**ANDREW BARROT**

OREHAM MANOR FARM, OREHAM COMMON, HENFIELD,
WEST SUSSEX, BN5 9SB

# Preliminary Contamination Risk Assessment

February 2023

eas ltd
Environmental Assessment Services Ltd

# REPORT DATA SHEET

| **Requirement** | **Data** |
|---|---|
| Report Ref: | 574/PRowePlanning/OrehamManorFarm/PCRA |
| Date | February 2023 |
| Client | Andrew Barrott |
| Report type | Preliminary Contamination Risk Assessment |
| Purpose | Planning |
| Revisions | - |
| Prepared by | Lucy Collins BSc (Hons) MSc, QCIEEM<br>[redacted]<br>Signed |
| Approved by | Eur Ing Malcolm McKemey BSc (Hons), CEng, CEnv, MICE, MIEAust, MCIWEM, MIEnvSc<br>[redacted]<br>Signed |

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## 1. CAUTION

This investigation relies largely on a superficial examination of the site, plus a review of data from Horsham District Council Planning and Environmental Health Departments, and the Environment Agency (EA). Even where no previous contaminating activity has been identified, it is possible that the site could be contaminated due to fly tipping or other unrecorded events. The age of a building may indicate probability but cannot be treated as proof of the absence or presence of asbestos. This report does not attempt to comment on the commercial value or viability of the site.

## 2. THE SITE & PROPOSED DEVELOPMENT

2.1 The site comprises a 'workshop building' which was in recent use as a light industrial workshop before being closed during the Covid-19 pandemic. The site sits within the Oreham Manor Farm complex. The surrounding area is predominately agricultural land, with large residential properties. The site area is approximately 400 sqm. The Ordnance Survey (OS) map reference for the site is TQ 22414 13450. The site elevation is approximately + 20 m OD. See Appendix A.

2.2 It is proposed to demolish the existing workshop building to construct a single storey, three-bedroom residence with associated parking and soft landscaping areas. See Figure 3.

## 3. GEOLOGY & HYDROGEOLOGICAL CONSIDERATIONS

3.1 According to the British Geological Survey, the site lies on Cretaceous Weald Clay Formation – Mudstone. This is classified by the Environment Agency (EA) mapping as Unproductive Strata.

3.2 The site does not lie within a groundwater source protection zone and is not considered to be hydrogeologically sensitive.

3.3 According to the Environment Agency (EA) online 'Flood Map for Planning', the site lies within Flood Zone 1, defined as land having a less than 1 in 1000 annual probability of fluvial or tidal flooding. The site is predominately at very

low risk of surface water flooding, there is a small section within the north of the site at high risk.

3.4 There are no recent or active waste disposal landfills within 500 m of the site. There is one historic landfill record within the far south of the site, extending to the south and east. This is recorded as inert waste, likely to have comprised building rubble, there is a possibility this may have included materials containing asbestos.

## 4. SITE DEVELOPMENT HISTORY

4.1 The site development history is derived from a review of historic maps from 1873 to date and other references.

4.2 The historic maps are provided in Appendix C. A summary of the relevant information provided in these maps is given in Table 4.1 below.

TABLE 4.1
SITE DEVELOPMENT HISTORY

| Map date | Features on site | Features within surrounding area (<250 m) |
|---|---|---|
| 1873 - 1874 | Site sits centrally within an agricultural field. | Ponds 30 m N & 60 m E. Agricultural buildings 50 m N, Oreham Manor House 80 m N. Little Oreham Farm 100 m NW. |
| 1910 | No change. | No change. |
| 1956 | No change. | Alteration to /additional agricultural buildings to the N & NW of the site. |
| 1978 | Agricultural building/ workshop on site as existing. | Agricultural buildings within wider site to west. Oreham Manor Farm 60 m N. Piggery 200 m E. Residences 250 m NW. |
| 2003 | No significant change. | Further agricultural development. Farmhouse now present 30 m N. |
| 2010 - 2023 | No significant change. | Demolition of agricultural buildings adjacent to W. |

4.3 The recent development history may also be traced from the planning history of the site. See Table 4.2 below.

TABLE 4.2
A SUMMARY OF RECENT PLANNING APPLICATIONS

| Ref. Nos. | Description | Decision & Date |
|---|---|---|
| HRA/23/0001 | Application under Regulation 77 of the Conservation of Habitats and Species Regulations 2017 in respect of Prior Approval consent DC/21/2039. | *r* 03/01/2023 |
| DC/22/2092 | Removal of existing dwelling known as 'The Stables' and other buildings on site and erection of a replacement single storey dwelling. | *r* 08/11/2022 |
| HRA/22/0014 | Application under Regulation 77 of the Conservation of Habitats and Species Regulations 2017 in respect of Prior Approval consent DC/21/2039. | × 01/06/2022 |
| DC/21/2039 | Prior notification for the demolition of existing workshop building (Class B1(c)) and construction of new dwellinghouse (Class C3). | ✓11/02/2022 |
| DC/20/2360 | Prior notification for the demolition of existing workshop building (Class B1(c)) and construction of new dwellinghouse (Class C3). | × 21/01/2021 |
| DC/15/0088 | Demolition of Commercial and Agricultural Buildings and the Erection of Dwelling with Garage. | × 18/03/2015 |
| DC/14/2167 | Demolition of commercial and agricultural building and the erection of dwelling with garage. | × 05/12/2014 |
| HF/52/96 | Use of agricultural building for the storage of refrigerators. | × 22/11/1996 |

Key: ✓ planning permission granted × planning permission refused
*r* application registered

4.4 More recent development history and land use can also be observed from recent aerial photographs. Aerial photographs centred on the site are provided in Appendix D, and a summary of the relevant information provided in these photographs is given in Table 4.3 below.

TABLE 4.3
A SUMMARY OF RECENT AERIAL PHOTOGRAPHS

| Photo date | Features on site | Features adjacent to the site |
|---|---|---|
| 06/09/1999 | The 'workshop building' comprising two adjoined agricultural type buildings, approximately the same size, with a small area of grass/soft landscaping surrounding the southeast building, and apparent hard standing to the east. | There are several agricultural buildings including immediately north of the northwest building, and pigsties to the west. There is a pond just northwest of the site. |
| 22/08/2009 | Northwest building footprint has approximately halved in width. | The pigsties appear partially dismantled and the pond is replaced by a large dwelling with garden. Land immediately southwest appears in use for storage. |
| 31/08/2012 | No significant change. | No significant change. |
| 26/06/2018 | No significant change. | Adjacent land to the west appears derelict. The dwelling to the northeast is extended. |

## 5. THE EXISTING SITE

5.1 The site was visited on Thursday 9th February 2023, photographs of the site are provided in Appendix E.

5.2 The site sits to the south of the Oreham Manor Farm to the south of Henfield. Land immediately surrounding the site is predominately agricultural fields, with scattered large residential properties to the northwest.

5.3 The site comprises a 'workshop building' and adjacent soft landscaping/ storage yard. The wider site comprises a residence immediately adjacent to the north, redundant pigsties and derelict land/ materials storage to the west and northwest, and a large dwelling with gardens to the east/ northeast. There is a large dwelling and garden to the east of the site, and the yard/ storage area to the south has been recently reprofiled and contains mounds of hardcore.

5.4 The workshop building is comprised of two adjoined buildings of block construction with a concrete frame, and asbestos fibre cement cladding. There is a concrete floor throughout, which is in good condition, with a central inspection pit in the eastern section of the building. The floor level of the eastern section is slightly higher than the western section.

5.5 The eastern section of the building is larger and is used predominately for storage of materials and vehicles/machinery. This includes two excavators, a dumper, a sit-on mower, a forklift, and several motorcycles. This area is used for storage of bulk bags of wood and a table saw, plus various building materials, vehicle parts and equipment, some of which are stored in wooden crates. There is storage of various small quantities of fluids (generally associated with vehicle maintenance), a number of 25 litre containers, and a universal bulk container, which is currently empty but was previously used for storage of diesel.

5.6 The eastern and western sections of the building are connected internally. A trailer and tubing are stored within this area.

5.7 The western section is divided into two rooms. The northern room is used for storage of timber planks and plastic pipes on shelving. This previously housed an old car which has been removed from the room via the removal of the northern external wall. This car now sits within the parking area to the north. The southern room is used for further storage including several large gas canisters.

5.8 There is a small area of soft landscaping to the north and east of the eastern section of the barn, comprising mown grass and shrubs. This is used for storage of concrete blocks, excavator treads and a redundant fuel tank. This tank has been moved from its original location which was previously situated, when in use, on the concrete.

5.9 Immediately north of the western section of the barn is a residential bungalow, beyond which is a gravel drive and parking area leading to the large dwelling within the north of the site.

5.10 The yard area to the west of the workshop building is laid to concrete and is in current use for materials storage. This includes pallets and bulk bags of bricks and tiles, corrugated metal, stone, concrete blocks, and scaffolding. A modern oil tank sits adjacent to the building at the north of the yard. There is a central skip which appears to be full of scrap metal, and a bonfire area to the east which was smoking during the site walkover. There are redundant pigsties to the south of this area adjacent to the bulk of the stored materials. There is a disused tank to the south which is thought to have been associated with keeping of pigs, likely slurry, but the exact former use is unknown.

5.11 The area to the south of the site was previously a yard area under hardstanding. The hardstanding has been removed and retained on site as piled hardcore, intended to be crushed and used as recycled aggregate. The underlying soil has been reprofiled and the ground level raised.

# 6. RECORD DATA SEARCH RESULTS

6.1 An environmental records search (Enviro-Insight Report) has been prepared for the site. The GroundSure EnviroInsight Report is provided in Appendix C and any items of potential contamination significance highlighted below.

## *6.1.1 Historical and current Land Use*

There are no records of historical industrial land uses, tanks or energy features, petrol stations or garages within 500 m of the site.

There is one record of recent industrial land use within 250 m of the site, 210 m NW (electrical equipment repair & servicing).

## *6.1.2 Environmental Permits, Incidents and Registers*

The site is not on any Council maintained register of contaminated land. There are no records of current or historical licenced industrial activities or licenced pollutant releases.

There is one record of radioactive substance authorisations within 500 m: 463 m S (Imaging Research Solutions Ltd).

There are two records of Licenced Discharges to controlled waters within 500 m, these are within the wider site approximately 30 m NW and are both lapsed.

There are no recorded pollution incidents within 500 m of the site.

## *6.1.3 Landfill and other Waste Sites*

There are no records of active or recent landfill sites within 500 m. There are two records of historic landfill; Oreham Piggeries (inert waste), on site (within the far south of the site) and 130 m NE. This is likely to have comprised building rubble and waste soil, there is a possibility this may have included materials containing asbestos.

There are 15 records of waste exemptions within 500 m of the site, the closest being 304 m SE at Leat Farm (Using waste, agricultural only).

## *6.1.4 Hydrology and Flood Risk*

The site lies upon Unproductive Strata. Groundwater vulnerability on site is classified as Unproductive Aquifer. The site does not lie within a groundwater source protection zone.

There are no records of groundwater or potable abstractions within 2000 m of the site. There are two records of surface water abstractions within 2000 m, both historical at Fish Farm/ Cress Pond Throughflow (555 m E and 571 m E).

There is one Water Network record within 250 m, 85 m S (inland river not influenced by normal tidal action), and there are five surface water features within 250 m.

There is one WFD (Water Framework Directive) surface water body catchment on site (Woodsmill Stream - catchment), and one WFD surface water body 321 m W (Woodsmill Stream - river).

The site is not at risk of flooding from rivers and the sea, and there are no recorded historic flood events within 250 m of the site.

There is a negligible risk of surface water flooding on site, and within 50 m the highest risk is 1 in 250 year (0.1 – 0.3 m). The site is at negligible risk of groundwater flooding.

### *6.1.5 Designated Environmentally Sensitive Sites*

There is one record of a Site of Special Scientific Interest (SSSI) within 2000 m of the site; 1407 m SW (Horton Clay Pit), and the site lies within a SSSI impact risk zone. There is one recorded Local Nature Reserve (LNR) within 2000 m: Tottington Wood 927 m SW. There are 15 records of designated ancient woodland within 2000 m of the site, all ancient & semi-natural woodland, the closest being 479 m W. The Brighton and Lewes Downs Biosphere Reserve and National Park lies 39 m SE.

There are two recorded Nitrate Vulnerable Zones within 2000 m of the site: 1499 m N and 1892 m NE, Both Chess Stream NVZ.

There are 6 records of Priority Habitat Inventory within 250 m, the closest is 78 m E (semi-improved grassland). There is one record of Habitat Networks within 250 m, 158 m S, Network Enhancement Zone 1.

### *6.1.6 Natural Hazards Findings and Mining*

There are no records of artificial or made ground within 500 m of the site. There are three records of superficial geology within 500 m, none are on site. Bedrock geology on site is Weald Clay Formation – Mudstone. Bedrock permeability on site has fracture flow type with low maximum and very low minimum permeability. There are no bedrock faults or other linear features within 500 m of the site.

On site there is a low hazard of shrink swell clays, a very low hazard of collapsible deposits and landslides, and a negligible hazard of running sands, compressible deposits, ground dissolution of soluble rocks.

There are four records of surface ground workings within the wider site (pond, mapped 1875 – 1909). There are three records of non-coal mining within 1000 m: on site (Sand/ Building Stone), 248 m S (Sand), and 763 m N (Iron Ore).

The site is not within an area of significant radon risk, estimated properties affected <1%, with no protection measures required.

The BGS Estimated background soil chemistry for the site and the vicinity is given below.

| Location | Arsenic | Bioaccessible Arsenic | Lead | Bioaccessible Lead | Cadmium | Chromium | Nickel |
|---|---|---|---|---|---|---|---|
| On site | 15 - 25 mg/kg | No data | 100 mg/kg | 60 mg/kg | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |
| On site | 15 - 25 mg/kg | No data | 100 mg/kg | 60 mg/kg | 1.8 mg/kg | 60 - 90 mg/kg | 15 - 30 mg/kg |

## 7. POTENTIAL SOURCES OF CONTAMINATION

7.1 Land history has comprised agricultural land from pre 1873 to circa 1970s (which may have comprised grazing livestock and/or arable farming), and agricultural buildings from circa 1970s to date (which has included use as piggeries and 'light industrial' workshop and included vehicle storage and maintenance). The workshop building first appears on OS mapping in 1978.

7.2 Potential contamination from historic land use is associated with historic agricultural use. The agricultural use included piggeries and is likely to have included the storage and maintenance of farm equipment and vehicles, and for bulk storage of applications used elsewhere on the farm. Two above ground tanks were observed on site, one is a known redundant fuel tank, and the other is of unknown use associated with the historic piggery, likely to be for slurry. The redundant fuel tank (thought to have been used for red diesel) is currently stored on/adjacent to an area of soft landscaping. This has been moved from its original location on concrete.

7.3 Potential contaminants associated with historic land use may have included petroleum hydrocarbons, heavy metals and PAHs (from fuels, maintenance fluids and waste disposal / burning waste on site), and possibly pesticides and heavy metals associated with crops and animal treatments which may have been used on the farm.

7.4 Land immediately to the south and east of the site, which could be used for soft landscaping/ gardens for the proposed residence, was a historic landfill. The Oreham Piggeries landfill is classified as an inert waste landfill which likely comprised waste soil and builders rubble, although there is some (low) potential for the landfilled waste to include asbestos containing materials.

7.5 Recent workshop usage including vehicle maintenance and storage pose potential contamination risks, including the current and possible historic storage of maintenance fluids, oil and fuel. This included the recent bulk storage of fuels; a universal bulk container was observed within the workshop which previously contained diesel. The presence of concrete surfacing on site is likely to have acted as a barrier between any leakage or spillage of fluids and the

underlying soil. No evidence of any significant spillage/s was noted during the site walkover.

7.6 ACM (asbestos containing materials) were identified on site, in the form of asbestos fibre cement roofing and upper elevation cladding on the workshop.

## 8. RISK ASSESSMENT

8.1 The risk to future site users can be assessed using the Conceptual Model. This comprises three elements all of which must be present for there to be a risk. The three elements of the model are, a *source* of potentially hazardous contaminant, a *pathway* by which the contaminant can be transmitted and a *receptor* on which the contaminant may have a harmful effect. A conceptual model for the site is given in Appendix F.

8.2 Potential pollutant linkages between source, pathway and receptor for the site are shown in Table 8.1 below.

TABLE 8.1

| Source | | Pathway | Receptor | Risk |
|---|---|---|---|---|
| Contaminated soil | Contaminated groundwater | | | |
| Contamination risk associated with historic agricultural use, recent light industrial workshop use, and current vehicle storage | No significant risk | Contact with contaminated soil, groundwater or soil gas. | Existing and future site users. | ? |
| | | Ingestion of or skin contact with contaminated soil, dust, or groundwater. | Maintenance or construction workers engaged in groundworks on the site. | ? |
| | | Contact with contaminated soil or ground water. | Building & services. | ? |
| | | Leeching of site contaminants into groundwater. | Wider environment. | × |

Key: ✓Significant risk × No significant risk ? Uncertain risk

8.3 Source

8.3.1 From a review of available information, it is considered that there is some potential for contamination associated with historic and recent land use. Contaminants may include heavy metals, petroleum hydrocarbons and PAHs (from fuels, maintenance fluids and waste disposal / burning waste on site), and possibly pesticides and heavy metals associated with crop and animal treatments which may have been used on the farm (*source*).

8.3.2 ACM (asbestos containing materials) including roofing and upper elevation cladding is present on the workshop. These materials are presently in good

condition and are unlikely to have affected soils / ground materials at the site. All ACMs are to be removed from the site as part of the site's redevelopment.

8.4 Receptor

8.4.1 It is proposed to redevelop the site for residential use, converting the workshop building into a residential dwelling. In this case, the potential *receptors* may include site workers (during the redevelopment and future maintenance of the site), future site users (residents, assumed to include both adults and children), buildings and services (including underground water mains), and the wider environment (not considered to be hydrogeologically sensitive – underlain by Unproductive Strata).

8.5 Source – Receptor Pathways

8.5.1 Site workers (notably ground workers) may come into contact with building materials containing asbestos (the asbestos cement roofing and cladding) and contaminated soils (from historic and recent land use) during the redevelopment of the site. Appropriate industrial hygiene measures will be required to reduce the risk of exposure to workers during the development phase.

8.5.2 In the absence of remediation, future site users and/or maintenance workers (e.g., gardeners) may come into direct contact with contaminated soils within the areas of soft landscaping, and/or may consume produce grown within this area. Exposure to contamination in this case may be via dermal contact, inhalation and/or ingestion. Remediation will be required as part of the site's redevelopment.

8.5.3 Future site users may be exposed to tainted water supplied via underground mains to the site where any contamination with potential to degrade the pipes (such as hydrocarbon contamination) is present along the line of the water mains (see current UKWIR guidelines). Those involved in the laying of underground water supply pipes should satisfy themselves that either the route of the water main is free from contamination or appropriate barrier pipework is used.

8.5.4 The underlying bedrock is Weald Clay, which has a low leaching potential. Therefore, there is considered to be a minimal pathway between potential contamination on site and the wider environment.

## 9. CONCLUSIONS

9.1 The site lies on Weald Clay Formation – Mudstone, which is classified as Unproductive Strata. The site does not lie within a groundwater Source Protection Zone (SPZ) and is not considered to be hydrogeologically sensitive.

9.2 The site is not considered to be at significant risk of ground gas at this time. There are two records of historic landfill within 250 m of the site including Oreham Piggeries (inert waste) on site, which is considered to have a minimal risk of landfill gas migration.

9.3 Land use history at the site, including historical agricultural use and historical and recent workshop use with storage and maintenance of vehicles poses a potential contamination risk. The majority of the site is to remain under hard cover, reducing the risk of exposure to future site users. However, current plans do include the creation of some soft landscaping or garden areas. Testing of the soils within these areas will be required and, should contamination be identified, the soils may need to be replaced. See recommendations given in section 10 below.

9.4 Asbestos containing materials have been identified on the workshop (the asbestos cement roofing and cladding). These materials will need to be removed, and appropriately disposed of by a suitably qualified person, as part of the site's redevelopment.

9.5 The site is not within a radon-affected area. No radon protective measures are indicated in this case.

9.6 The overall environmental risk for the site is rated according to the risk assessment matrix in Table 9.1 below:

TABLE 9.1
RISK ASSESSMENT MATRIX

| PROBABILITY OF IMPACT | CONTAMINATION POTENTIAL | | |
|---|---|---|---|
| | SEVERE | MODERATE OR UNCERTAIN | MINIMAL |
| High | 4 | 3 | 2 |
| Medium | 3 | 2 | 1 |
| Low | 2 | 1 | 1 |

1 = low risk, 2 = low to moderate risk, 3 = moderate to high risk, 4 = high risk.

9.7 In this case, potential contamination risks have been identified on site principally related to the historic agricultural use, and recent workshop and vehicle maintenance. It is proposed to convert the site to a more vulnerable land use which will include soft landscaping and garden areas, that could be used for growing home produce. The probability of impact is medium with an uncertain contamination potential giving an overall rating of 2 (moderate). Following soil testing and completion of any remediation required on site this may be reduced to 1 (minimal).

## 10. RECOMMENDATIONS

10.1 All asbestos containing materials (ACMs) including roofing and cladding on the workshop should be removed from the site as part of the site's redevelopment.

10.2 All site workers should adopt appropriate industrial hygiene measures (gloves, boots, coveralls, masks, no eating within excavation areas etc) whilst working on site to reduce the risk of exposure during the development phase.

10.3 It is recommended an intrusive site investigation is conducted to include soil sampling and analysis from any proposed areas of soft landscaping / garden. This will inform any required remediation on site.

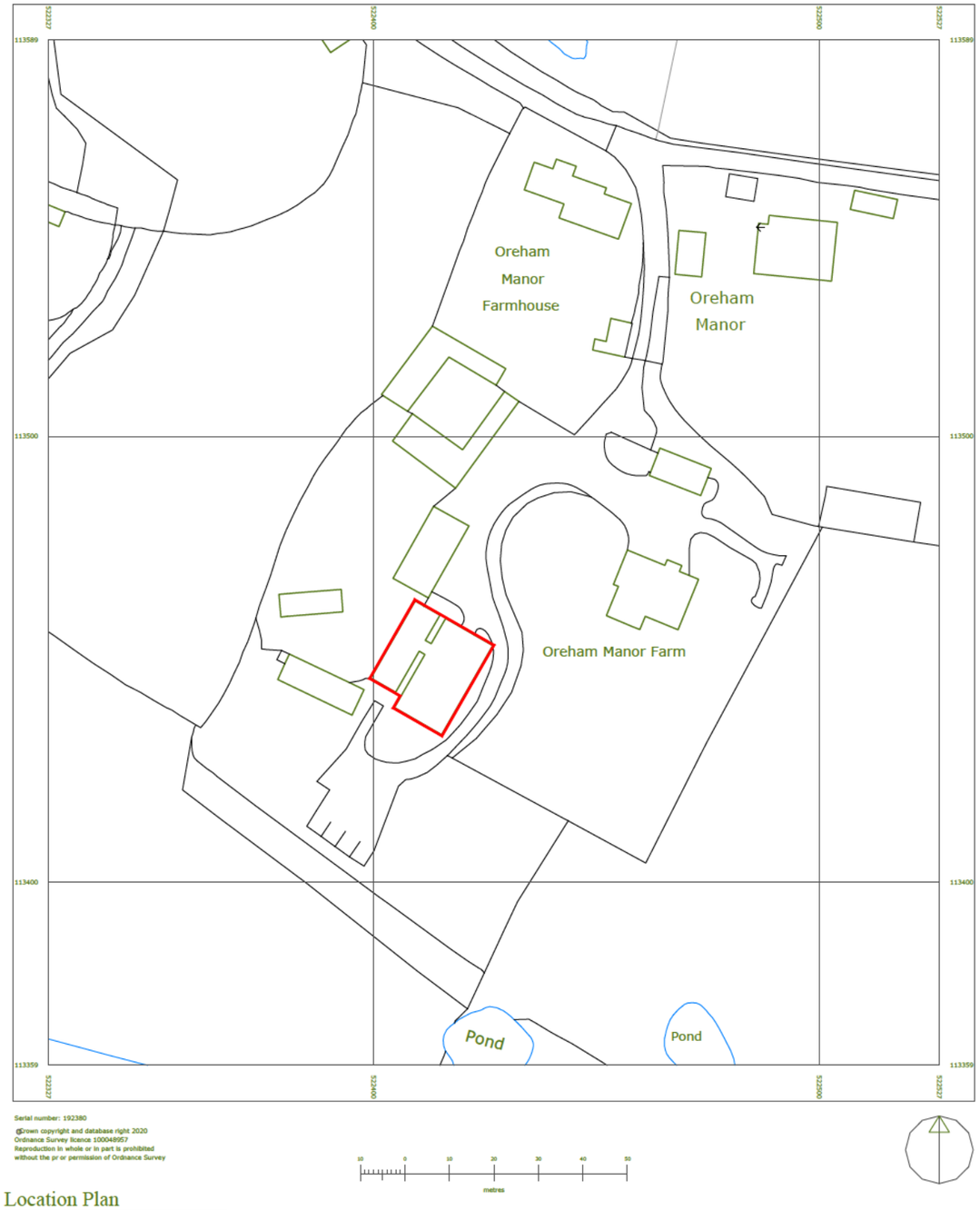
10.4 Those responsible for laying any new water main connections / pipework should satisfy themselves that the route of the pipework is free from any contamination that may degrade standard polyethylene (PE) pipes or use barrier pipes if contamination is identified.

☆ ☆ ☆ ☆ ☆ ☆ ☆

APPENDIX A

# Figures

Ordnance Survey ®
Ukmapcentre.com




Serial number: 192380
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## Location Plan

1:1250 | EXISTING

MANORWOOD
*building on tradition*

Suite 114
26 The Hornet
Chichester
West Sussex
PO19 7BB

tel: 01243 201 102
email: enquiries@manorwood.co.uk
web: www.manorwood.co.uk

This drawing is the copyright of Manorwood Construction Ltd.

Exemptions apply for Local Authority planning purposes only.

Do not scale from this drawing.

All dimensions must be checked on site prior to commencement of works

**Address**
Oreham Manor Farm
Oreham Common Henfield
West Sussex BN5 9SB

**Drawing**
Site Drawings:
**Location Plan**

**Scale @ A3**
1:1250

| Drawn: | Issued: |
|---|---|
| 13.01.2022 | 14.01.2022 |
| **Drawn By** | **Checked By** |
| MD | BK |

**Job No.**
201123_R1

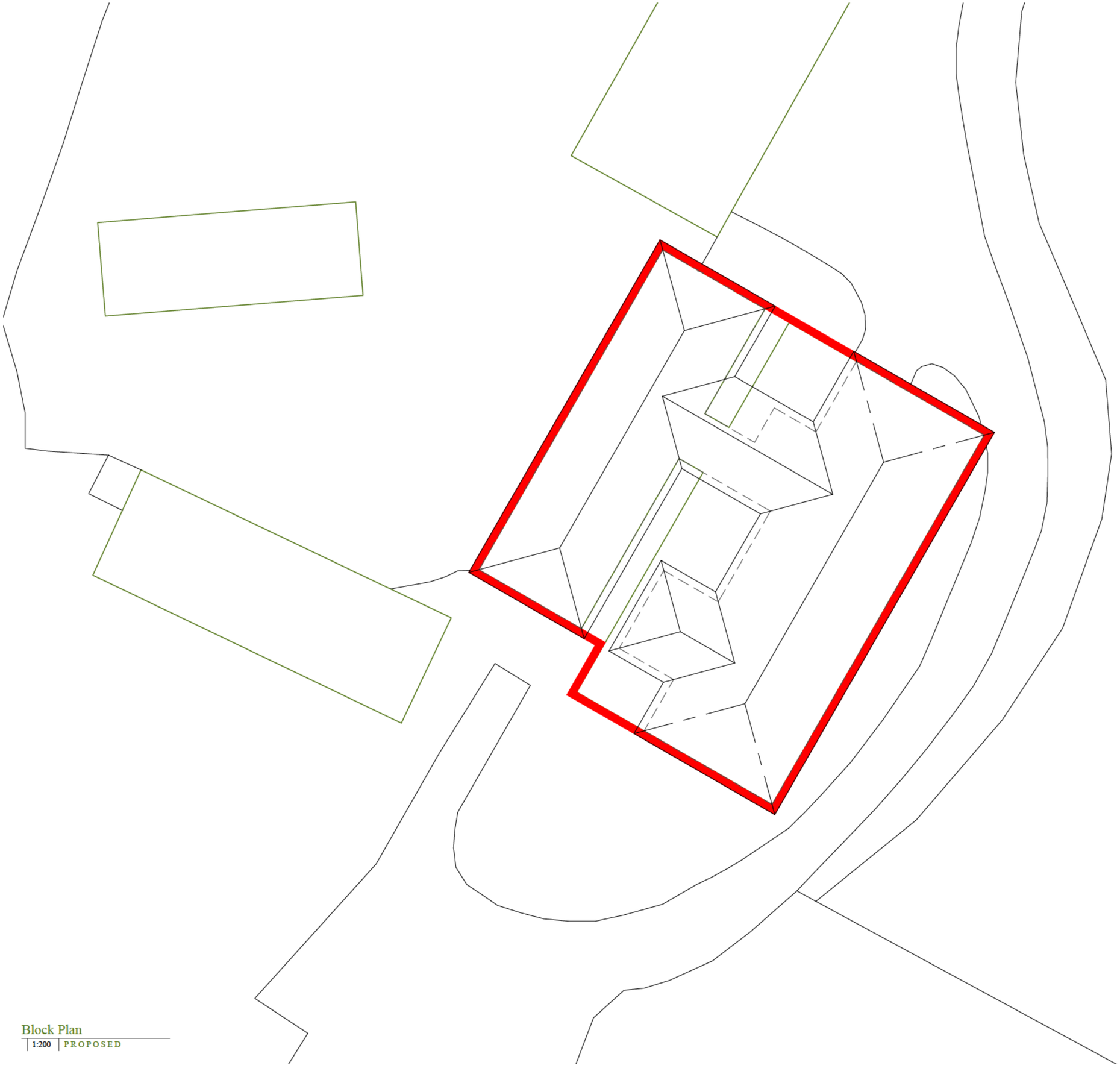
**Drawing No.**
201123_R1_000_r.0

**Revisions:**
R.0

**Status**
FOR COMMENT

N

1m @ 1:
50
100
200
500
1250



Block Plan
1:200 | PROPOSED

MANORWOOD
building on tradition

Suite 114
26 The Hornet
Chichester
West Sussex
PO19 7BB

tel: 01243 201 102
email: enquiries@manorwood.co.uk
web: www.manorwood.co.uk

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All dimensions must be checked on site prior to commencement of works

Address

Oreham Manor Farm
Oreham Common Henfield
West Sussex BN5 9SB

Oreha

Drawing

Site Drawings:

**Block Plan**

Scale @ A3

1:200

| Drawn: | Issued: |
|---|---|
| 13.01.2022 | 14.01.2022 |
| Drawn By | Checked By |
| MD | BK |

Job No.

201123_R1

Drawing No.

201123_R1_001_r.0

Revisions:

R.0

Status

FOR COMMENT

N

1m @ 1:
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100
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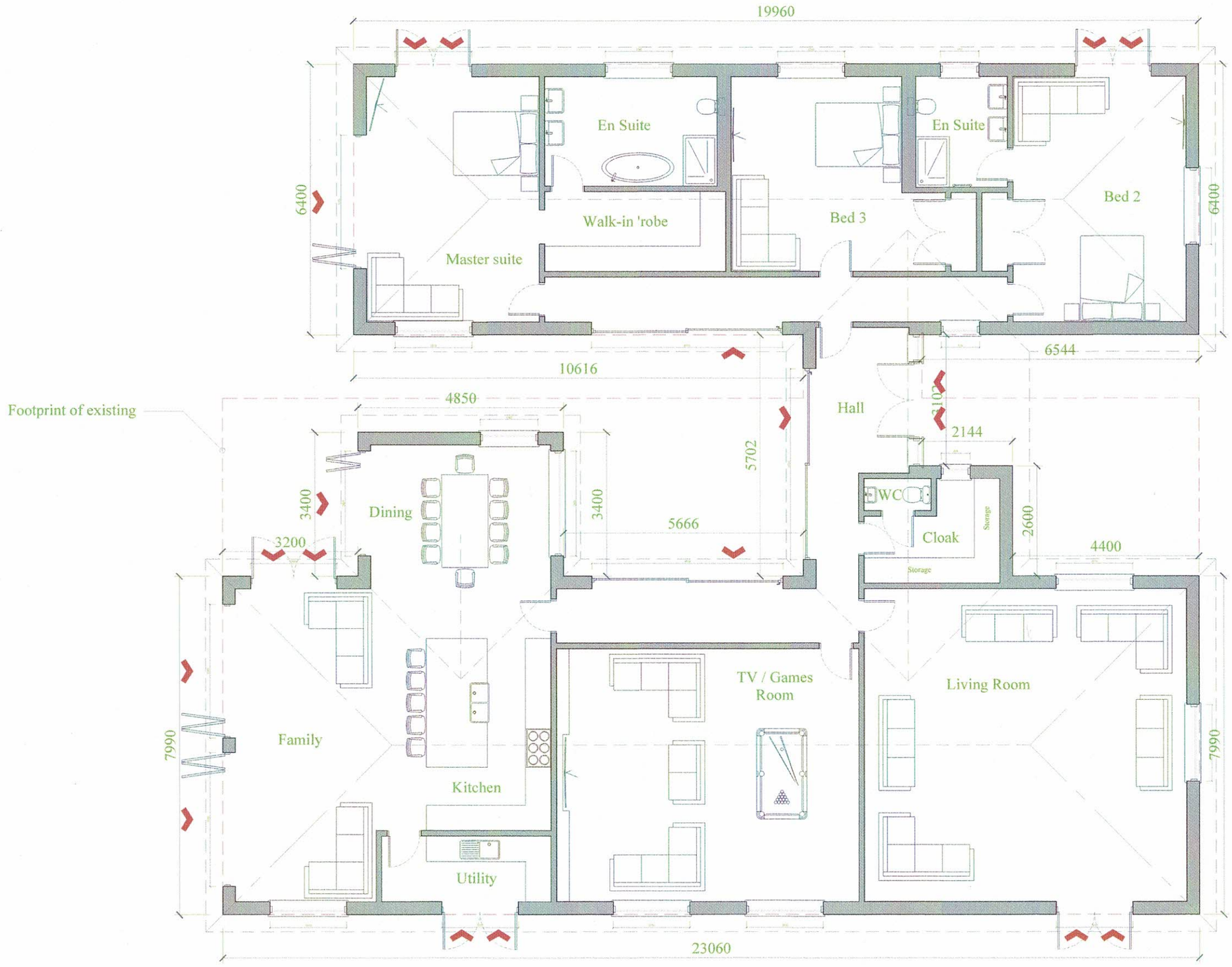
500
1250




Ground Floor Plan

1:100 | PROPOSED

MANORWOOD
building on tradition

Suite 114
26 The Hornet
Chichester
West Sussex
PO19 7BB

tel: 01243 201 102
email: enquiries@manorwood.co.uk
web: www.manorwood.co.uk

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All dimensions must be checked on site prior to commencement of works

Address

Oreham Manor Farm
Oreham Common Henfield
West Sussex BN5 9SB

Drawing

Proposed Plan:

**Ground Floor Plan**

Scale @ A3
1:100

| Drawn: | Issued: |
|---|---|
| 13.01.2022 | 13.01.2022 |
| Drawn By | Checked By |
| MD | BK |

Job No.
201123_R1

Drawing No.
201123_R1_206_r.0

Revisions:
R.0

Existing Footprint:
413.09m²

Proposed Footprint:
350.02m²

Existing GIA:
377.26m²

Proposed GIA:
312.16m²

Status
FOR COMMENT

1m @ 1:
50
100
200
500
1250

APPENDIX B

## Environment Agency Flood Map for Planning & Surface Water Flood Risk Map

# Flood map for planning

| Your reference | Location (easting/northing) | Created |
|---|---|---|
| **574** | **522413/113448** | **13 Jan 2023 14:48** |

**Your selected location is in flood zone 1, an area with a low probability of flooding.**

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

**Notes**

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

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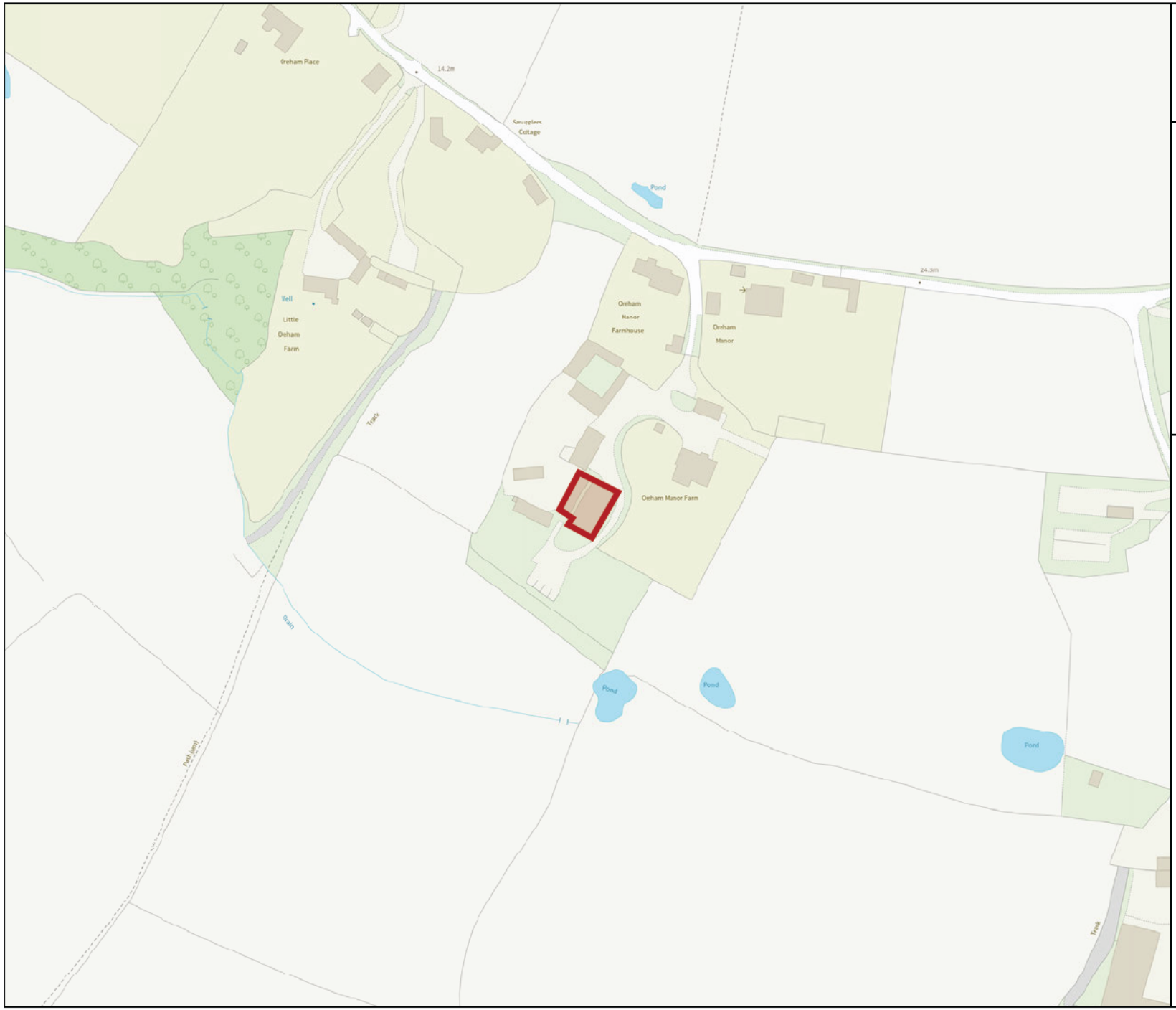


Environment Agency

## Flood map for planning

Your reference
**574**

Location (easting/northing)
**522413/113448**

Scale
**1:2500**

Created
**13 Jan 2023 14:48**

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

0 20 40 60m



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Extent of flooding from surface water

High Medium Low Very low Location you selected

APPENDIX C

# Historic Maps




Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** County Series
**Map date:** **1875**
**Scale:** 1:10,560
**Printed at:** 1:10,560

N
W E
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Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 13 January 2023

Map legend available at:
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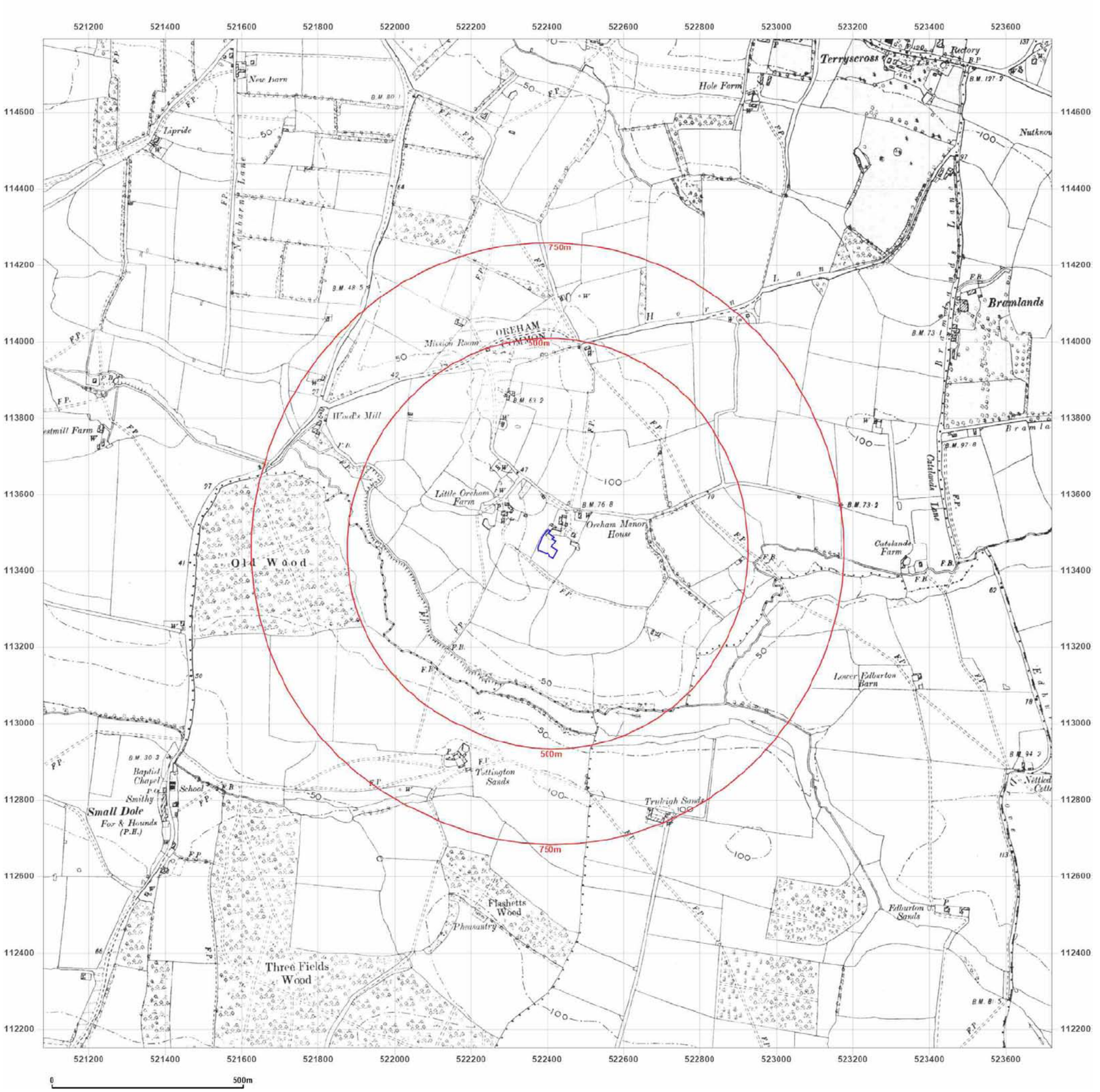


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** County Series
**Map date:** **1896**
**Scale:** 1:10,560
**Printed at:** 1:10,560

N
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Surveyed 1875
Revised 1896
Edition N/A
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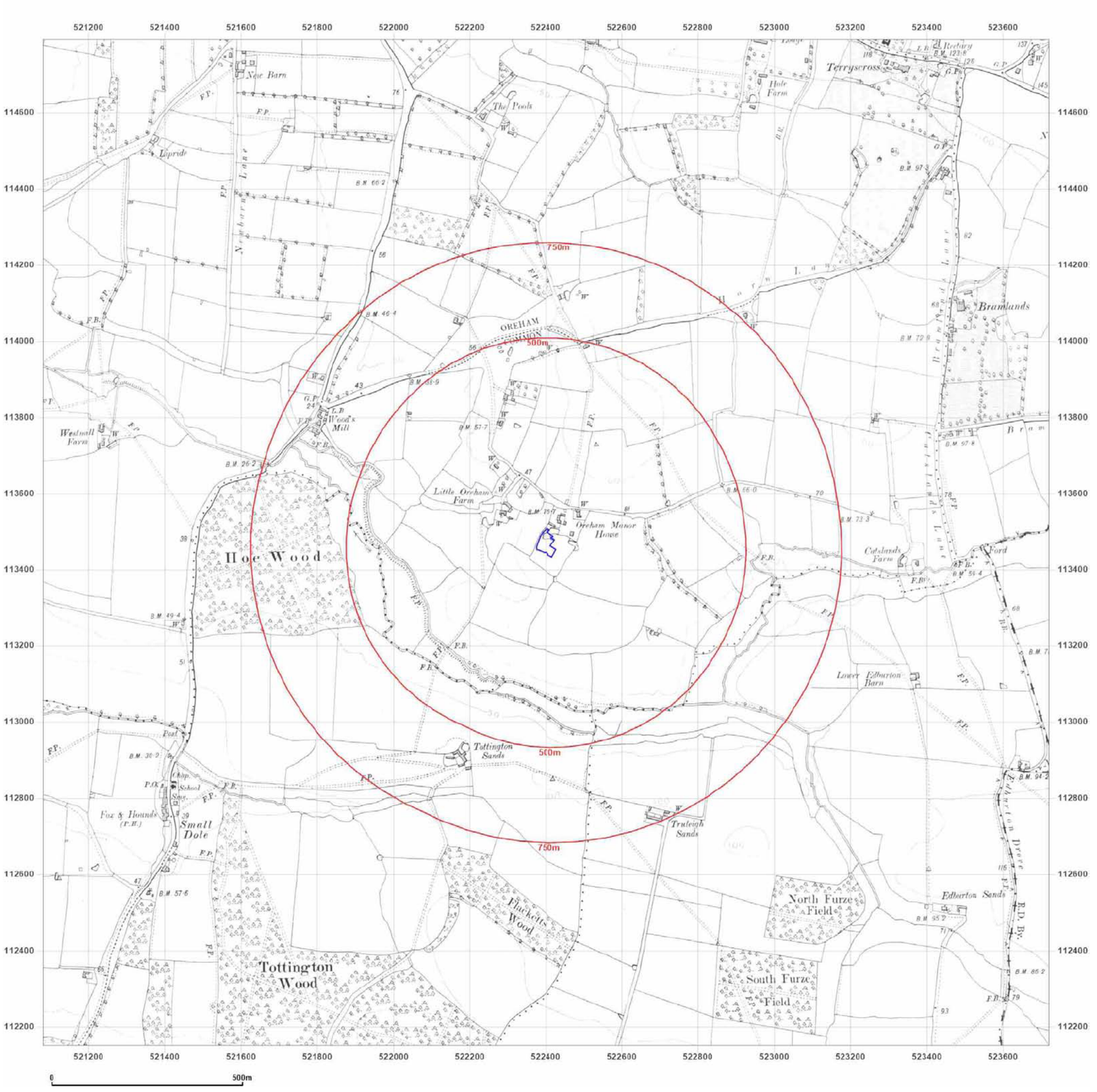


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** County Series
**Map date:** **1909**
**Scale:** 1:10,560
**Printed at:** 1:10,560

N
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Surveyed 1874
Revised 1909
Edition N/A
Copyright N/A
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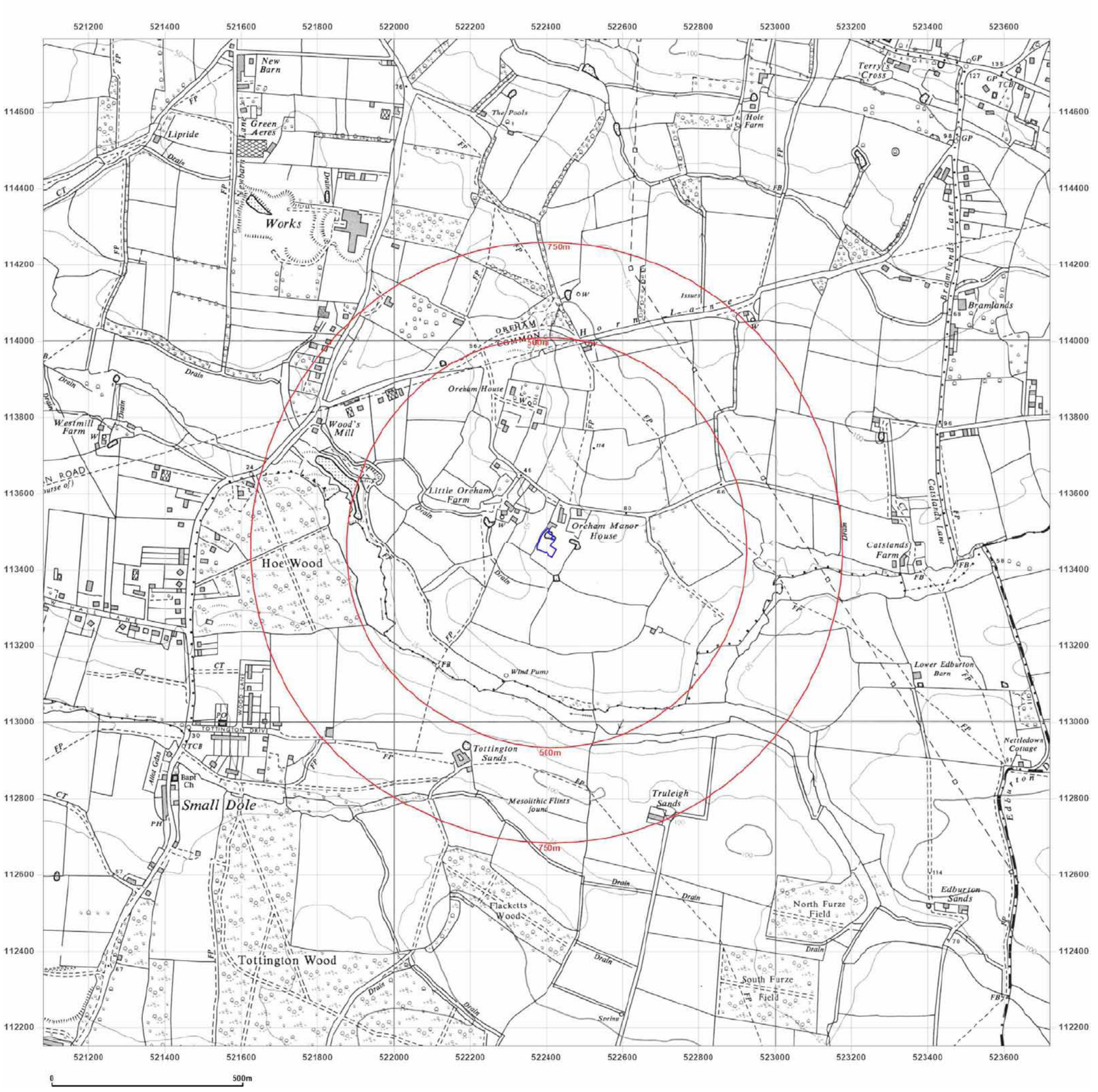


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
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**Grid Ref:** 522400, 113471

**Map Name:** Provisional
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**Printed at:** 1:10,560

N
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Revised 1962
Edition N/A
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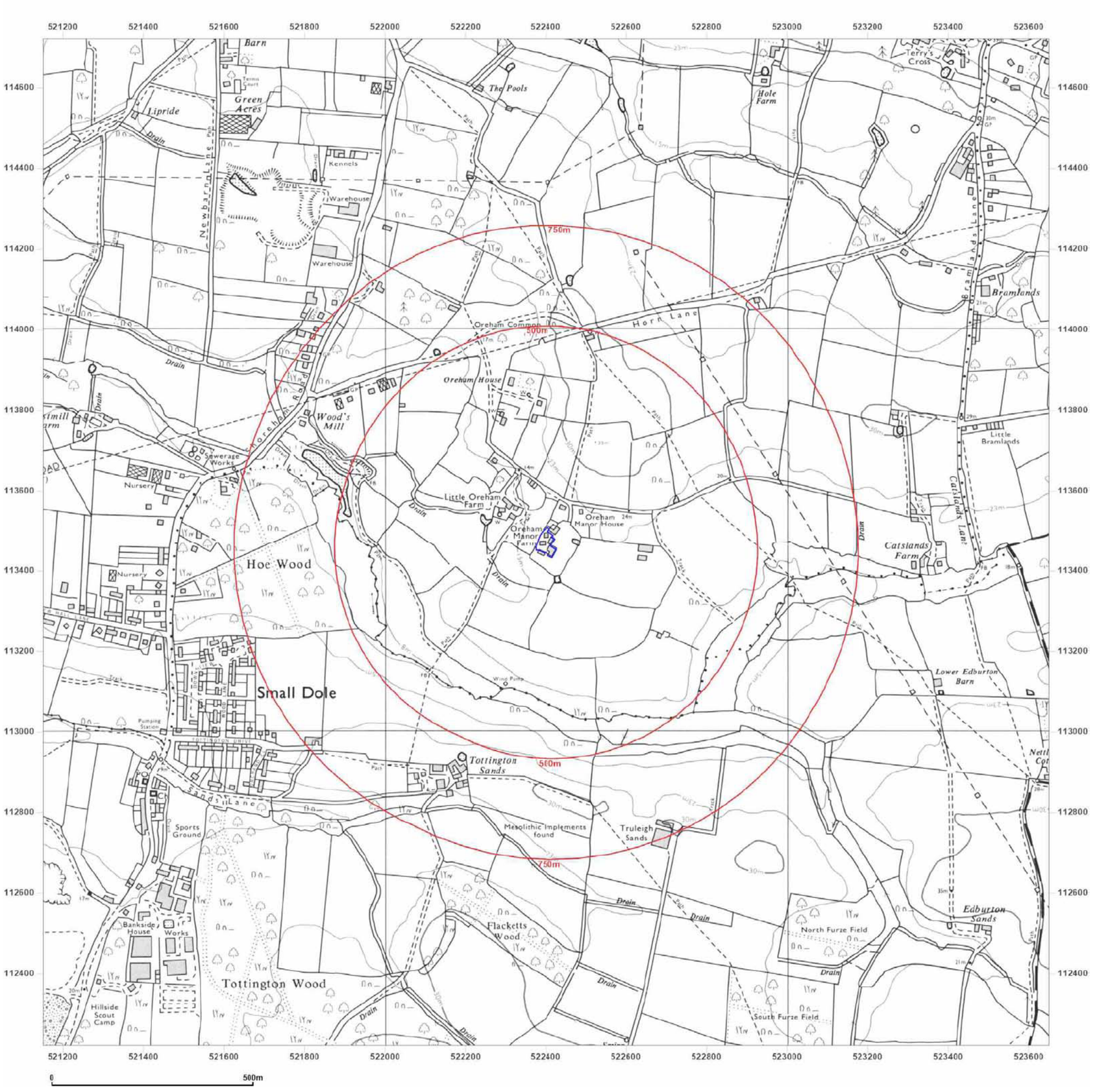


Groundsure INSIGHTS

**Site Details:**

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OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** National Grid

**Map date:** **1975**

**Scale:** 1:10,000

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

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Surveyed 1972
Revised 1975
Edition N/A
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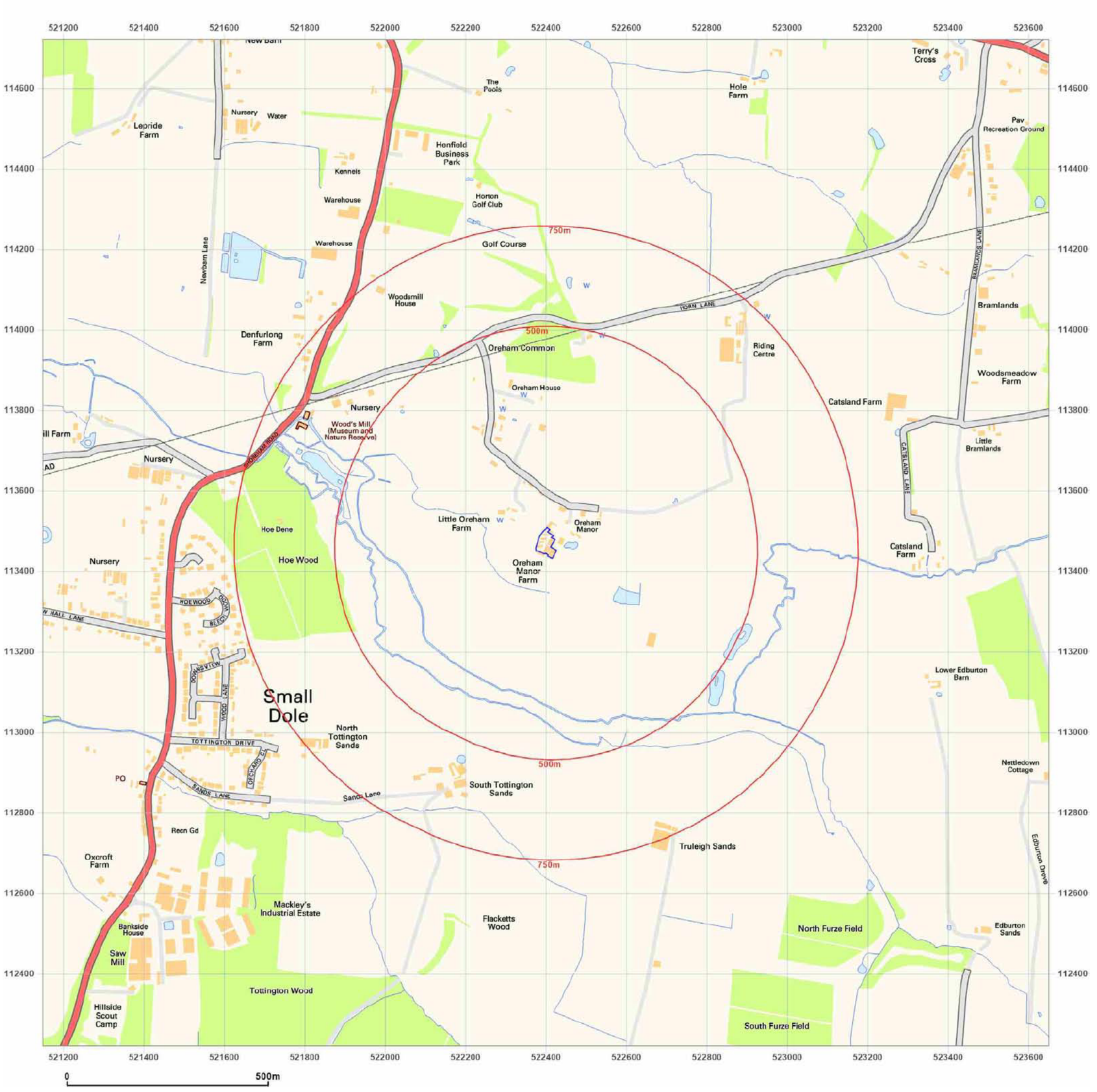


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** National Grid
**Map date:** 2001
**Scale:** 1:10,000
**Printed at:** 1:10,000

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2001

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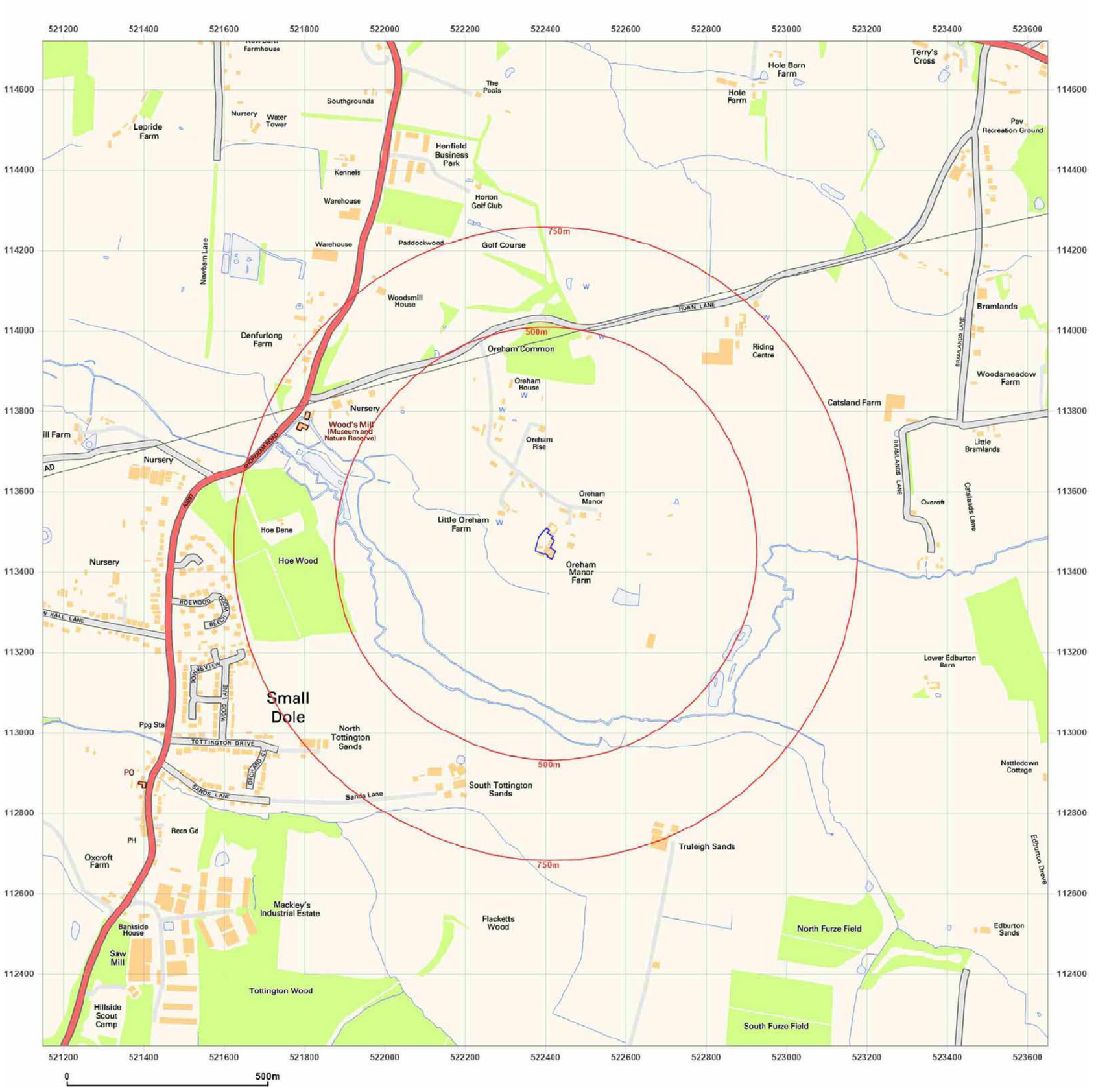


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
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**Grid Ref:** 522400, 113471

**Map Name:** National Grid
**Map date:** **2010**
**Scale:** 1:10,000
**Printed at:** 1:10,000

N
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2010

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**Site Details:**

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HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** National Grid
**Map date:** **2023**
**Scale:** 1:10,000
**Printed at:** 1:10,000

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2023

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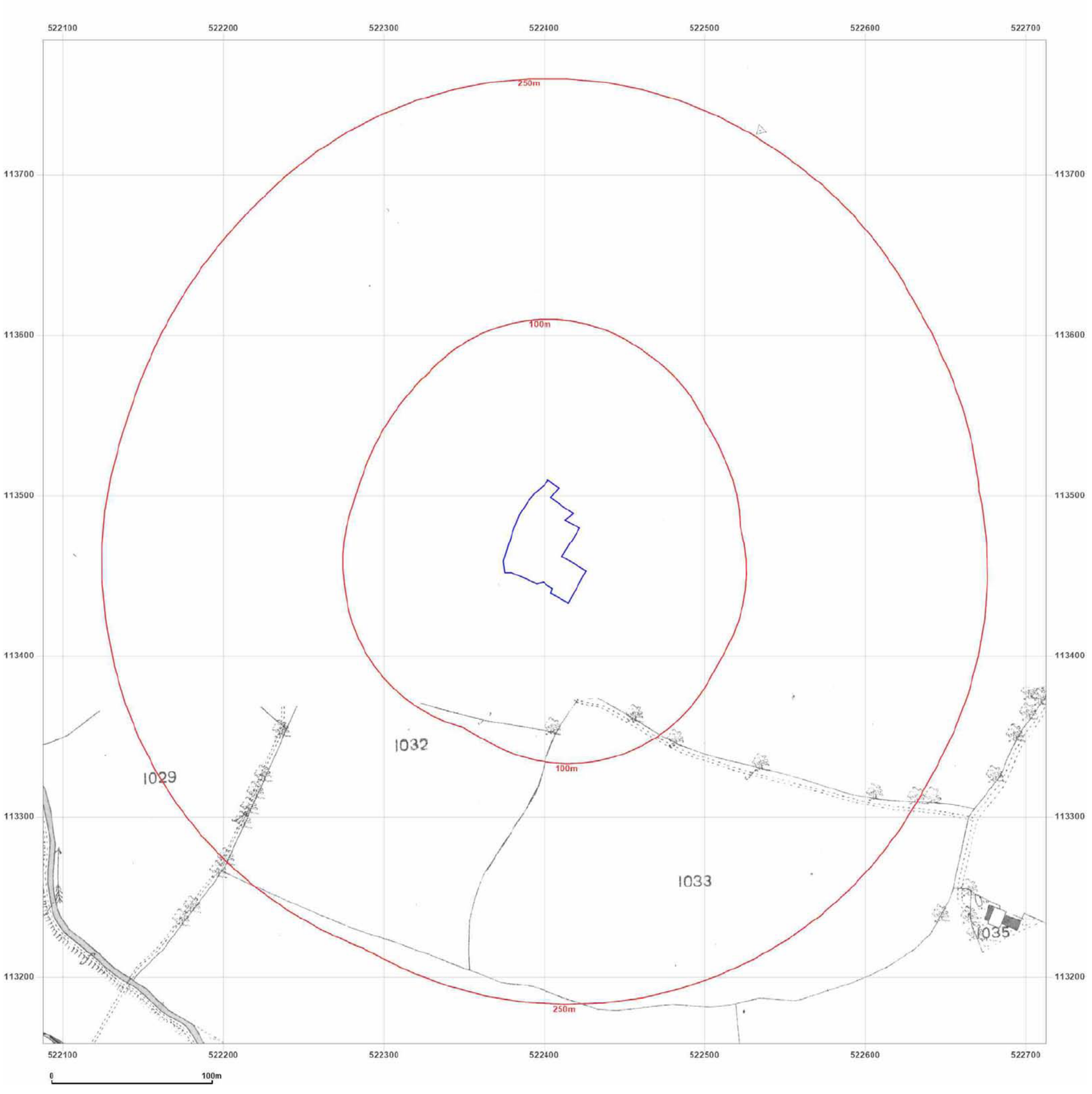


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

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**Grid Ref:** 522400, 113471

**Map Name:** County Series
**Map date:** **1873**
**Scale:** 1:2,500
**Printed at:** 1:2,500

N
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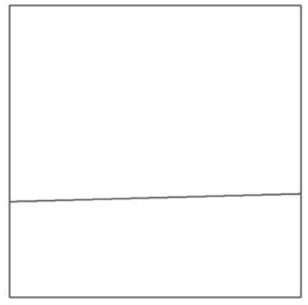
Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1873
Revised 1873
Edition N/A
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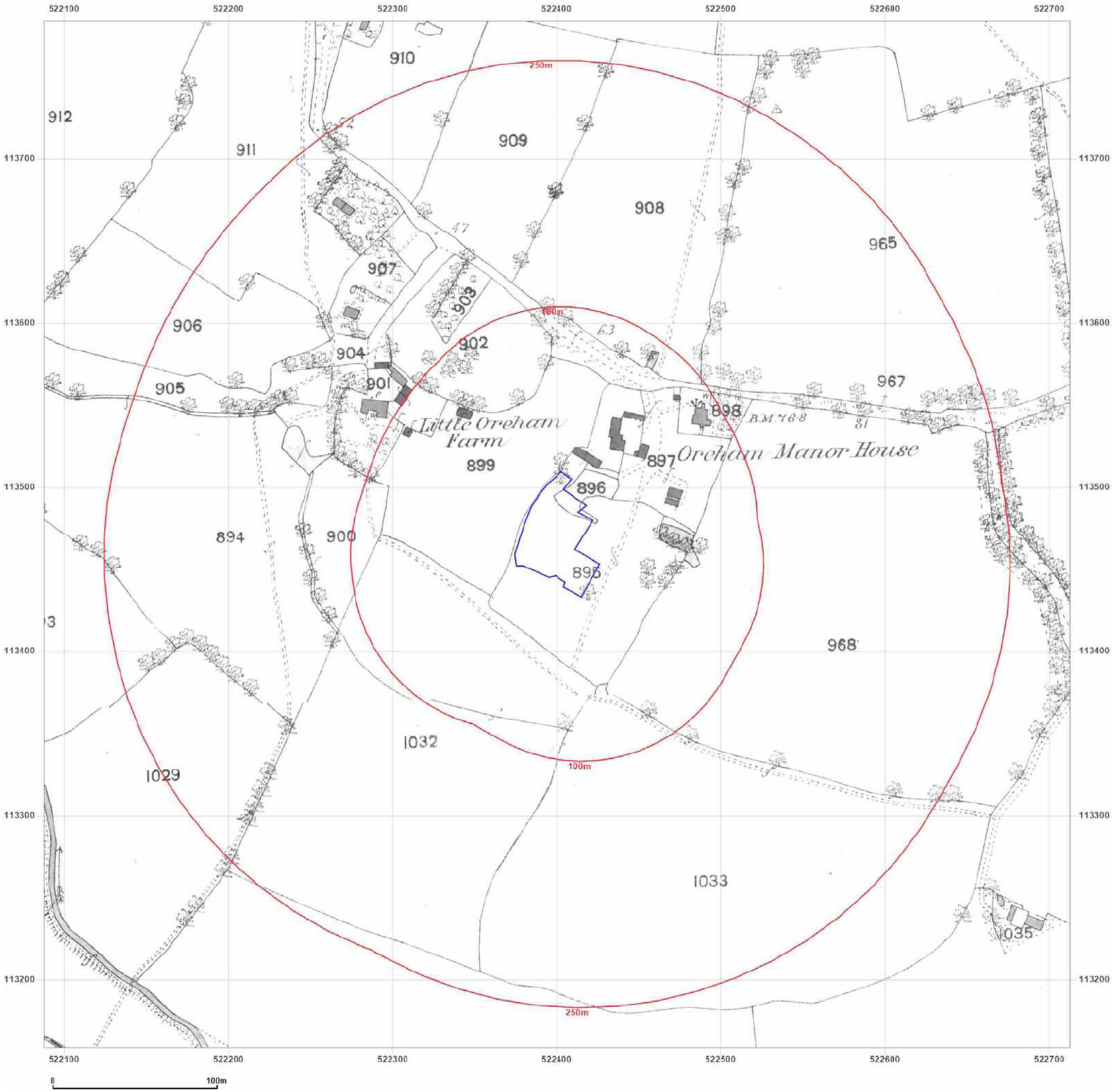


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** County Series
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**Scale:** 1:2,500
**Printed at:** 1:2,500

N
W E
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Surveyed 1874
Revised 1874
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1873
Revised 1873
Edition N/A
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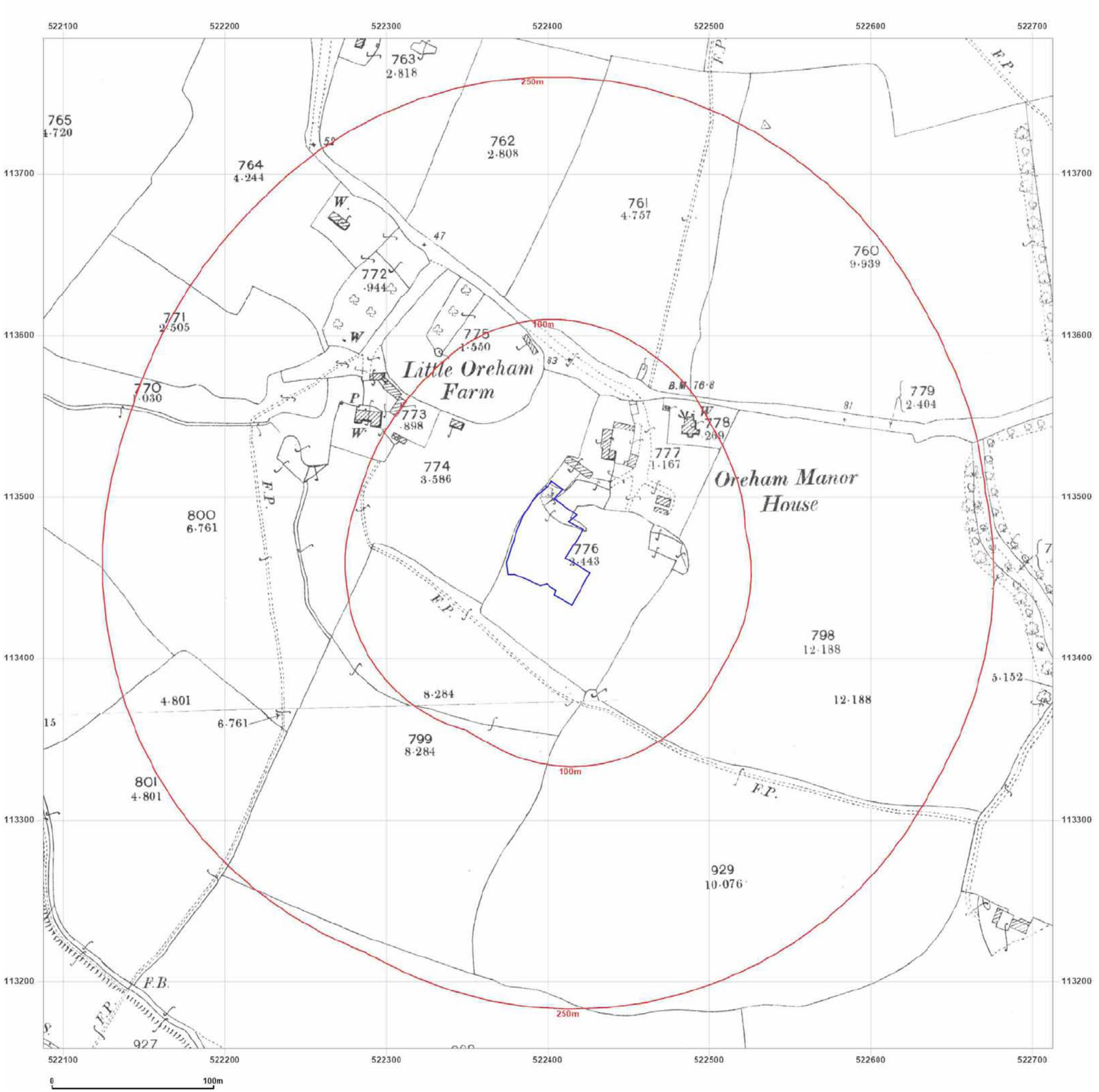


Groundsure INSIGHTS

**Site Details:**

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**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** County Series
**Map date:** **1897-1898**
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**Printed at:** 1:2,500

N
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Surveyed 1897
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Edition N/A
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Levelled N/A

Surveyed 1898
Revised 1898
Edition N/A
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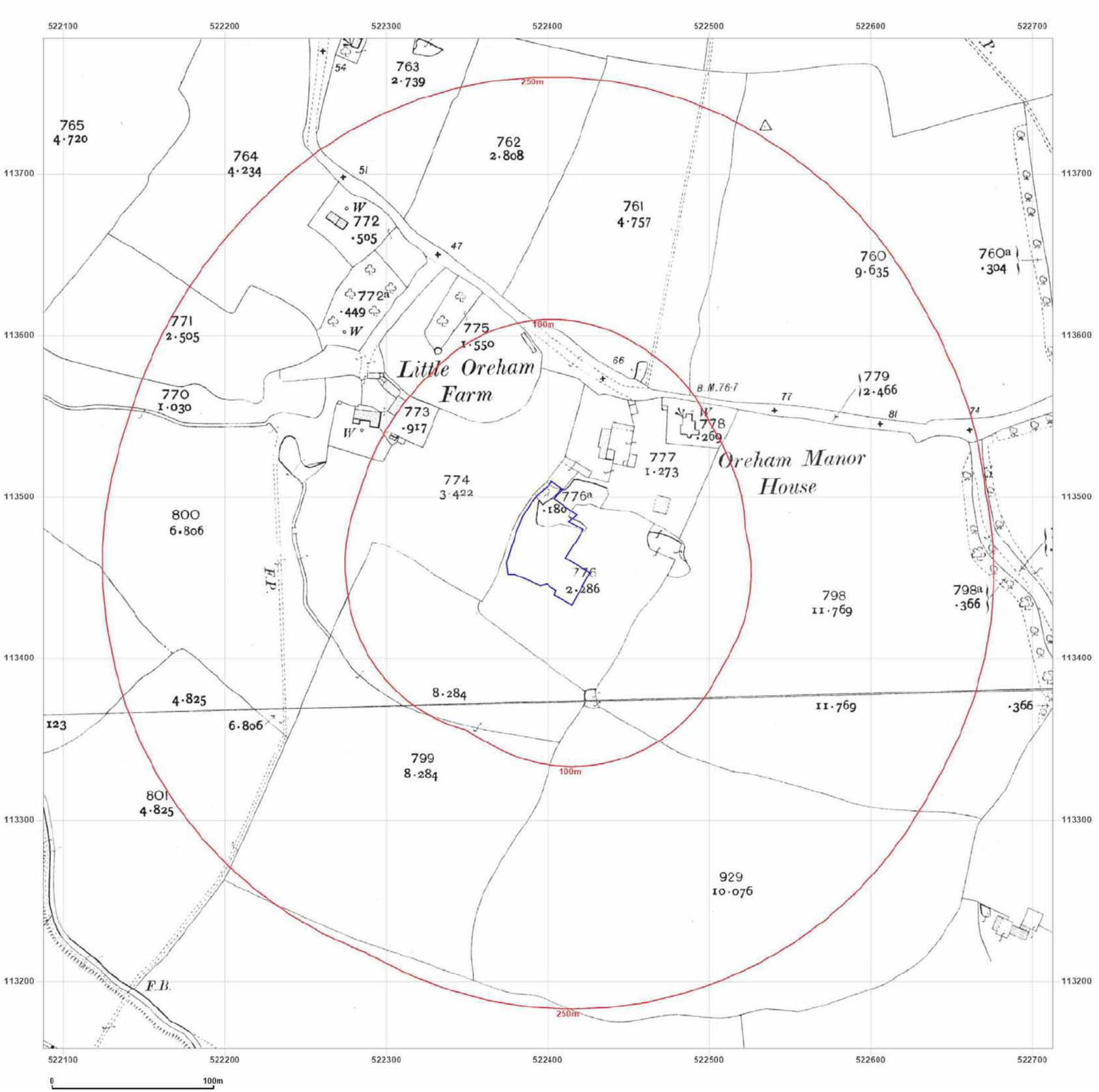


Groundsure INSIGHTS

**Site Details:**

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OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** County Series
**Map date:** **1910**
**Scale:** 1:2,500
**Printed at:** 1:2,500

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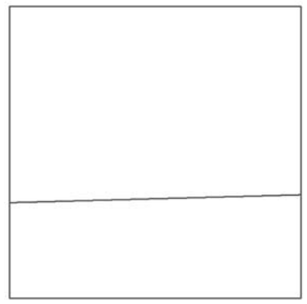
Surveyed 1910
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A



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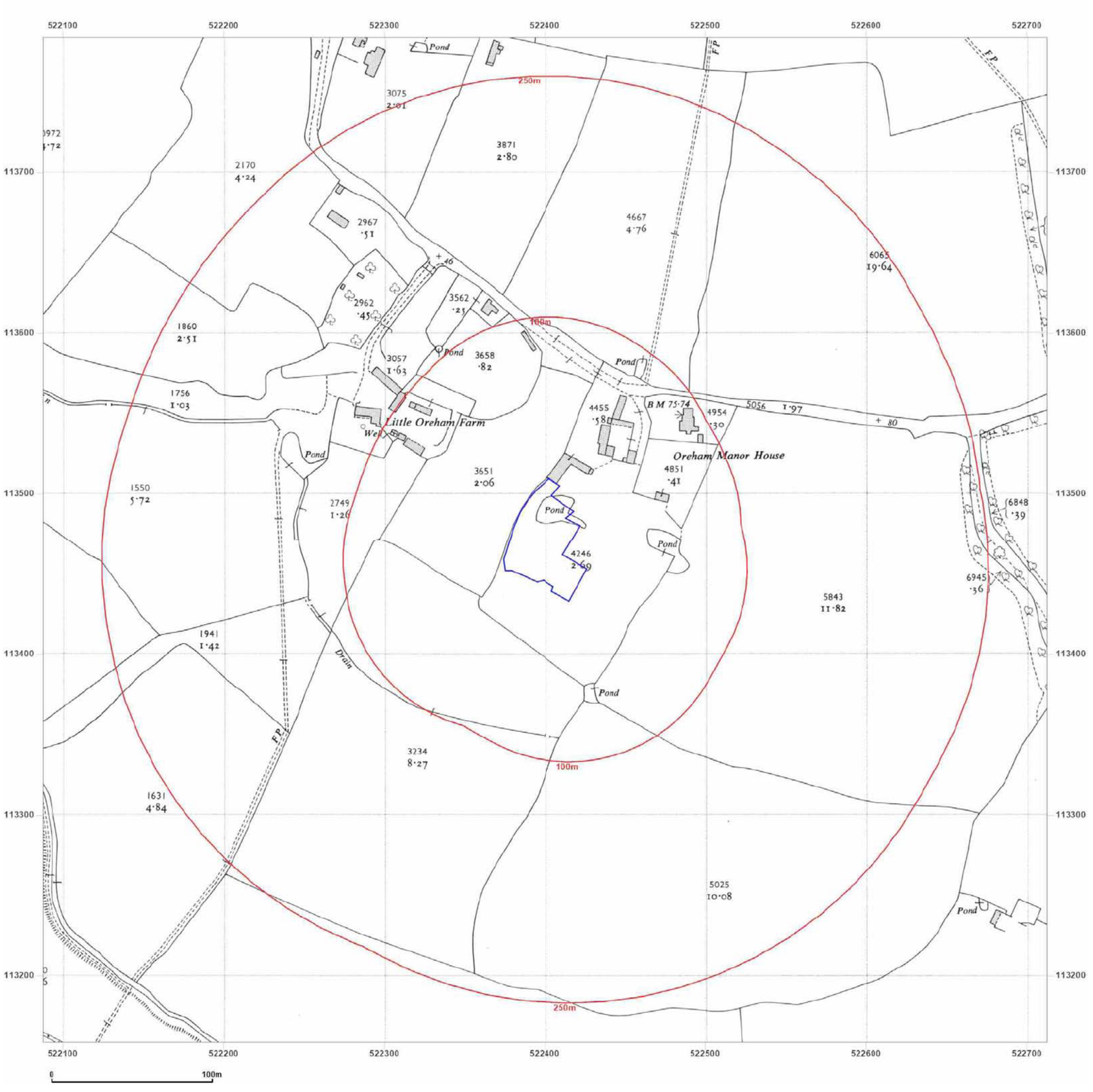


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** National Grid
**Map date:** **1956**
**Scale:** 1:2,500
**Printed at:** 1:2,500

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Surveyed 1956
Revised 1956
Edition N/A
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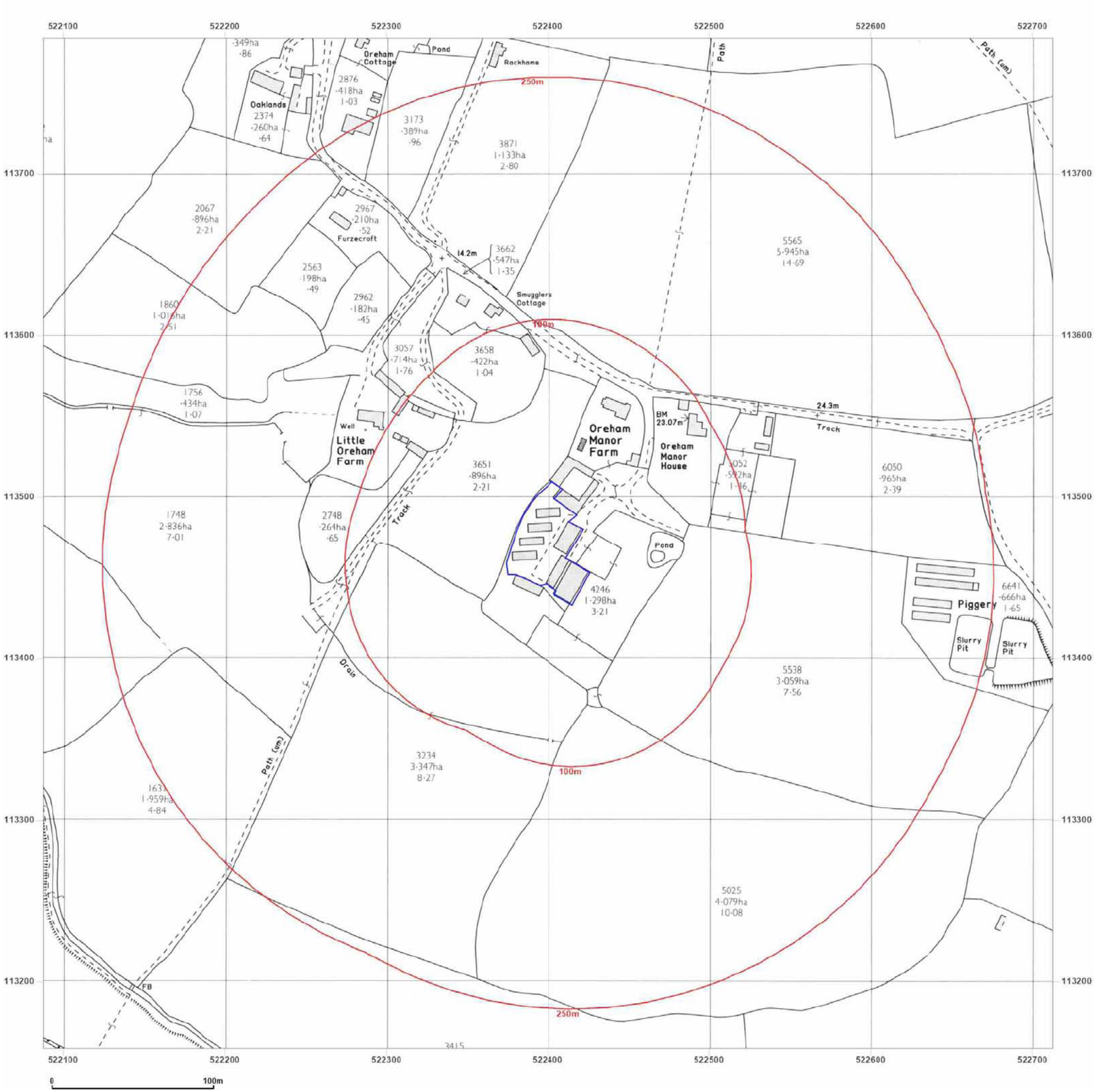


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
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HENFIELD, BN5 9SB

**Client Ref:** 574
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**Grid Ref:** 522400, 113471

**Map Name:** National Grid
**Map date:** **1978**
**Scale:** 1:2,500
**Printed at:** 1:2,500

N
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Edition N/A
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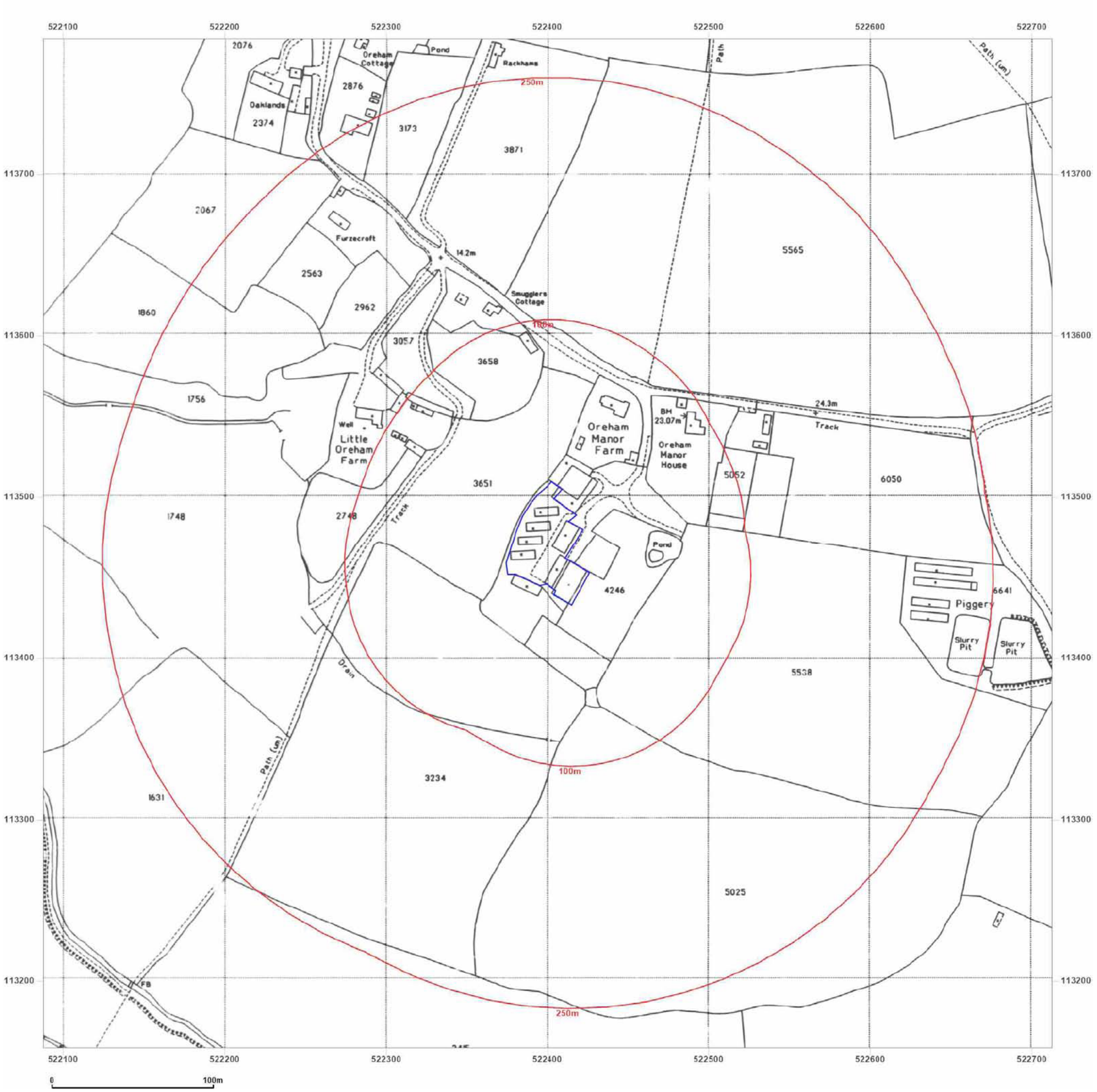


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** National Grid

**Map date:** **1994**

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

N
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Edition N/A
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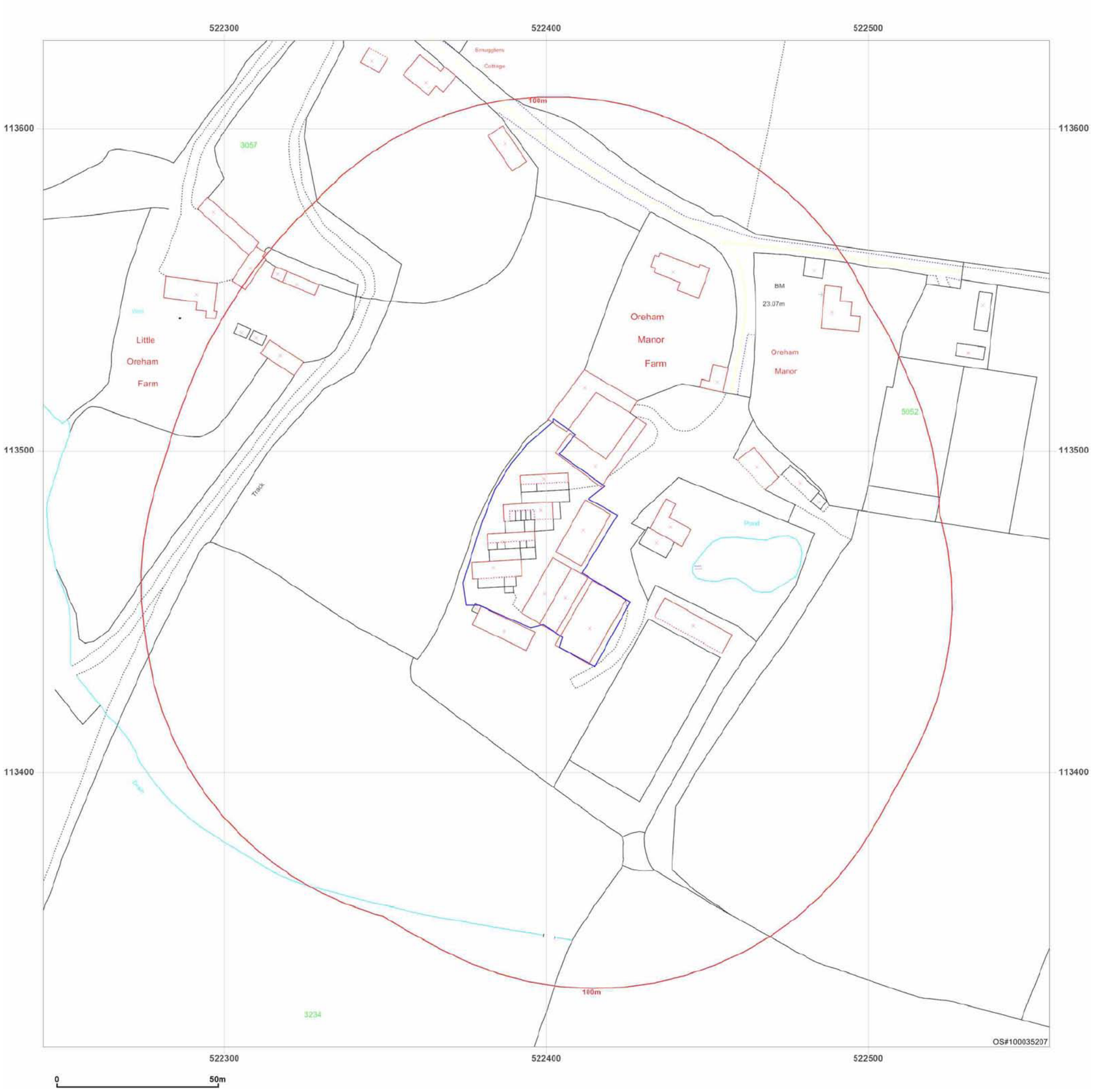


Groundsure INSIGHTS

**Site Details:**

OREHAM MANOR FARM,
OREHAM COMMON,
HENFIELD, BN5 9SB

**Client Ref:** 574
**Report Ref:** HMD-47-9296258
**Grid Ref:** 522400, 113471

**Map Name:** LandLine
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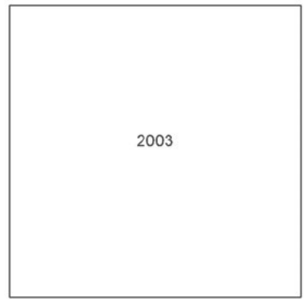


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APPENDIX D

## GroundSure Enviro+Geo Insight Report

APPENDIX E

## Site Photographs



Photo 1: View of workshop building from former yard to the south, with reprofied soil and piled hardcore.



Photo 2: Dumper and excavator stored within the eastern section of the warehouse.

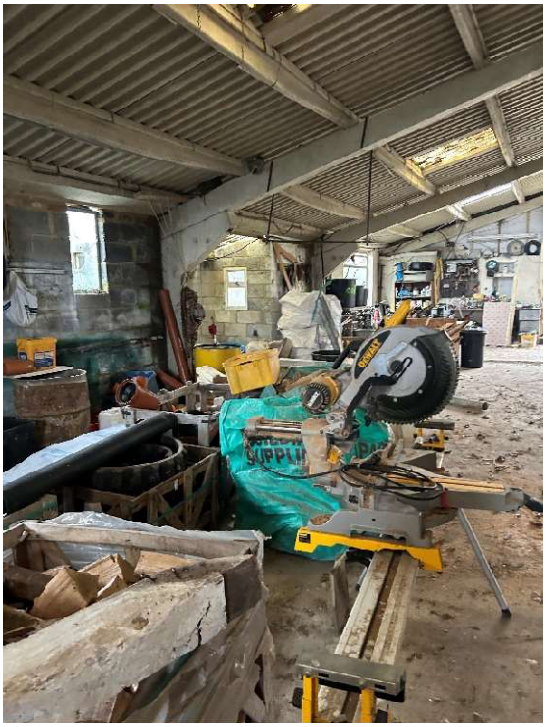


Photo 3: Table saw and storage of wood and various materials within the eastern warehouse section.



Photo 4: Nothern room of the western warehouse section.



Photo 5: Storage within southern room of western warehouse section.



Photo 6: Redundant fuel tank, concrete blocks and excavator tread stored within soft landscaping adjacent to workshop.



Photo 7: Redundant pigstie to the west of the workshop.



Photo 8: Redundant tank adjacent to pigstie.



Photo 9: Scrap metal skip within the western yard.

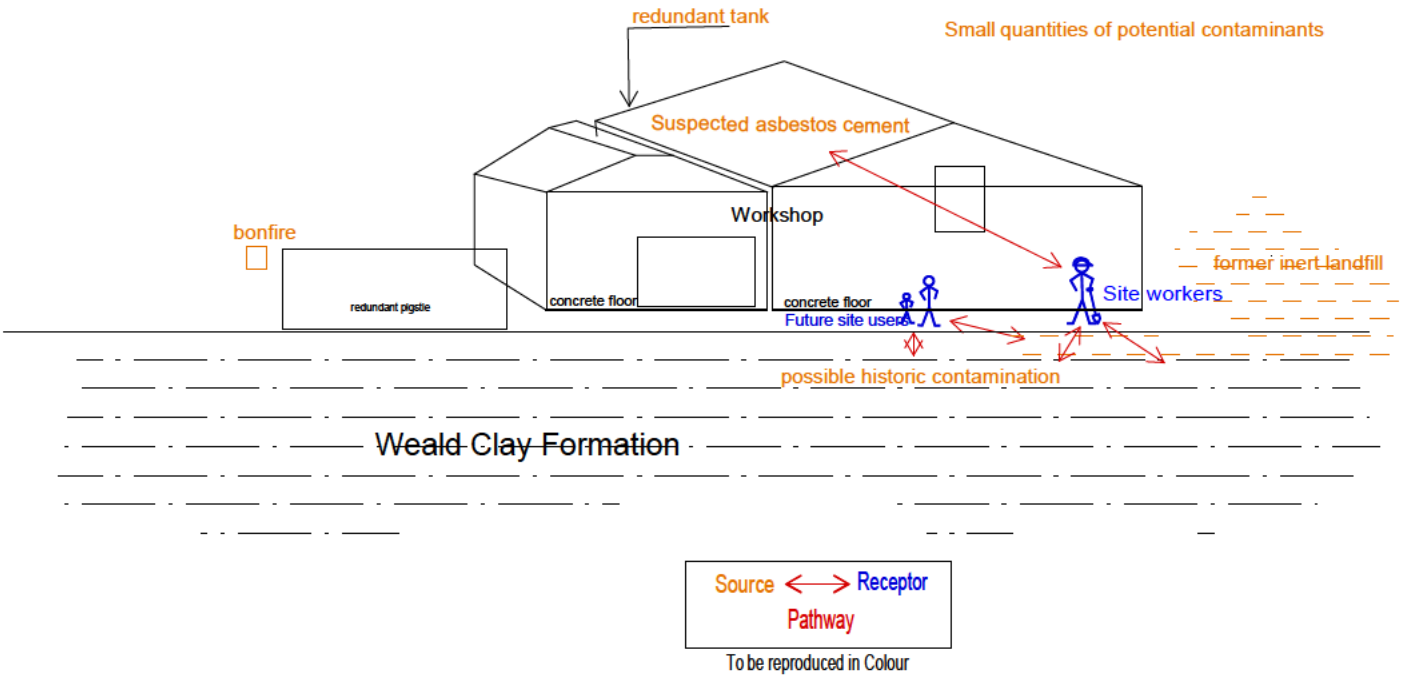


Photo 10: Materials storage within the western yard.

APPENDIX F

# Conceptual Model

# APPENDIX F

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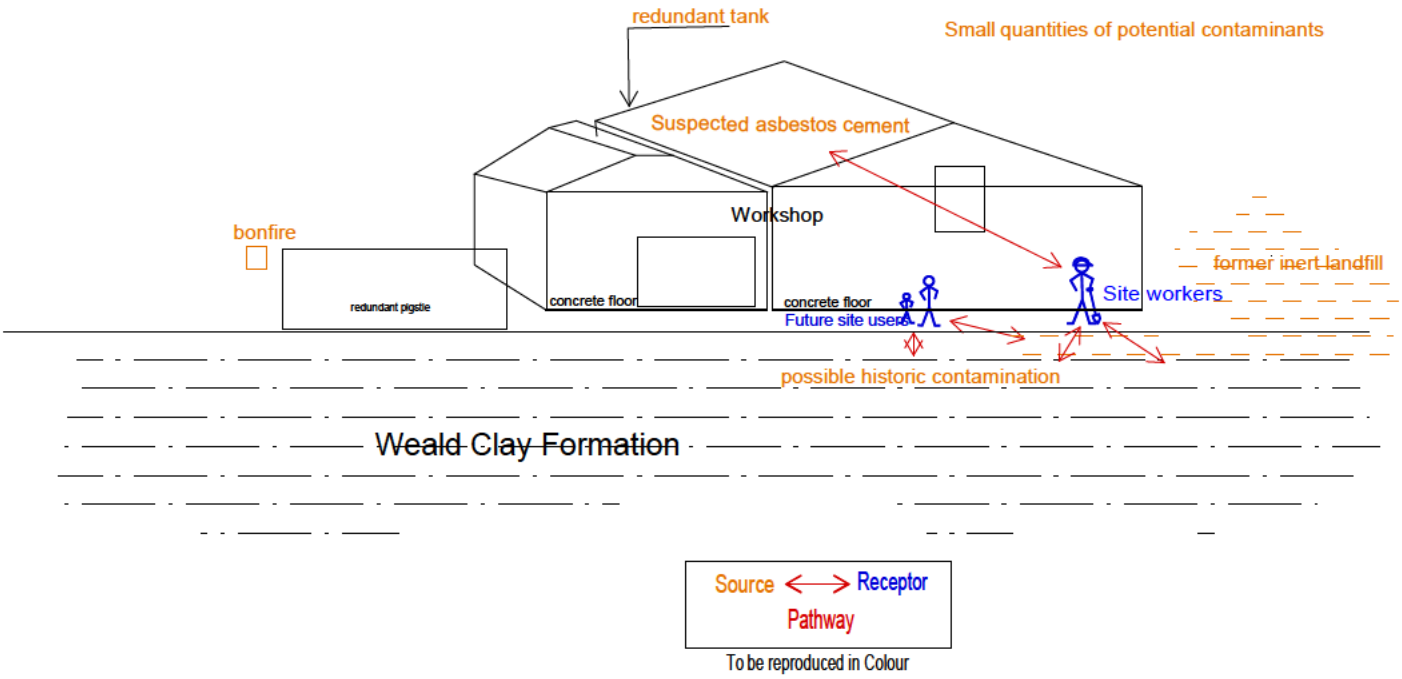
CONCEPTUAL MODEL

# APPENDIX F

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CONCEPTUAL MODEL

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web site : www.easltd.co.uk