------|-------------|-----------------|-------------------------|-----------------|----------------------|
| 1  | 281m N   | Stokes Farm | Sand and gravel | Surface mineral working | Refused         | 31/01/69             |
| 2  | 282m N   | Stokes Farm | Sand and gravel | Surface mineral working | Refused         | 31/01/69             |

*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

**1**

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.

| Location | Mineral type |
|----------|--------------|
| 480m SE  | Stone        |

*This data is sourced from Groundsure.*

## 18.10 Mining record office plans

### Records within 500m

**0**

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

*This data is sourced from Groundsure.*

## 18.11 BGS mine plans

### Records within 500m

**0**

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

*This data is sourced from Groundsure.*

## 18.12 Coal mining

### Records on site

**0**

Areas which could be affected by past, current or future coal mining.

*This data is sourced from the Coal Authority.*

### 18.13 Brine areas

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

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

*This data is sourced from the Cheshire Brine Subsidence Compensation Board.*

### 18.14 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

### 18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Groundsure.*

### 18.16 Clay mining

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

Generalised areas that may be affected by kaolin and ball clay extraction.

*This data is sourced from the Kaolin and Ball Clay Association (UK).*

## 19 Ground cavities and sinkholes

### 19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

*This data is sourced from Stantec UK Ltd.*

### 19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

*This data is sourced from Stantec UK Ltd.*

### 19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

*This data is sourced from Groundsure.*

### 19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

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



*This data is sourced from Groundsure.*

## 19.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

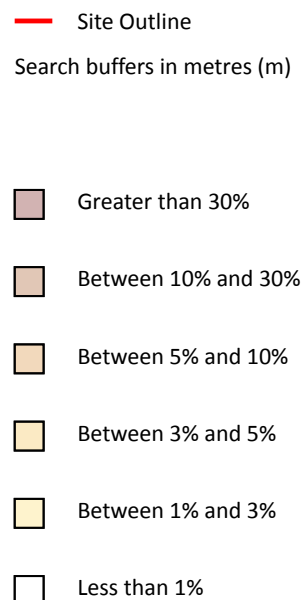
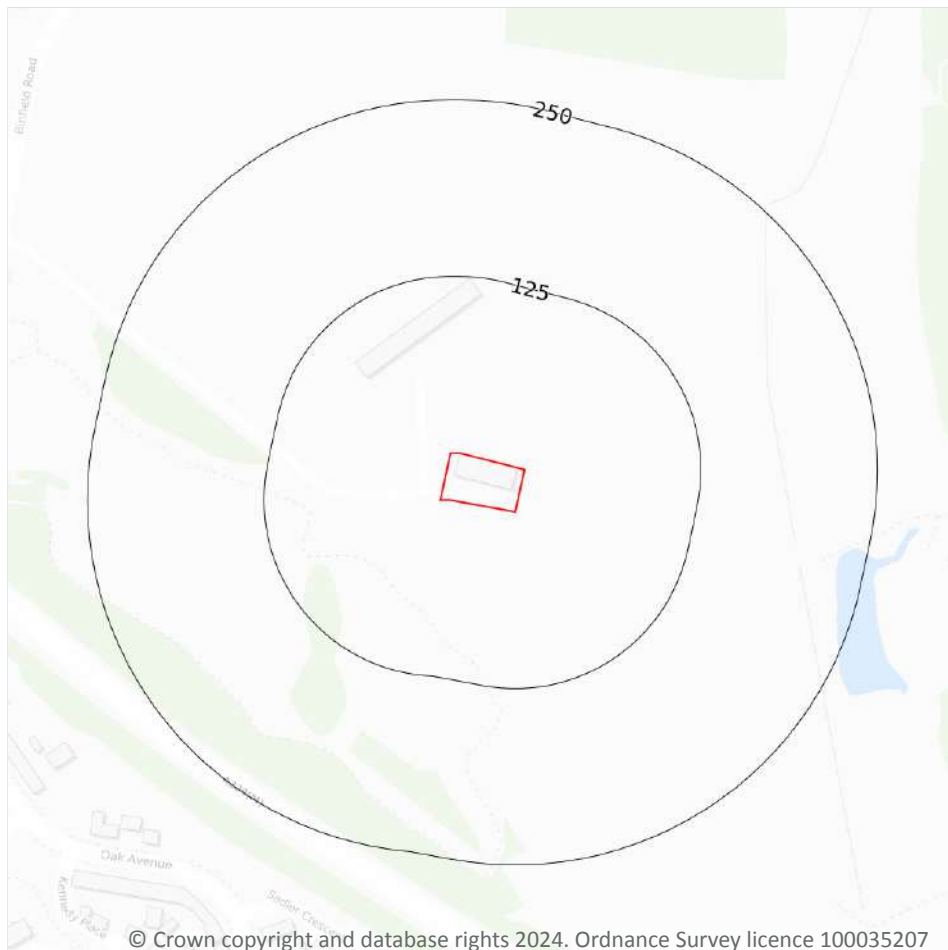
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

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



## 20 Radon



### 20.1 Radon

#### Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 89](#) >

| Location | Estimated properties affected | Radon Protection Measures required |
|----------|-------------------------------|------------------------------------|
| On site  | Less than 1%                  | None                               |



*This data is sourced from the British Geological Survey and UK Health Security Agency.*



## 21 Soil chemistry

### 21.1 BGS Estimated Background Soil Chemistry

Records within 50m

5

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km<sup>2</sup>. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km<sup>2</sup>; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

| Location | Arsenic       | Bioaccessible Arsenic | Lead      | Bioaccessible Lead | Cadmium   | Chromium      | Nickel        |
|----------|---------------|-----------------------|-----------|--------------------|-----------|---------------|---------------|
| On site  | 15 mg/kg      | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site  | 15 mg/kg      | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site  | 15 mg/kg      | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site  | 15 mg/kg      | No data               | 100 mg/kg | 60 mg/kg           | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| 24m SW   | 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 km<sup>2</sup>).

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



## 21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

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



## 22 Railway infrastructure and projects

### 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 1

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

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

*This data is sourced from publicly available information by Groundsure.*

## 22.9 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.*

## 22.10 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> ↗.

## Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: [www.groundsure.com/terms-and-conditions-april-2023/](https://www.groundsure.com/terms-and-conditions-april-2023/) ↗.



## APPENDIX C

### HISTORICAL MAPPING

#### Site Details:

CHICKEN SHED, STOKES FARM,  
BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** County Series

**Map date:** 1871

**Scale:** 1:2,500

**Printed at:** 1:2,500



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

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

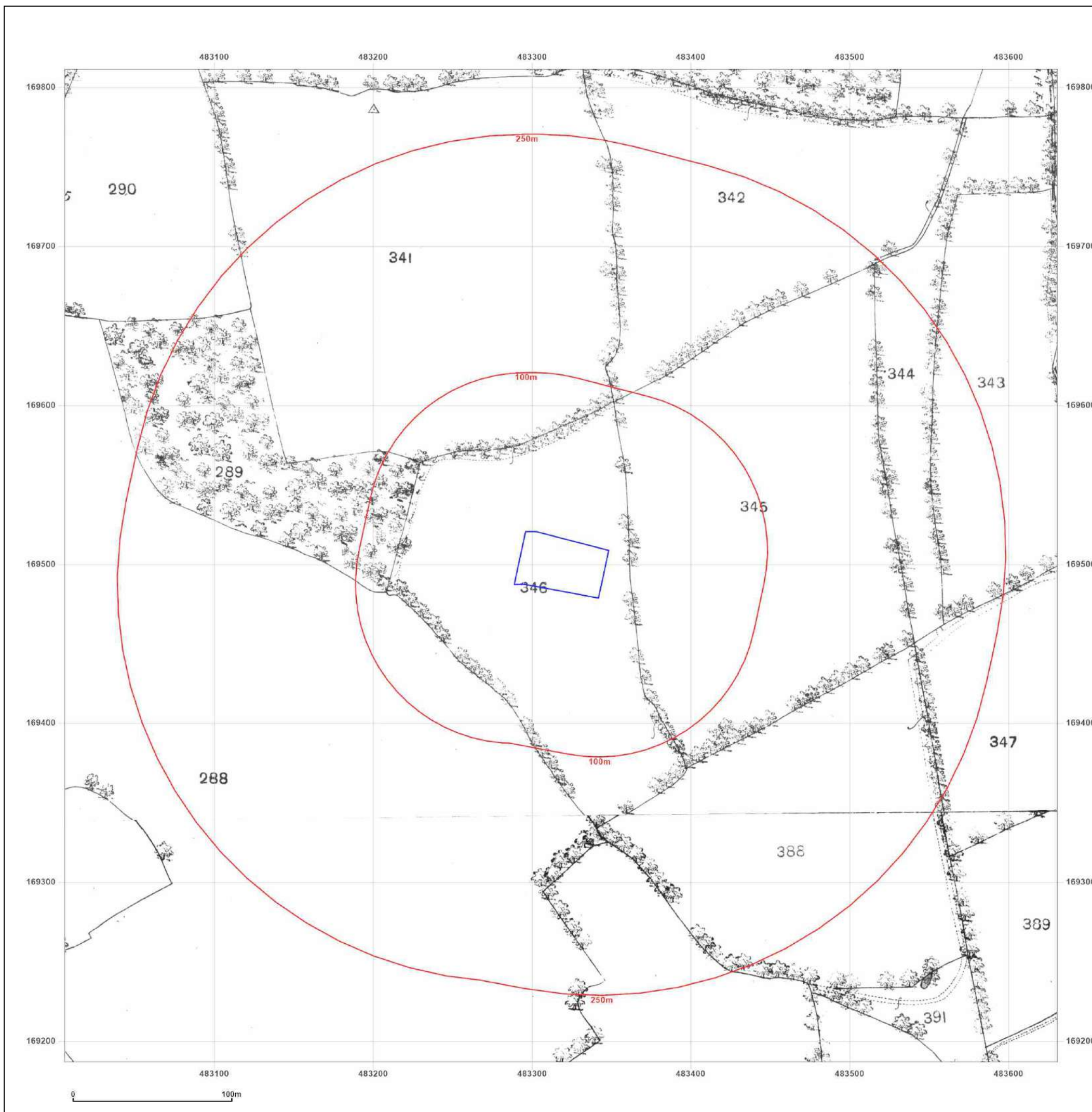


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#### Site Details:

CHICKEN SHED, STOKES FARM,  
BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** County Series

**Map date:** 1899

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1899  
Revised 1899  
Edition N/A  
Copyright N/A  
Levelled N/A

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Revised 1899  
Edition N/A  
Copyright N/A  
Levelled N/A

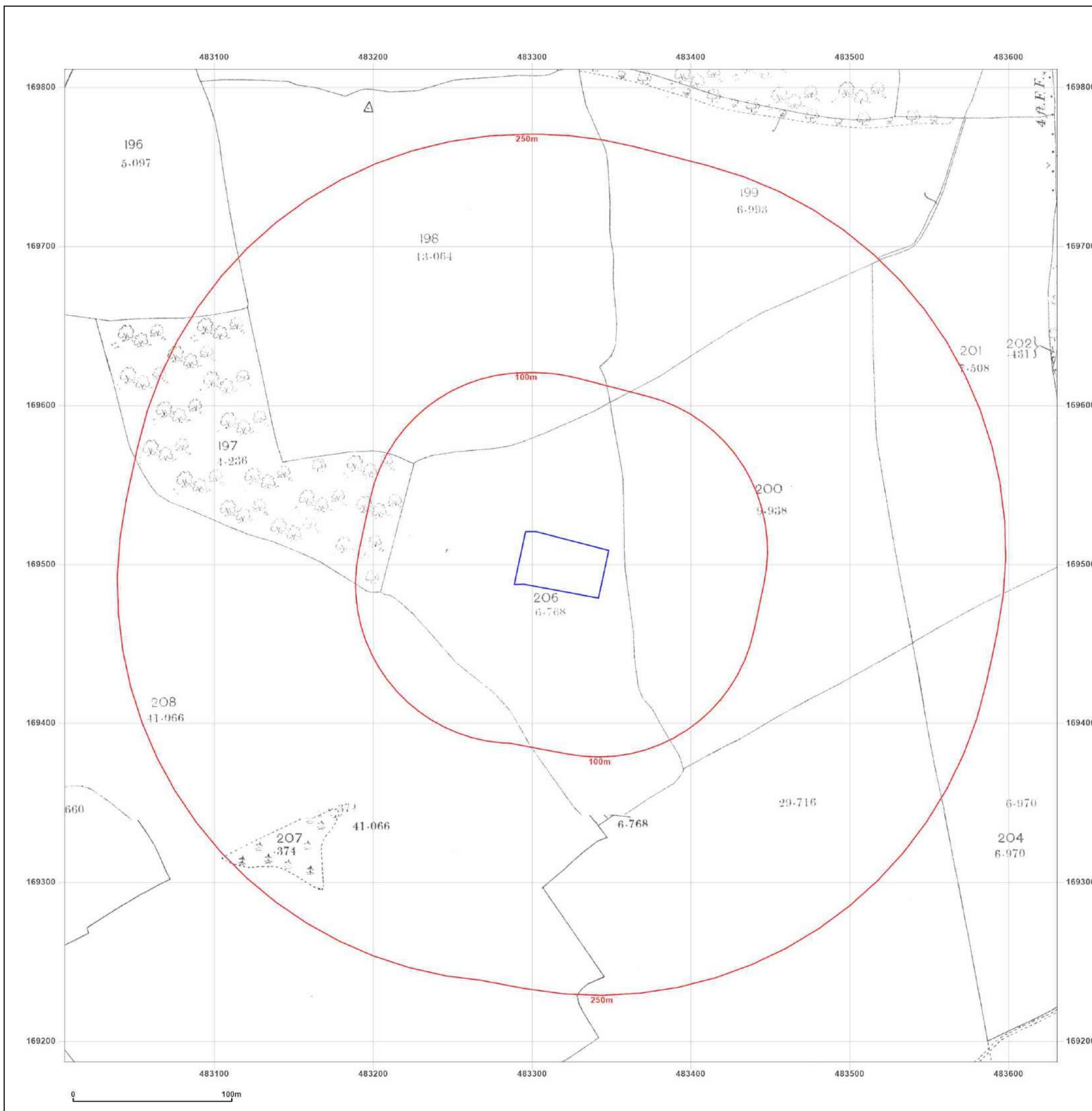


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#### Site Details:

CHICKEN SHED, STOKES FARM,  
BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** County Series

**Map date:** 1912

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1912  
Revised 1912  
Edition N/A  
Copyright N/A  
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Surveyed 1912  
Revised 1912  
Edition N/A  
Copyright N/A  
Levelled N/A

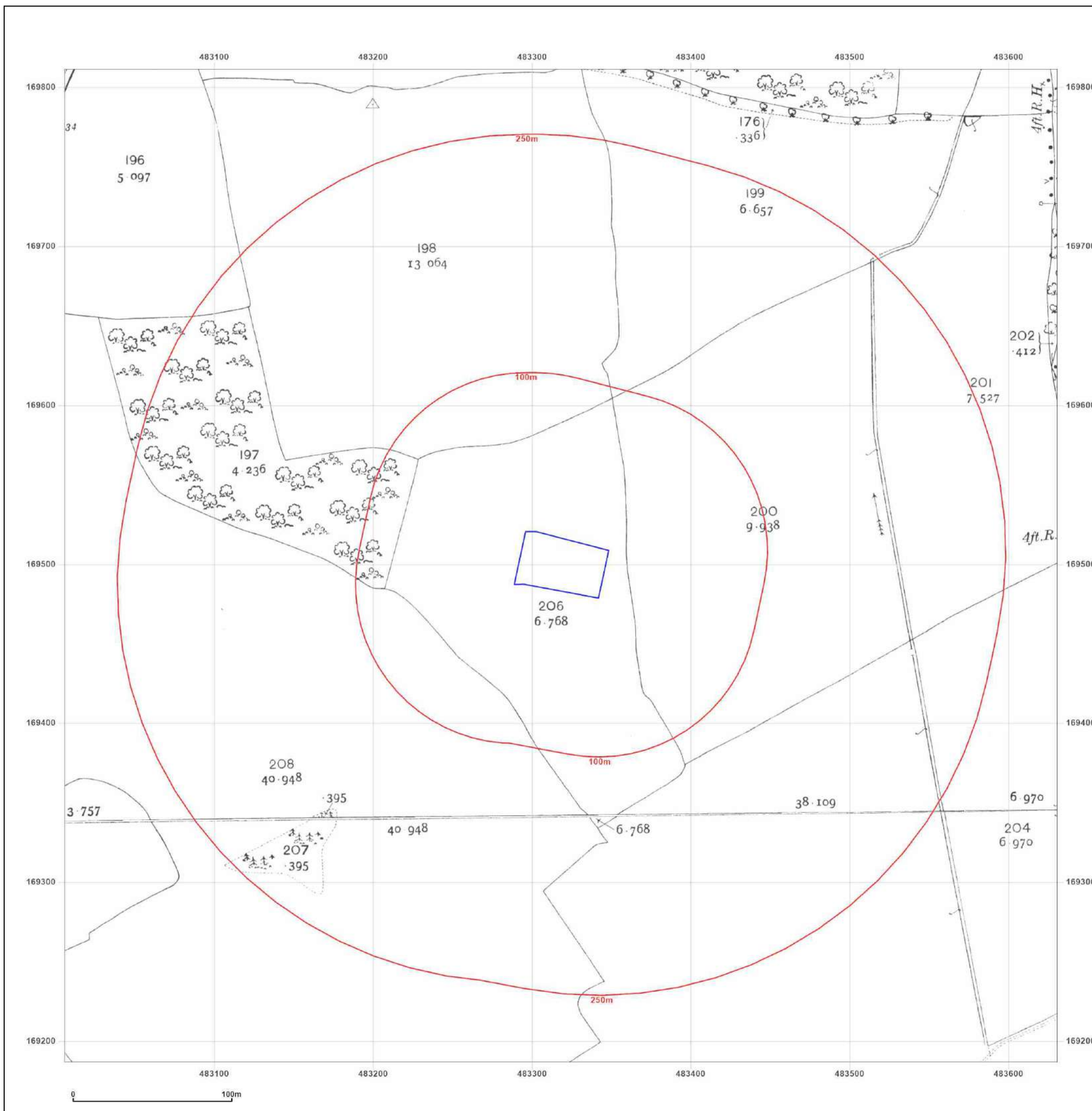


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#### Site Details:

CHICKEN SHED, STOKES FARM,  
BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro.  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** County Series

**Map date:** 1933

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1933  
Revised 1933  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1933  
Revised 1933  
Edition N/A  
Copyright N/A  
Levelled N/A

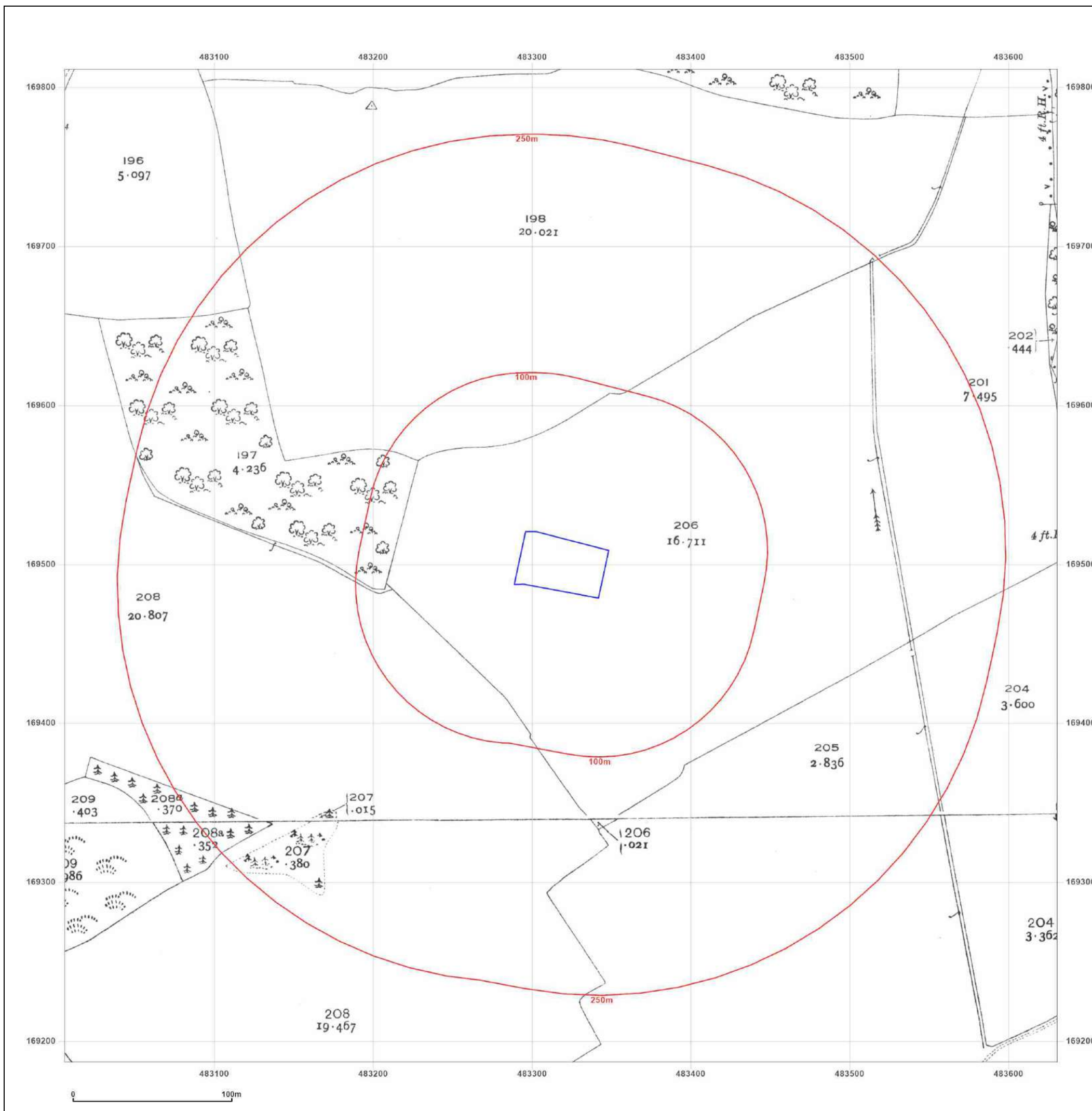


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#### Site Details:

CHICKEN SHED, STOKES FARM,  
BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 1965

**Scale:** 1:2,500

**Printed at:** 1:2,500



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

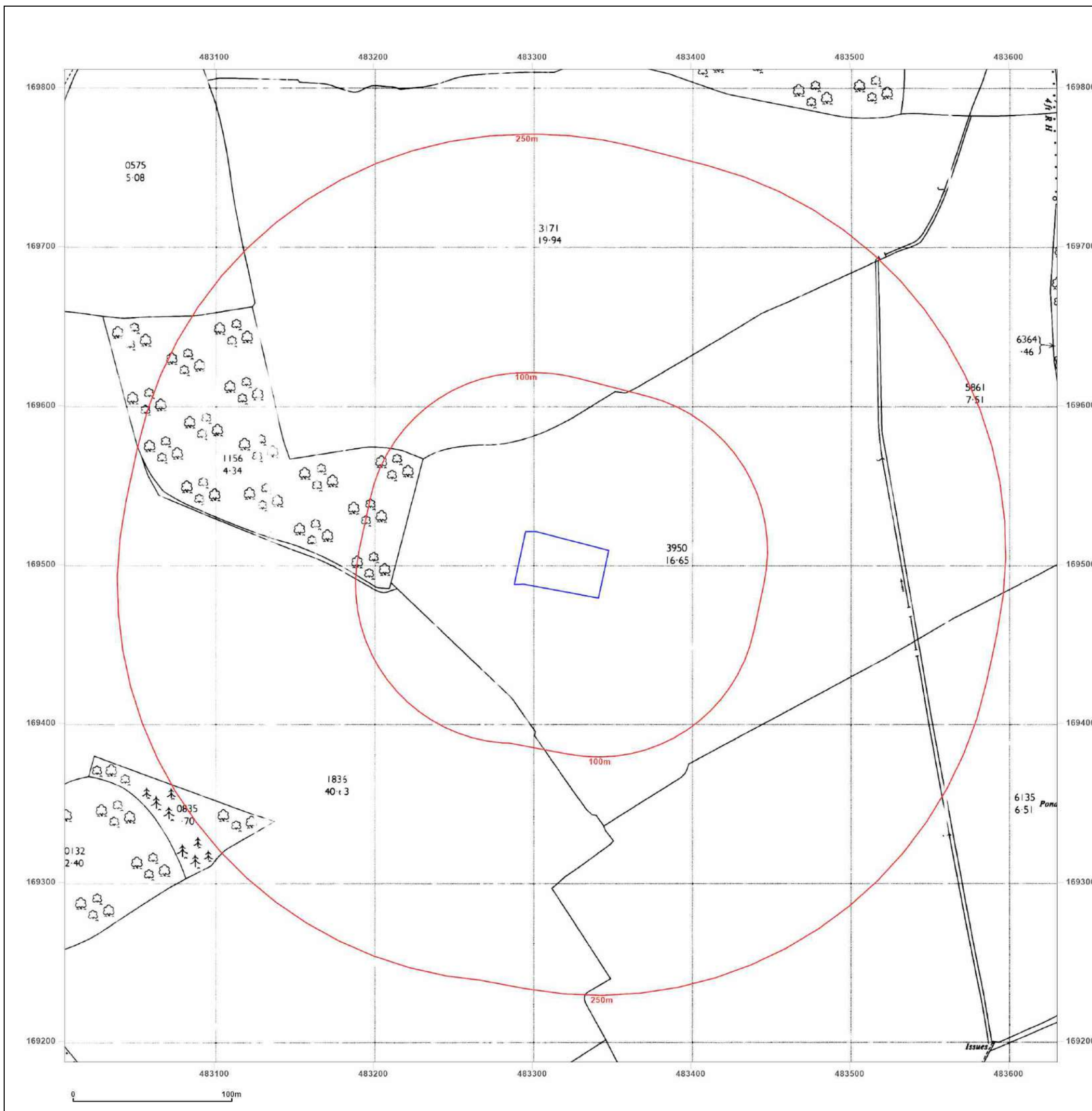


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**Site Details:**

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WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 1965

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1964  
Revised 1964  
Edition N/A  
Copyright 1965  
Levelled 1951

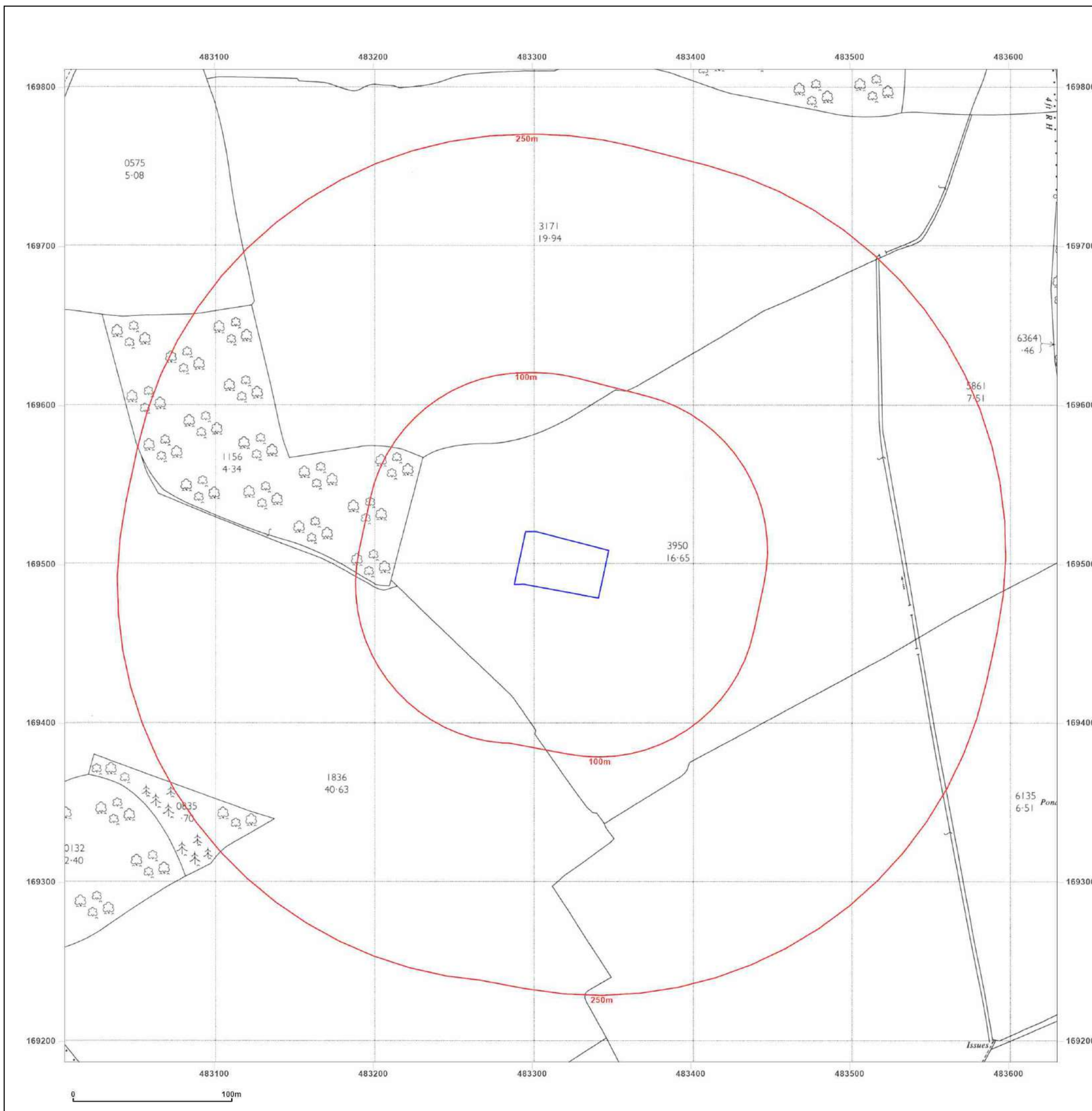


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#### Site Details:

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WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 1978

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1977  
Revised 1977  
Edition N/A  
Copyright 1978  
Levelled 1964

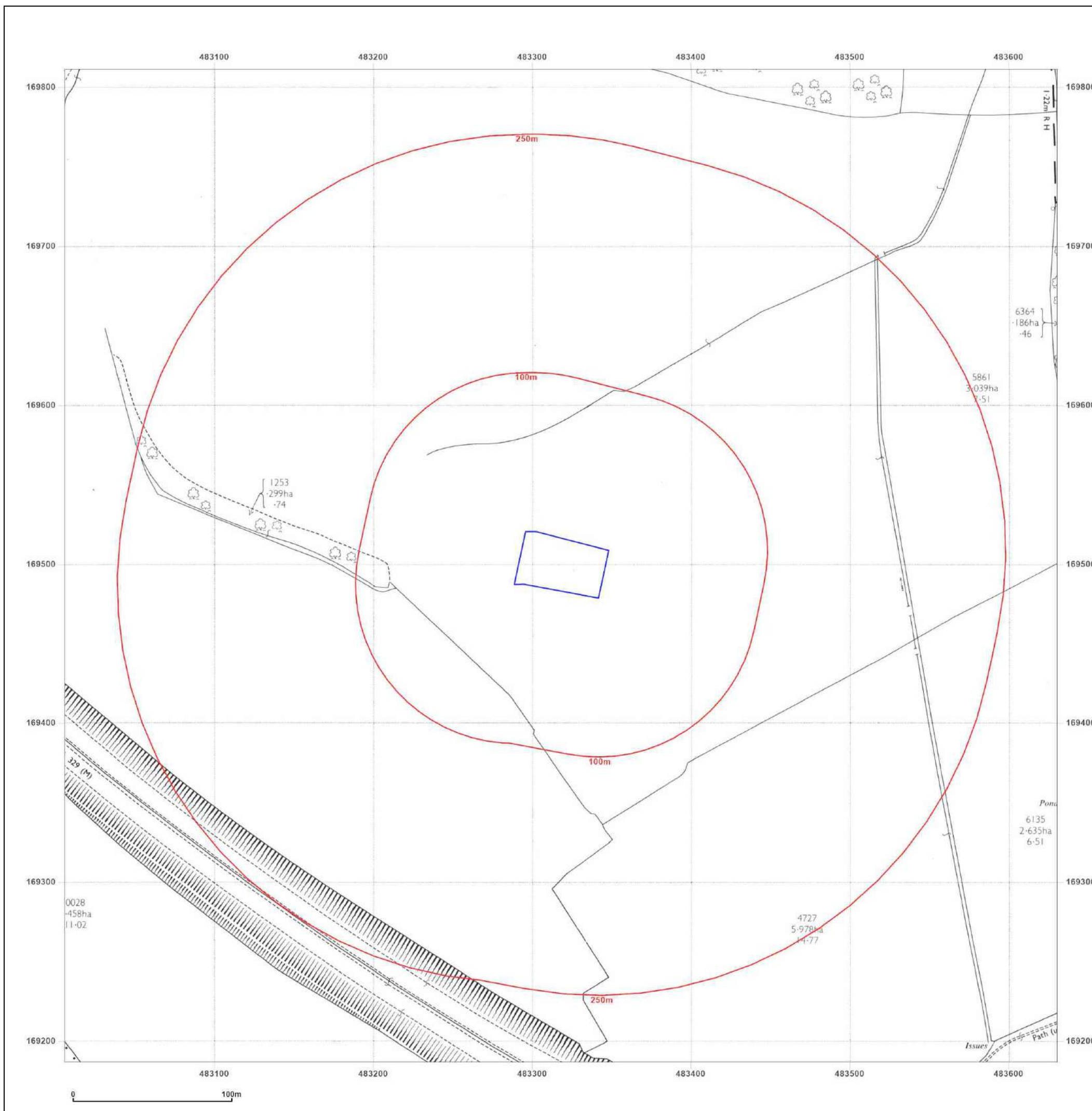


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Site Details:

CHICKEN SHED, STOKES FARM,  
BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

Client Ref: CW7224 - Chicken Shed, Stokes Farm, Binfield Ro.  
Report Ref: GS-D2L-N9S-LEX-I26  
Grid Ref: 483318, 169499

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1993  
Revised N/A  
Edition N/A  
Copyright 1993  
Levelled N/A

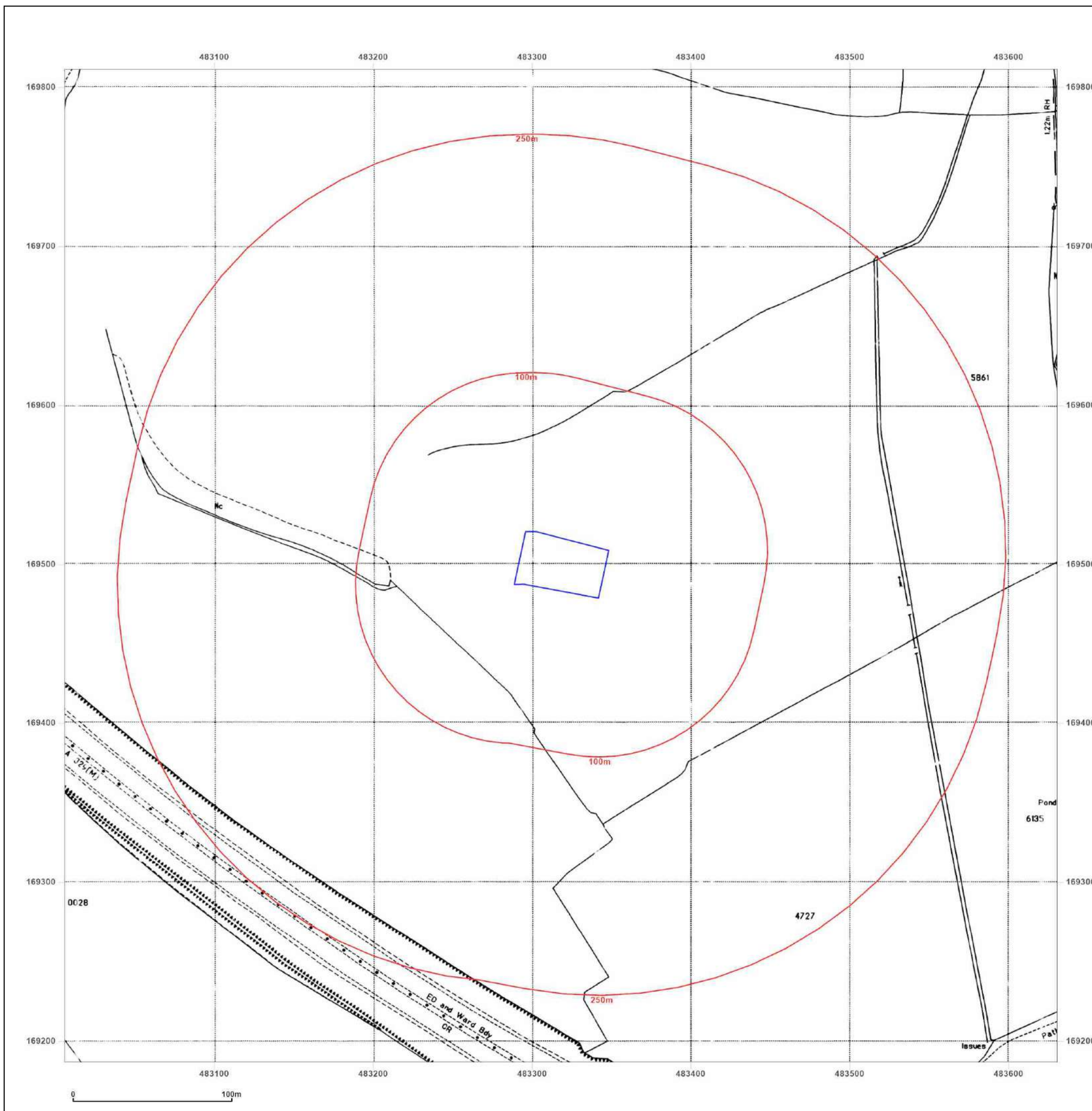


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**Site Details:**

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro.  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** LandLine

**Map date:** 2003

**Scale:** 1:1,250

**Printed at:** 1:1,250



2003

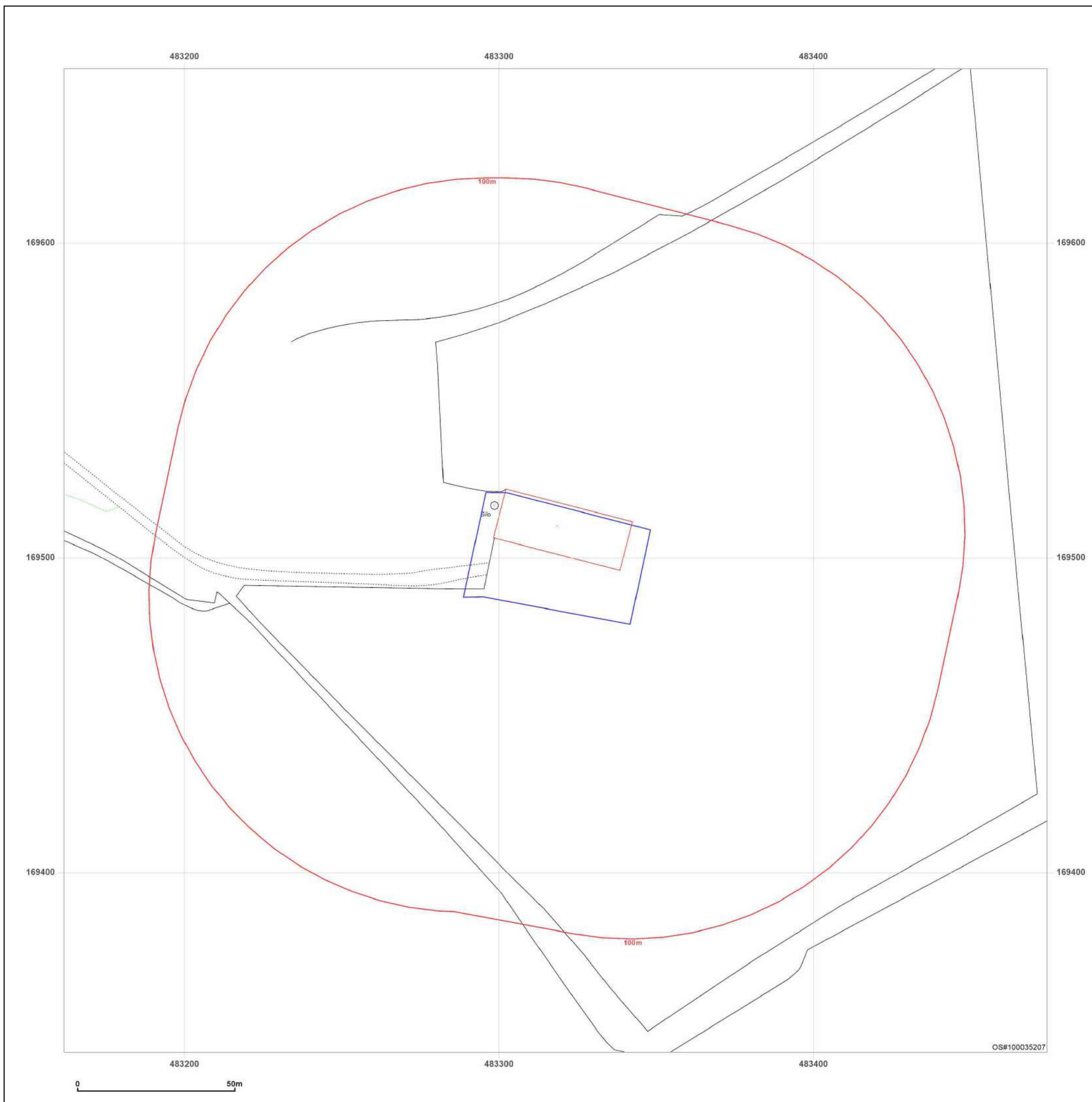


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#### Site Details:

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**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

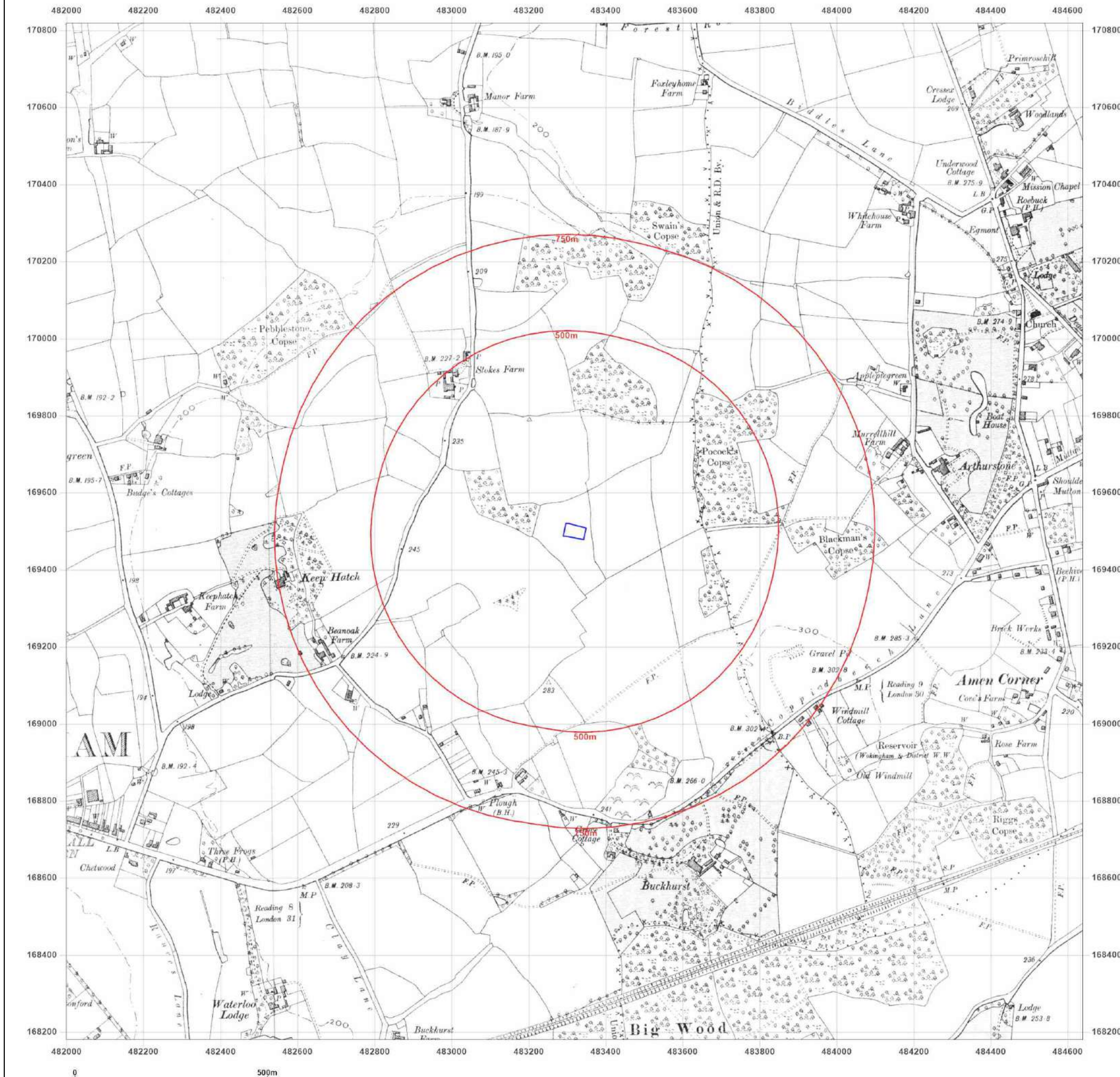


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#### Site Details:

CHICKEN SHED, STOKES FARM,  
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WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** County Series

**Map date:** 1898

**Scale:** 1:10,560

**Printed at:** 1:10,560



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

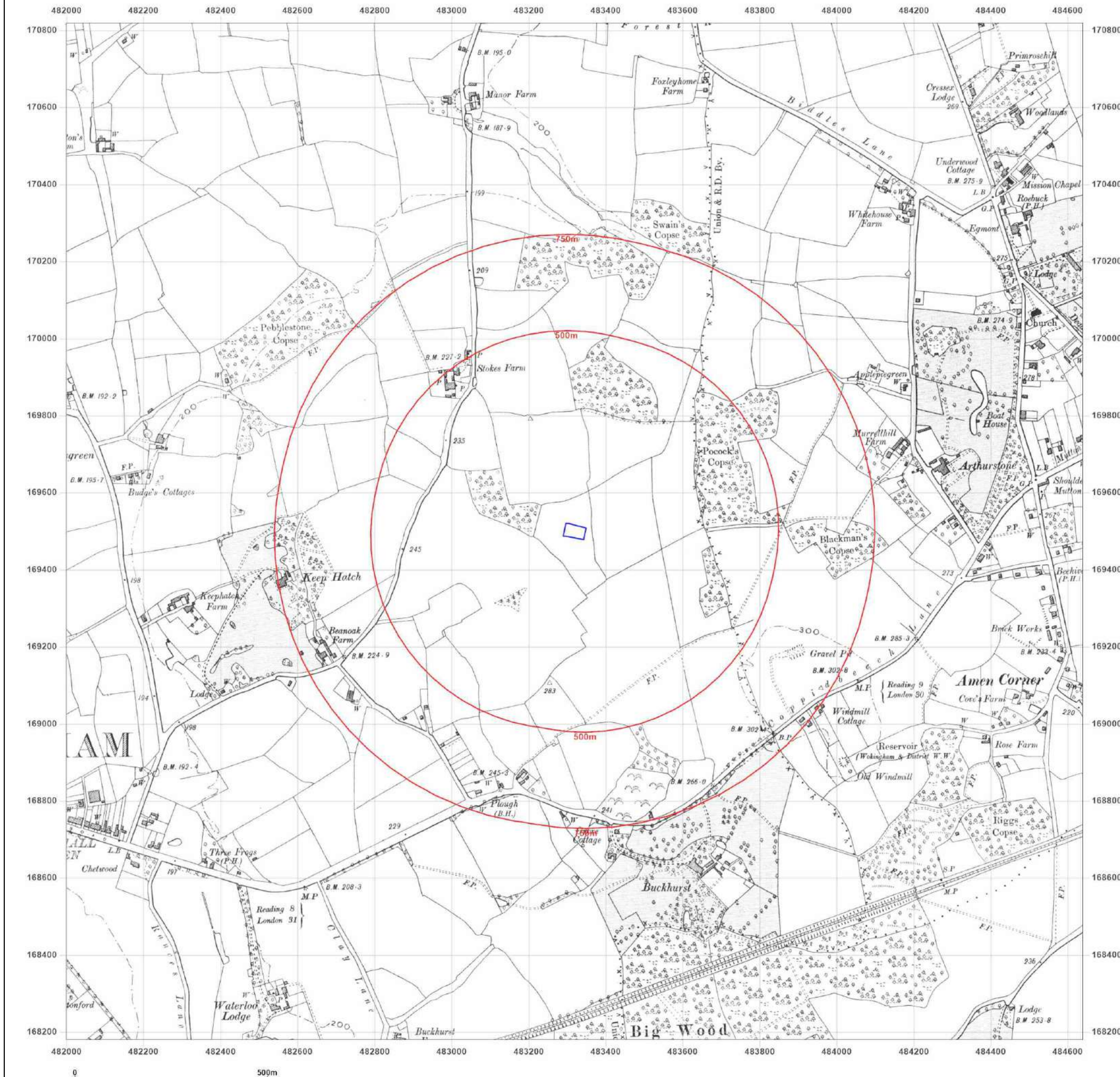


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#### Site Details:

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BINFIELD ROAD, BINFIELD,  
WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** County Series

**Map date:** 1932

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1871  
Revised 1932  
Edition N/A  
Copyright N/A  
Levelled N/A

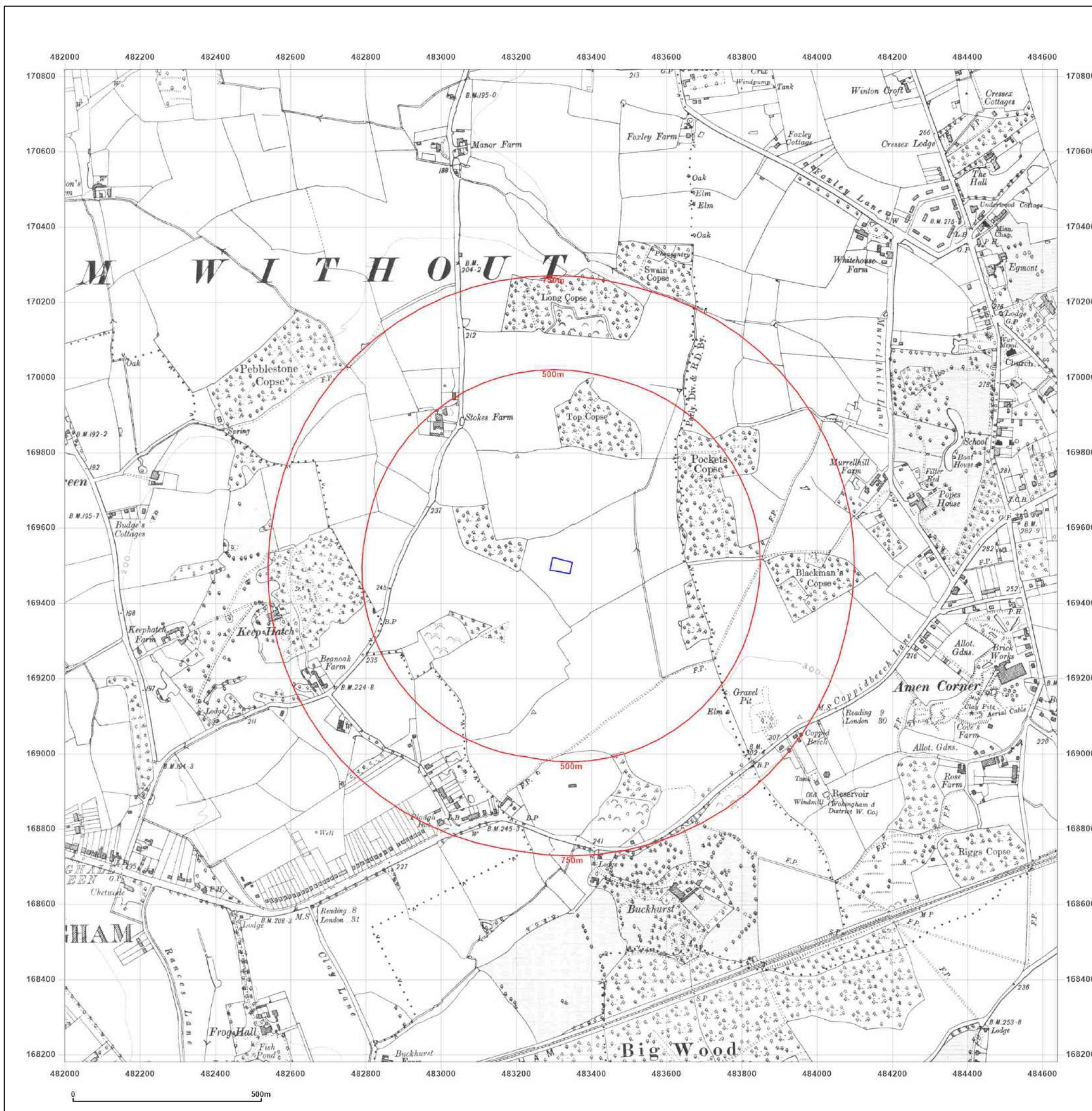


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**Site Details:**

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**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

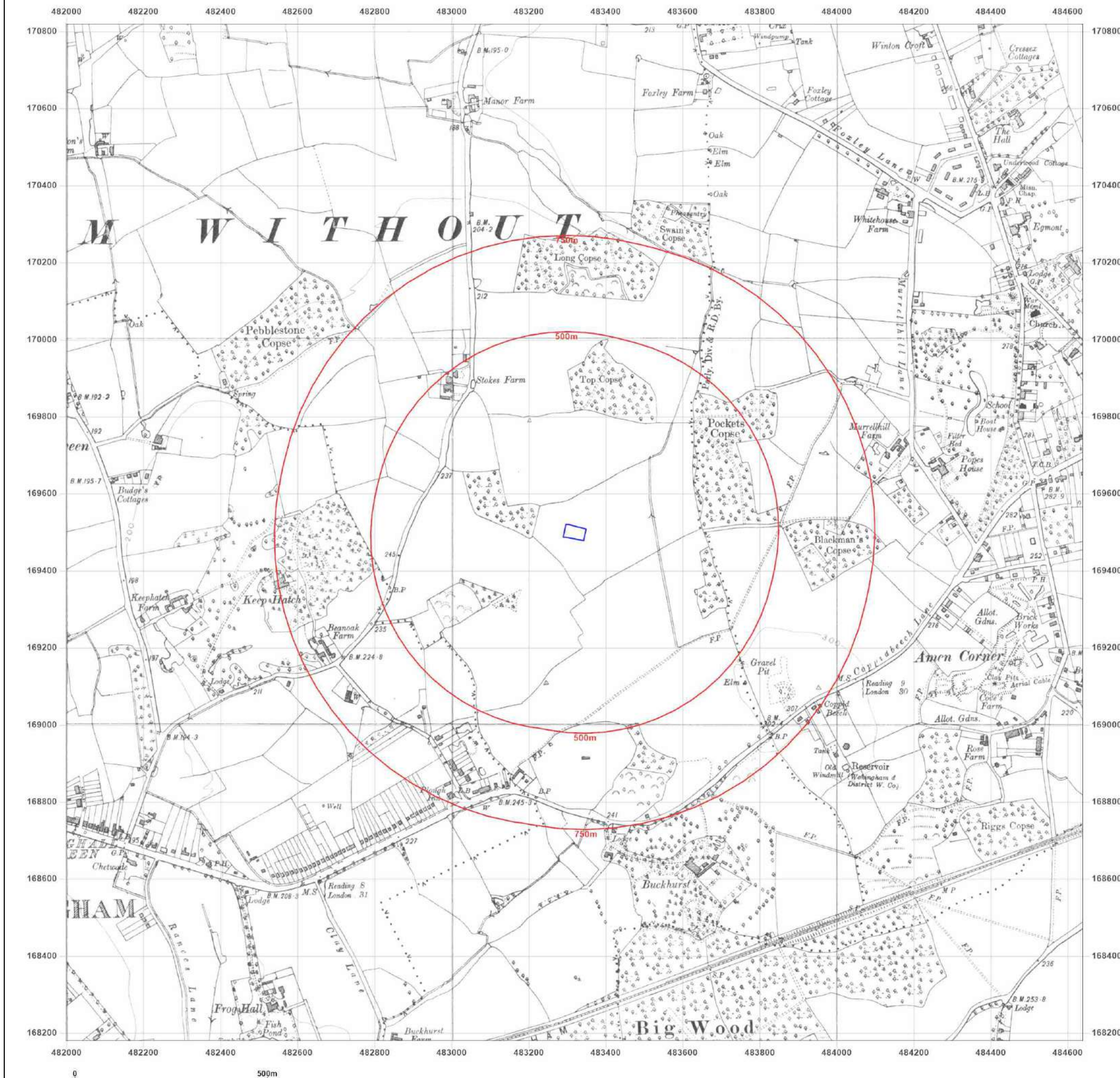


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#### Site Details:

CHICKEN SHED, STOKES FARM,  
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WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** Provisional

**Map date:** 1959-1961

**Scale:** 1:10,560

**Printed at:** 1:10,560



Surveyed 1956  
Revised 1959  
Edition N/A  
Copyright N/A  
Levelled N/A

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

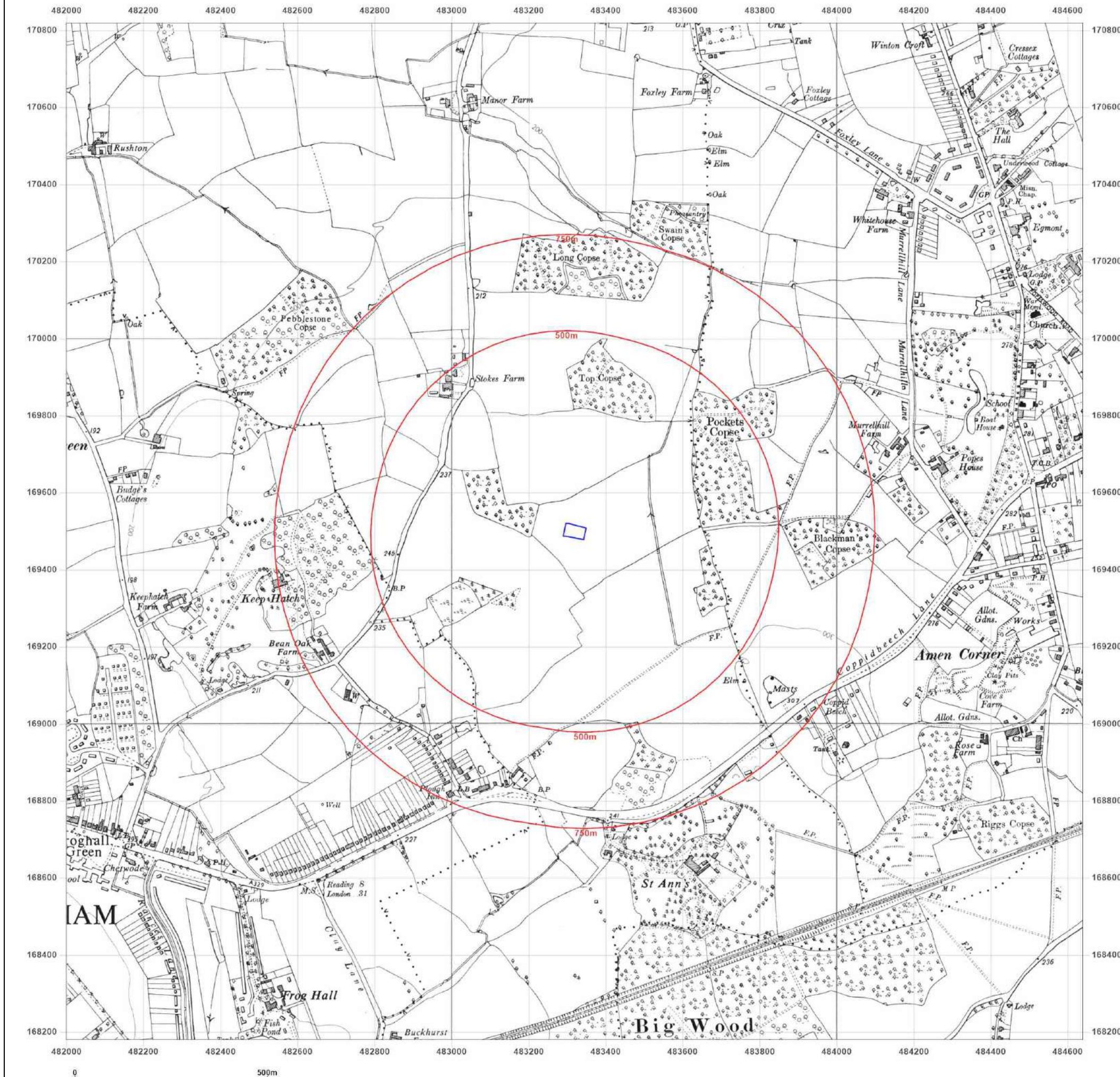


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#### Site Details:

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WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

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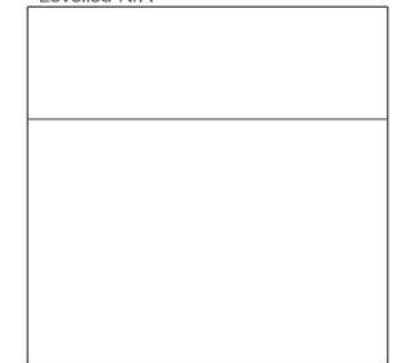
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**Printed at:** 1:10,560



Surveyed 1956  
Revised 1972  
Edition N/A  
Copyright N/A  
Levelled N/A

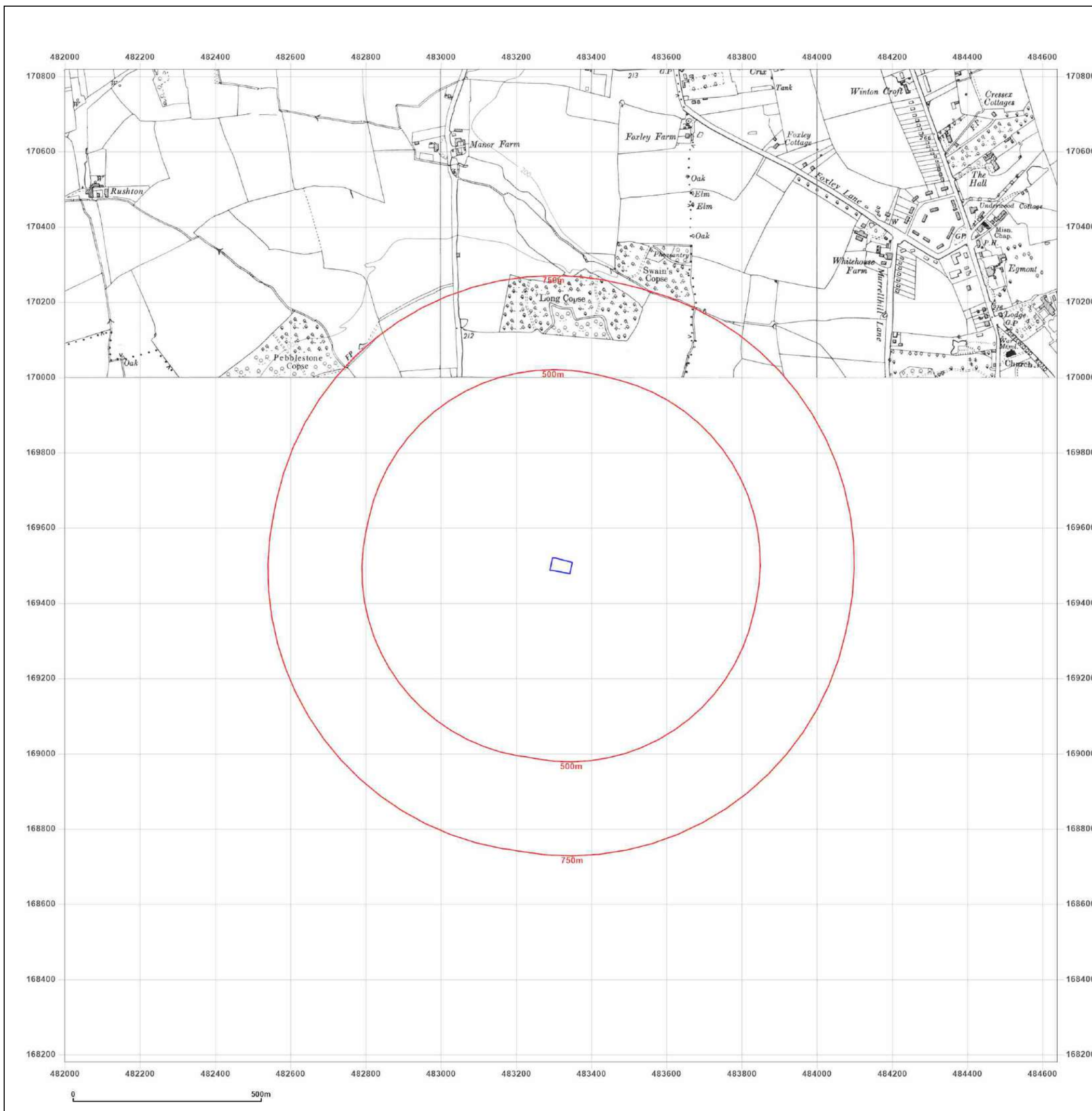


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**Site Details:**

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WOKINGHAM, RG40 5PR

**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 1975-1980

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1972  
Revised 1975  
Edition N/A  
Copyright 1975  
Levelled 1971

Surveyed 1973  
Revised 1980  
Edition N/A  
Copyright N/A  
Levelled N/A

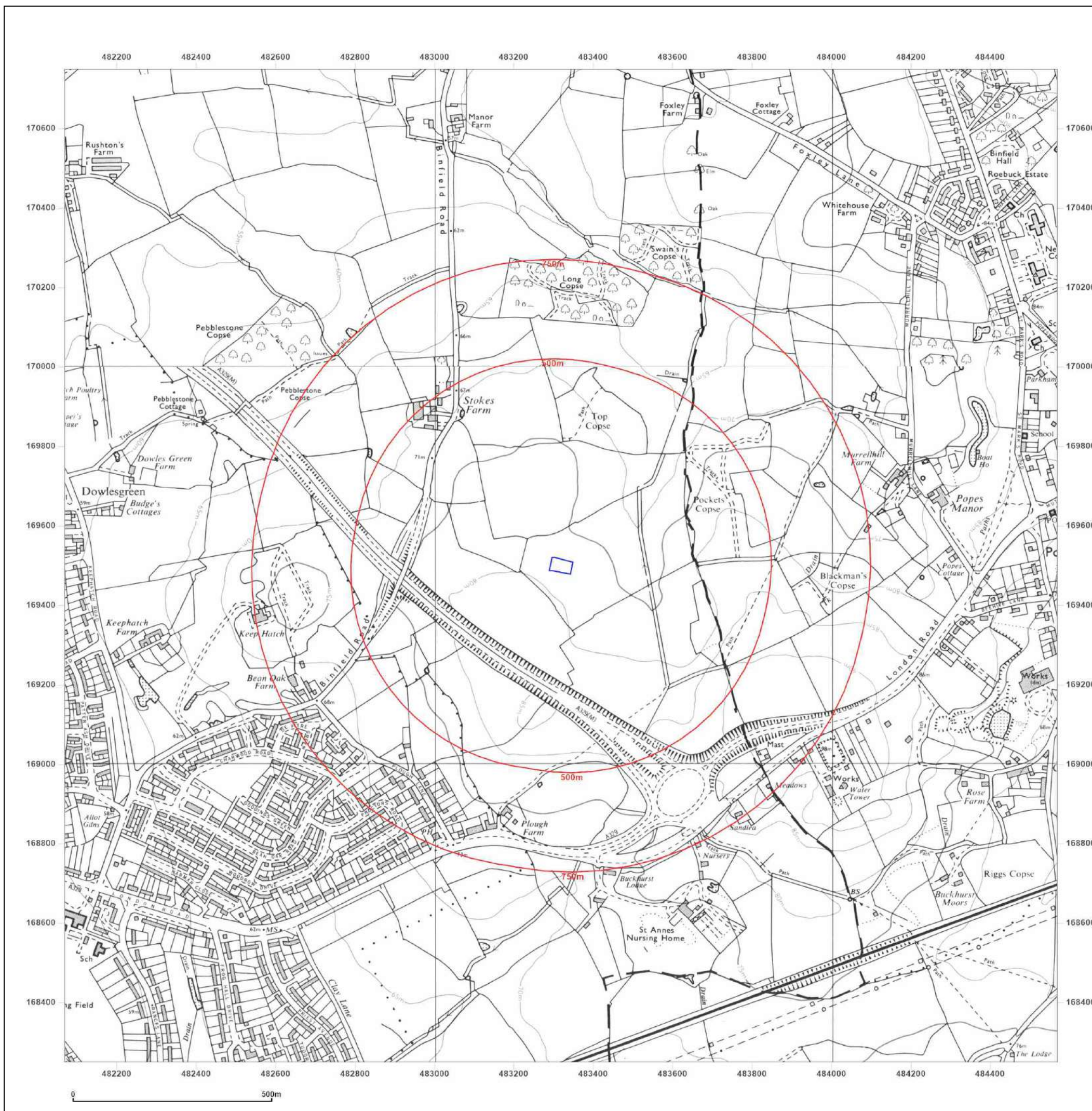


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#### Site Details:

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Road  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 1975-1980

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1972  
Revised 1980  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1973  
Revised 1975  
Edition N/A  
Copyright 1975  
Levelled 1973

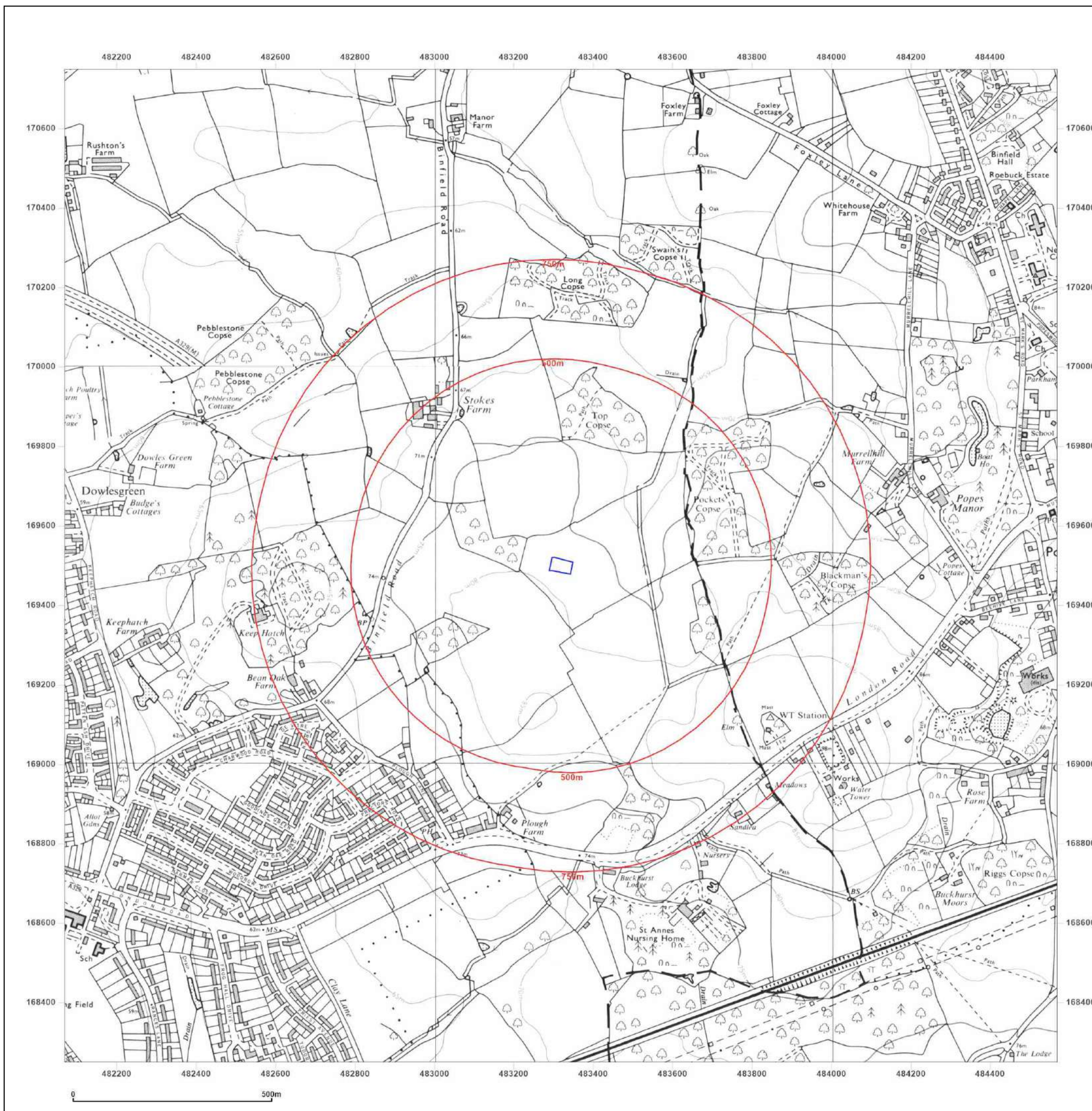


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**Site Details:**

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro.  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 1988

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1977  
Revised 1988  
Edition N/A  
Copyright N/A  
Levelled N/A

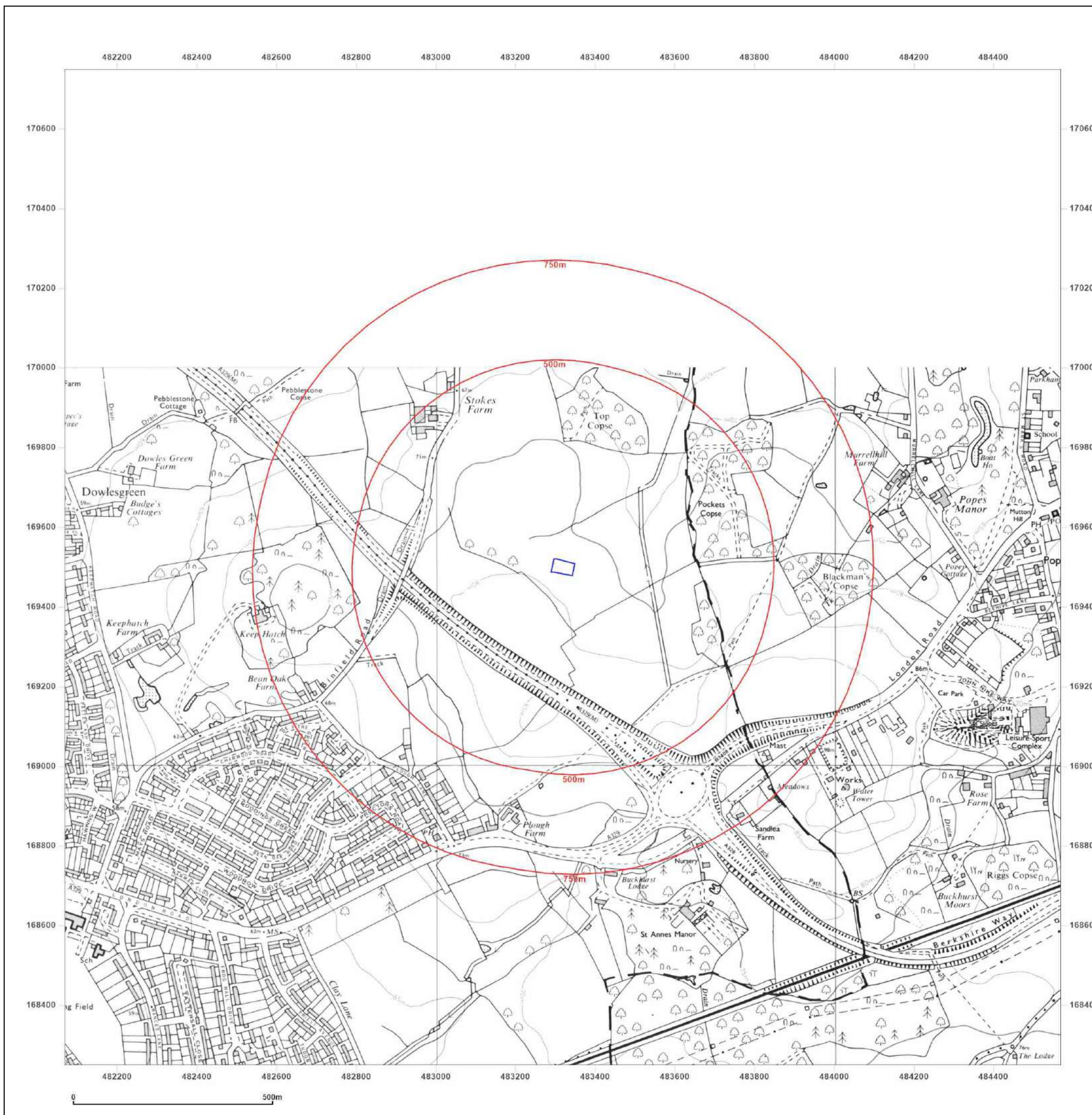


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#### Site Details:

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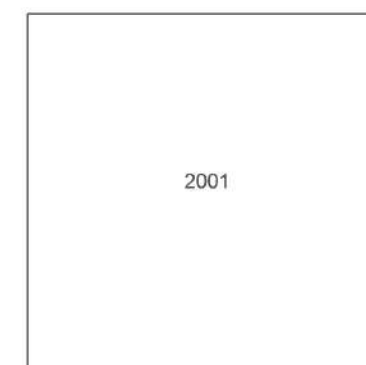
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**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 2001

**Scale:** 1:10,000

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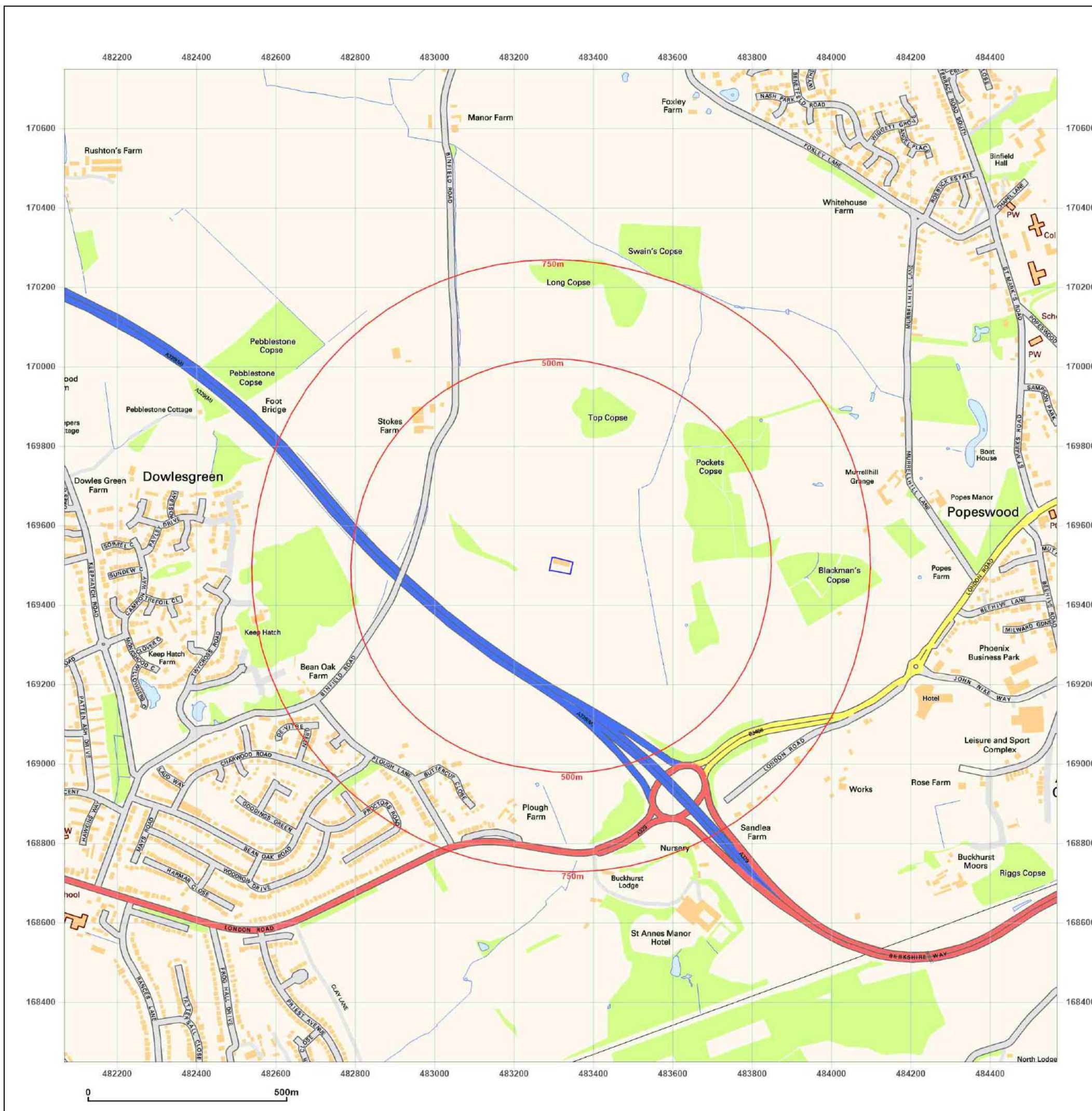


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#### Site Details:

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

**Map Name:** National Grid

**Map date:** 2010

**Scale:** 1:10,000

**Printed at:** 1:10,000



2010

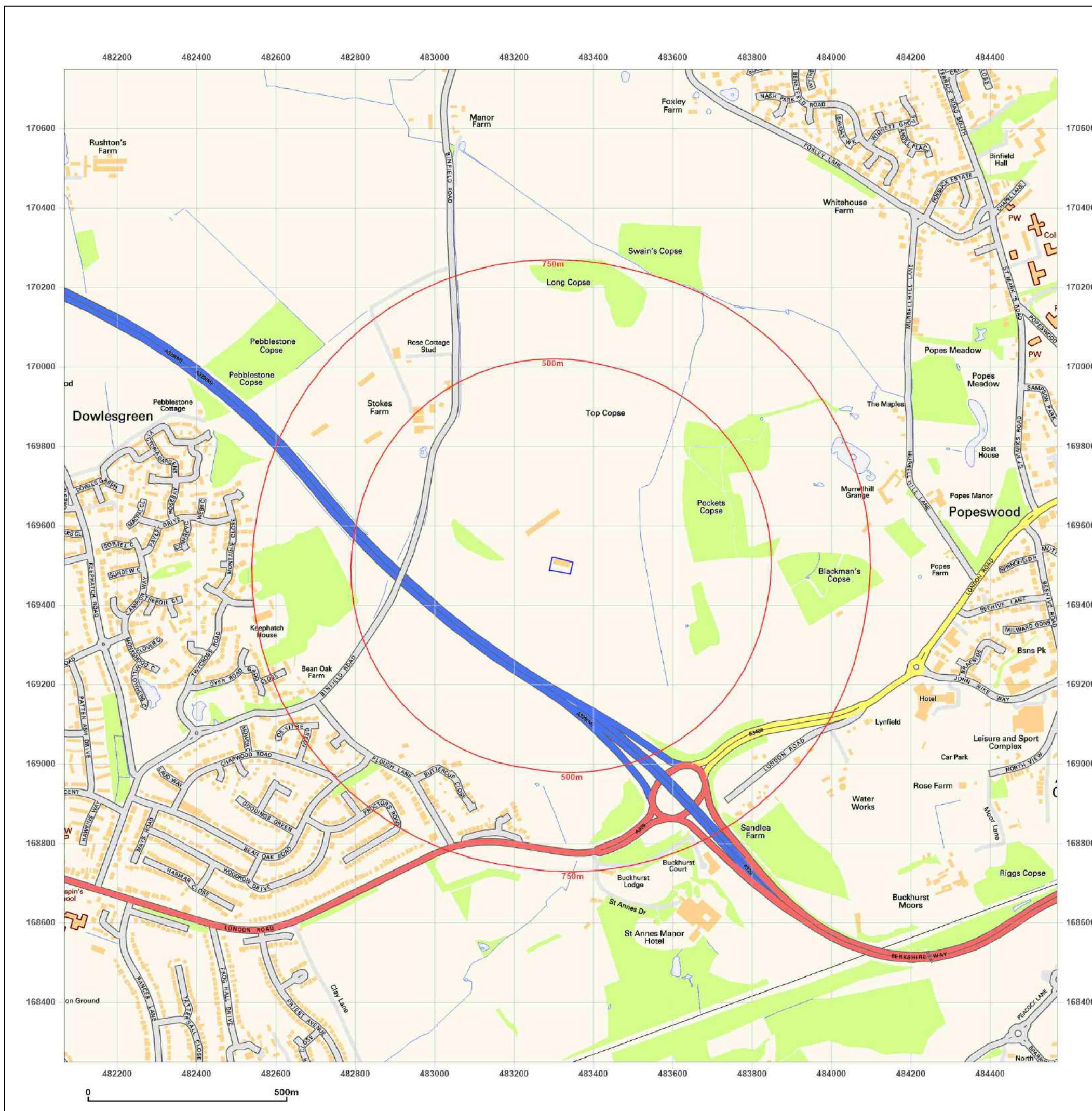


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#### Site Details:

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**Client Ref:** CW7224 - Chicken Shed, Stokes Farm, Binfield Ro  
**Report Ref:** GS-D2L-N9S-LEX-I26  
**Grid Ref:** 483318, 169499

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**Map date:** 2024

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**Printed at:** 1:10,000



2024

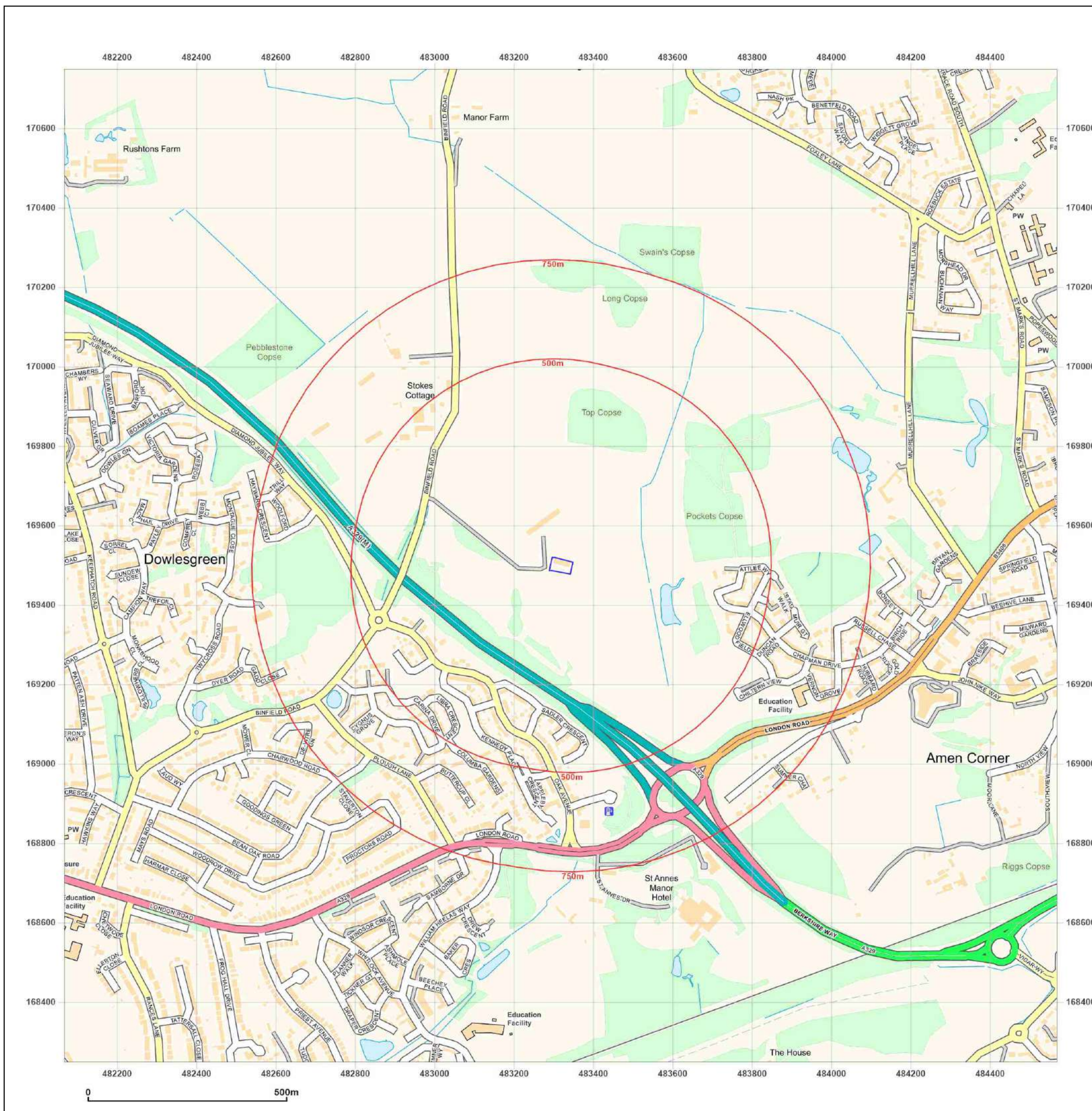


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## APPENDIX D

### ANALYTICAL RESULTS

Barn at Stokes Farm, Binfield Road, Binfield  
Comparative Residential Values

|                         |             |      |       | Lab No                      | 2415547                     | 2415548                      | 2415549    | 2415550    |                 |        |        |
|-------------------------|-------------|------|-------|-----------------------------|-----------------------------|------------------------------|------------|------------|-----------------|--------|--------|
|                         |             |      |       | Sample ID                   | TP1                         | TP2                          | TP3        | TP4        |                 |        |        |
|                         |             |      |       | Depth                       | 0.15                        | 0.2                          | 0.25       | 0.2        |                 |        |        |
|                         |             |      |       | Sample Type                 | SOIL                        | SOIL                         | SOIL       | SOIL       |                 |        |        |
|                         |             |      |       | Sampling Date               | 17/10/2024                  | 17/10/2024                   | 17/10/2024 | 17/10/2024 |                 |        |        |
|                         |             |      |       | Sampling Time               |                             |                              |            |            |                 |        |        |
| Test                    | Method      | LOD  | Units | C4SL *                      | S4UL *                      | CIEH/LQM Criteria            | Other      |            |                 |        |        |
|                         |             |      |       | Residential with home-grown | Residential with home-grown | (6% SOM Metals - Residential |            |            |                 |        |        |
|                         |             |      |       |                             |                             |                              |            |            |                 |        |        |
| Metals                  |             |      |       |                             |                             |                              |            |            |                 |        |        |
| Arsenic                 | DETSC 2301# | 0.2  | mg/kg | 37                          | 37                          |                              |            | 7.8        | 6.9             | 11     | 8.2    |
| Boron, Water Soluble    | DETSC 2311# | 0.2  | mg/kg |                             | 290                         | 291                          |            | 0.8        | 0.7             | 0.6    | 0.6    |
| Cadmium                 | DETSC 2301# | 0.1  | mg/kg | 22                          | 11                          | 3                            |            | 0.2        | 0.2             | 0.2    | 0.2    |
| Chromium                | DETSC 2301# | 0.15 | mg/kg | 21                          |                             | 3000                         |            | 16         | 18              | 18     | 16     |
| Copper                  | DETSC 2301# | 0.2  | mg/kg |                             | 2400                        |                              |            | 18         | 23              | 17     | 19     |
| Lead                    | DETSC 2301# | 0.3  | mg/kg | 200                         | 200                         |                              |            | 20         | 23              | 20     | 21     |
| Mercury                 | DETSC 2325# | 0.05 | mg/kg |                             | 40                          |                              |            | 0.06       | 0.08            | < 0.05 | < 0.05 |
| Nickel                  | DETSC 2301# | 1    | mg/kg |                             | 181                         |                              |            | 9.4        | 14              | 7.8    | 9.1    |
| Selenium                | DETSC 2301# | 0.5  | mg/kg |                             | 250                         |                              |            | < 0.5      | < 0.5           | < 0.5  | < 0.5  |
| Zinc                    | DETSC 2301# | 1    | mg/kg |                             | 3700                        | 3750                         |            | 72         | 100             | 68     | 78     |
| Inorganics              |             |      |       |                             |                             |                              |            |            |                 |        |        |
| pH                      | DETSC 2008# |      | pH    |                             |                             |                              |            | 7.7        | 7.8             | 7.6    | 7.6    |
| Nitrate as N            | DETSC 2130# | 0.1  | mg/kg |                             |                             |                              |            | < 1.0      | < 1.0           | < 1.0  | < 1.0  |
| Organic matter          | DETSC 2002# | 0.1  | %     |                             |                             |                              |            | 2.5        | 3.4             | 3.2    | 2.4    |
| Petroleum Hydrocarbons  |             |      |       |                             |                             |                              |            |            |                 |        |        |
| EPH (C5-C10)            | DETSC 3321* | 0.01 | mg/kg |                             | 27 **                       |                              |            | < 0.1      | < 0.1           | < 0.1  | < 0.1  |
| EPH (C10-C24)           |             |      |       |                             |                             |                              |            | < 10       | 58              | < 10   | < 10   |
| EPH (C24-C40)           | DETSC 3321* | 0.01 | mg/kg |                             | 74 ***                      |                              |            | < 10       | 66              | < 10   | < 10   |
| PAHs                    |             |      |       |                             |                             |                              |            |            |                 |        |        |
| Naphthalene             | DETSC 3301  | 0.1  | mg/kg |                             | 2.3                         |                              |            | < 0.1      | < 0.1           | < 0.1  | < 0.1  |
| Acenaphthylene          | DETSC 3301  | 0.1  | mg/kg |                             | 170                         |                              |            | < 0.1      | 0.2             | < 0.1  | < 0.1  |
| Acenaphthene            | DETSC 3301  | 0.1  | mg/kg |                             | 210                         |                              |            | < 0.1      | 0.1             | < 0.1  | < 0.1  |
| Fluorene                | DETSC 3301  | 0.1  | mg/kg |                             | 170                         |                              |            | < 0.1      | 0.2             | < 0.1  | < 0.1  |
| Phenanthrene            | DETSC 3301  | 0.1  | mg/kg |                             | 95                          |                              |            | < 0.1      | 1.3             | < 0.1  | < 0.1  |
| Anthracene              | DETSC 3301  | 0.1  | mg/kg |                             | 2400                        |                              |            | < 0.1      | 0.4             | < 0.1  | < 0.1  |
| Fluoranthene            | DETSC 3301  | 0.1  | mg/kg |                             | 280                         |                              |            | < 0.1      | 3.4             | < 0.1  | < 0.1  |
| Pyrene                  | DETSC 3301  | 0.1  | mg/kg |                             | 620                         |                              |            | < 0.1      | 3.4             | < 0.1  | < 0.1  |
| Benzo(a)anthracene      | DETSC 3301  | 0.1  | mg/kg |                             | 7.2                         |                              |            | < 0.1      | 1.9             | < 0.1  | < 0.1  |
| Chrysene                | DETSC 3301  | 0.1  | mg/kg |                             | 15                          |                              |            | < 0.1      | 1.8             | < 0.1  | < 0.1  |
| Benzo(b)fluoranthene    | DETSC 3301  | 0.1  | mg/kg |                             | 2.6                         |                              |            | < 0.1      | 1.5             | < 0.1  | < 0.1  |
| Benzo(k)fluoranthene    | DETSC 3301  | 0.1  | mg/kg |                             | 77                          |                              |            | < 0.1      | 1.0             | < 0.1  | < 0.1  |
| Benzo(a)pyrene          | DETSC 3301  | 0.1  | mg/kg | 5                           | 2.2                         |                              |            | < 0.1      | 2.9             | < 0.1  | < 0.1  |
| Indeno(1,2,3-c,d)pyrene | DETSC 3301  | 0.1  | mg/kg |                             | 27                          |                              |            | < 0.1      | 1.8             | < 0.1  | < 0.1  |
| Dibenzo(a,h)anthracene  | DETSC 3301  | 0.1  | mg/kg |                             | 0.24                        |                              |            | < 0.1      | 0.5             | < 0.1  | < 0.1  |
| Benzo(g,h,i)perylene    | DETSC 3301  | 0.1  | mg/kg |                             | 320                         |                              |            | < 0.1      | 1.6             | < 0.1  | < 0.1  |
| PAH Total               | DETSC 3301  | 1.6  | mg/kg |                             |                             |                              |            | < 1.6      | 22              | < 1.6  | < 1.6  |
| Phenols                 |             |      |       |                             |                             |                              |            |            |                 |        |        |
| Phenol - Monohydric     | DETSC 2130# | 0.3  | mg/kg |                             |                             |                              |            |            |                 |        |        |
| Subcontracted Analysis  |             |      |       |                             |                             |                              |            |            |                 |        |        |
| E. coli                 | \$*         | 10   | cfu/g |                             |                             |                              |            | <10        | E.Coli Positive | <10    | <10    |
| Faecal coliforms        | \$*         | 10   | cfu/g |                             |                             |                              |            | <10        | E.Coli Positive | <10    | <10    |
| Salmonella              | \$*         | 25   | cfu/g |                             |                             |                              |            | N.D        | N.D             | N.D    | N.D    |
| Total coliforms         | \$*         | 10   | cfu/g |                             |                             |                              |            | <10        | E.Coli Positive | <10    | <10    |
| Faecal Streptococci     | \$*         | 10   | cfu/g |                             |                             |                              |            | < 20.0     | < 20.0          | < 20.0 | < 20.0 |

## APPENDIX E

### LABORATORY CERTIFICATES



## Certificate of Analysis

**Certificate Number** 24-23162

**Issued:** 18-Nov-24

**Client** Brown Fisher Consulting  
Barley House  
Cedar Drive  
Snitterfled  
Stratford upon Avon  
CV37 0LJ

**Our Reference** 24-23162

**Client Reference** ~ 7224

**Order No** ~ (not supplied)

**Contract Title** ~ STOKES FARM

**Description** 4 Soil samples.

**Date Received** 28-Oct-24

**Date Started** 28-Oct-24

**Date Completed** 18-Nov-24

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

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

**Approved By**



Kirk Bridgewood  
General Manager



2139

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report    Tel: 01207 582333 • email: [info@dets.co.uk](mailto:info@dets.co.uk) • [www.dets.co.uk](http://www.dets.co.uk)

Page 1 of 4

# Summary of Chemical Analysis

## Soil Samples

Our Ref 24-23162  
 Client Ref ~ 7224  
 Contract Title ~ STOKES FARM

| Lab No          | 2415547    | 2415548    | 2415549    | 2415550    |
|-----------------|------------|------------|------------|------------|
| Sample ID ~     | TP1        | TP2        | TP3        | TP4        |
| Depth ~         |            |            |            |            |
| Other ID ~      |            |            |            |            |
| Sample Type ~   | SOIL       | SOIL       | SOIL       | SOIL       |
| Sampling Date ~ | 17/10/2024 | 17/10/2024 | 17/10/2024 | 17/10/2024 |
| Sampling Time ~ | n/s        | n/s        | n/s        | n/s        |

| Test                                   | Method      | LOD  | Units |       |              |        |        |
|----------------------------------------|-------------|------|-------|-------|--------------|--------|--------|
| <b>Metals</b>                          |             |      |       |       |              |        |        |
| Arsenic                                | DETSC 2301# | 0.2  | mg/kg | 7.8   | 6.9          | 11     | 8.2    |
| Boron, Water Soluble (2.5:1)           | DETSC 2311# | 0.2  | mg/kg | 0.8   | 0.7          | 0.6    | 0.6    |
| Cadmium                                | DETSC 2301# | 0.1  | mg/kg | 0.2   | 0.2          | 0.2    | 0.2    |
| Chromium                               | DETSC 2301# | 0.15 | mg/kg | 16    | 18           | 18     | 16     |
| Copper                                 | DETSC 2301# | 0.2  | mg/kg | 18    | 23           | 17     | 19     |
| Lead                                   | DETSC 2301# | 0.3  | mg/kg | 20    | 23           | 20     | 21     |
| Mercury                                | DETSC 2325# | 0.05 | mg/kg | 0.06  | 0.08         | < 0.05 | < 0.05 |
| Nickel                                 | DETSC 2301# | 1    | mg/kg | 9.4   | 14           | 7.8    | 9.1    |
| Selenium                               | DETSC 2301# | 0.5  | mg/kg | < 0.5 | < 0.5        | < 0.5  | < 0.5  |
| Zinc                                   | DETSC 2301# | 1    | mg/kg | 72    | 100          | 68     | 78     |
| <b>Inorganics</b>                      |             |      |       |       |              |        |        |
| pH                                     | DETSC 2008# |      | pH    | 7.7   | 7.8          | 7.6    | 7.6    |
| Organic matter                         | DETSC 2002# | 0.1  | %     | 2.5   | 3.4          | 3.2    | 2.4    |
| Nitrate as N                           | *           | 1    | mg/kg | < 1.0 | < 1.0        | < 1.0  | < 1.0  |
| <b>Petroleum Hydrocarbons</b>          |             |      |       |       |              |        |        |
| C5-C10 Gasoline Range Organics (GRO)   | DETSC 3321* | 0.1  | mg/kg | < 0.1 | < 0.1        | < 0.1  | < 0.1  |
| C10-C24 Diesel Range Organics (DRO)    | DETSC 3311# | 10   | mg/kg | < 10  | 58           | < 10   | < 10   |
| C24-C40 Lube Oil Range Organics (LORO) | DETSC 3311# | 10   | mg/kg | < 10  | 66           | < 10   | < 10   |
| <b>PAHs</b>                            |             |      |       |       |              |        |        |
| Naphthalene                            | DETSC 3301  | 0.1  | mg/kg | < 0.1 | < 0.1        | < 0.1  | < 0.1  |
| Acenaphthylene                         | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 0.2          | < 0.1  | < 0.1  |
| Acenaphthene                           | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 0.1          | < 0.1  | < 0.1  |
| Fluorene                               | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 0.2          | < 0.1  | < 0.1  |
| Phenanthrene                           | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.3          | < 0.1  | < 0.1  |
| Anthracene                             | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 0.4          | < 0.1  | < 0.1  |
| Fluoranthene                           | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 3.4          | < 0.1  | < 0.1  |
| Pyrene                                 | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 3.4          | < 0.1  | < 0.1  |
| Benzo(a)anthracene                     | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.9          | < 0.1  | < 0.1  |
| Chrysene                               | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.8          | < 0.1  | < 0.1  |
| Benzo(b)fluoranthene                   | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.5          | < 0.1  | < 0.1  |
| Benzo(k)fluoranthene                   | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.0          | < 0.1  | < 0.1  |
| Benzo(a)pyrene                         | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 2.9          | < 0.1  | < 0.1  |
| Indeno(1,2,3-c,d)pyrene                | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.8          | < 0.1  | < 0.1  |
| Dibenzo(a,h)anthracene                 | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 0.5          | < 0.1  | < 0.1  |
| Benzo(g,h,i)perylene                   | DETSC 3301  | 0.1  | mg/kg | < 0.1 | 1.6          | < 0.1  | < 0.1  |
| PAH 16 Total                           | DETSC 3301  | 1.6  | mg/kg | < 1.6 | 22           | < 1.6  | < 1.6  |
| <b>Subcontracted Analysis</b>          |             |      |       |       |              |        |        |
| E. coli                                | \$*         | 10   | cfu/g | <10   | pli Positive | <10    | <10    |
| Faecal coliforms                       | \$*         | 10   | cfu/g | <10   | pli Positive | <10    | <10    |
| Salmonella                             | \$*         | 25   | cfu/g | N.D   | N.D          | N.D    | N.D    |

## Summary of Chemical Analysis Soil Samples

Our Ref 24-23162

Client Ref ~ 7224

Contract Title ~ STOKES FARM

|                 |            |            |            |            |
|-----------------|------------|------------|------------|------------|
| Lab No          | 2415547    | 2415548    | 2415549    | 2415550    |
| Sample ID ~     | TP1        | TP2        | TP3        | TP4        |
| Depth ~         |            |            |            |            |
| Other ID ~      |            |            |            |            |
| Sample Type ~   | SOIL       | SOIL       | SOIL       | SOIL       |
| Sampling Date ~ | 17/10/2024 | 17/10/2024 | 17/10/2024 | 17/10/2024 |
| Sampling Time ~ | n/s        | n/s        | n/s        | n/s        |

| Test                | Method | LOD | Units |        |             |        |        |
|---------------------|--------|-----|-------|--------|-------------|--------|--------|
| Total coliforms     | \$*    | 10  | cfu/g | <10    | li Positive | <10    | <10    |
| Faecal Streptococci | \$*    | 10  | cfu/g | < 20.0 | < 20.0      | < 20.0 | < 20.0 |

## Information in Support of the Analytical Results

Our Ref 24-23162  
Client Ref ~ 7224  
Contract ~ STOKES FARM

### Containers Received & Deviating Samples

| Lab No  | Sample ID ~ | Date      | Containers Received      | Holding time exceeded for tests | Inappropriate container for tests |
|---------|-------------|-----------|--------------------------|---------------------------------|-----------------------------------|
|         |             | Sampled ~ |                          |                                 |                                   |
| 2415547 | TP1 SOIL    | 17/10/24  | GJ 250ml, GJ 60ml, PT 1L |                                 |                                   |
| 2415548 | TP2 SOIL    | 17/10/24  | GJ 250ml, GJ 60ml, PT 1L |                                 |                                   |
| 2415549 | TP3 SOIL    | 17/10/24  | GJ 250ml, GJ 60ml, PT 1L |                                 |                                   |
| 2415550 | TP3 SOIL    | 17/10/24  | GJ 250ml, GJ 60ml, PT 1L |                                 |                                   |

Key: G-Glass P-Plastic J-Jar T-Tub

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

### Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

### Disposal

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

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

#### Key:

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

\* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

#### End of Report