



Geo-Environmental

DESK STUDY REPORT

for

LAND OFF HYDE END ROAD

SHINFIELD, WOKINGHAM

RG2 9EP

on behalf of

BLOOR HOMES SOUTHERN



Report:	DESK STUDY REPORT
Site:	LAND OFF HYDE END ROAD, SHINFIELD, WOKINGHAM, RG2 9EP
Client:	BLOOR HOMES SOUTHERN
Date:	16/08/2024
Reference:	GE22615/DSR/AUG24
Version:	1.0
Prepared by:	 Anthony Potter BSc (Hons), MSc, FGS SENIOR CONSULTANT ENGINEER
Reviewed by:	 FIONA GOODE BSc (Hons), MSc, FGS, MEnvSc, RSoBRA SENIOR CONSULTANT ENGINEER
Authorised by:	 GAVIN ROBERTS CGeol, BEng (Hons), MSc, FGS TECHNICAL DIRECTOR
Geo-Environmental Services Limited Unit 7, Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex, BN6 9GL +44(0)1273 832972 www.gesl.net	

Amendment Record

Revision ref.	Date	Reasons for amendment	Author	Reviewed by	Authorised by
1.0	16/08/2024	Initial issue	AP	FG	GR

**CONTENTS**

1.0	INTRODUCTION	1
1.1	Proposed Development	1
1.2	Objectives	1
1.3	Standards	1
1.4	Conditions	2
2.0	DESK STUDY	3
2.1	Site Description	3
2.2	Geology	3
2.3	Hydrogeology	5
2.4	Hydrology	5
2.5	Sensitive Land Uses	6
2.6	Environmental Data	6
2.7	Geotechnical Data	7
2.8	Landfill and Ground Workings	8
2.9	Radon	9
2.10	Geochemistry	9
2.11	Historical Data	9
2.12	Previous Ground Investigations	11
2.13	Asbestos	11
2.14	Potential Contamination	11
2.15	Ground Gas Summary	11
2.16	Unexploded Ordnance	12
2.17	Climate Change	12
3.0	PRELIMINARY ASSESSMENT	13
3.1	Preliminary Geotechnical Risk Assessment	13
3.1.1	Potential Geotechnical Issues	13
3.2	Preliminary Environmental Conceptual Site Model & Risk Assessment	13
3.2.1	Methodology	13
3.2.2	Summary of Plausible Sources	15
3.2.3	Summary of Plausible Pathways	15
3.2.4	Summary of Plausible Receptors	15
3.3	Preliminary Risk Assessment Summary	22
3.4	Preliminary Geotechnical Assessment Summary	22
4.0	CONCLUSIONS AND RECOMMENDATIONS	23
4.1	Conclusions	23
4.2	Recommendations	23

FIGURES

FIGURE 1	Site Location Plan
FIGURE 2	Initial Site Master Plan
FIGURE 3	Conceptual Site Model (Proposed Site Use)

APPENDICES

APPENDIX A	Desk Study Information
APPENDIX B	Photographic Record
APPENDIX C	UXO risk screening map



1.0 INTRODUCTION

Geo-Environmental Services Limited (Geo-Environmental) was instructed by Bloor Homes Southern (the Client) to undertake a Phase 1 assessment of the geotechnical and geo-environmental factors pertaining to the proposed redevelopment of the land at land Off Hyde End Road, Shinfield, Wokingham, RG2 9EP, (herein referred to as 'the site'). The site's location is presented in Figure 1.

1.1 Proposed Development

It is understood the proposed redevelopment was to comprise residential properties with private gardens, access roads and associated infrastructure. The proposed site development layout, as at the time of writing, is presented in Figure 2.

1.2 Objectives

The investigation was to comprise a desk study of geotechnical and geo-environmental factors pertaining to the site, including a review of available historical maps, site walkover and an examination of other available sources of readily available geo-environmental information.

A Preliminary Risk Assessment (PRA) was to be undertaken as part of the desk study in accordance with Land Contamination Risk Management (LCRM). The objective of the risk assessment was to evaluate plausible pollutant linkages with respect to the proposed development, adjacent land uses, and the wider environment, in the context of planning, immediate liabilities under the Environmental Protection Act 1990, and risks posed to Controlled Waters under the Water Resources Act 1991.

1.3 Standards

Where practicable, the desk study was undertaken in accordance with the following documents and guidance:

- National Planning Policy Framework – December 2023;
- Land Contamination Risk Management (LCRM), Environment Agency, updated July 2023;
- Model Procedures for the Management of Contaminated Land, CLR11, DEFRA and Environment Agency 2004 (withdrawn 2020);
- Environment Agency Guidance on Requirements for Land Contamination Reports, Version 1 dated July 2005;
- BS10175:2011+A2:2017 - Investigation of Potentially Contaminated Sites - Code of Practice, BSI 2017;
- BS5930: 2015+A1:2020 - Code of Practice for Site Investigations, BSI 2020;
- EN ISO 14688 Geotechnical Investigation and Testing Part 1-2002 and Part 2-2004;
- BS1377: 1990 - Soils for Civil Engineering Purposes, BSI1990;
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions;
- NHBC Standards Chapter 4.2 Building Near Trees;
- CIRIA C665 – Assessing risks posed by hazardous ground gases to buildings (2007);
- NHBC NF94 – Hazardous Ground Gas – an essential guide for housebuilders – April 2023
- BS8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings;
- Department of Environment - Industry Profiles (1995 - 1996).

1.4 Conditions

The desk study data obtained for the site is assumed to be factually correct and up to date at the point of their acquisition. No liability is taken for any omissions or inaccuracies in the data acquired. It should also be noted that changes to the desk study data may occur following the production of this report, Geo-Environmental accepts no liability where this subsequently affects the assessment presented herein.

The information collected from the desk study and site walkover has been used to provide an interpretation of the geotechnical and environmental conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained. Geo-Environmental takes no responsibility for conditions that have either not been revealed in the available records or that occur between or under points of any physical investigation. Whilst every effort has been made to interpret the conditions, such information is only indicative and liability cannot be accepted for its accuracy.

It must be noted that in particular the concentrations and levels of mobile liquid and gaseous materials are likely to vary with time. The results obtained may therefore only be representative of the conditions at the time of sampling. The absence of asbestos within soil samples analysed does not guarantee the absence of asbestos within buildings, within or bonded to concrete, as discrete burials, or within the soil mass elsewhere within a site. This report must not be taken as, or assumed to imply any guarantee that a site is free of hazardous or potentially contaminative materials.

Information contained in this report is intended for the use of the Client, and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever expressed or implied with respect to the use of this information by any third party. Geo-Environmental does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.

This report remains the property of Geo-Environmental and the Client has no rights to, or reliance upon this document or supporting documents until such time as payment has been received in full for all invoices for works undertaken in connection with this report.

Assessment criteria or other parameters developed for the evaluation of contamination on this site are based on a number of assumptions regarding exposure and toxicology. Exposure to contaminants and levels of adverse effects may therefore vary. Whilst reasonable care and expertise has been employed in the development of such criteria, no liability is accepted in this respect. Other criteria or guidance on the development of assessment criteria may be published in the future and no liability is accepted in this respect.

2.0 DESK STUDY

The findings of the Phase I desk study are presented in the following section. A copy of the historical maps and other information obtained as part of the desk study are presented in Appendix A. Comments made in the following section regarding possible ground conditions on the site are based purely on the desk study and associated site walkover.

2.1 Site Description

A walkover inspection was undertaken on 12th August 2024 by an engineer from Geo-Environmental. The site was located at NGR 473203, 167218 and extended to c. 10.7 ha. A photographic record from the site walkover is presented in Appendix B.

At the time of the site walkover, the site comprised an irregularly shaped area of land incorporating three separate agricultural fields and a farmyard with several of agricultural buildings. The B3349 road transects the site in a north-south direction, with one agricultural field located to the west of this road and the remainder of the site located to the east of this road.

The field located to the west of the B3349 was mainly planted with maize crop with the exception of the southern portion of the field that was grassed. Overhead power lines ran along this grassed section of the field in an east-west direction. The northern field located to the east of the B3349 was also planted with maize crop at the time of the site walkover.

The southern field located to the east of the B3349 was grassed and had recently been cut at the time of the walkover. A farm track ran along the entire length of the northern boundary of this field. All of the three fields were generally level topographically.

Whilst it was not possible to access the farmyard area of the site at the time of the walkover, this area of the site was observed from the adjacent field and aerial mapping imagery has also been reviewed. This farmyard area contained c.4 No. barn type structures noted to be constructed with corrugated type roofs of unknown material. It is possible that this roofing material contains asbestos. The buildings varied in condition, with the buildings located closest to the B3349 road in the poorest state of repair.

The site boundaries comprised a mix of semi-mature to mature trees and hedgerows in all directions. The site was bounded by new residential development and playing fields to the north and predominantly agricultural fields to the south, east and west.

The site was accessed via gateways off the B3349 road that transects the site.

2.2 Geology

BGS Mapping

British Geological Survey (BGS) geological mapping indicated the ground conditions beneath the site to form superficial deposits of the River Terrace Deposits overlying bedrock strata of the London Clay Formation. Given the developed nature of part of the site and the site use comprising agricultural land, it is considered likely that there may be areas of reworked, disturbed or Made Ground across the site.

BS5930:2015+A1:2020 defines **Made Ground** as anthropogenic ground in which the material has been placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process. Great variations in material type, thickness and degree of compaction invariably

Desk Study Report

occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material. In addition, where identified it is not uncommon for asbestos to be present within Made Ground soils.

The rivers of the south-east of England, including the River Thames and its tributaries, have been subject to at least three changes of level since Pleistocene times. One result has been the formation of a complex series of **River Terrace Deposits**. The deposits are generally found at an elevation close to or higher than that of the existing rivers, and generally comprise sand and gravel of roughly bedded flint or chert in varying degrees of coarseness.

London Clay comprises a stiff grey fissured clay, weathering to brown near surface. Concretions of argillaceous limestone in nodular form (Claystones) occur throughout the formation. Crystals of gypsum (Selenite) are often found within the weathered part of the London Clay, and precautions against sulphate attack to concrete are sometimes required.

The lowest part of the formation is a sandy bed with black rounded gravel and occasional layers of sandstone and is known as the Basement Beds.

BGS borehole records

A search was undertaken for BGS borehole records on or proximal to the site. 11No. records were identified on the site. A summary of the ground conditions encountered in the boreholes on and in close proximity to the site is presented in Table 2.1. The encountered conditions are reported as recorded on the borehole logs.

Borehole ID	Encountered Conditions	Depth up to (m bgl)	Ground Level (m AOD)	Groundwater (m bgl)
427135	River Terrace Deposits: Very clayey sandy GRAVEL.	2.8	44.5	Not struck
	London Clay: Silty CLAY	3.8		
427141	River Terrace Deposits: Flint GRAVEL.	3.2	48.3	0.7
	London Clay: Firm CLAY	3.7		
427157	Drift: Gravel and Clay	3.53	46	Blank
	London Clay: CLAY	42.7		
	Reading Beds: Reading Beds	66.7		
	Upper Chalk: Upper Chalk	125		
427133	Alluvium: Silty CLAY	1.2	40.4	0.8
	River Terrace Deposits: Sand and GRAVEL	2.0		
	London Clay: Firm silty CLAY	2.5		
427134	River Terrace Deposits: Sand and GRAVEL	2.5	40.4	0.3
	London Clay: Firm CLAY	3.0		
RUK-TP6	Topsoil:	0.10	39.97	1.0
	Alluvium: Soft to firm sandy CLAY	1.10		
	River Terrace Deposits: Firm sandy gravelly CLAY and sandy gravel	1.60		
RUK-TP7	Topsoil: Topsoil	0.25	39.66	1.70
	Alluvium: Soft sandy slightly gravelly CLAY & soft brown CLAY	1.70		
	River Terrace Deposits: Sandy GRAVEL	2.20		

Borehole ID	Encountered Conditions	Depth up to (m bgl)	Ground Level (m AOD)	Groundwater (m bgl)
427138	Alluvium: Silty CLAY	1.6	39.0	1.60
	River Terrace Deposits: Clayey GRAVEL	3.6		
	London Clay: Silty CLAY	5.0		
427164	Drift: SAND and GRAVEL	6.0	43.0	0.75
	London Clay: CLAY	32.50		
	Reading Beds: Sandy CLAY	46.50		
	Upper Chalk: Chalk with Flints	82.50		
427139	River Terrace Deposits: Clayey SAND and GRAVEL	2.50	46.9	1.6
	London Clay: Firm CLAY	3.80		

Table 2.1 Summary of BGS boreholes records in the vicinity of the site

2.3 Hydrogeology

With reference to information provided by the Environment Agency, the superficial strata of the River Terrace Deposits were classified as a Secondary A Aquifer, whilst the solid geology of the underlying London Clay Formation was classified as Unproductive Strata.

Secondary A Aquifers are 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.

Unproductive Strata are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

The site was indicated to be outside of any Source Protection Zones (SPZ).

One licenced groundwater abstraction was identified within 500m of the site boundary:

- 152m W – University of Reading, spray irrigation from Thames groundwater, no expiry date provided.

One licensed discharge to controlled waters was identified within 500m of the site boundary:

- 361m N – Shinfield, Reading, trade discharges unspecified to the tributary of the Loddon, revoked 10/05/1993.

No pollution incidents to groundwater were identified within 500m of the site.

The BGS Flood GFS Data indicated that the site had a moderate to high potential for groundwater flooding to occur. It should be noted that the mapping is a “susceptibility set”, it does not indicate hazard or risk, i.e. it does not provide any information on the depth to which groundwater flooding occurs or the likelihood of the occurrence of an event of a particular magnitude.

2.4 Hydrology

The nearest surface feature was identified on-site, an unnamed inland river located between the northern and southern fields east of the B3349.

No pollution incidents to controlled waters were identified within a radius of 500m of the site.

Desk Study Report

The easternmost portion of the site and the adjacent land to the east were identified as being at a medium risk of flooding from rivers and the sea.

Historical flood event records have noted the following flood events on-site and within 250m of the site boundary:

- On-site – Thames SE Area, flooded between 20/07/2007 and 21/07/2007. Main river channel capacity exceeded.
- On-site – Thames SE Area, flooded between 20/07/2007 and 21/07/2007. Main river channel capacity exceeded.
- On-site – February Winter 1990, flooded between 01/01/1991 and 12/12/1991. Main river channel capacity exceeded.
- On-site – February Winter 1990, flooded between 01/01/1991 and 12/12/1991. Main river channel capacity exceeded.
- 138m S – Thames SE Area, flooded between 20/07/2007 and 21/07/2007. Drainage – local drainage/surface water.
- 168m SE – South West England, flooded between 30/01/2014 and 10/02/2014. Source and cause unclassified.
- 183m NE – Thames SE Area, flooded between 20/07/2007 and 21/07/2007. Main river channel capacity exceeded.
- 202m S – Thames SE Area, flooded between 20/07/2007 and 21/07/2007. Drainage – local drainage/surface water.

The site is within a Zone 2 (1 in 1000 chance) and Zone 3 (1 in 200 chance) flood zone from river and coastal flooding. On-site, surface water flooding was 1 in 30 year risk at depths of between 0.30m and 1.00m.

Based on the flood risk data, it is recommended that a flood risk assessment be undertaken for the site.

2.5 Sensitive Land Uses

A search was made of environmentally sensitive areas, including areas of green belt, scenic or natural beauty, parks, reserves, nitrate zones, protected conservation and scientific areas.

Two areas of ancient woodland were identified immediately adjacent to the site, High Copse adjacent to the northwestern site boundary and Tanners Copse adjacent to the western site boundary. Two additional areas of ancient woodland were identified within 500m of the site, High Copse 30m SW and Moor Coppice 454m SE.

2.6 Environmental Data

Searches of other various environmental databases were made as part of the desk study, including air pollution control sites, Part IIA contaminated land, Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC) site, registered radioactive substances, COMAH sites, explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS) sites, planning permissions for sites involving hazardous substances, contemporary trade directories and fuel station registers.

No licenced pollutant releases were recorded within 500m of the site.

The desk study identified ten historical land uses within 500m of the site, as summarised in Table 2.2 below:

Distance and Direction (m)	Land Use	Date
344m North	Unspecified Heap	1913
344m North	Unspecified Heap	1913
346m North	Unspecified Ground Workings	1938
363m North	Unspecified Yard	1976
363m North	Builders Yard	1969
374m North	Gravel Pit	1913
375m North	Gravel Pit	1961
377m North	Gravel Pit	1938
390m North	Gravel Pit	1976
396m North	Gravel Pit	1898

Table 2.2 Historical Land Uses within 500m

One historical garage was identified 499m northeast, dated 1983.

Six historical tanks (unspecified) were identified between 359m and 425m from the site between the dates of 1899 and 1994.

One electricity substation was identified 371m northeast and was present between 1968 and 1994.

Given the location of the identified historical land uses, tanks and substation, in relation to the site it is considered that these are unlikely to have resulted in a detrimental impact on the subject site.

2.7 Geotechnical Data

The site was recorded as being located in an area which might not be affected by past, current or future coal mining.

National databases for a number of geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site is presented in Table 2.3.

Hazard	Designation
Non-coal mining	Negligible
Collapsible ground	Very low
Compressible ground	Negligible
Ground dissolution	Negligible
Landslide	Very low
Running sand	Very low
Shrinking and Swelling clay	Low

Table 2.3 Summary of BGS Geological Hazards

One Brit pit was identified 414m north of the site at School Green gravel pit with the commodity of sand and gravel, the pit has ceased activity. This appeared to correlate with the gravel pit referred to in Table 2.2, the outline of which did not appear to change from 1913 to 1961 and it was no longer shown on mapping from 1969 onwards.

2.8 Landfill and Ground Workings

A search of BGS recorded landfill sites, IPC registered waste sites, licensed waste management facilities, local authority recorded landfill sites, other registered landfill sites, waste transfer stations, and other waste treatment or disposal sites was undertaken as part of the desk study. Such sites may form an artificial source of ground gases, such as carbon dioxide and methane, where wastes are buried or disposed of to landfill.

One historical landfill was identified within 500m of the site boundary:

- 347m N – School Green, Shinfield, inert, industrial, commercial and household waste. No operational dates were provided.

Given the location of the identified historical landfill in relation to the site, the anticipated ground conditions to be semi-permeable and impermeable, and the fact that there are multiple other land uses between this landfill and the subject site, it is considered that this landfill is unlikely to have resulted in a detrimental impact on the subject site.

One historical waste site was identified within 500m of the site boundary:

- 34m W – High Copse Farm, Shinfield, recycling facility.

Eight waste exemptions were recorded within 500m of the site details of which are outlined within Table 2.4.

Location	Site	Category	Sub-Category	Description
346m N	Unknown	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
346m N	CastleOak Office, Shinfield	Treating waste exemption	Not on a farm	Screening and blending of waste
346m N	Construction site, Shinfield	Using waste exemption	Not on a farm	Use of waste in construction
346m N	CastleOak Office, Shinfield	Using waste exemption	Not on a farm	Use of waste in construction
346m N	CastleOak Office, Shinfield	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
346m N	CastleOak Office, Shinfield	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
347m N	Shinfield Pharmacy School	Treating waste exemption	Non-agricultural waste only	Sorting and de-naturing of controlled drugs for disposal
348m NW	Unknown	Using waste exemption	Not on a farm	Use of waste in construction

Table 2.4 Summary of Waste Exemptions within 500m

These waste exemptions are not expected to have resulted in an adverse effect on the site.

No other such land uses or designations were identified by the desk study within a 500m radius of the site boundary.

2.9 Radon

The Groundsure report states that the site lies in an area where less than 1% of homes are estimated to be at or above the Action Level as defined by Public Health England. The BGS record states that no radon protective measures are necessary in the construction of the new dwellings or extensions within the site boundary.

2.10 Geochemistry

Data obtained as part of the Groundsure Report provides details on the estimated soil chemistry for natural soils in the vicinity of the site. The estimated quality of natural soils beneath the subject site is presented in Table 2.5.

Determinand	Estimated Concentration (mg/kg)
Arsenic	15 – 25
Cadmium	1.8
Chromium	60 – 90
Lead	100
Nickel	15 – 30

Table 2.5 Summary of Site Geochemistry

The natural background concentrations for the determinands in Table 2.5 were noted to be below respective published Soil Guideline Values, Generic Assessment Criteria and Category 4 Screening Levels for the protection of human health under a residential land use with plant uptake.

However, these values are not necessarily representative of the site's soil chemistry, nor do they account for a site's historic uses, nor the presence or condition of any Made Ground soils. Furthermore, SGVs and GAC are dependent on pH and soil organic matter content. Therefore, concentrations of specific determinands and the utilised SGV/GAC cannot be determined without site specific investigation and analysis.

2.11 Historical Data

A summary of site history dating back to 1872 is presented in Table 2.6 and has been determined through examination of historical maps obtained as part of the desk study.

Date	On Site	Off Site
1872 (1:2,500)	The site formed part of a field network and part of three copses including Tanners Copse, Costrills Copse and High Copse. A roadway ran north to south, through the centre of the site roughly in line with the current route of the B3349.	The surrounding area comprised a mixture of fields and woodland with a small scattering of buildings immediately to the north (Warrengate farm) and to the south (residential property). A river was noted c.250m east.
1877 (1:10,560)	No significant changes noted.	No significant changes noted.
1898-1900 (1:10,560)	Undefined buildings, assumed to be agricultural, labelled 'Wyvern' were located centrally along with two wells and a pond.	The majority of the farm to the north was no longer indicated. A Gravel Pit was mapped c. 450m to the north of the site. The village of Schoolgreen was located c.200m north.
1899 (1:2,500)	No significant changes noted.	No significant changes noted.
1909-13 (1:10,560)	No significant changes noted.	Residential properties were indicated immediately north of Warrengate Farm. The

Date	On Site	Off Site
		Gravel Pit to the north of the site appeared to have been extended.
1911 (1:2,500)	No significant changes noted.	No significant changes noted.
1938 (1:10,56)	Mapping incomplete.	No significant changes noted.
1961 (1:10,560)	No areas of copse/woodland were mapped within the site boundary.	Three large undefined buildings were indicated c.90m west. There had been further residential development to the north.
1968 (1:2,500)	One of the buildings on-site appeared to have been divided into two residential properties. The pond and wells were no longer indicated.	A recreational ground and allotment gardens were adjacent to the north-eastern boundary. The undefined buildings to the west formed 'High Copse Farm', two residential properties were indicated adjacent to the farm.
1969 (1:10,000)	Several land drains were noted to run through the site.	There had been further residential development to the north. A builders yard was indicated c.200m north. The gravel pit to the north was no longer mapped.
1974 (1:2,500)	No significant changes noted.	No significant changes noted.
1976 (1:10,000)	The two residential properties were no longer indicated, with two new residential properties located centrally within the northern boundary.	No significant changes noted.
1983 (1:2,500)	No significant changes noted.	A piggery was indicated c.25m north-west.
1983 (1:10,000)	No significant changes noted.	The builders yard to the north was no longer indicated.
1988 (1:10,000)	No significant changes noted.	No significant changes noted.
1989-94 (1:2,500)	No significant changes noted.	No significant changes noted.
2001 (1:10,000)	No significant changes noted.	No significant changes noted.
2010 (1:10,000)	No significant changes noted.	No significant changes noted.
2024 (1:10,000)	No significant changes noted.	The piggery and surrounding area to the northwest had been redeveloped for residential use.

Table 2.6 Summary of Site History

The site had originally formed fields and copse/woodland on the earliest map edition c.1872. Buildings (assumed to be agricultural), two wells and a pond were indicated c.1898 within the central portion of the site, copses shown on early maps were no longer indicated c.1961. Two of the original residential buildings were replaced with two new properties centrally c.1976 whilst the pond and wells were no longer indicated from c.1968.

The surrounding area originally formed copse, fields and a farm c.1872. Between 1909 to present, residential development took place to the north and north-west. High Copse Farm was indicated to the west c.1968 along with allotments and recreation ground to the north. A gravel pit was mapped c.450m north on mapping from c. 1898

but was no longer mapped from c. 1969 and appeared to have been developed. A piggery was indicated to the north-west c.1983 but was later developed for residential use.

2.12 Previous Ground Investigations

Geo-Environmental was not made aware of any previous ground investigations undertaken within the boundary of the site.

2.13 Asbestos

Inspection of the farm buildings located centrally on the site was not possible at the time of the walkover survey. However, given the age and construction of the buildings it is considered likely that asbestos may be present within the construction of these buildings. Prior to demolition, an appropriate asbestos survey should be undertaken followed by removal of any asbestos containing materials identified. All work with asbestos should comply with the Control of Asbestos Regulations 2012.

As at all sites, consideration for the potential for asbestos to be present within the shallow soils, within stockpiles/Made Ground or entrained within or below any concrete on the site should be given when designing any site investigations, therefore asbestos identification should be included within the suite of testing of contaminants on site. The absence of asbestos in soil samples analysed is not a guarantee of the absence of asbestos elsewhere on a site.

2.14 Potential Contamination

The site has historically been undeveloped agricultural land with the exception of presumed agricultural type buildings located centrally and two residential properties located in the north of the site. In addition, historical mapping identified an infilled pond and wells within the site.

These land uses are not covered by the National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008), which provides a summary of industrial profiles (1995-1996) published by the former Department of the Environment (DoE) (now part of the Department for Environment, Food and Rural Affairs (DEFRA)).

Whilst gross contamination is considered unlikely based on the information reviewed, there is the potential for heavy metals, metalloids, sulphates, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), asbestos, pesticides and herbicides.

2.15 Ground Gas Summary

The desk study identified an infilled pond on-site. If Made Ground is present within this infilled pond and contained a significant amount of organic matter or organic contamination, it could have the potential to represent a source of ground gases/vapours.

An historical landfill site was identified c. 347m north of the site albeit no operational dates were recorded. However, the landfill was noted to have received inert, commercial and household wastes. Underlying ground conditions are anticipated to comprise River Terrace Deposits and London Clay. A potential migration pathway may exist within the layered sands and gravels of the River Terrace Deposits when seasonally dry. However, shallow groundwater or perched water within these strata will provide a barrier to any migration. Groundwater flow direction is anticipated to be west-east towards the River Loddon, therefore gas migration and/or dissolved gases are anticipated to be migrating from the former landfill in this direction, not towards the site. In addition, there are

a series of watercourses between the site and the former landfill which are likely to limit migration potential. It is understood that until recently the former landfill had remained undeveloped, and therefore any ground gases were able to vent freely to atmosphere. Based on the likely dates of infilling (c.1960-70) the gas generation potential for the landfill is considered to be low. Development has recently been constructed on this former landfill, as well as surrounding it, if ground gases are being generated by the former landfill, then service trenches/ducts constructed as part of this new development are likely to provide preferential pathways such that gases would not migrate towards the site. Based on the distance the former landfill is located from the site, the identified potential migration barriers and the low gas generation potential, the former landfill is not considered a plausible source that would impact the site.

Ground gas monitoring would only be recommended if a source of organic rich Made Ground or organic contamination was encountered on the site in sufficient volume that it could present a source in its own right. No other plausible source of ground gases and or vapours have currently been identified in relation to the site.

2.16 Unexploded Ordnance

An initial assessment for Unexploded Ordnance (UXO) risk was undertaken and based on accessing Zetica's on-line screening tool (accessed 10/07/2024). This indicated the site to be within a 'low risk' area. A copy of the initial assessment is presented in Appendix C.

2.17 Climate Change

Climate change is a factor for consideration under LCRM. Current climate models are showing an increase in extreme weather patterns, with extended periods of warm dry weather and/or extreme wet weather and flooding.

The effect of extreme and/or extended dry weather and extreme wet weather and flooding should be considered further as part of the proposed works. Extended periods of low flow would reduce dilution of any mobile contaminants present. Extended periods of high flow and flooding which would increase the volumes and duration of saturated soils at the site and increase erosion and sediment transport. High flow and flooding would also reduce the risks of any gas migration to the site. However, the risks associated which such periods would only apply where contamination has been identified/is present which would be considered as part of the wider contamination assessment of the site.

3.0 PRELIMINARY ASSESSMENT

Based on the findings of the desk study, the following sections summarise the anticipated geotechnical and environmental factors likely to impact the site.

3.1 Preliminary Geotechnical Risk Assessment

3.1.1 Potential Geotechnical Issues

The following factors that might impact the geotechnical condition of the site were identified as part of the desk study:

Geotechnical Hazard	Probability	Engineering Implications
Lateral changes in ground conditions	High	The mapped geology of the site is shown to predominantly form River Terrace Deposits overlying the London Clay Formation. Made Ground may also be present based on the former development and infilled pond.
Shrinkable soils	Likely	The finer soils of the River Terrace Deposits and cohesive soils of the London Clay Formation are likely to be shrinkable.
Significant depths of Made Ground	Likely	The site has previously had limited development and an infilled pond was identified on historic mapping. As such, areas of deep Made Ground are likely.
Aggressive chemical ground conditions (sulphates)	Likely	The possible presence of aggressive chemical ground conditions within the underlying geology may affect foundation design and construction.
Shallow Groundwater	Likely	The site is underlain by River Terrace Deposits and the London Clay Formation, classified as a Secondary A Aquifer and Unproductive Strata, respectively. The site is outside any SPZ. Shallow groundwater is likely within the River Terrace Deposits.
Potential for shallow soakaways to be unviable	Likely	Shallow soakaways might perform satisfactorily within the River Terrace Deposits, subject to the presence and depth of groundwater.
Obstructions	Likely	Obstructions such as old foundations, land drains or below ground structures may be present.

Table 3.1 Possible Geotechnical Hazards

Climate change has the potential to cause changes in groundwater regime beneath the site in the short, medium and long term and this could adversely influence geotechnical factors such as drainage performance and serviceability of foundations and roads. In addition, surface water flooding on site has been recorded historically.

3.2 Preliminary Environmental Conceptual Site Model & Risk Assessment

3.2.1 Methodology

A Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) has been prepared in accordance with Land Contamination Risk Management (LCRM) based on information obtained as part of the desk study. Possible risks associated with potential sources of contamination and sensitive receptors identified have been assessed following a source-pathway-receptor (SPR) approach in accordance with current UK protocols. The Conceptual Site Model is shown in Figure 3.

A risk may only exist where a plausible SPR linkage is present, and where the quantity or concentration of a

Desk Study Report

contaminant is sufficient so as to cause harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. Risk may be defined as a function of the likelihood and severity of any adverse effects arising from contamination. The risk classification has been assessed in accordance with CIRIA C552 (Rudland et al., 2001). A summary of how the risks is derived and their definitions are presented in Tables 3.2 & 3.3 below.

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low Likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table 3.2 Risk Ratings Matrix

Risk Rating	Definitions
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not already undertaken) is required and remediation works may be necessary in the short term and are likely over the longer term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.
Moderate to low risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is unlikely that any such harm would be severe, or if any harm were to occur it is probable that the harm would be relatively mild.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Table 3.3 Risk Ratings Definition

Desk Study Report

3.2.2 Summary of Plausible Sources

Possible sources of contamination identified or discounted as part of the desk study are summarised in Table 3.4.

Source	Description	Contaminants
Made Ground, disturbed ground and shallow soils (on-site use agricultural buildings, agricultural land)	The general quality of any Made Ground and shallow soils could be impacted by the presence of contamination associated within land use as agricultural land and agricultural and residential buildings.	Possible elevated concentrations of heavy metals, metalloids, sulphates, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), asbestos, pesticides and herbicides.
Onsite source Infilled Pond	Potential for contamination of Made Ground materials used to infill the former pond.	The composition of the material used to infill the pond is unknown. Possible elevated concentrations of metals, organic compounds such as, hydrocarbons and inorganic compounds and asbestos. (Ground gas addressed below)
Ground gases	The site could be impacted by ground gases from the onsite infilled pond or where any on-site Made Ground includes appreciable quantities of organic material.	Elevated methane, carbon dioxide, and depleted oxygen.

Table 3.4 Possible Sources of Contamination

3.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.5. These pathways are based on the proposed residential end use, including residential dwellings and private and communal gardens.

Pathway	Description
Direct Contact	Ingestion of soil particles, inhalation of soil derived dust (including tracked back dust), dermal contact. Bioaccumulation and home grown produce consumption.
Inhalation	Inhalation of soil dust both inside and outside of buildings. Inhalation of ground gas/vapours within buildings.
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches, more permeable bedded strata or within groundwater. Migration of infiltrating water or contaminants through preferential pathways such as granular layers within the River Terrace Deposits.
Shallow Groundwater	Shallow groundwater or perched water may be present within superficial deposits and, if encountered, could result in the vertical and lateral migration of contaminants.
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions.
Flooding	The easternmost portion of the site was located within a Flood Zone.

Table 3.5 Possible Contaminant Pathways

3.2.4 Summary of Plausible Receptors

Potential receptors associated with the site and its development, identified or otherwise discounted, are summarised in Table 3.6.

Receptor	Description	Comments	Plausible
End Users	Residents/occupants of the proposed development.	The proposed development is understood to include communal and private gardens.	Yes
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity.	Adjacent land comprises residential uses.	Yes
Soft Landscaping	Possible areas of planting including lawns, shrubs, trees, etc.	Planting is anticipated in communal, private gardens and soft landscaping.	Yes
Built Environment	Buried concrete for foundations and plastics for potable water supply pipes may be laid in contact with contaminated soils.	Aggressive ground conditions and depths of Made Ground may be present beneath the site.	Yes
Groundwater	Controlled waters contained within the aquifer(s) beneath the site.	The site overlies a Secondary A Aquifer and Unproductive Strata. The site is situated outside any SPZ.	Yes
Surface Water	Controlled waters within lakes, rivers, and ponds, etc., or coastal waters.	Land drains were present within the site boundary, the nearest off-site surface water feature was the River Ludden to the east, flowing in a roughly north-south direction.	Yes
Ecological Receptors	Sensitive areas of ecological significance.	Two areas of ancient woodland were identified immediately adjacent to the site.	Yes

Table 3.6 Possible Receptors of Contamination

Site workers involved in the preparation and construction of the development have not been considered in this assessment as the principal contractor is duty bound under the current CDM Regulations to undertake their own risk assessments with respect to their employees.

Whilst the above sources and receptors have been identified, Table 3.7 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research.

Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
Made Ground and shallow soils (on-site use as agricultural buildings and agricultural land)	End users	Direct contact and inhalation of soil derived dust	Likely	Mild	Moderate/Low Future occupiers may come into direct contact with soils where soft landscaping is present. Where soft landscaping is proposed it will be completed with uncontaminated soils in the near surface root zone which will reduce the risk. Sampling and chemical testing required to assess the risk.
	Adjacent land users	Direct contact	Unlikely	Mild	Very Low Adjacent site users are unlikely to come into contact with soils. Sampling and chemical testing required to assess the risk.
	Soft Landscaping	Root Uptake	Likely	Minor	Low Where soft landscaping is proposed on the site, root uptake is possible. However, landscaping would be completed with uncontaminated soils in the near surface root zone. Furthermore, no clear evidence of harm to existing vegetation was observed. Where soft landscaping is proposed it will be completed with uncontaminated soils in the near surface root zone. Sampling and chemical testing required to assess the risk.
	Water supply pipes	Direct contact	Likely	Minor	Low Water supply pipes would come into contact with impacted or aggressive soils depending upon depth of installation and extent of soil impact. Sampling and chemical testing required to assess the risk.
	Buildings and infra-structure	Direct contact	Likely	Minor	Low Foundations and utilities will be placed within potentially aggressive soils. Sampling and chemical testing required to assess the risk.

Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
	Groundwater	Vertical migration	Likely	Minor	Low The area is underlain by a Secondary A Aquifer and Unproductive Strata. However, the site was not located in a SPZ. Significant potentially mobile contamination is not anticipated to be present on site. Sampling and chemical testing required to assess the risk.
	Ecological Receptors	Root Uptake, Vertical migration and Overland runoff	Low	Mild	Low Two areas of ancient woodland lie immediately adjacent to the site, however gross mobile contamination is not anticipated so ecological receptors are not anticipated to come into contact with soils originating from the site. Sampling and chemical testing required to assess the risk.
On-site Source Infilled Pond	End Users	Direct contact and inhalation of soil derived dust	Low likelihood	Medium	Moderate/Low It is not known what materials were used to infill the onsite pond. Future occupiers may come into direct contact with soils (if Made Ground or contaminants are identified) where soft landscaping is present. Where soft landscaping is proposed it will be completed with uncontaminated soils in the near surface root zone which will reduce the risk. Sampling and chemical testing required to assess the risk.
	Adjacent Land Users	Direct contact and inhalation of soil derived dust	Unlikely	Minor	Very Low Adjacent site users are unlikely to come into contact with the soils at the site. This is considered a possible source of on-site contamination if any infilling had occurred. Sampling and chemical testing required to assess the risk
	Soft Landscaping	Root uptake	Unlikely	Mild	Very Low Where soft landscaping is proposed on site, root uptake is possible. However, landscaping would be completed with uncontaminated soils in the near surface root zone.

Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
					Furthermore, no clear evidence of harm to existing vegetation was observed. Where soft landscaping is proposed it will be completed with uncontaminated soils in the near surface root zone. This is considered a possible source of on-site contamination if any infilling had occurred. Sampling and chemical testing required to assess the risk.
	Water Supply Pipes	Direct contact	Low Likelihood	Minor	Very Low Water supply pipes are likely to come into contact with impacted soils depending upon depth of installation and extent of soil impact. This is considered a possible source of on-site contamination if any infilling. Sampling and chemical testing required to assess the risk.
	Buildings and Infrastructure	Direct contact	Likely	Minor	Low Foundations and utilities will be placed within potentially aggressive soils (e.g. sulphate). However, the consequence is anticipated to be minor. This is considered a possible source of on-site contamination. if any infilling had occurred. Sampling and chemical testing required to assess the risk.
	Groundwater	Vertical Migration	Low Likelihood	Mild	Low The area is underlain by a Secondary A Aquifer and Unproductive Strata. However, the site was not located in a SPZ. Significant potentially mobile contamination is not anticipated on site. Sampling and chemical testing required to assess the risk.
	Ecological Receptors	Root Uptake, Vertical migration and Overland runoff	Low	Mild	Low Two areas of ancient woodland lie immediately adjacent to the site, however gross mobile contamination is not anticipated so ecological receptors are not anticipated to come into contact with soils originating from the site,

Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
					Sampling and chemical testing required to assess the risk.
Ground gases and vapours from any Made Ground (including infilled pond)	End users	Inhalation	Low	Mild	Low Future occupiers may inhale potential ground gases produced by this source. Extensive or deep Made Ground with sufficient organic content for significant ground gas generation is not anticipated. Intrusive investigation required to identified whether organic rich Made Ground is present.
	Buildings and infrastructure	Gas accumulation and potential explosion of flammable gases	Unlikely	Minor	Very Low Extensive putrescible material sufficient for significant methane production is not anticipated at the site. Intrusive investigation required to identified whether organic rich Made Ground is present.
Naturally occurring aggressive ground conditions	End users	Direct contact and inhalation / ingestion of soil derived dust	Low	Minor	Very low No naturally occurring potential sources which could harm human health have been identified. The consequence is likely to be minor.
	Adjacent land users	Direct contact	Unlikely	Minor	Very low No naturally occurring potential sources which could harm human health have been identified. The consequence is likely to be minor.
	Water supply pipes	Direct contact	Likely	Minor	Low No naturally occurring potential sources which could harm human health have been identified. The consequence is likely to be minor.
	Buildings and Infrastructure	Direct contact	Likely	Minor	Low Foundations will be placed within soils which may be an aggressive environment for concrete. However, the consequence is anticipated to be minor. Sampling and

Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
					chemical testing required to assess the risk.

Table 3.7 Plausible Pollution Linkages

3.3 Preliminary Risk Assessment Summary

The Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) developed from the information gathered as part of the desk study process have identified several plausible pollutant linkages that exist in relation to the proposed development of the site.

The potential pollutant linkages established within this desk study are not considered to prevent development on the subject site but could require investigation and assessment to support further characterisation, calibration of the CSM and where/if necessary, determine a remedial strategy to reduce, remove or otherwise control any risk within the site to key receptors.

The specific potential pollutant linkages have been assigned moderate/low, low and very low risk ratings. As such, further assessment would be necessary to satisfy planning conditions or to provide clarification of the risk assessment.

In order to progress this assessment in line with LCRM and the National Planning Policy Framework, to provide further characterisation of the site and refinement of the PRA and CSM, it is recommended that intrusive investigation and associated testing is undertaken to confirm the findings of the desk study report and to provide a robust risk assessment for the site and proposed redevelopment. As such, it is recommended that geochemical and geotechnical investigation be carried out on the site to include analysis of soil and groundwater (if encountered) samples for the range of potential contaminants identified within the Desk Study and to provide geotechnical information to support geotechnical works on site.

3.4 Preliminary Geotechnical Assessment Summary

Based on geological mapping and BGS borehole records superficial deposits of the River Terrace Deposits are mapped on site overlying soils of the London Clay Formation.

It is possible that conventional strip or pad foundations could be suitable for the proposed development where natural ground is encountered at relatively shallow depths. However, where foundations are required in any areas of Made Ground or infilled ground, which may be present to depth beneath areas of the site, a deeper or piled foundation solution may be required. Shallow groundwater could also impact the viability of conventional foundations, particularly in areas of granular soils where excavations are likely to become unstable where shallow groundwater is encountered. The development should also take into account the presence of trees (existing and proposed) and/or desiccation at the site if shrinkable soils are present. Localised deepening of foundations may be required in the vicinity of trees and piled foundations may be required in proximity to trees (subject to tree type and ground conditions).

Given that the site is underlain by a Secondary A Aquifer and Unproductive Strata at depth, it is possible that shallow groundwater could be present on site, which may affect excavation stability and foundation design and dewatering of excavations may be required. This should be investigated during an intrusive site investigation to assess groundwater conditions on site.

Soakage testing would be required to assess if soakaways will function satisfactorily on site. It may be necessary to utilise on-site storage and attenuation of peak storm flow, through systems such as porous paving and cellular storage crates. In line with a SuDS approach, storm water should be discharged to the ground wherever possible. In addition, a period of winter groundwater monitoring is often required by Lead Local Flood Authorities.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The desk study has shown the subject site to comprise agricultural fields and copse/woodland from the earliest mapping period. Buildings (assumed to be agricultural), two wells and a pond were indicated c.1898 within the central portion of the site. Two of the original residential buildings were replaced with two new properties centrally c.1976 whilst the pond and wells were no longer indicated c.1968.

The surrounding area originally formed copse, fields and a farm c.1872. Between 1909 to present, residential development took place to the north and north-west. High Copse Farm was indicated to the west c.1968 along with allotments and recreation ground to the north. A gravel pit was mapped c.450m north on mapping from c. 1898 but was no longer mapped from c. 1969 and appeared to have been developed. A piggery was indicated to the north-west c.1983 but was later developed for residential use.

The site walkover identified overhead power lines within the southern portion of the western most field, running roughly east-west. Although it was not possible to access the farm buildings at the time of the site walkover, it was noted that these buildings may contain asbestos based on the structures observed.

A moderate/low risk has been assigned in relation to on-site shallow soils and end users, on-site infilled pond and end users.

Further assessment is recommended to progress characterisation of the contamination status of the site to inform an update of the conceptual site model and allow a robust assessment of the risk to human health, controlled waters and the environment.

It is possible that conventional foundations would be suitable for parts of the proposed development, although any design should account for the potential presence of shrinkable soils on site, as well as instability of excavations in granular soils, in particular if shallow groundwater is encountered and for the presence of trees on site and/or desiccation of the shallow soils.

4.2 Recommendations

At this stage and based on the findings of the desk study and preliminary risk assessment, the following scope of works is recommended for the intrusive investigation on the site.

- Intrusive investigation works should be carried out in order to clarify the geotechnical and geo-environmental issues pertaining to redevelopment of the site. This should include asbestos testing and testing for contaminants associated with an agricultural site use including pesticides.
- In-situ testing to assess the potential for the use of soakaways, e.g. trial pit soakage tests.
- Soil sampling and analysis should be undertaken to inform subsequent geotechnical and geo-environmental risk assessment.
- Laboratory analysis, on soil samples recovered from the exploratory holes for a range of geotechnical parameters to support foundation design and geotechnical assessment of the site.
- Laboratory analysis on soil and water (if encountered) samples recovered from the exploratory holes, for an analytical suite to include the potential contaminants identified within the desk study and encountered during any intrusive investigation. The soil suite should include commonly occurring metals, non-metals, asbestos, TPH, PAH and pesticides. A similar suite should be considered for water testing.
- Return groundwater monitoring to confirm the site conceptual model and to allow for consideration of the presence of shallow groundwater which may affect the proposed foundation design on site.



- An assessment of ground gas, including whether there is any requirement for ground gas monitoring following the intrusive investigation works, dependent on the findings.

It may be necessary to undertake remediation/risk mitigation measures on this site to break pollutant linkages and thus protect key receptors such as human health, controlled waters, built environment, soft landscaping and the like. The requirement and extent of any such remediation cannot be determined until such time as an intrusive investigation and associated testing has been completed.



Figures





Project: Hyde End Road, Shinfield		Title Site Location Plan	
Client: Bloor Homes Southern		Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	
Ref No: GE22615	Revision: 0		
Drawn: FG	Date: 16/08/2024		
Figure: 1	Scale: Not To Scale		
		 Geo-Environmental	

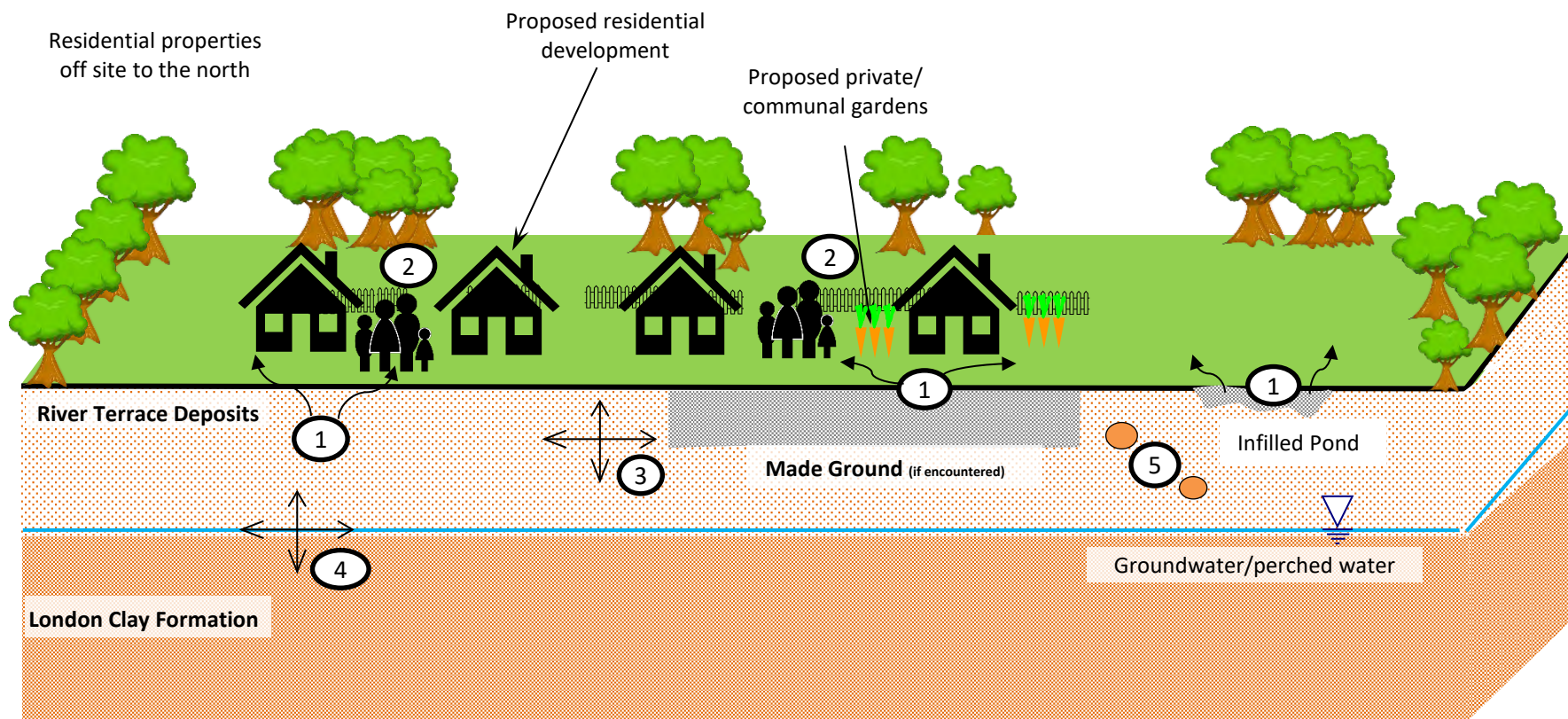


Project: Hyde End Road, Shinfield		Title	Initial Site Master Plan
Client: Bloor Homes Southern		Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	
Ref No: GE22615	Revision: 0		
Drawn: FG	Date: 16/08/2024		
Figure: 2	Scale: Not To Scale		



Possible Pollutant Linkages:

1. Direct contact with contaminated soils, ingestion of contaminated soils, bioaccumulation in homegrown produce
2. Inhalation of soil dusts indoor and outdoor, and inhalation of gases/vapours within buildings
3. Vertical and lateral migration through permeable strata
4. Shallow groundwater vertical and lateral migration
5. Chemical attack of buried plastics and concrete



Project:	Hyde End Road, Shinfield			Title	Conceptual Site Model (Proposed Site Use)		
Client:	Bloor Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net		 Geo-Environmental	
Ref No:	GE22615	Revision:	V1				
Drawn:	FG	Date:	16/08/2024				
Figure:	3	Scale:	Not To Scale				

APPENDIX A

Desk Study Information



HYDE END ROAD, SHINFIELD, WOKINGHAM, RG2 9EP

Order Details

Date: 04/07/2024
Your ref: GE22615 - PO7581
Our Ref: GS-N5O-GA6-VUS-SHW

Site Details

Location: 473203 167218
Area: 10.7 ha
Authority: [Wokingham Borough Council](#) ↗



© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

N/A: >10ha

[Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	0	0	0	8	-
15 >	1.2 >	Historical tanks >	0	0	0	6	-
16 >	1.3 >	Historical energy features >	0	0	0	1	-
16	1.4	Historical petrol stations	0	0	0	0	-
16 >	1.5 >	Historical garages >	0	0	0	1	-
17	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
18 >	2.1 >	Historical industrial land uses >	0	0	0	11	-
19 >	2.2 >	Historical tanks >	0	0	0	9	-
20 >	2.3 >	Historical energy features >	0	0	0	3	-
20	2.4	Historical petrol stations	0	0	0	0	-
20 >	2.5 >	Historical garages >	0	0	0	1	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
21	3.1	Active or recent landfill	0	0	0	0	-
21	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	1	-
22 >	3.5 >	Historical waste sites >	0	1	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
23 >	3.7 >	Waste exemptions >	0	0	0	8	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
25 >	4.1 >	Recent industrial land uses >	0	0	6	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
26	4.5	Sites determined as Contaminated Land	0	0	0	0	-



27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
27	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
28	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	1	-
28	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	4.15	Pollutant release to public sewer	0	0	0	0	-
29	4.16	List 1 Dangerous Substances	0	0	0	0	-
29	4.17	List 2 Dangerous Substances	0	0	0	0	-
29	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
29	4.19	Pollution inventory substances	0	0	0	0	-
30	4.20	Pollution inventory waste transfers	0	0	0	0	-
30	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
31 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
32 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
33 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
34	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
34	5.5	Groundwater vulnerability- local information	None (within 0m)				
35 >	5.6 >	Groundwater abstractions >	0	0	1	0	4
37 >	5.7 >	Surface water abstractions >	0	0	0	0	4
38 >	5.8 >	Potable abstractions >	0	0	0	0	1
39	5.9	Source Protection Zones	0	0	0	0	-
39	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
40 >	6.1 >	Water Network (OS MasterMap) >	9	10	18	-	-



43 >	6.2 >	Surface water features >	1	9	16	-	-
44 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
44 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
45	6.5	WFD Groundwater bodies	0	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
46 >	7.1 >	Risk of flooding from rivers and the sea >	Medium (within 50m)				
47 >	7.2 >	Historical Flood Events >	4	0	4	-	-
48	7.3	Flood Defences	0	0	0	-	-
48	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
48	7.5	Flood Storage Areas	0	0	0	-	-
49 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
50 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
51 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
53 >	9.1 >	Groundwater flooding >	High (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
54	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
55	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
55	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
55	10.4	Special Protection Areas (SPA)	0	0	0	0	0
55	10.5	National Nature Reserves (NNR)	0	0	0	0	0
56 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
56 >	10.7 >	Designated Ancient Woodland >	2	1	0	1	45
59	10.8	Biosphere Reserves	0	0	0	0	0
59	10.9	Forest Parks	0	0	0	0	0
59	10.10	Marine Conservation Zones	0	0	0	0	0
59	10.11	Green Belt	0	0	0	0	0
60	10.12	Proposed Ramsar sites	0	0	0	0	0



60	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
60	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
60	10.15	Nitrate Sensitive Areas	0	0	0	0	0
61 >	10.16 >	Nitrate Vulnerable Zones >	0	0	0	0	1
62 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
63	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
64	11.1	World Heritage Sites	0	0	0	-	-
64	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
64	11.3	National Parks	0	0	0	-	-
64	11.4	Listed Buildings	0	0	0	-	-
65	11.5	Conservation Areas	0	0	0	-	-
65	11.6	Scheduled Ancient Monuments	0	0	0	-	-
65	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	12.1 >	Agricultural Land Classification >	Grade 3a (within 250m)				
68	12.2	Open Access Land	0	0	0	-	-
68	12.3	Tree Felling Licences	0	0	0	-	-
68	12.4	Environmental Stewardship Schemes	0	0	0	-	-
69	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
70 >	13.1 >	Priority Habitat Inventory >	4	5	6	-	-
71 >	13.2 >	Habitat Networks >	3	0	1	-	-
72 >	13.3 >	Open Mosaic Habitat >	0	0	1	-	-
72	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
73 >	14.1 >	10k Availability >	Identified (within 500m)				
74 >	14.2 >	Artificial and made ground (10k) >	0	0	0	1	-
75 >	14.3 >	Superficial geology (10k) >	2	0	1	1	-

76	14.4	Landslip (10k)	0	0	0	0	-
77 >	14.5 >	Bedrock geology (10k) >	1	0	0	0	-
78	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
79 >	15.1 >	50k Availability >	Identified (within 500m)				
80 >	15.2 >	Artificial and made ground (50k) >	0	0	0	1	-
81	15.3	Artificial ground permeability (50k)	0	0	-	-	-
82 >	15.4 >	Superficial geology (50k) >	2	0	1	1	-
83 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
83	15.6	Landslip (50k)	0	0	0	0	-
83	15.7	Landslip permeability (50k)	None (within 50m)				
84 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
85 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
85	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
86 >	16.1 >	BGS Boreholes >	0	0	2	-	-
Page	Section	Natural ground subsidence >					
87 >	17.1 >	Shrink swell clays >	Low (within 50m)				
88 >	17.2 >	Running sands >	Very low (within 50m)				
89 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
90 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
91 >	17.5 >	Landslides >	Very low (within 50m)				
92 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
94 >	18.1 >	BritPits >	0	0	0	1	-
95	18.2	Surface ground workings	0	0	0	-	-
95	18.3	Underground workings	0	0	0	0	0
95	18.4	Underground mining extents	0	0	0	0	-
95 >	18.5 >	Historical Mineral Planning Areas >	0	1	0	0	-



96	18.6	Non-coal mining	0	0	0	0	0
96	18.7	JPB mining areas	None (within 0m)				
96	18.8	The Coal Authority non-coal mining	0	0	0	0	-
96 >	18.9 >	Researched mining >	0	0	0	1	-
97	18.10	Mining record office plans	0	0	0	0	-
97	18.11	BGS mine plans	0	0	0	0	-
97	18.12	Coal mining	None (within 0m)				
97	18.13	Brine areas	None (within 0m)				
98	18.14	Gypsum areas	None (within 0m)				
98	18.15	Tin mining	None (within 0m)				
98	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
99	19.1	Natural cavities	0	0	0	0	-
99	19.2	Mining cavities	0	0	0	0	0
99	19.3	Reported recent incidents	0	0	0	0	-
99	19.4	Historical incidents	0	0	0	0	-
100	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
101 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
103 >	21.1 >	BGS Estimated Background Soil Chemistry >	4	2	-	-	-
103	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
104	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
105	22.1	Underground railways (London)	0	0	0	-	-
105	22.2	Underground railways (Non-London)	0	0	0	-	-
105	22.3	Railway tunnels	0	0	0	-	-
105	22.4	Historical railway and tunnel features	0	0	0	-	-
105	22.5	Royal Mail tunnels	0	0	0	-	-



106	22.6	Historical railways	0	0	0	-	-
106	22.7	Railways	0	0	0	-	-
106	22.8	Crossrail 1	0	0	0	0	-
106	22.9	Crossrail 2	0	0	0	0	-
106	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 30/04/2022

Site Area: 10.7ha



Recent site history - 2019 aerial photograph



Capture Date: 29/06/2019

Site Area: 10.7ha



Recent site history - 2010 aerial photograph



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

Capture Date: 25/09/2010

Site Area: 10.7ha



Recent site history - 2005 aerial photograph



Capture Date: 12/07/2005

Site Area: 10.7ha



Recent site history - 1999 aerial photograph



Capture Date: 04/09/1999

Site Area: 10.7ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

8

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 14](#) >

ID	Location	Land use	Dates present	Group ID
A	344m N	Unspecified Heap	1913	1987831



ID	Location	Land use	Dates present	Group ID
A	346m N	Unspecified Ground Workings	1938	1880783
C	363m N	Builders Yard	1969	1889958
C	363m N	Unspecified Yard	1976	1911566
D	374m N	Grass Pit	1913	1917655
D	375m N	Gravel Pit	1938 - 1961	1919974
D	390m N	Gravel Pit	1976	1945668
D	396m N	Gravel Pit	1898	1950079

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

6

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

Features are displayed on the Past land use map on [page 14](#) >

ID	Location	Land use	Dates present	Group ID
B	359m NE	Unspecified Tank	1994	331405
B	360m NE	Unspecified Tank	1983	332213
B	361m NE	Unspecified Tank	1968	339778
1	365m S	Unspecified Tank	1989 - 1994	334229
2	422m SW	Unspecified Tank	1899	326688
3	425m S	Unspecified Tank	1968 - 1994	331006

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

1

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

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
B	371m NE	Electricity Substation	1968 - 1994	234029

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

1

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

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
4	499m NE	Garage	1983	67453

This data is sourced from Ordnance Survey / Groundsure.



1.6 Historical military land

Records within 500m

0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

11

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	344m N	Unspecified Heap	1913	1987831
A	344m N	Unspecified Heap	1913	1987831
A	346m N	Unspecified Ground Workings	1938	1880783



ID	Location	Land Use	Date	Group ID
C	363m N	Unspecified Yard	1976	1911566
C	363m N	Builders Yard	1969	1889958
E	374m N	Grass Pit	1913	1917655
E	374m N	Grass Pit	1913	1917655
E	375m N	Gravel Pit	1961	1919974
E	377m N	Gravel Pit	1938	1919974
E	390m N	Gravel Pit	1976	1945668
E	396m N	Gravel Pit	1898	1950079

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

9

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

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

ID	Location	Land Use	Date	Group ID
B	359m NE	Unspecified Tank	1994	331405
B	360m NE	Unspecified Tank	1983	332213
B	361m NE	Unspecified Tank	1968	339778
D	365m S	Unspecified Tank	1994	334229
D	366m S	Unspecified Tank	1989	334229
1	422m SW	Unspecified Tank	1899	326688
F	425m S	Unspecified Tank	1968	331006
F	425m S	Unspecified Tank	1989	331006
F	426m S	Unspecified Tank	1994	331006

This data is sourced from Ordnance Survey / Groundsure.



2.3 Historical energy features

Records within 500m

3

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

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

ID	Location	Land Use	Date	Group ID
B	371m NE	Electricity Substation	1994	234029
B	371m NE	Electricity Substation	1983	234029
B	372m NE	Electricity Substation	1968	234029

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

1

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

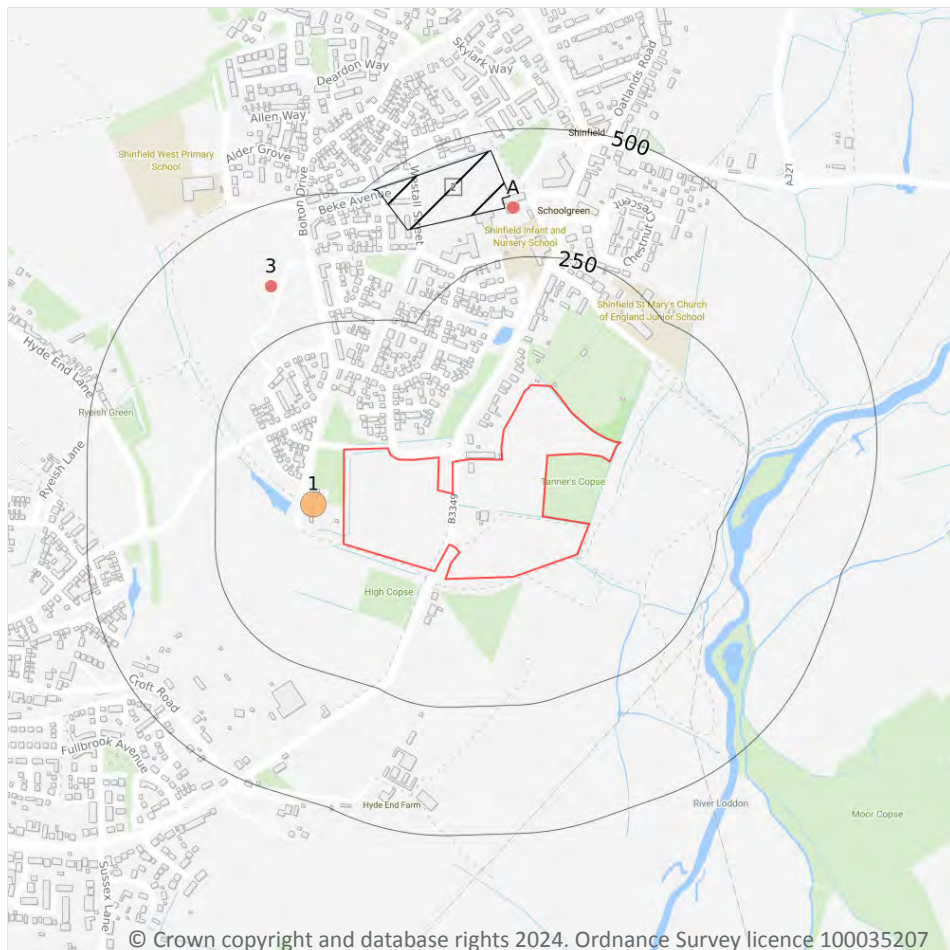
Features are displayed on the Past land use - un-grouped map on [page 18 >](#)

ID	Location	Land Use	Date	Group ID
2	499m NE	Garage	1983	67453

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



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

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

1

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

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

ID	Location	Details		
2	347m N	Site Address: Land at School Green, Shinfield, Whitley Wood, Reading Licence Holder Address: -	Waste Licence: - Site Reference: WOK2 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -

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

3.5 Historical waste sites

Records within 500m

1

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

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



ID	Location	Address	Further Details	Date
1	34m W	Site Address: High Copse Farm, Hyde End Road, Shinfield, READING, Berkshire, RG2 9ES	Type of Site: Recycling Facility Planning application reference: F/2007/1165 Description: Scheme comprises application for change of use from agriculture to waste and recycling management. An application (ref: F/2007/1165) for detailed planning permission was withdrawn from Wokingham B.C. Planning decision obtained Data source: Historic Planning Application Data Type: Point	-

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	8
----------------------------	----------

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

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

ID	Location	Site	Reference	Category	Sub-Category	Description
A	346m N	-	WEX361918	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
A	346m N	CastleOak Office, Land Off Hyde End Road, Shinfield, Rg2 9eh	WEX159026	Treating waste exemption	Not on a farm	Screening and blending of waste
A	346m N	New Construction Site Parcel 3 - Buxted, Off Deardon Way Onto Bolton Drive, Shinfield Reading, Rg29eh	WEX158693	Using waste exemption	Not on a farm	Use of waste in construction
A	346m N	CastleOak Office, Land Off Hyde End Road, Shinfield, Rg2 9eh	WEX159026	Using waste exemption	Not on a farm	Use of waste in construction



ID	Location	Site	Reference	Category	Sub-Category	Description
A	346m N	CastleOak Office, Land Off Hyde End Road, Shinfield, Rg2 9eh	WEX159026	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	346m N	CastleOak Office, Land Off Hyde End Road, Shinfield, Rg2 9eh	WEX159026	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
A	347m N	Shinfield Pharmacy School Green Reading Berkshire Rg2 9eh	EPR/CF0338NJ /A001	Treating waste exemption	Non-agricultural waste only	Sorting and de-naturing of controlled drugs for disposal
3	348m NW	-	WEX394941	Using waste exemption	Not on a farm	Use of waste in construction

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m

6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 25 >](#)

ID	Location	Company	Address	Activity	Category
A	162m W	Silo	Berkshire, RG2	Hoppers and Silos	Farming
A	162m W	Silo	Berkshire, RG2	Hoppers and Silos	Farming
A	162m W	Silo	Berkshire, RG2	Hoppers and Silos	Farming
A	165m W	Silo	Berkshire, RG2	Hoppers and Silos	Farming



ID	Location	Company	Address	Activity	Category
1	177m NW	Electricity Sub Station	Berkshire, RG2	Electrical Features	Infrastructure and Facilities
2	189m N	Electricity Sub Station	Berkshire, RG2	Electrical Features	Infrastructure and Facilities

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**1**

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

Features are displayed on the Current industrial land use map on [page 25 >](#)

ID	Location	Address	Details	
3	361m N	PREMISES, SHINFIELD, READING, BERKS, PREMISES, SHINFIELD, READING, BE, RKS	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: CTCR.0891 Permit Version: 1 Receiving Water: TRIB OF LODDON	Status: REVOKED - UNSPECIFIED Issue date: 10/01/1967 Effective Date: 10/01/1967 Revocation Date: 10/05/1993

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.

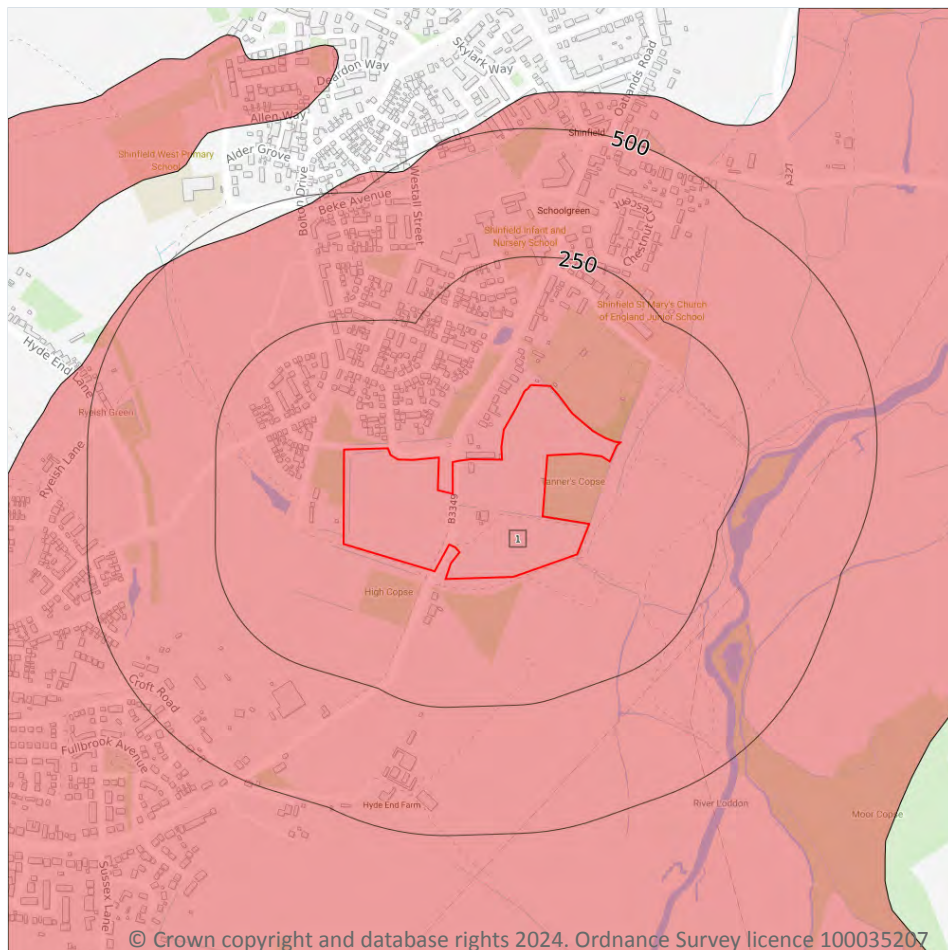
4.21 Pollution inventory radioactive waste

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

1

Aquifer status of groundwater held within superficial geology.

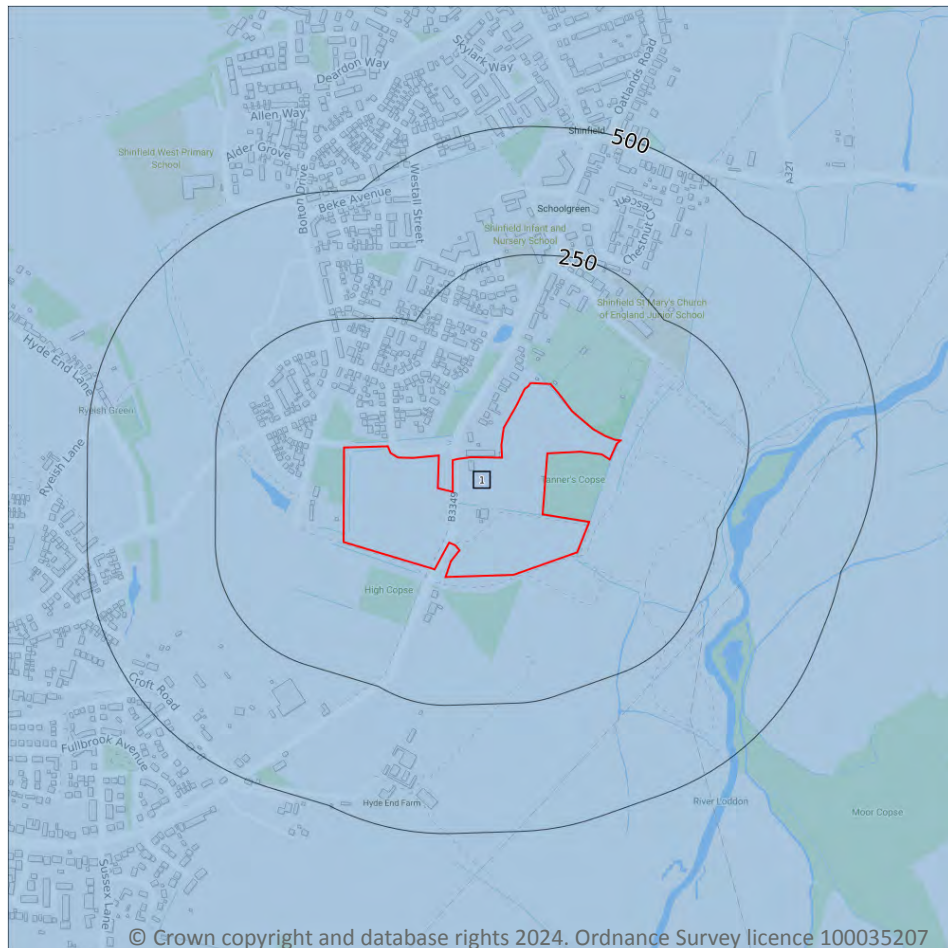
Features are displayed on the Hydrogeology map on [page 31](#) >

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

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

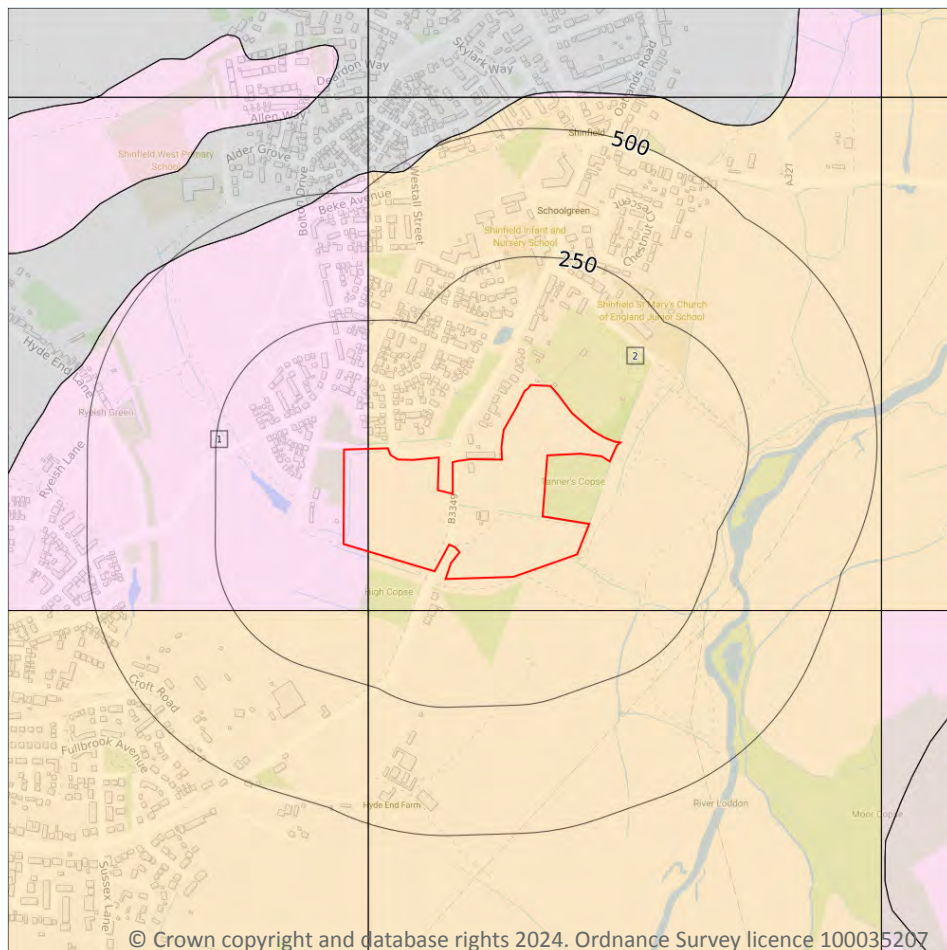
Features are displayed on the Bedrock aquifer map on [page 32](#) >

ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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



Groundwater vulnerability



— Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m

2

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

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

Features are displayed on the Groundwater vulnerability map on [page 33](#) >



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

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

Records on site

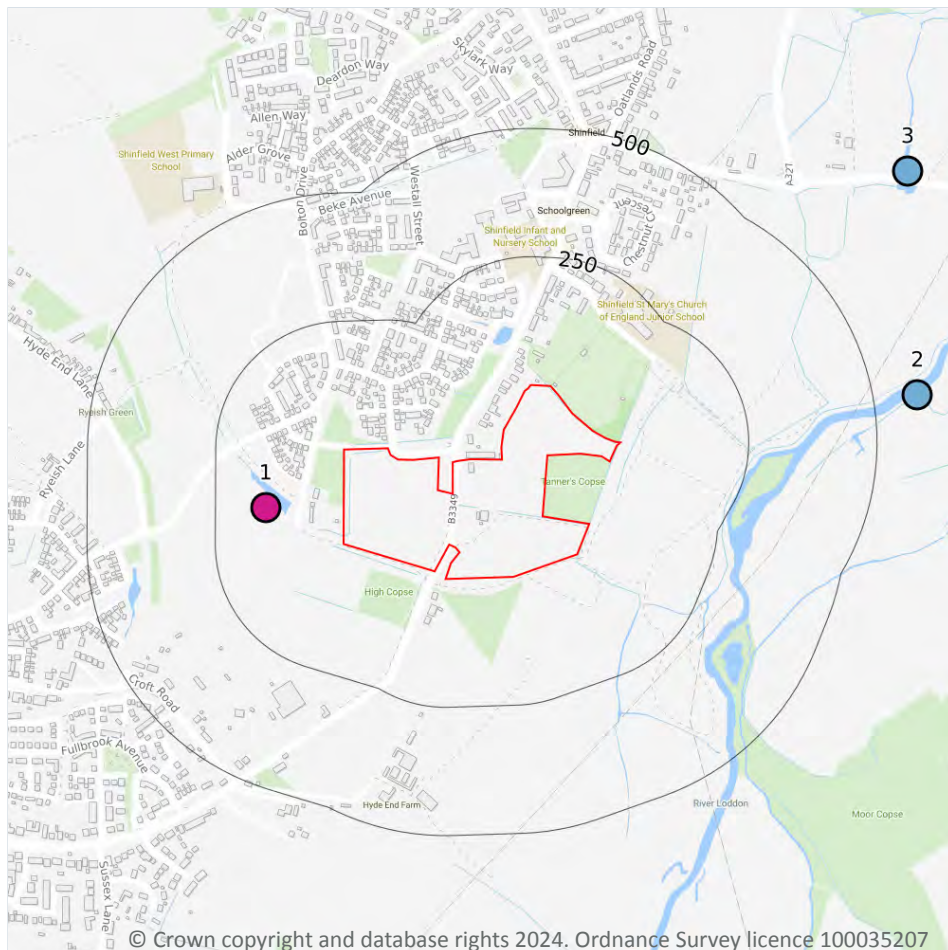
0

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

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



Abstractions and Source Protection Zones



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

5.6 Groundwater abstractions

Records within 2000m

5

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 35 >](#)



ID	Location	Details	
1	152m W	Status: Historical Licence No: 28/39/24/0142 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: HIGH COPSE FARM, SHINFIELD - BOREHOLE Data Type: Point Name: UNIVERSITY OF READING Easting: 472800 Northing: 167200	Annual Volume (m ³): 37277 Max Daily Volume (m ³): 681.9 Original Application No: - Original Start Date: 05/04/1971 Expiry Date: - Issue No: 100 Version Start Date: 05/04/1971 Version End Date: -
-	1063m N	Status: Historical Licence No: 28/39/24/0008 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: READING UNIVERSITY HORTICULTURAL STATION BOREHOLE Data Type: Point Name: UNIVERSITY OF READING Easting: 473400 Northing: 168500	Annual Volume (m ³): 19728 Max Daily Volume (m ³): 272.76 Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 13/05/1968 Version End Date: -
-	1063m N	Status: Historical Licence No: 28/39/24/0008 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: READING UNIVERSITY HORTICULTURAL STATION BOREHOLE Data Type: Point Name: UNIVERSITY OF READING Easting: 473400 Northing: 168500	Annual Volume (m ³): 19728 Max Daily Volume (m ³): 272.76 Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 13/05/1968 Version End Date: -
-	1063m N	Status: Historical Licence No: 28/39/24/0008 Details: Spray Irrigation - Spray Irrigation Definition Order Direct Source: THAMES GROUNDWATER Point: READING UNIVERSITY HORTICULTURAL STATION BOREHOLE Data Type: Point Name: UNIVERSITY OF READING Easting: 473400 Northing: 168500	Annual Volume (m ³): 19728 Max Daily Volume (m ³): 272.76 Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 13/05/1968 Version End Date: -



ID	Location	Details	
-	1657m NE	Status: Active Licence No: 28/39/24/0014 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: ARBORFIELD PUMPING STATION POINT A Data Type: Point Name: Thames Water Utilities Ltd Easting: 474900 Northing: 168200	Annual Volume (m ³): 818298 Max Daily Volume (m ³): 2273.05 Original Application No: RG959 Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/01/1966 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	4
-----------------------------	----------

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 35 >](#)

ID	Location	Details	
2	586m E	Status: Historical Licence No: 28/39/24/0253 Details: Spray Irrigation - Storage Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER LODDON AT ROUNDS COPSE, NEAR ARBORFIELD, BERKS Data Type: Point Name: FARLEY FARMS Easting: 474070 Northing: 167420	Annual Volume (m ³): 48000 Max Daily Volume (m ³): 1440 Original Application No: - Original Start Date: 27/03/2007 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 27/03/2007 Version End Date: -
3	769m NE	Status: Historical Licence No: TH/039/0024/026 Details: Dust Suppression Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER LODDEN- RIVER LODDEN TRIBUTARY (POINT A) Data Type: Point Name: Hochtief (UK) Construction Limited Easting: 474051 Northing: 167856	Annual Volume (m ³): 12000 Max Daily Volume (m ³): 60 Original Application No: - Original Start Date: 17/08/2015 Expiry Date: 17/04/2016 Issue No: 1 Version Start Date: 17/08/2015 Version End Date: -



ID	Location	Details	
-	1367m NE	Status: Historical Licence No: TH/039/0024/008 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: ARBORFIELD OFF-TAKE STRUCTURE Data Type: Point Name: THE ENVIRONMENT AGENCY Easting: 474687 Northing: 167991	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: NPS/WR/002619 Original Start Date: 28/05/2010 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/01/2012 Version End Date: -
-	1620m NE	Status: Historical Licence No: TH/039/0024/026 Details: Dust Suppression Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER LODDEN TRIBUTARY ADJACENT TO HALL FARM (POINT B) Data Type: Point Name: Hochtief (UK) Construction Limited Easting: 474872 Northing: 168175	Annual Volume (m ³): 12000 Max Daily Volume (m ³): 60 Original Application No: - Original Start Date: 17/08/2015 Expiry Date: 17/04/2016 Issue No: 1 Version Start Date: 17/08/2015 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

1

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 35 >](#)

ID	Location	Details	
-	1657m NE	Status: Active Licence No: 28/39/24/0014 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: ARBORFIELD PUMPING STATION POINT A Data Type: Point Name: Thames Water Utilities Ltd Easting: 474900 Northing: 168200	Annual Volume (m ³): 818298 Max Daily Volume (m ³): 2273.05 Original Application No: RG959 Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/01/1966 Version End Date: -

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



5.9 Source Protection Zones

Records within 500m

0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

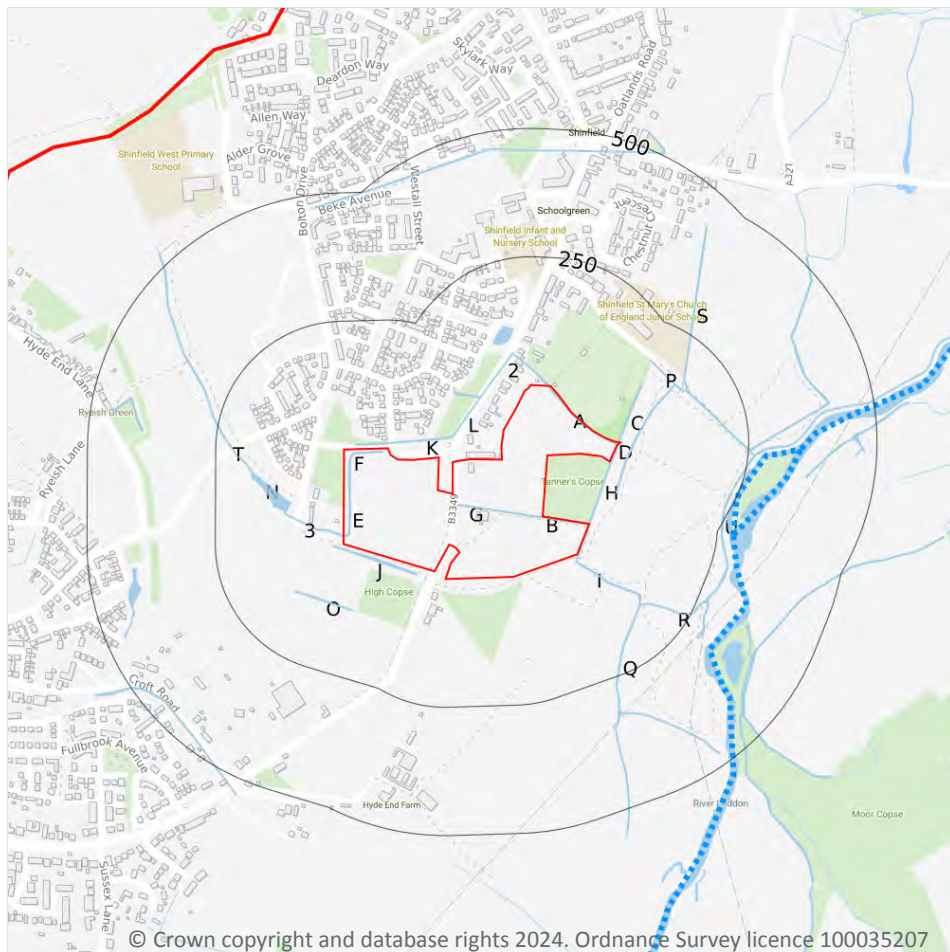
0

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

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



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

37

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 40 >](#)

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



ID	Location	Type of water feature	Ground level	Permanence	Name
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	8m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	9m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	9m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
K	18m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
2	22m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	23m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	47m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
3	49m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
L	71m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
N	112m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse may not contain water all year round	-
O	116m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	155m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	155m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	156m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	156m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	163m NE	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
P	163m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	164m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	165m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
S	168m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	169m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	193m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
P	199m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
T	207m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
T	235m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
U	236m 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

Records within 250m

26

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 40](#) >



This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
------------------------	----------

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

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

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
G	On site	River	Loddon (Swallowfield to River Thames confluence)	GB106039023160	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 40](#) >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
7	252m E	River	Loddon (Swallowfield to River Thames confluence)	GB106039023160 ↗	Moderate	Fail	Moderate	2019

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



6.5 WFD Groundwater bodies

Records on site

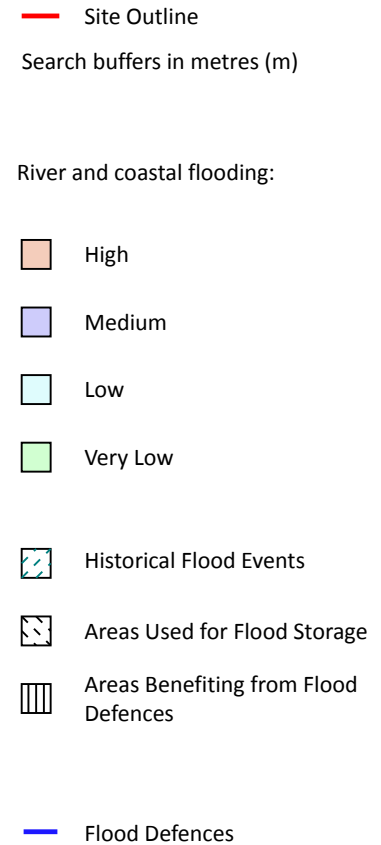
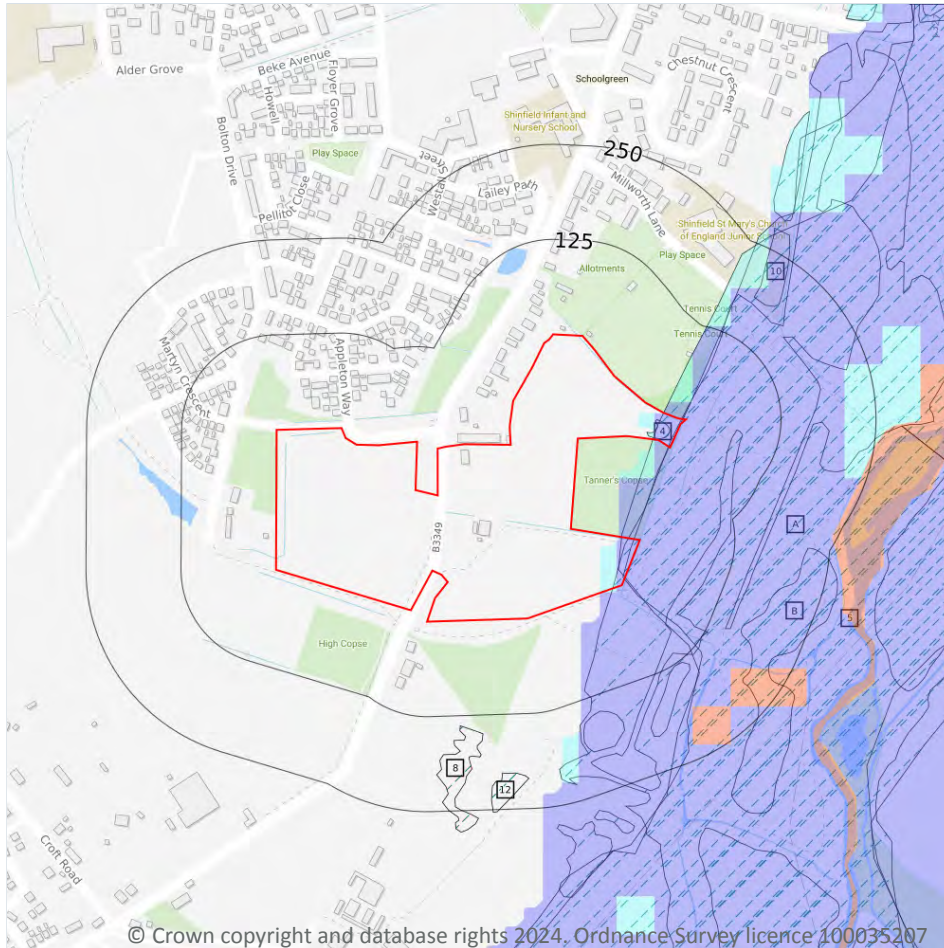
0

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

4

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).

Features are displayed on the River and coastal flooding map on [page 46 >](#)



Distance	Flood risk category
On site	Medium
0 - 50m	Medium

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

7.2 Historical Flood Events

Records within 250m	8
----------------------------	----------

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

Features are displayed on the River and coastal flooding map on [page 46 >](#)

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
4	On site	Thames Se Area July 2007	2007-07-20 2007-07-21	Main river	Channel capacity exceeded (no raised defences)	Fluvial
5	On site	Thames Se Area July 2007	2007-07-20 2007-07-21	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	On site	06februarywinter1991	1991-01-01 1991-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	On site	06februarywinter1990	1990-01-01 1990-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
8	138m S	Thames Se Area July 2007	2007-07-20 2007-07-21	Drainage	Local drainage/surface water	No data
B	168m SE	South West England	2014-01-30 2014-02-10	Unclassified	Unclassified	No data
10	183m NE	Thames Se Area July 2007	2007-07-20 2007-07-21	Main river	Channel capacity exceeded (no raised defences)	Fluvial
12	202m S	Thames Se Area July 2007	2007-07-20 2007-07-21	Drainage	Local drainage/surface water	No data

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

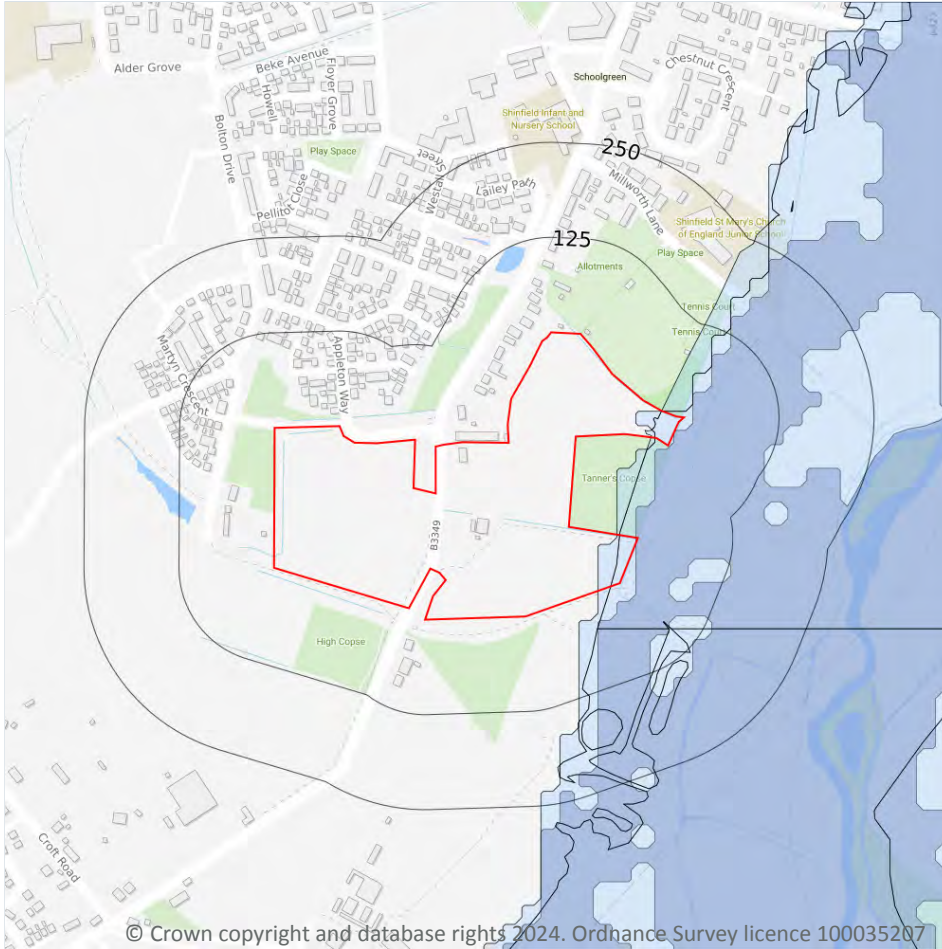
Records within 250m**0**

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



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

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.

Features are displayed on the River and coastal flooding map on [page 46 >](#)

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

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



7.7 Flood Zone 3

Records within 50m

1

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.

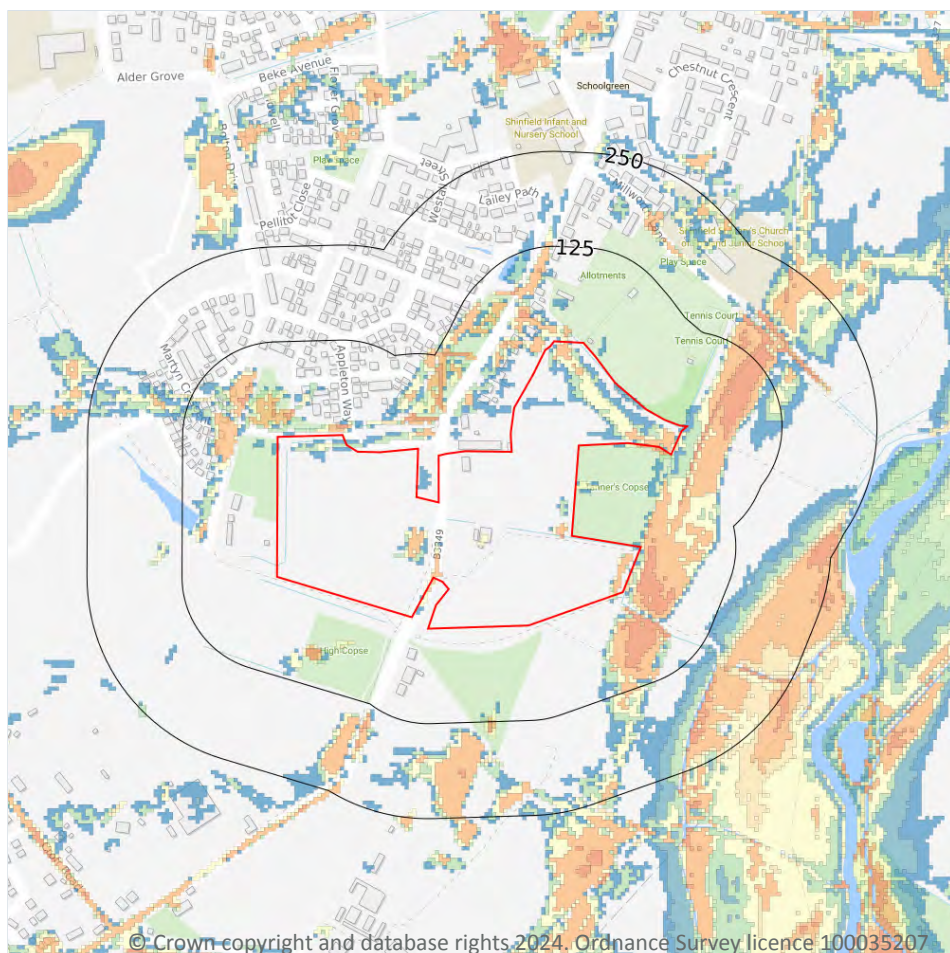
Features are displayed on the River and coastal flooding map on [page 46](#) >

Location	Type
On site	Zone 3 - (Fluvial Models)

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

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

1 in 250 return period

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

1 in 100 return period

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

1 in 30 return period

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

8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on [page 51](#) >

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.

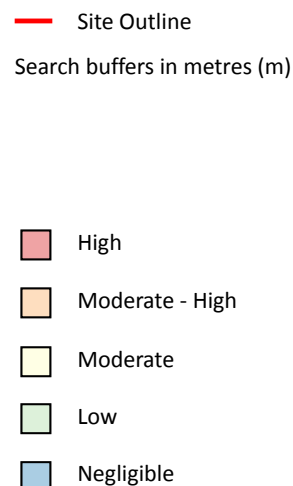
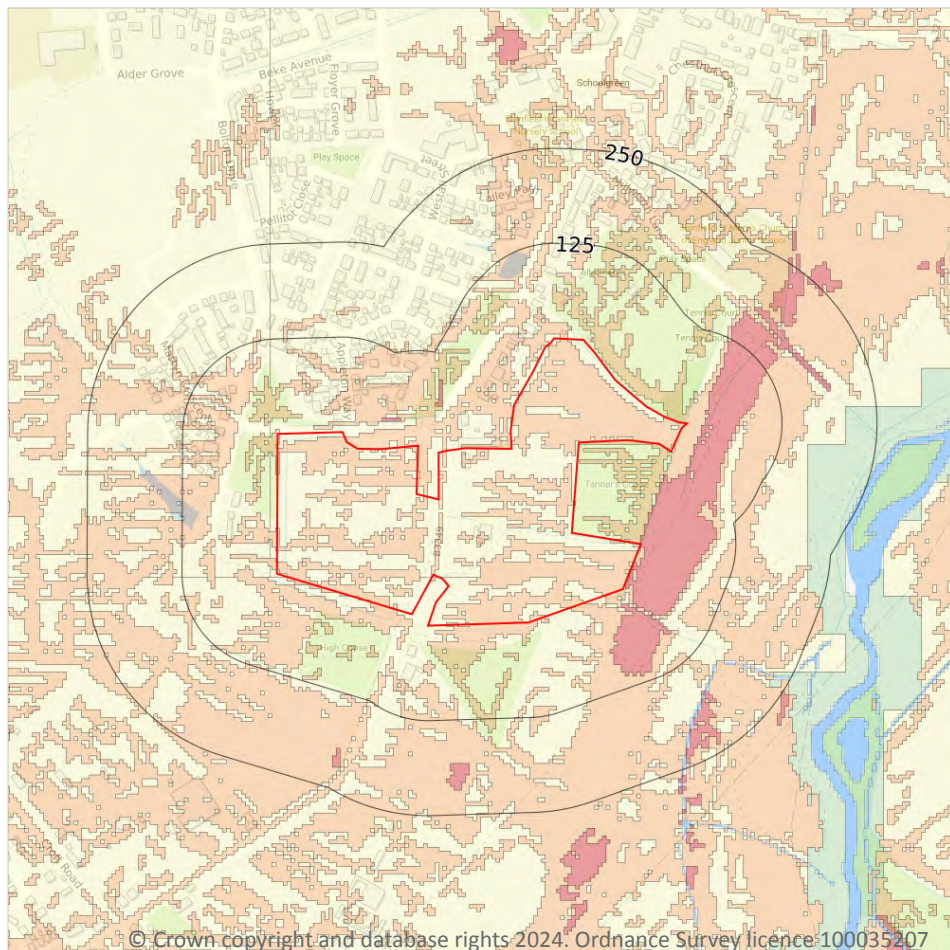
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

High

Highest risk within 50m

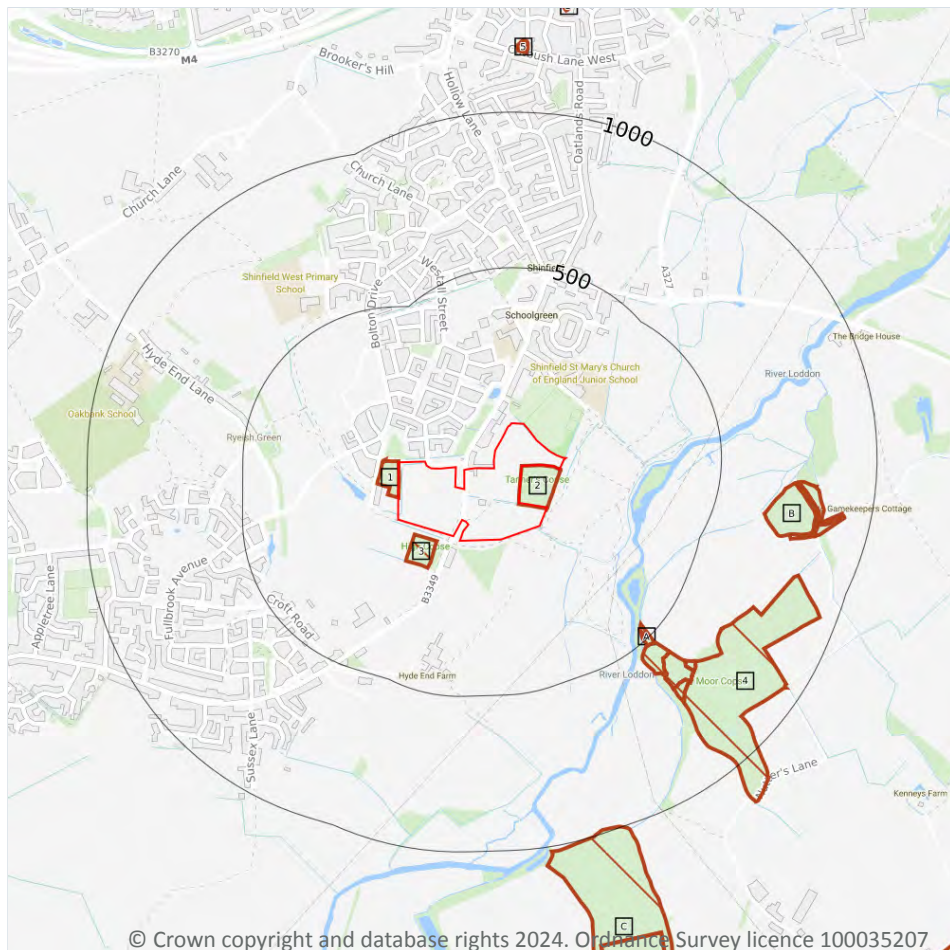
High

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 53](#) >

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

0

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.

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 54 >](#)

ID	Location	Name	Data source
-	1676m N	Pearman's 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

49

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 54 >](#)

ID	Location	Name	Woodland Type
1	On site	High Copse (Tithe Map: High Coppice)(tithe:high Coppice)	Ancient & Semi-Natural Woodland
2	On site	Tanner's Copse (Tithe Map: Tanners Coppice)(tithe:furgy Or Tanners Coppice)	Ancient & Semi-Natural Woodland
3	30m SW	High Copse (Tithe Map: High Coppice)(tithe:high Coppice)	Ancient & Semi-Natural Woodland
A	454m SE	(Tithe Map: Moor Coppice)	Ancient & Semi-Natural Woodland
A	517m SE	(Tithe Map: Moor Coppice)(tithe:moor Coppice)	Ancient & Semi-Natural Woodland
A	581m SE	(Tithe Map: Moor Coppice)(tithe:moor Coppice)	Ancient Replanted Woodland
A	637m SE	Moor Copse (Tithe Map: Moor Coppice)(tithe:moor Coppice)	Ancient & Semi-Natural Woodland
4	662m SE	Moor Copse (Tithe Map: Moor Coppice)(tithe:moor Coppice)	Ancient & Semi-Natural Woodland



ID	Location	Name	Woodland Type
B	663m E	Rounds Copse (Tithe Map: Round Coppice)(tithe:round Coppice)	Ancient & Semi-Natural Woodland
A	676m SE	Moor Copse (Tithe Map: Moor Coppice)(tithe:moor Coppice)	Ancient & Semi-Natural Woodland
B	743m E	Rounds Copse(tithe:driftway Waste)	Ancient & Semi-Natural Woodland
B	753m E	Rounds Copse	Ancient & Semi-Natural Woodland
B	760m E	Rounds Copse(tithe:driftway Waste)	Ancient & Semi-Natural Woodland
B	836m E	Rounds Copse	Ancient & Semi-Natural Woodland
C	989m S	Swallowfield Park: Great Wood(tithe:great Wood; Osd=swallowfield Place)	Ancient & Semi-Natural Woodland
5	1192m N	(Tithe:coppice Adjoining Home Close)	Ancient & Semi-Natural Woodland
D	1335m N	(Tithe: The Shaw)	Ancient & Semi-Natural Woodland
-	1344m N	(Tithe:the Shaw)	Ancient & Semi-Natural Woodland
C	1345m S	Swallowfield Park: Great Wood(tithe:great Wood; Osd=swallowfield Place)	Ancient Replanted Woodland
-	1345m E	Bottom Copse (Tithe Map: Bottoms Coppice)(tithe:bottom Coppice)	Ancient Replanted Woodland
-	1504m E	Pound Copse (Tithe Map: Pound Coppice Wellan's Coppice)(tithe:pond Or Willans Coppice)	Ancient & Semi-Natural Woodland
-	1626m S	Swallowfield Park: Great Wood(tithe:great Wood; Osd+swallowfield Place)	Ancient & Semi-Natural Woodland
-	1703m SE	New Plantation(tithe:second Dunnings Hole)	Ancient & Semi-Natural Woodland
-	1709m SE	New Plantation(tithe:first Dunnings Hole)	Ancient & Semi-Natural Woodland
-	1718m SE	New Plantation(tithe:rapleys Shaw)	Ancient & Semi-Natural Woodland
-	1724m SE	New Plantation(tithe:second Dunnings Hole)	Ancient Replanted Woodland
-	1745m SE	New Plantation(tithe:rapleys Shaw)	Ancient Replanted Woodland
-	1746m SE	New Plantation(tithe:first Dunnings Hole)	Ancient Replanted Woodland



ID	Location	Name	Woodland Type
-	1780m N	Nores Hill (Tithe Map: Nores Hill Coppice)(tithe:noves Hill Coppice)	Ancient & Semi-Natural Woodland
-	1787m SE	New Plantation(tithe:rapleys Shaw)	Ancient & Semi-Natural Woodland
-	1808m SE	New Plantation(tithe:rapleys Shaw)	Ancient Replanted Woodland
-	1819m SE	New Plantation(tithe:part Of Third Dunnings Hole)	Ancient & Semi-Natural Woodland
-	1820m SE	New Plantation(tithe:part Of Third Dunnings Hole)	Ancient Replanted Woodland
-	1824m SE	Kiln Copse(tithe:lower Moss Coppice)	Ancient & Semi-Natural Woodland
-	1829m E	(Tithe Map: Furzen Coppice Parson's Coppice)(tithe:furzen Or Parsons Coppice)	Ancient & Semi-Natural Woodland
-	1833m N	Pearman's Copse (Tithe Map: Pearmans Coppice)(tithe:pearmans Coppice)	Ancient & Semi-Natural Woodland
-	1860m SE	New Plantation(tithe:part Of Third Dunnings Hole)	Ancient & Semi-Natural Woodland
-	1860m SE	(Epo2: New Plantation)(tithe:part Of Third Dunnings Hole)	Ancient & Semi-Natural Woodland
12	1871m SE	Great Copse(tithe:mag Green Coppice)	Ancient & Semi-Natural Woodland
-	1905m SE	Emms Copse(tithe:emms Coppice)	Ancient & Semi-Natural Woodland
-	1929m SE	New Plantation(tithe:rapleys Shaw)	Ancient Replanted Woodland
-	1935m NE	St. John's Copse (Tithe Map: St Johns Coppice)(tithe:saint Johns Coppice)	Ancient & Semi-Natural Woodland
-	1938m SE	New Plantation(tithe:rapleys Shaw)	Ancient Replanted Woodland
-	1953m SE	Great Copse (Tithe Map: Horns Coppice)(tithe:hornes Coppice)	Ancient & Semi-Natural Woodland
-	1972m SE	New Plantation(tithe:rapleys Shaw)	Ancient & Semi-Natural Woodland
-	1972m SE	New Plantation(tithe:rapleys Shaw)	Ancient & Semi-Natural Woodland
-	1985m N	(Tithe Map: Little Whitley Wood Coppice)(tithe:little Whitley Wood Coppice)	Ancient & Semi-Natural Woodland
-	1988m SE	Emms Copse(tithe:emms Coppice)	Ancient & Semi-Natural Woodland



ID	Location	Name	Woodland Type
-	1993m SE	New Plantation(tithe:rapleys Shaw)	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

1

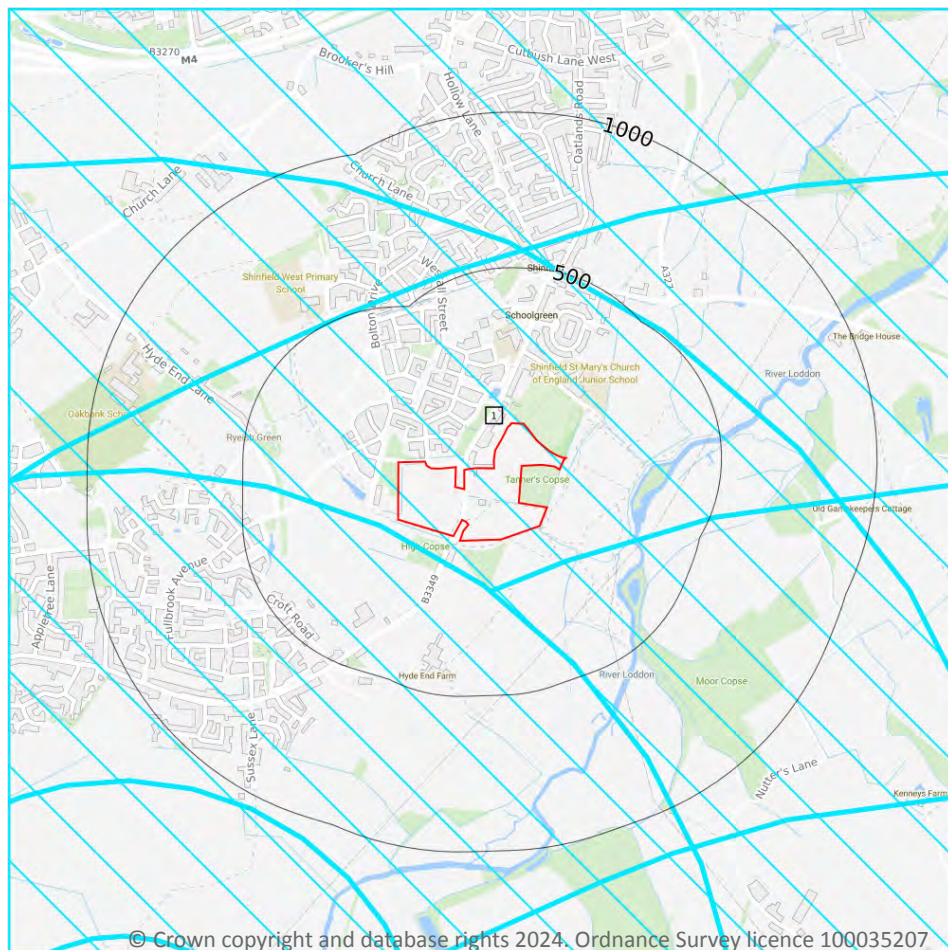
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
778m NW	Foudry Brook (West End Brook to M4) NVZ	Surface Water	459	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 62 >](#)

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Notes: Strategic solutions for recreational impacts are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0
----------------------	---

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.

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

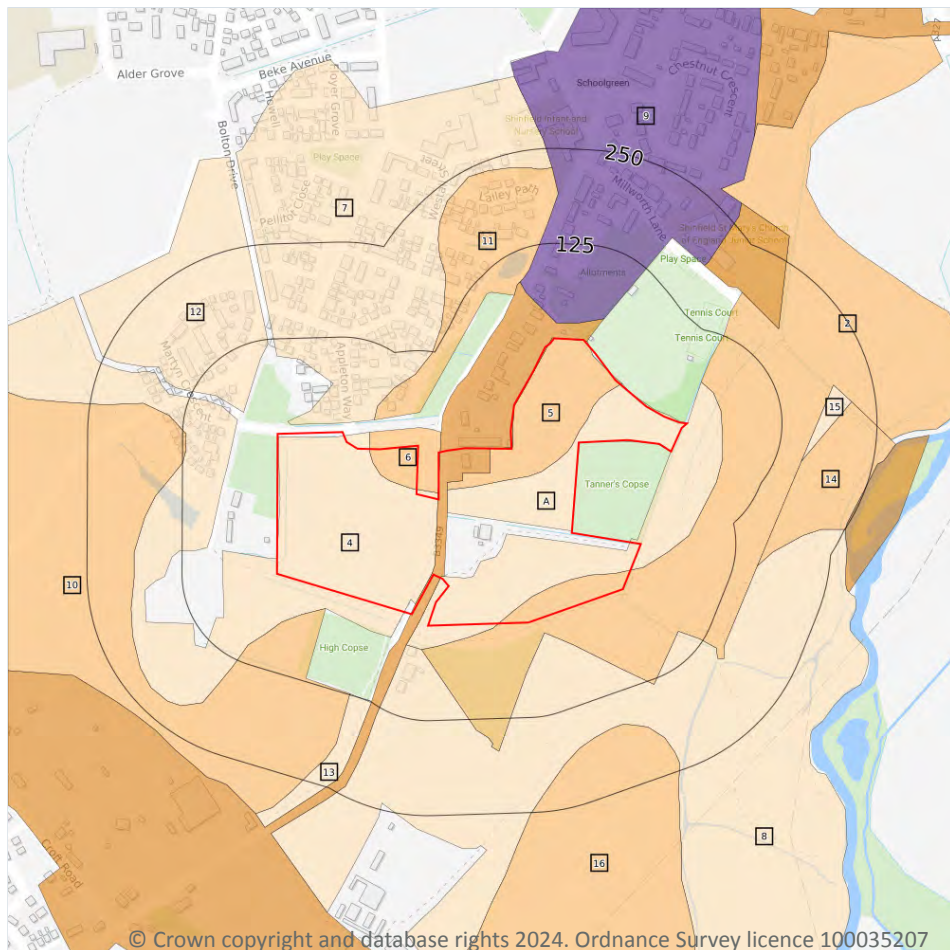
0

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

16

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 66](#) >

ID	Location	Classification	Description
2	On site	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.



ID	Location	Classification	Description
4	On site	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.
5	On site	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.
6	On site	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.
A	On site	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.
B	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.
7	12m NW	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.
8	20m SE	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.
9	21m NE	Urban	-
10	25m SW	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.
11	38m NW	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.
12	53m NW	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.
13	123m SW	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.



ID	Location	Classification	Description
14	156m E	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.
15	159m E	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.
16	168m 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.

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

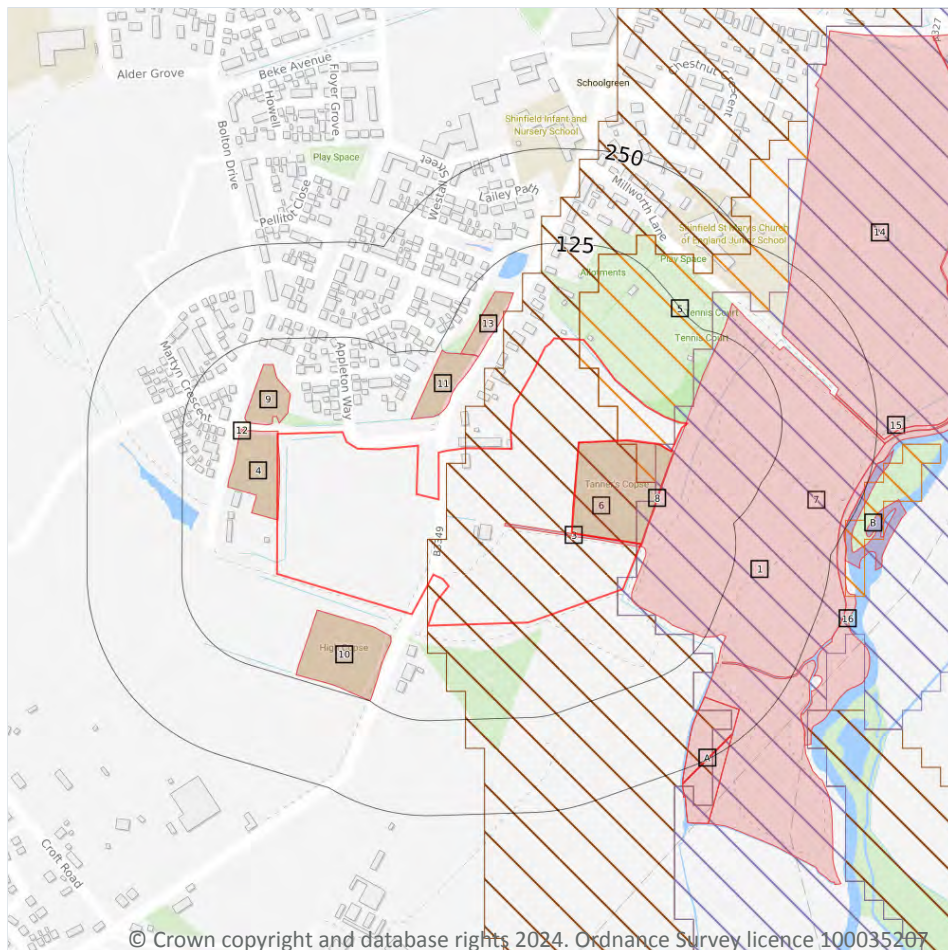
0

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



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

13.1 Priority Habitat Inventory

Records within 250m

15

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

Features are displayed on the Habitat designations map on [page 70 >](#)

ID	Location	Main Habitat	Other habitats
1	On site	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
2	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)



ID	Location	Main Habitat	Other habitats
8	1m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	14m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	30m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	36m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	43m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	68m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	172m NE	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
A	178m SE	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
15	198m E	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
16	237m E	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
B	247m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

4

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

Features are displayed on the Habitat designations map on [page 70 >](#)

ID	Location	Type	Habitat
5	On site	Network Enhancement Zone 1	Not specified
6	On site	Network Enhancement Zone 2	Not specified
7	On site	Restorable Habitat	Not specified
B	245m E	Network Enhancement Zone 1	Not specified

This data is sourced from Natural England.



13.3 Open Mosaic Habitat

Records within 250m**1**

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.

Features are displayed on the Habitat designations map on [page 70 >](#)

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
A	178m SE	NLUD Ref: 36000134	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

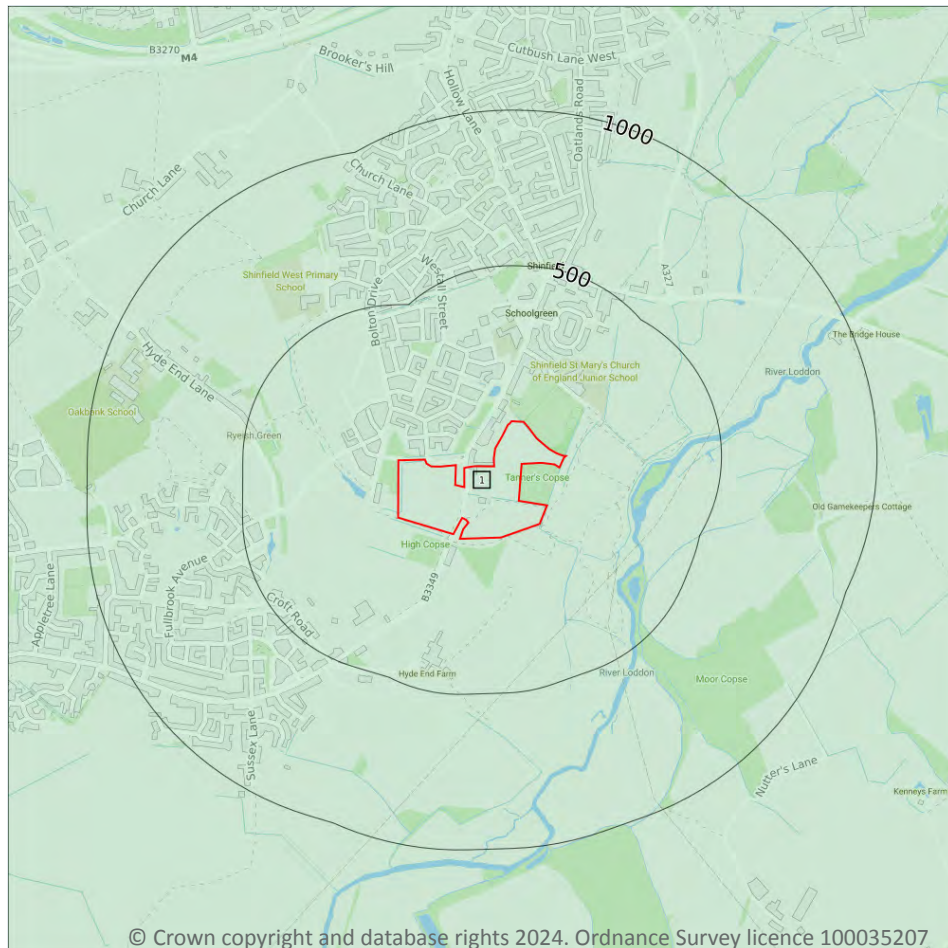
Records within 250m**0**

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

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

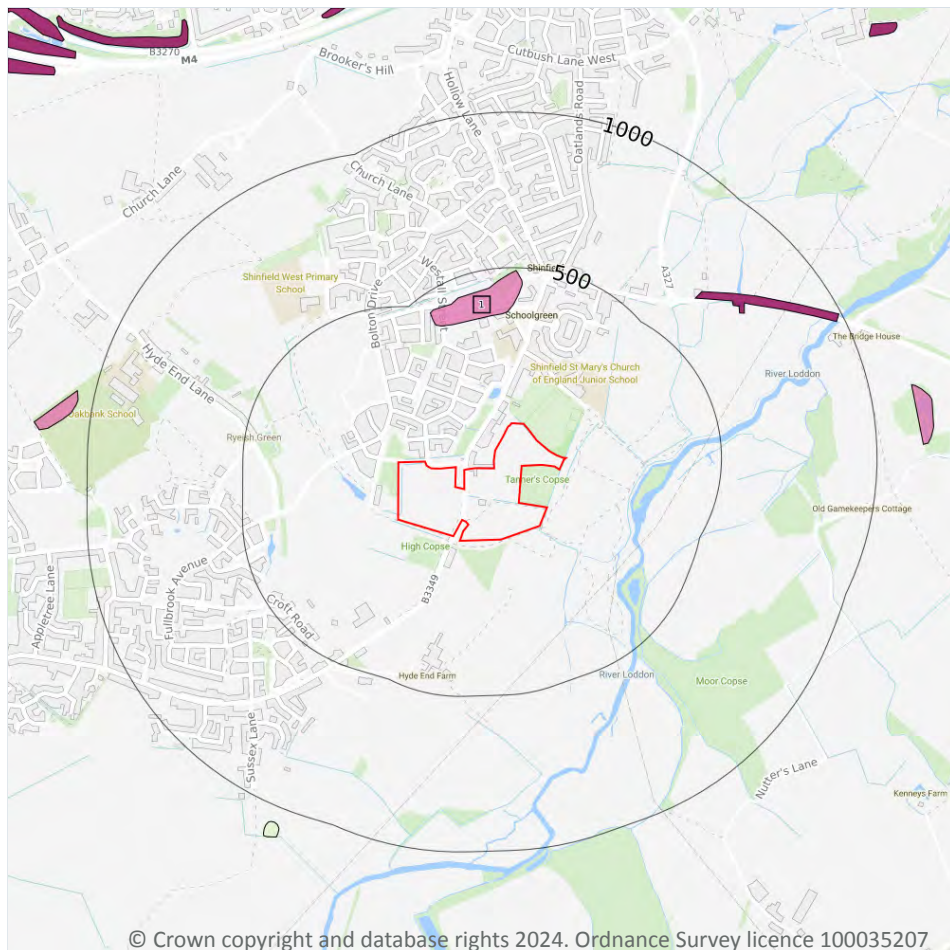
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 73](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU76NW

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

1

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.

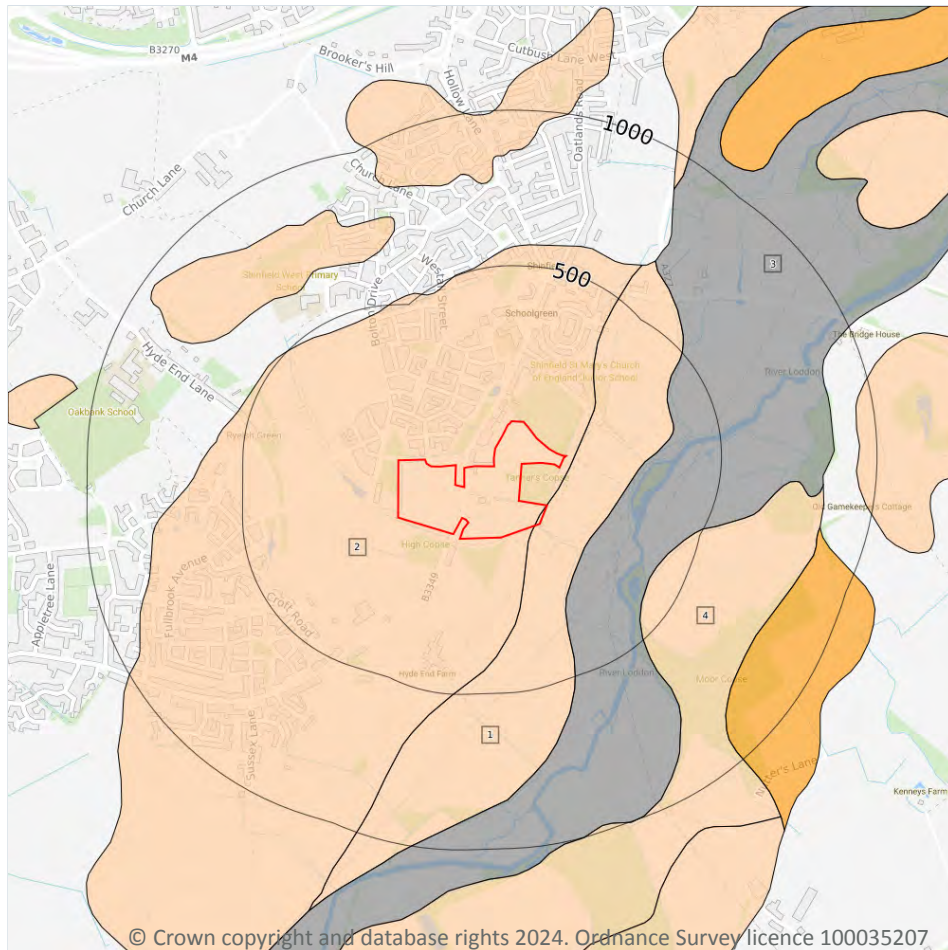
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 74](#) >

ID	Location	LEX Code	Description	Rock description
1	351m N	WGR-VOID	Worked Ground (Undivided)	Void

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

4

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 75 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
2	On site	RTD3-XSV	River Terrace Deposits, 3 - Sand And Gravel	Sand And Gravel
3	163m SE	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
4	394m SE	RTD2-XSV	River Terrace Deposits, 2 - 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

1

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 77](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	Eocene Epoch

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

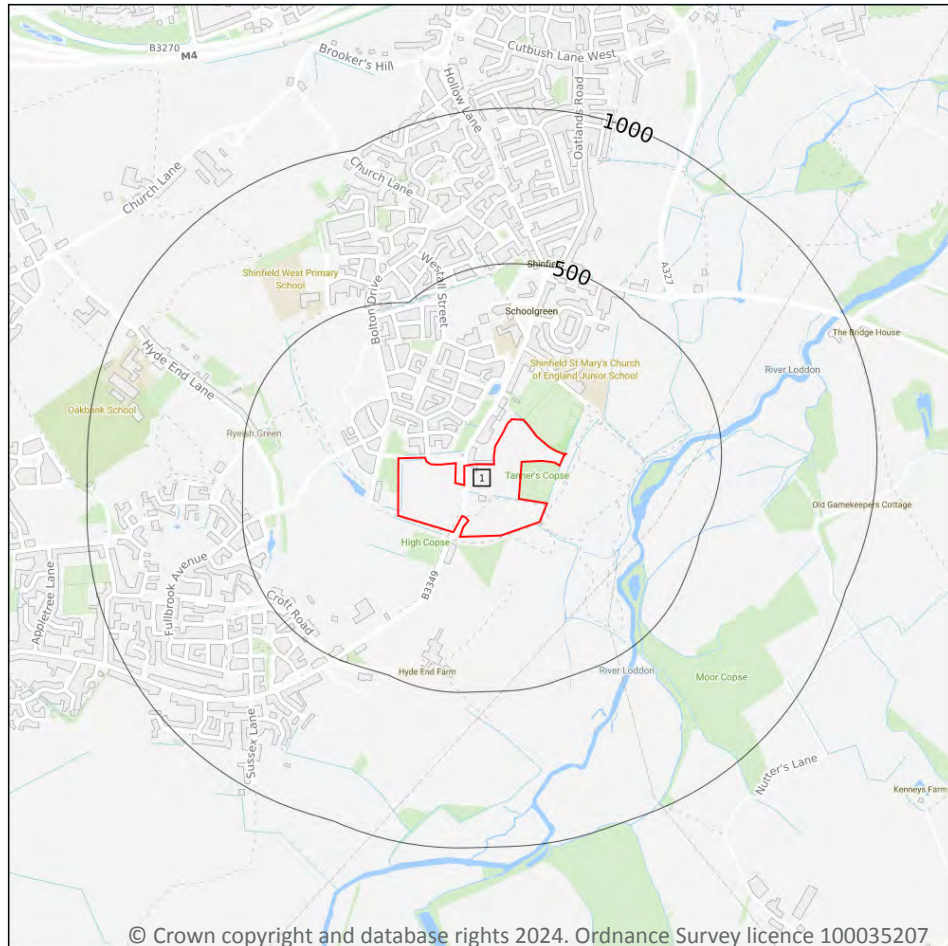
0

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

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

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

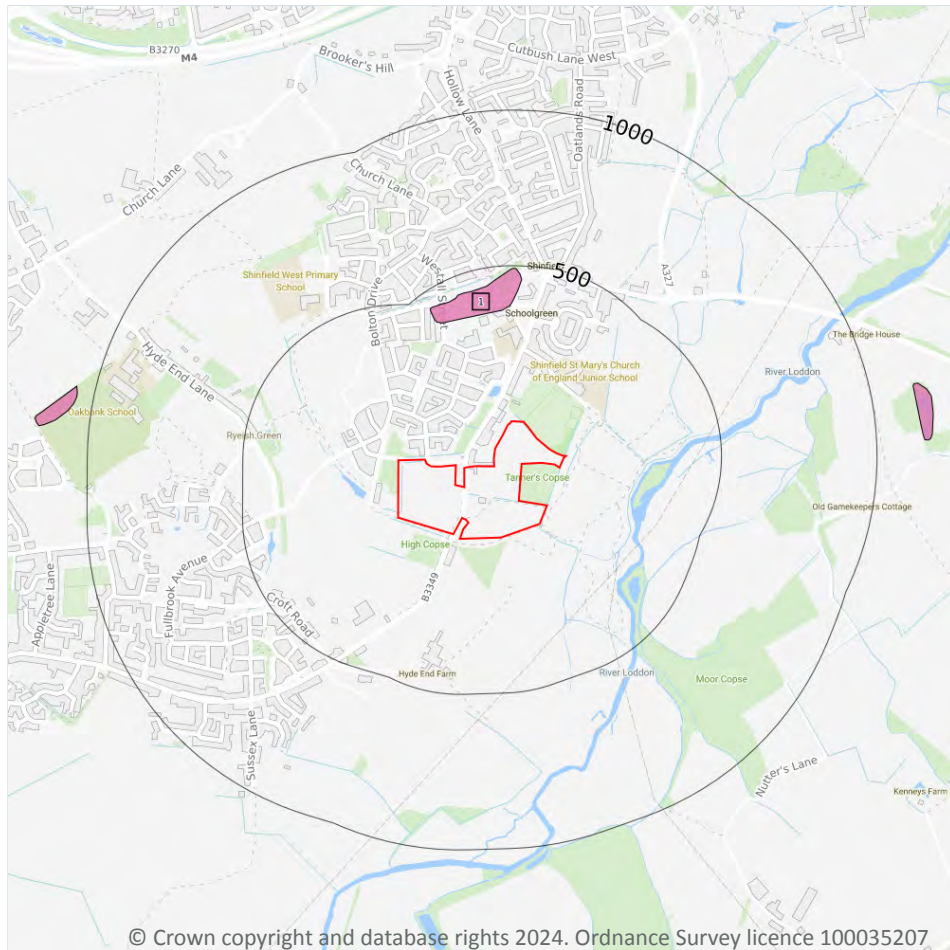
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 79](#) >

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

This data is sourced from the British Geological Survey.



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



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

© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

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 80](#) >

ID	Location	LEX Code	Description	Rock description
1	355m N	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

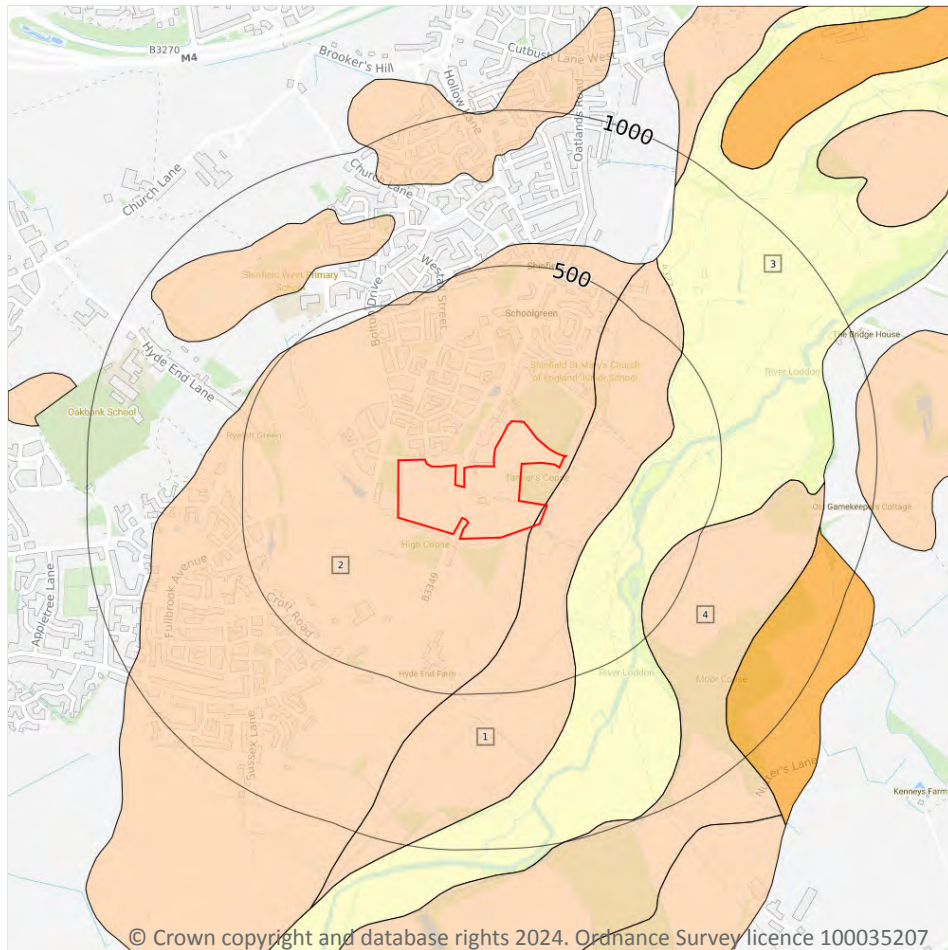
0

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

4

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 82](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL
2	On site	RTD3-XSV	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL
3	162m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
4	395m SE	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL



This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

2

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Very High	High
On site	Intergranular	Very High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m

1

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 84](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LC-XCZS	LONDON CLAY FORMATION - CLAY, SILT AND SAND	YPRESIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Moderate	Very Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

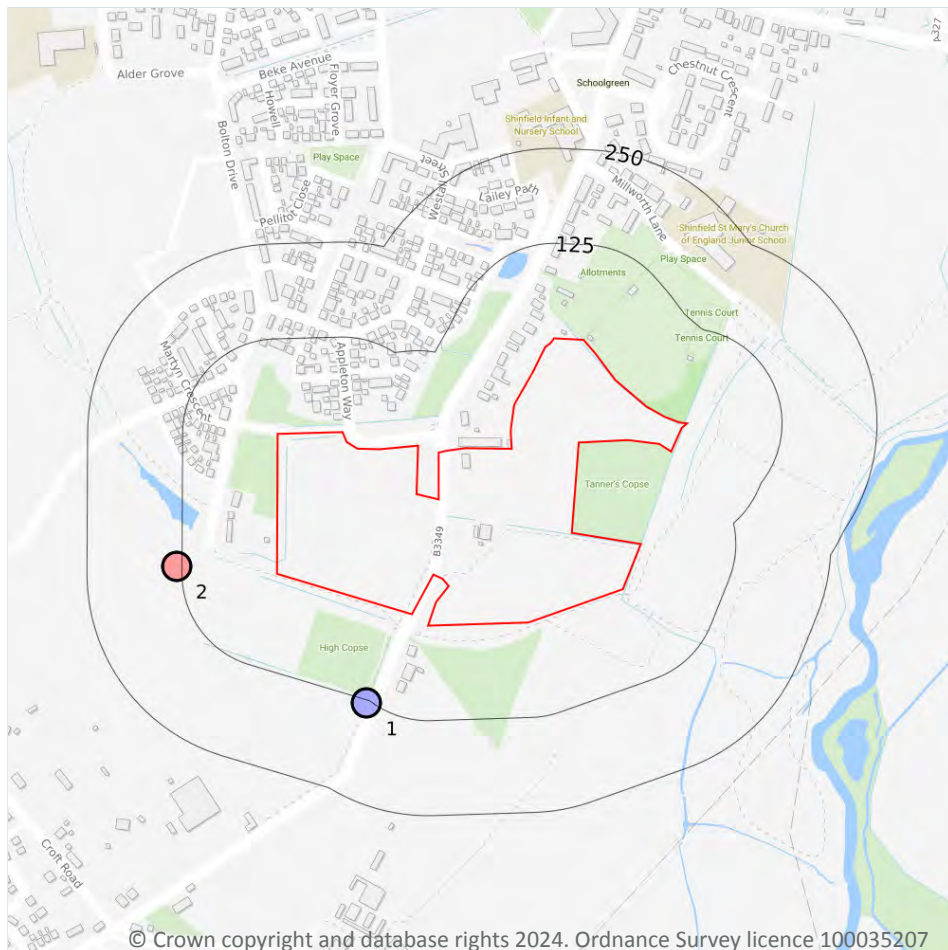
Records within 500m**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

2

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

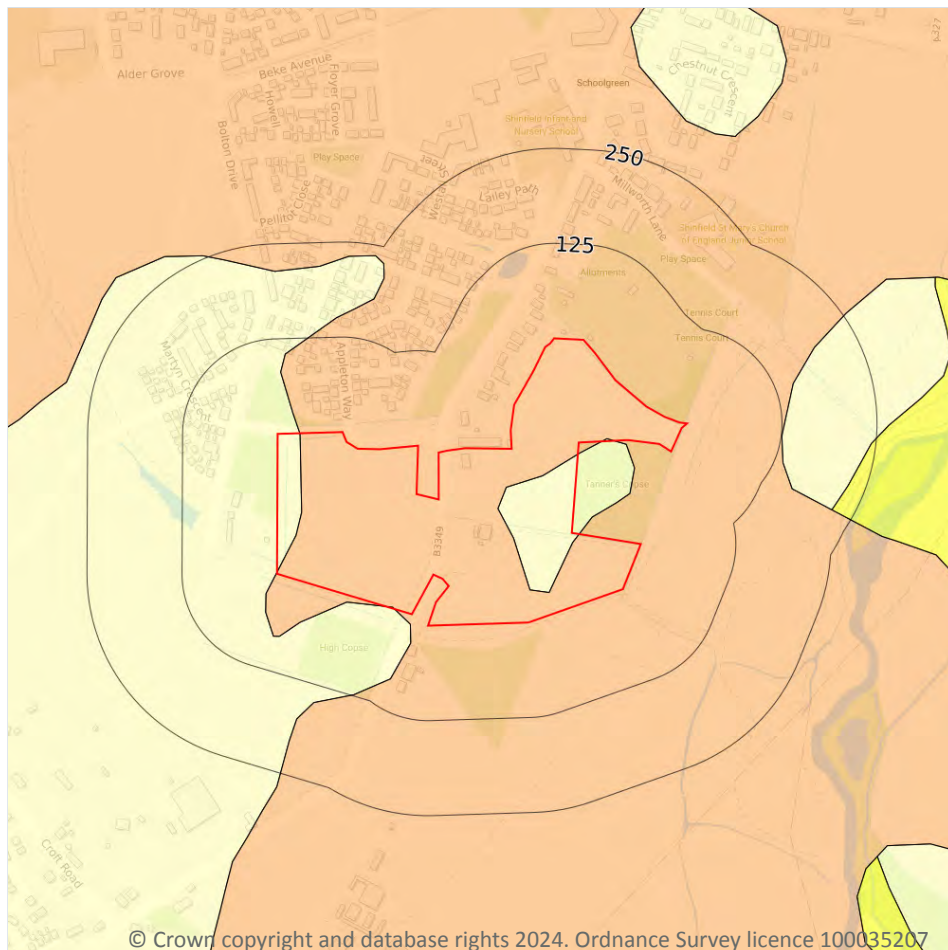
Features are displayed on the Boreholes map on [page 86](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	129m SW	473070 166960	NEAR HYDE END SHINFIELD	3.8	N	427135 ↗
2	132m W	472820 167140	HIGH COPSE FARM SHINFIELD	121.92	N	427157 ↗

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).

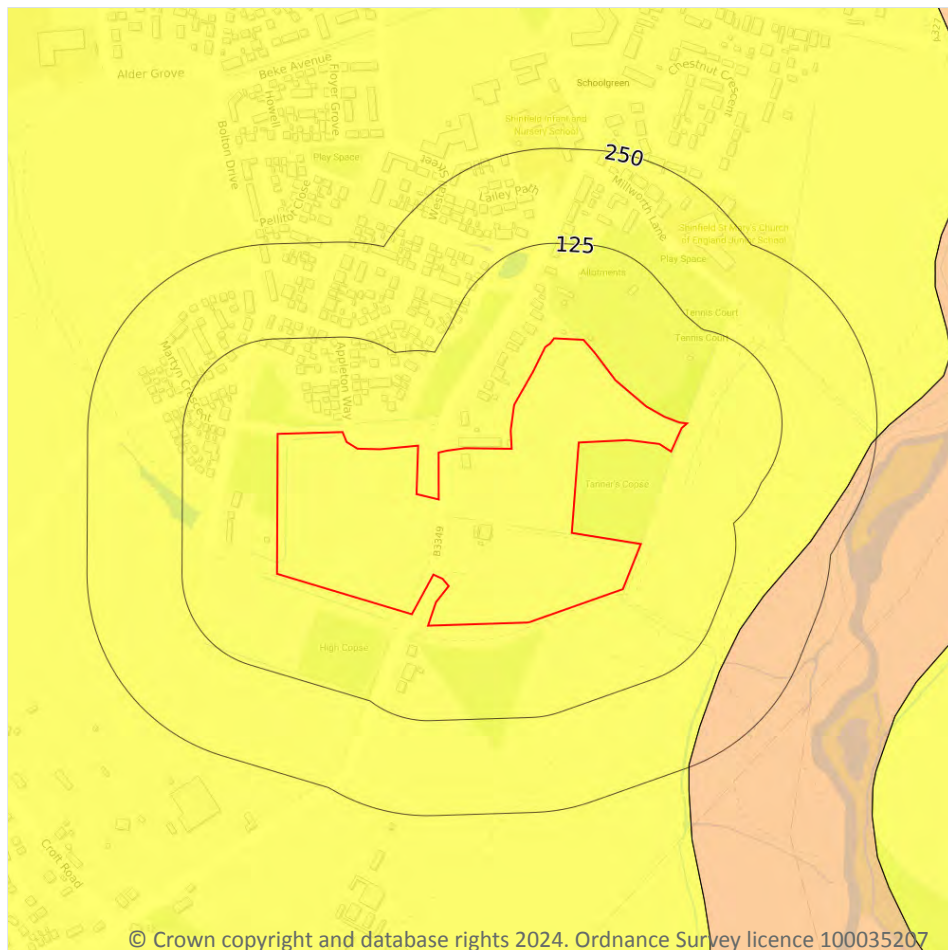
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 87 >](#)

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

1

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

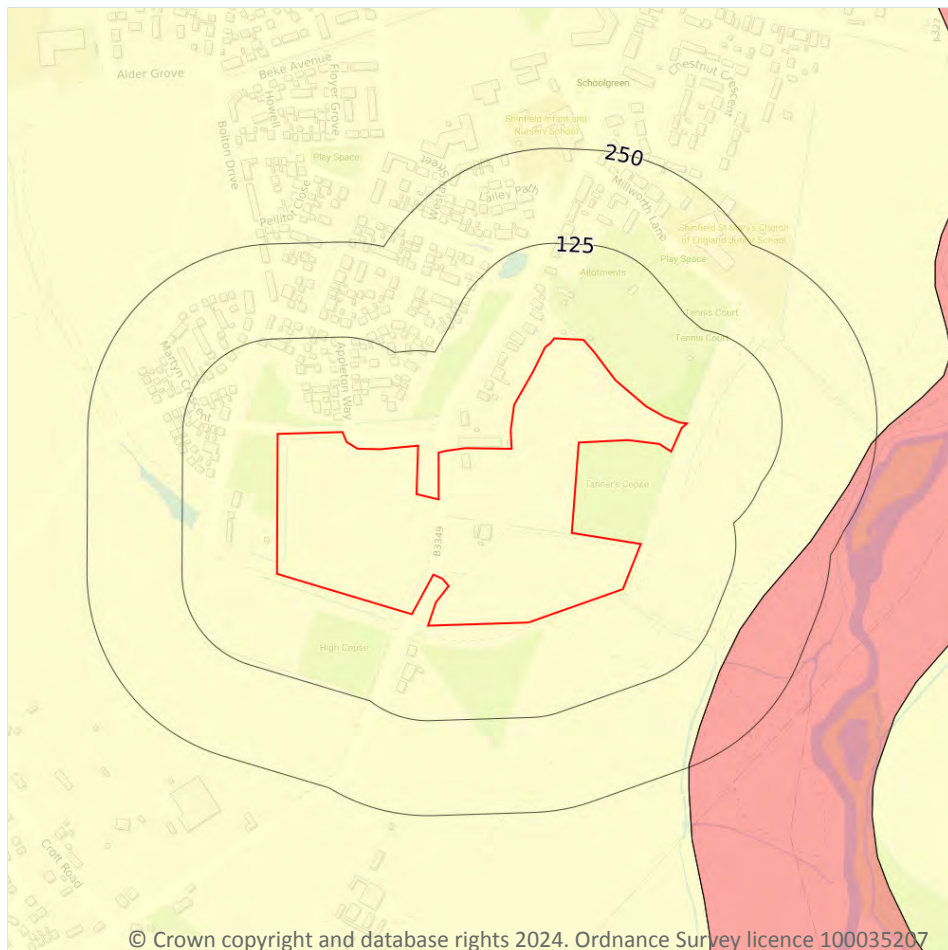
Features are displayed on the Natural ground subsidence - Running sands map on [page 88 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

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.

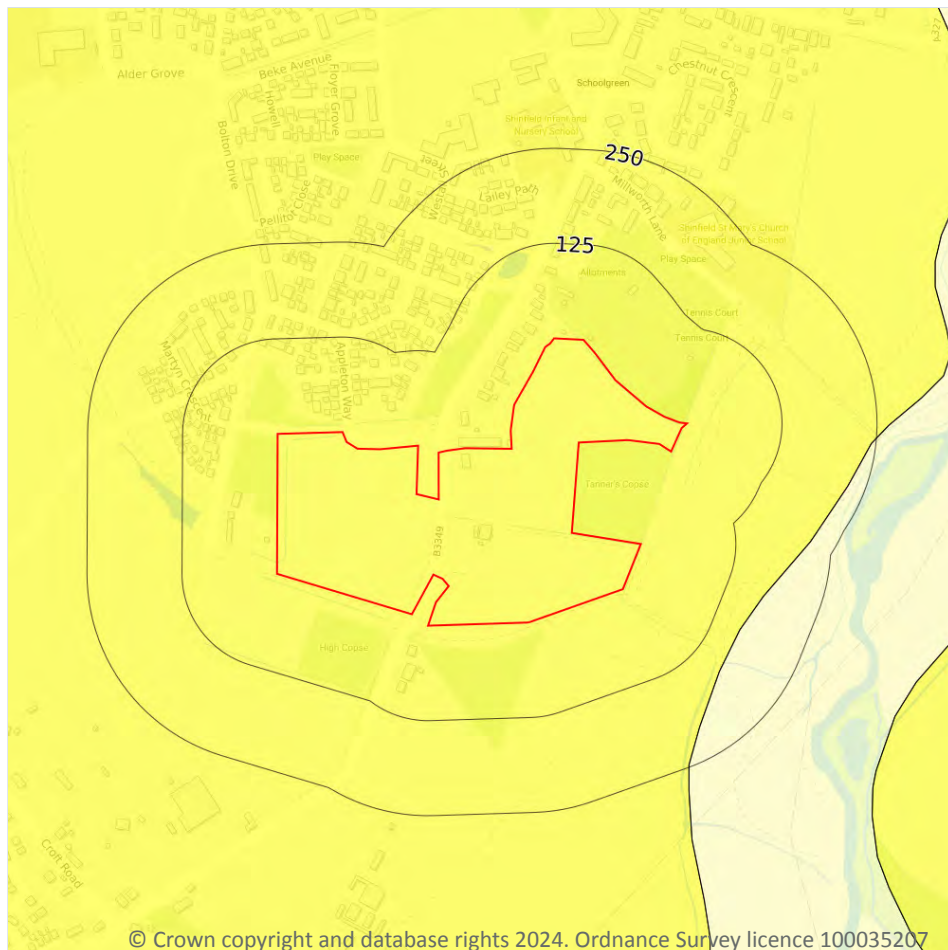
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 89](#) >

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.

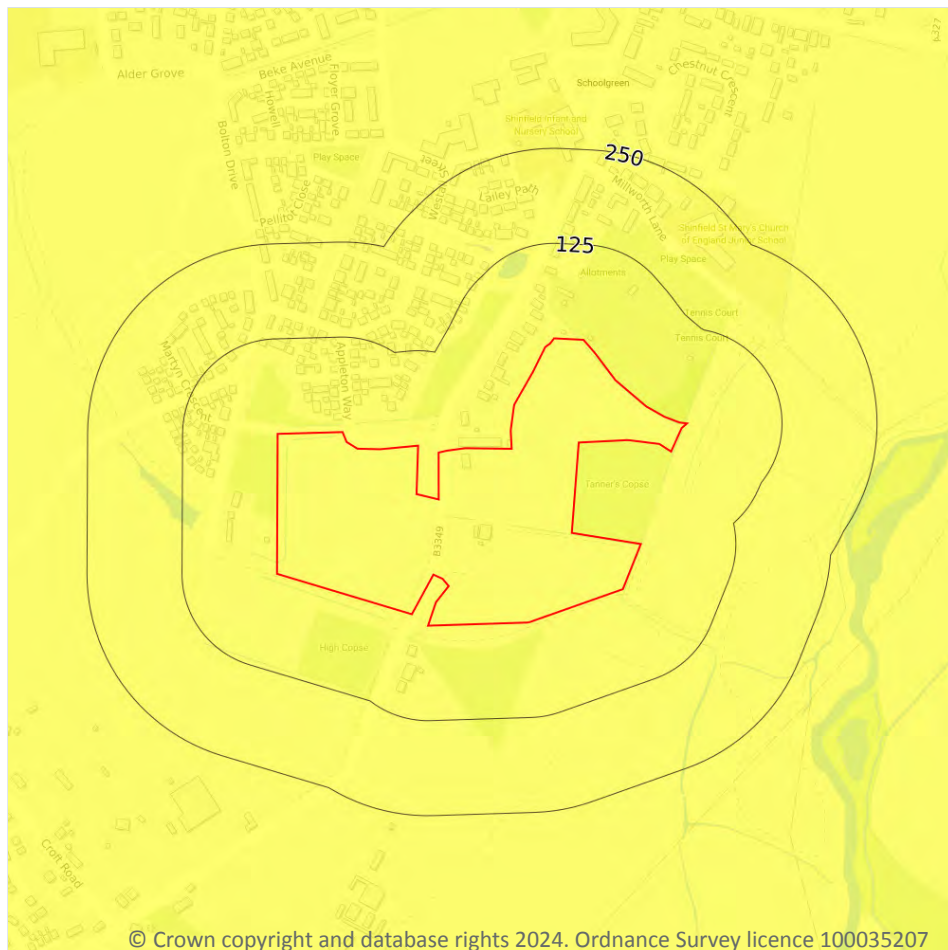
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 90](#) >

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.

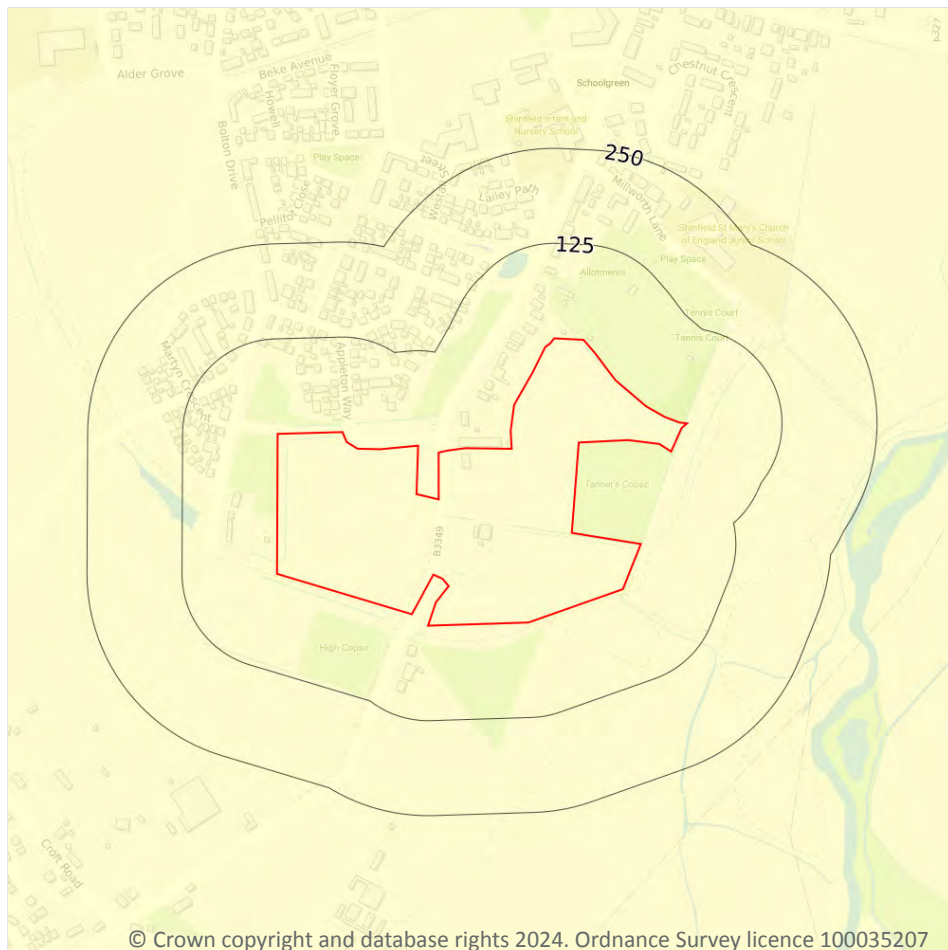
Features are displayed on the Natural ground subsidence - Landslides map on [page 91](#) >

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 92](#)

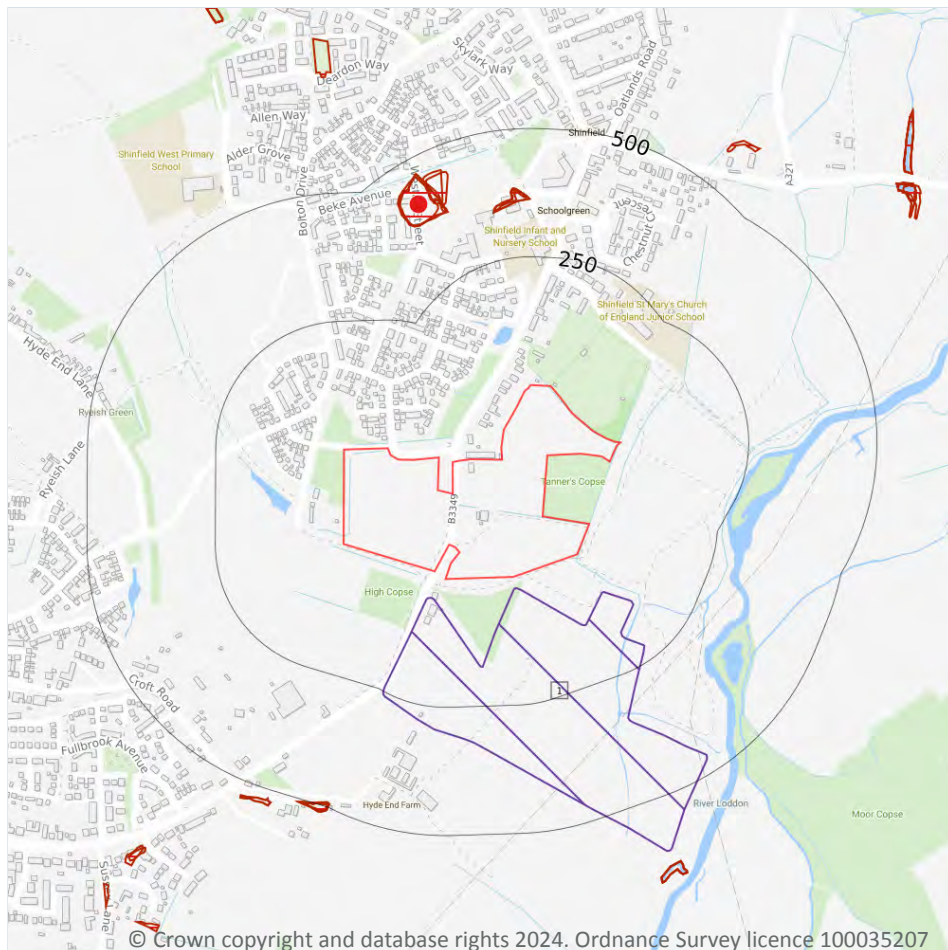
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



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

1

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 94 >](#)

ID	Location	Details	Description
B	414m N	Name: Schoolgreen Gravel Pit Address: Shinfield, READING, Berkshire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

1

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 94 >](#)



ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
1	22m SE	Hyde End Farm	Sand and gravel	Surface mineral working	Application	Not available

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
348m N	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.

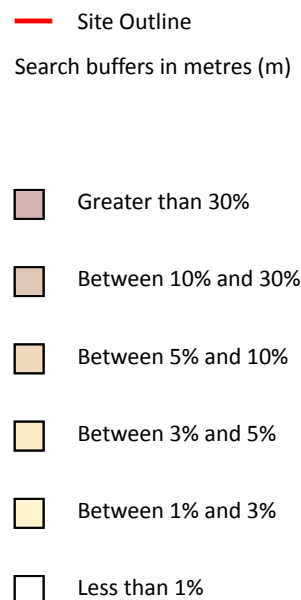
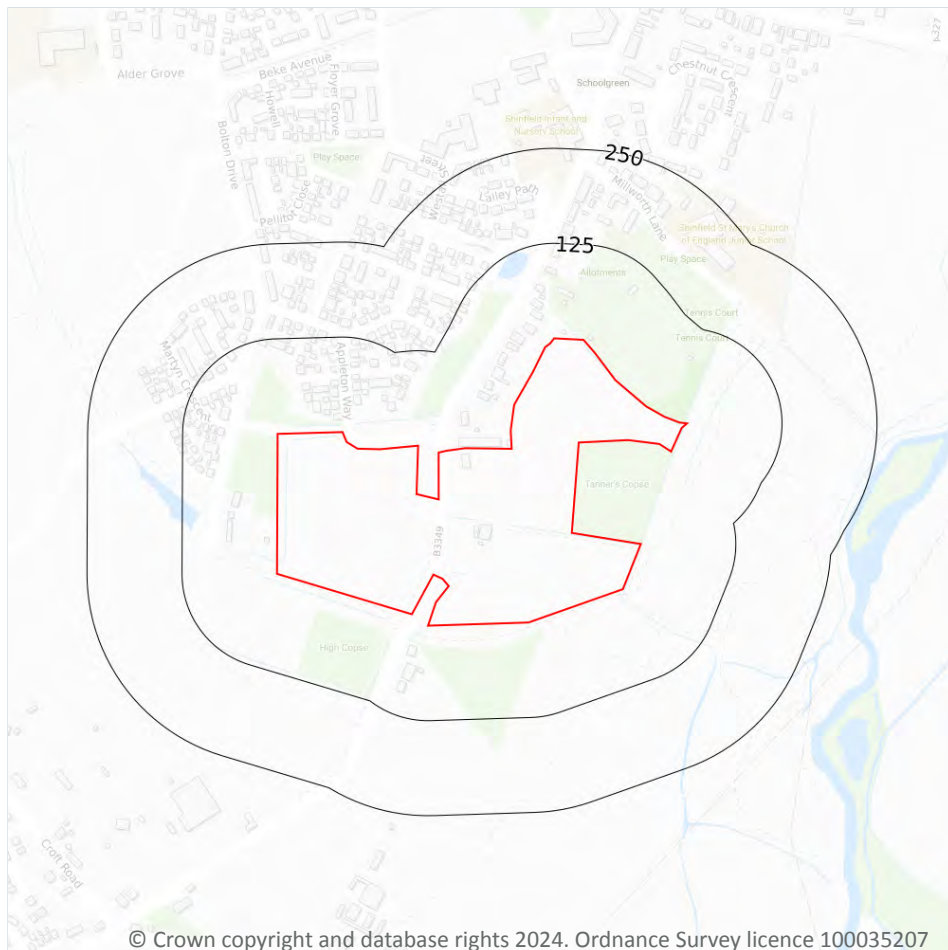
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 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 101](#) >

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

6

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
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
9m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
25m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m**0**

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m**0**

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m**0**

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m**0**

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m**0**

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



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 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/ ↗.



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_Landline_2_1
Grid Ref: 473371, 167100

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

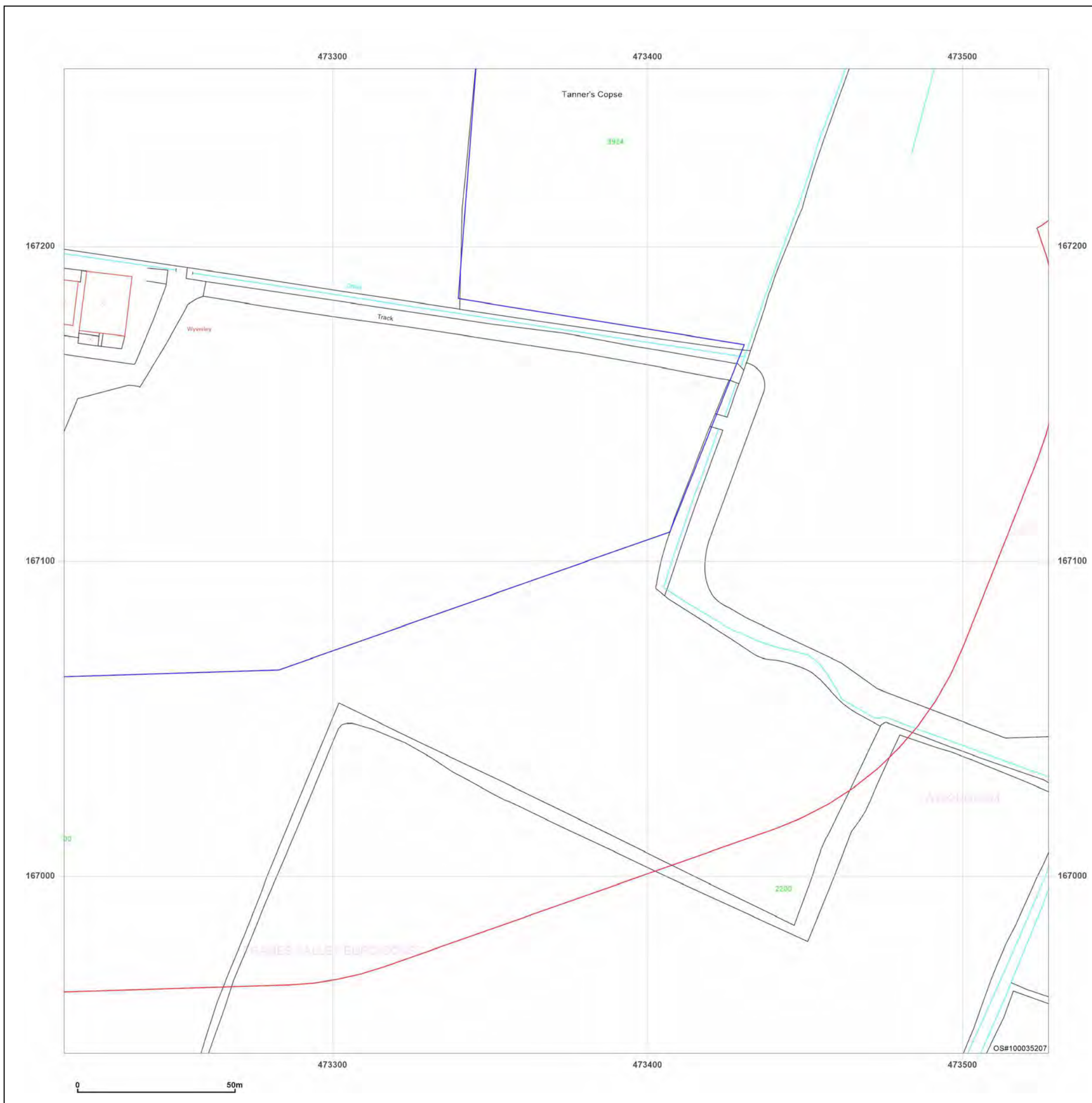


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_Landline_2_2
Grid Ref: 473371, 167400

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

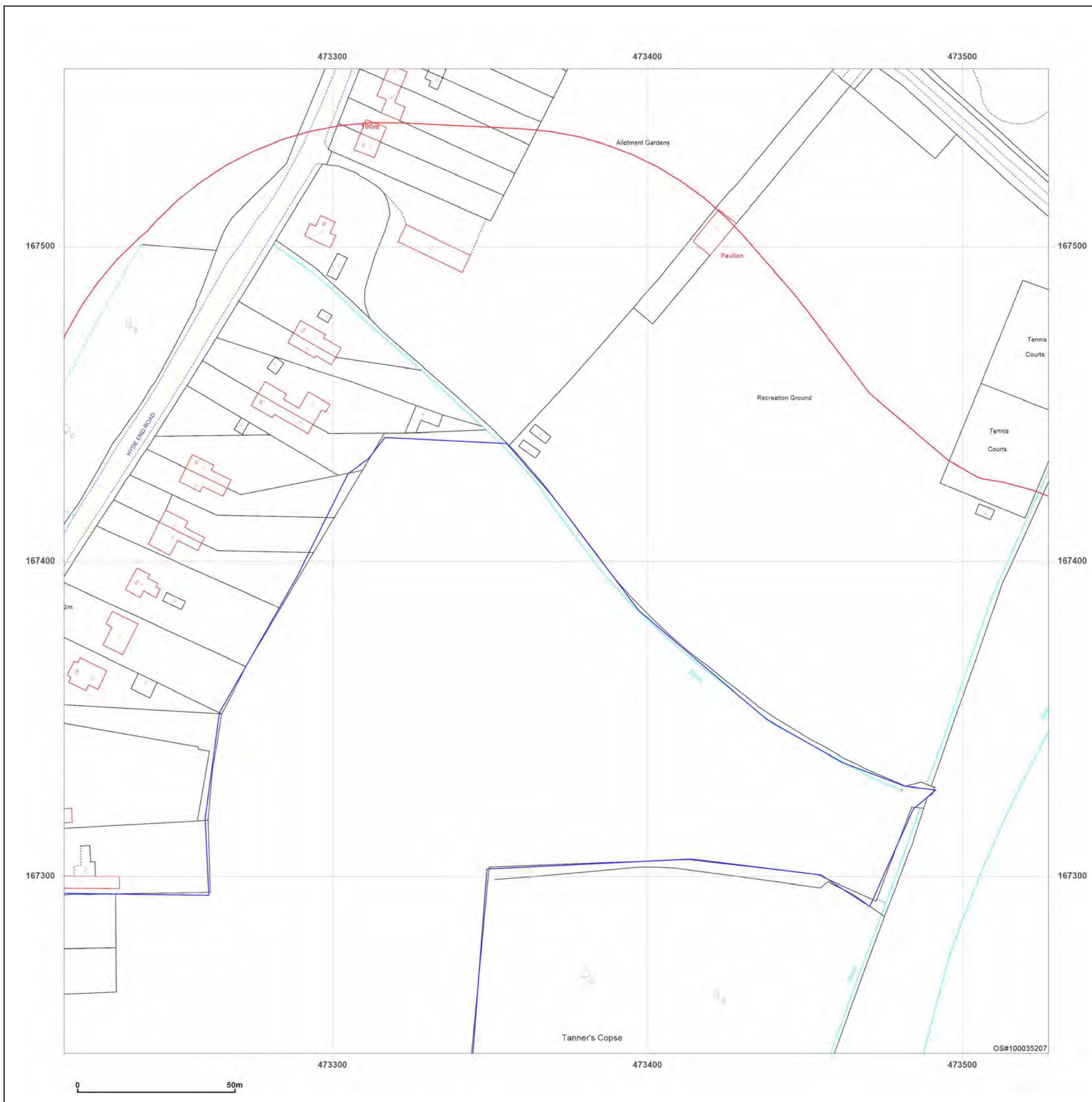


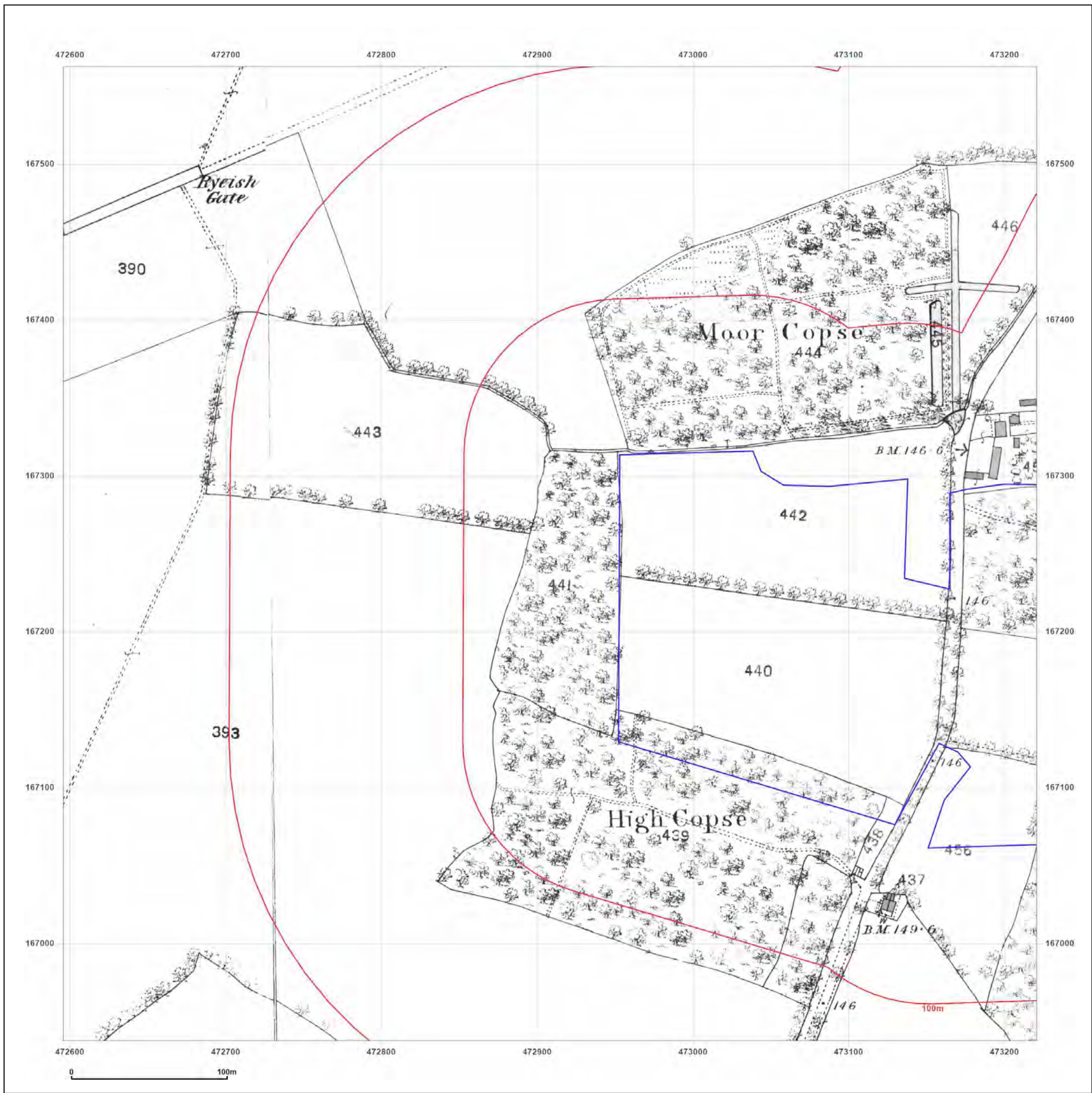
Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf





Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: County Series

Map date: 1872

Scale: 1:2,500

Printed at: 1:2,500



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

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

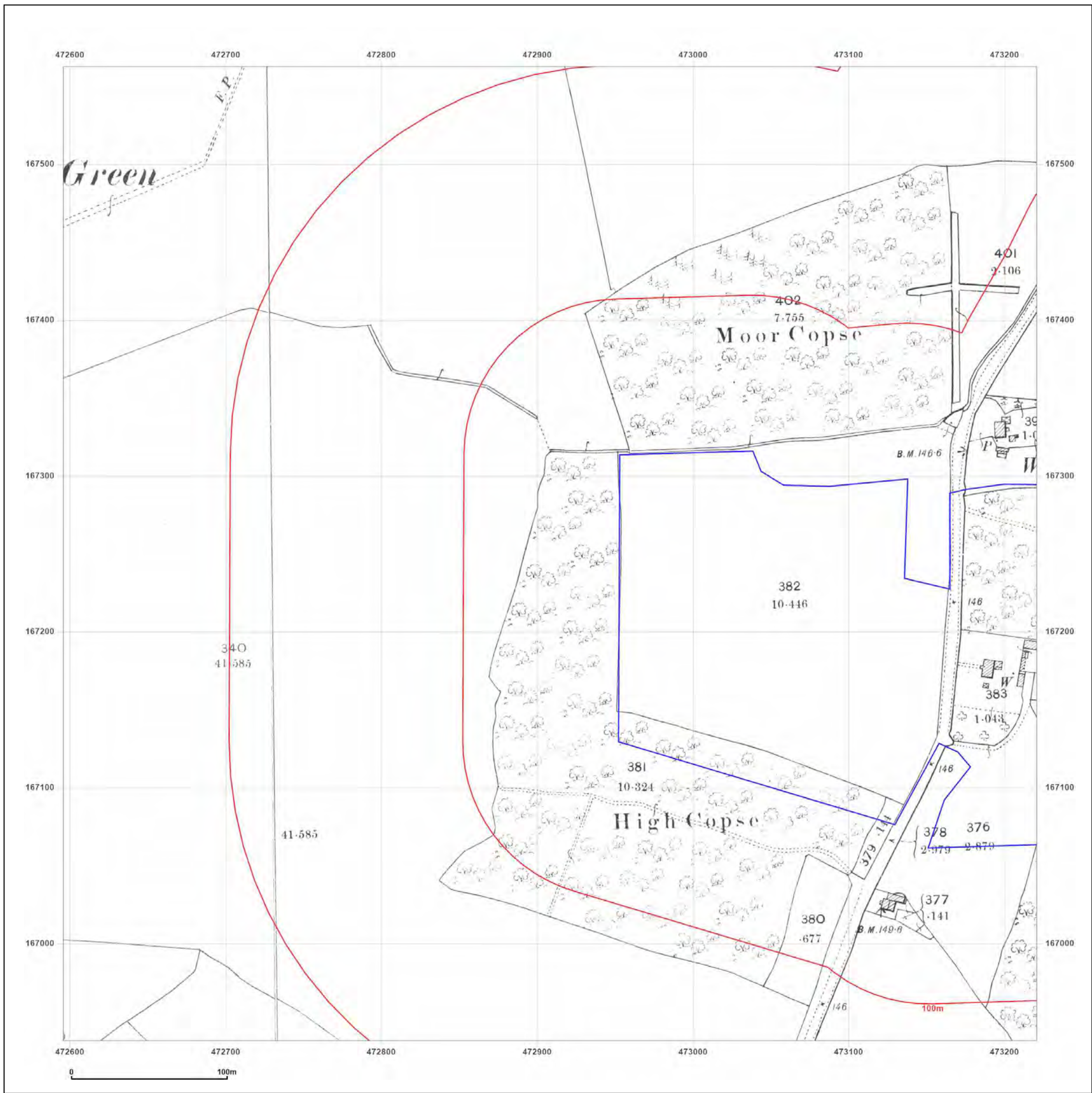


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

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

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

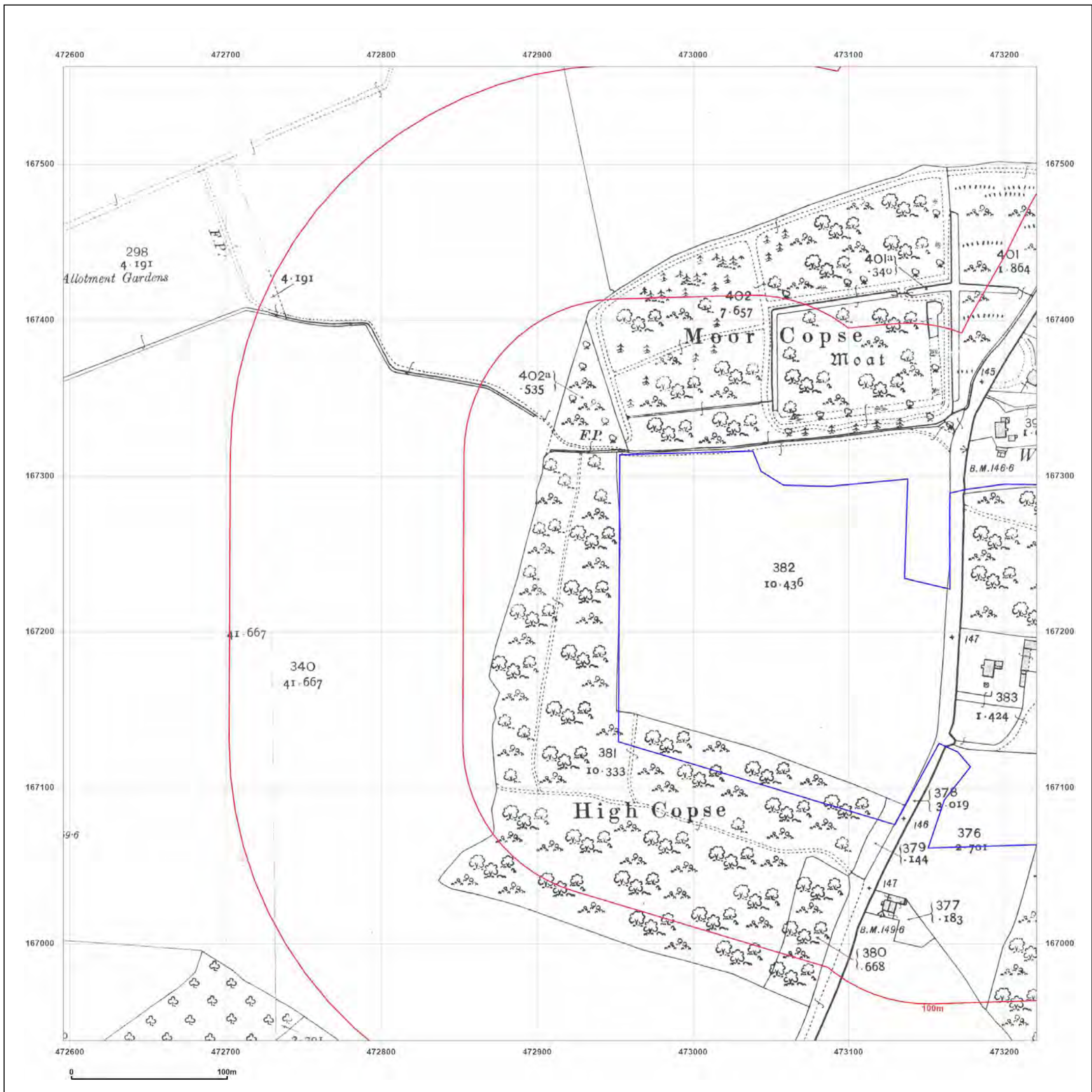


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: County Series

Map date: 1911

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1911
Revised 1911
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1911
Revised 1911
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

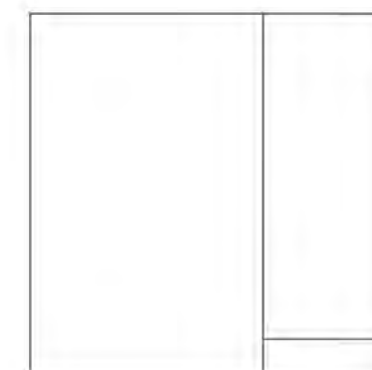
Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



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

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

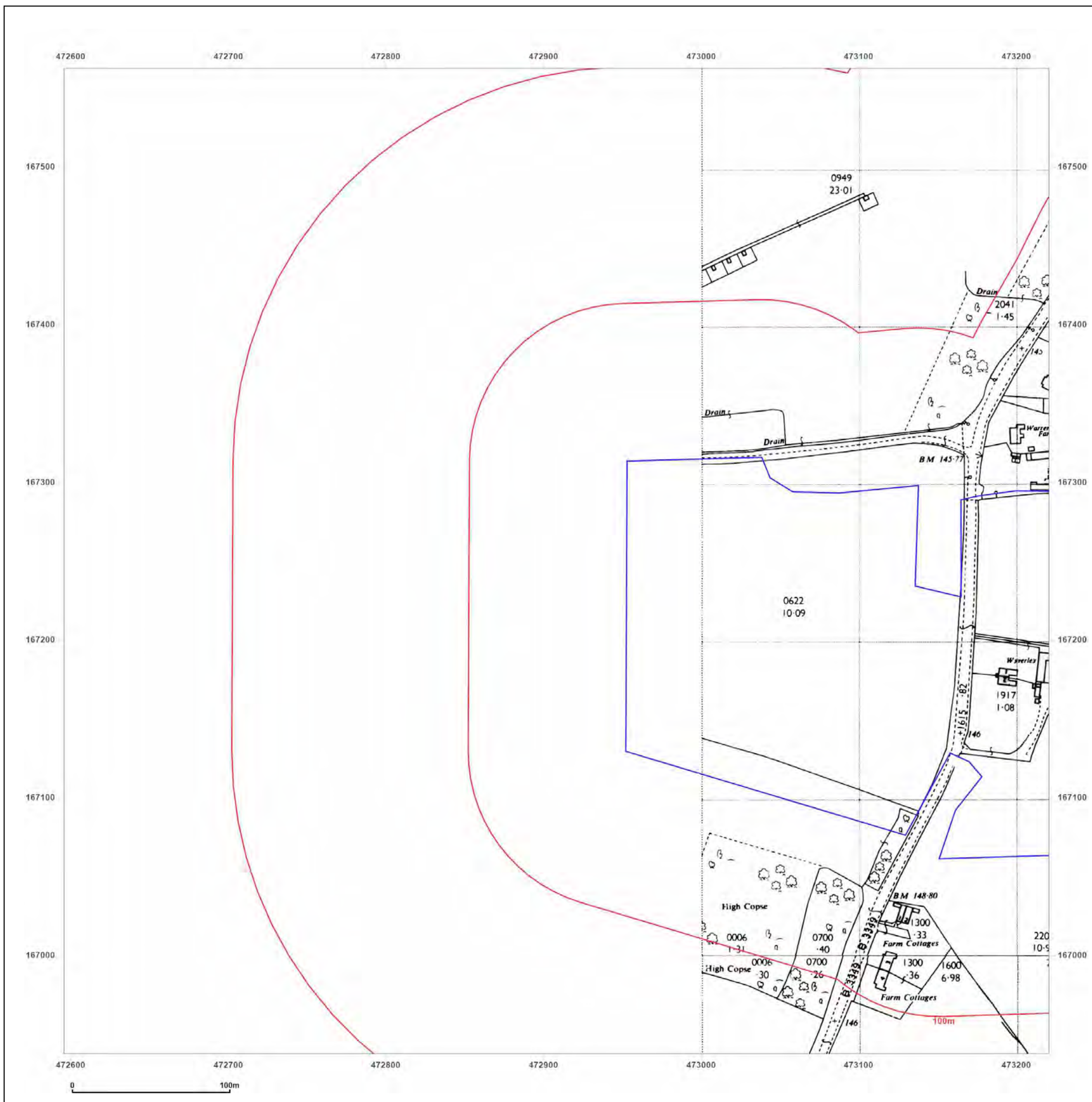


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1967
Revised 1967
Edition N/A
Copyright 1968
Levelled 1959

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1968
Levelled 1959

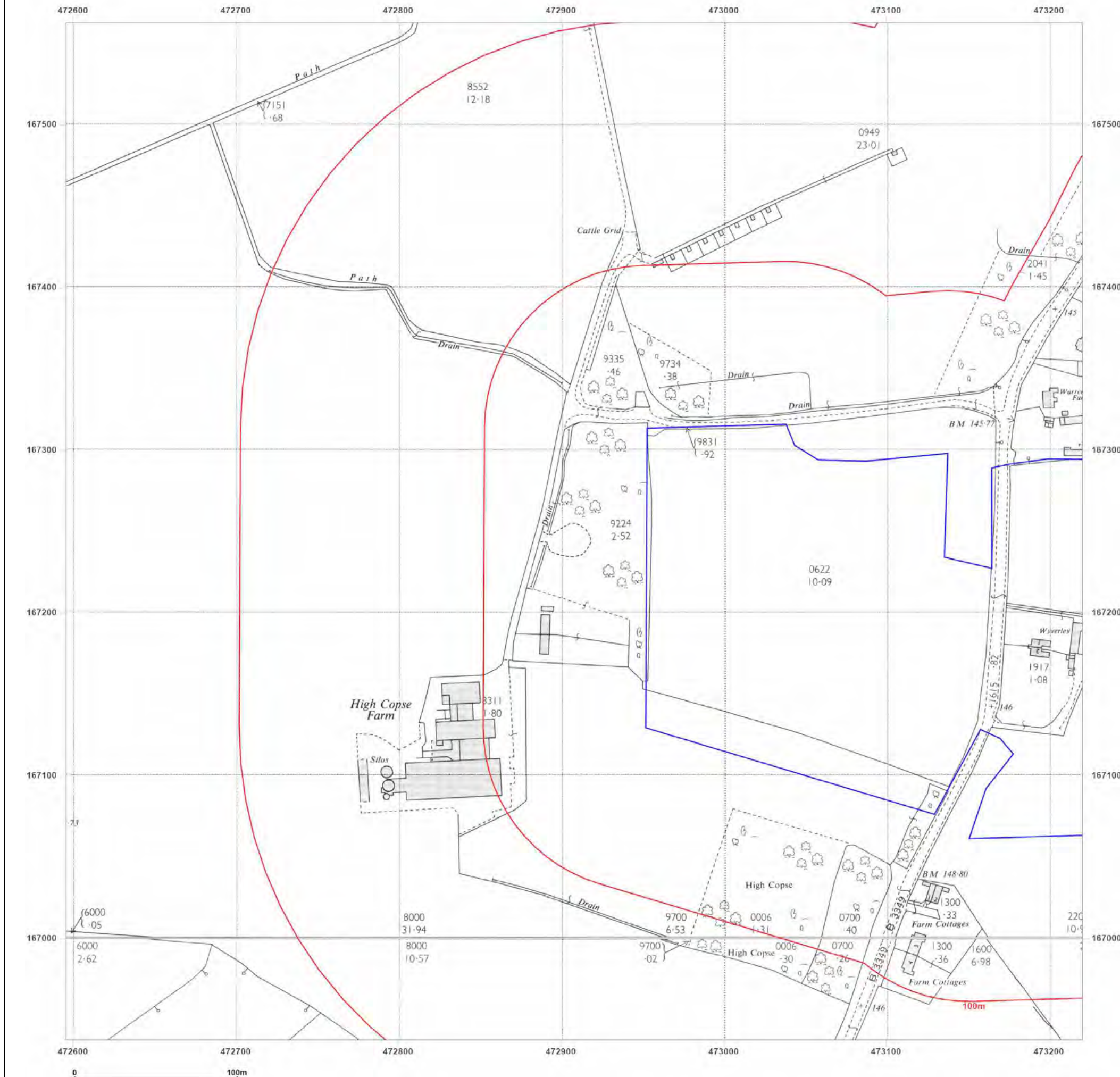


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: National Grid

Map date: 1974

Scale: 1:2,500

Printed at: 1:2,500



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

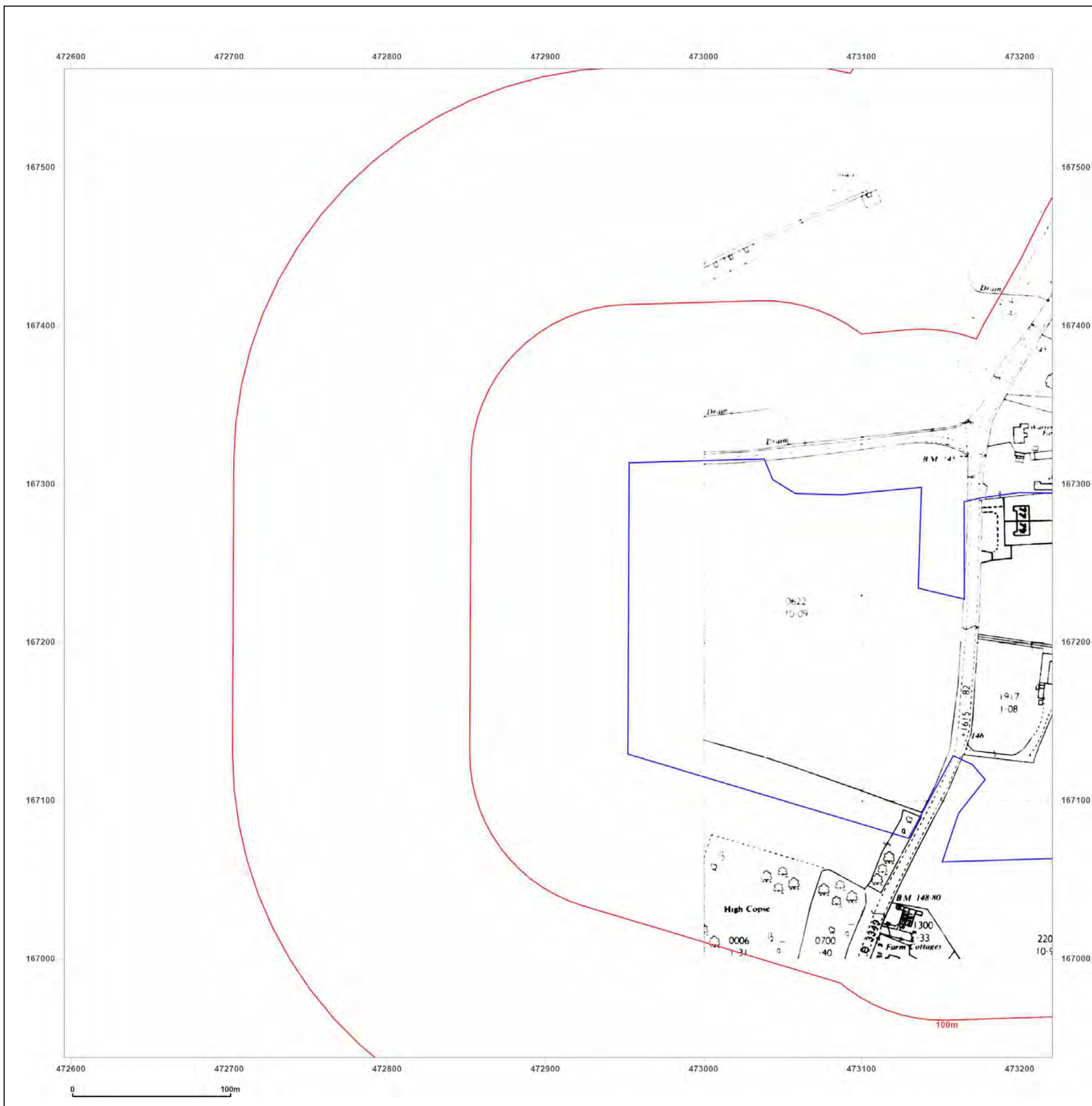


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: National Grid

Map date: 1983

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1973
Revised 1983
Edition N/A
Copyright 1983
Levelled 1973

Surveyed 1959
Revised 1983
Edition N/A
Copyright 1983
Levelled 1959

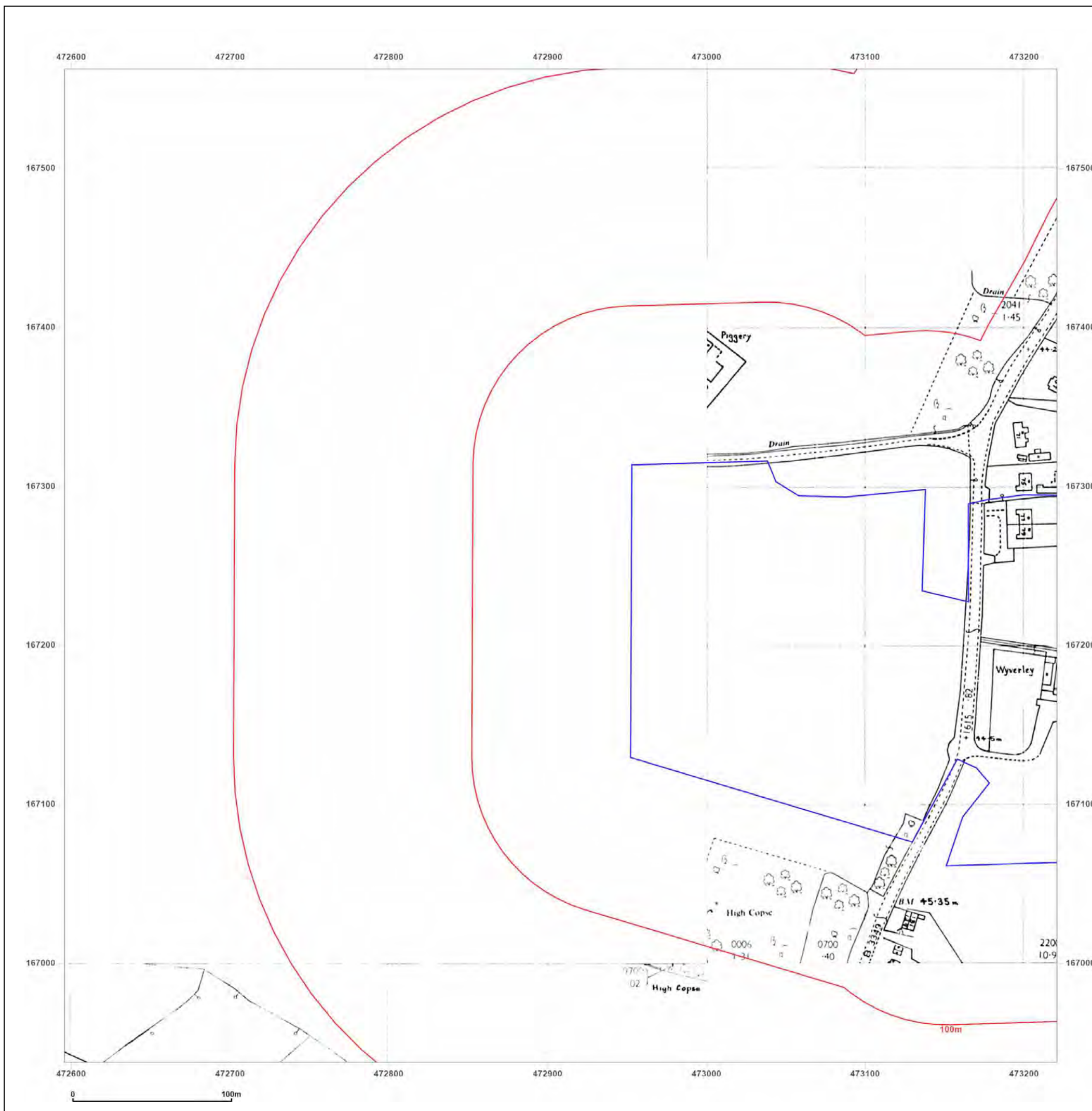


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: National Grid

Map date: 1989-1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1959
Revised 1990
Edition N/A
Copyright 1990
Levelled 1959

Surveyed 1994
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1959
Revised 1989
Edition N/A
Copyright 1989
Levelled 1959

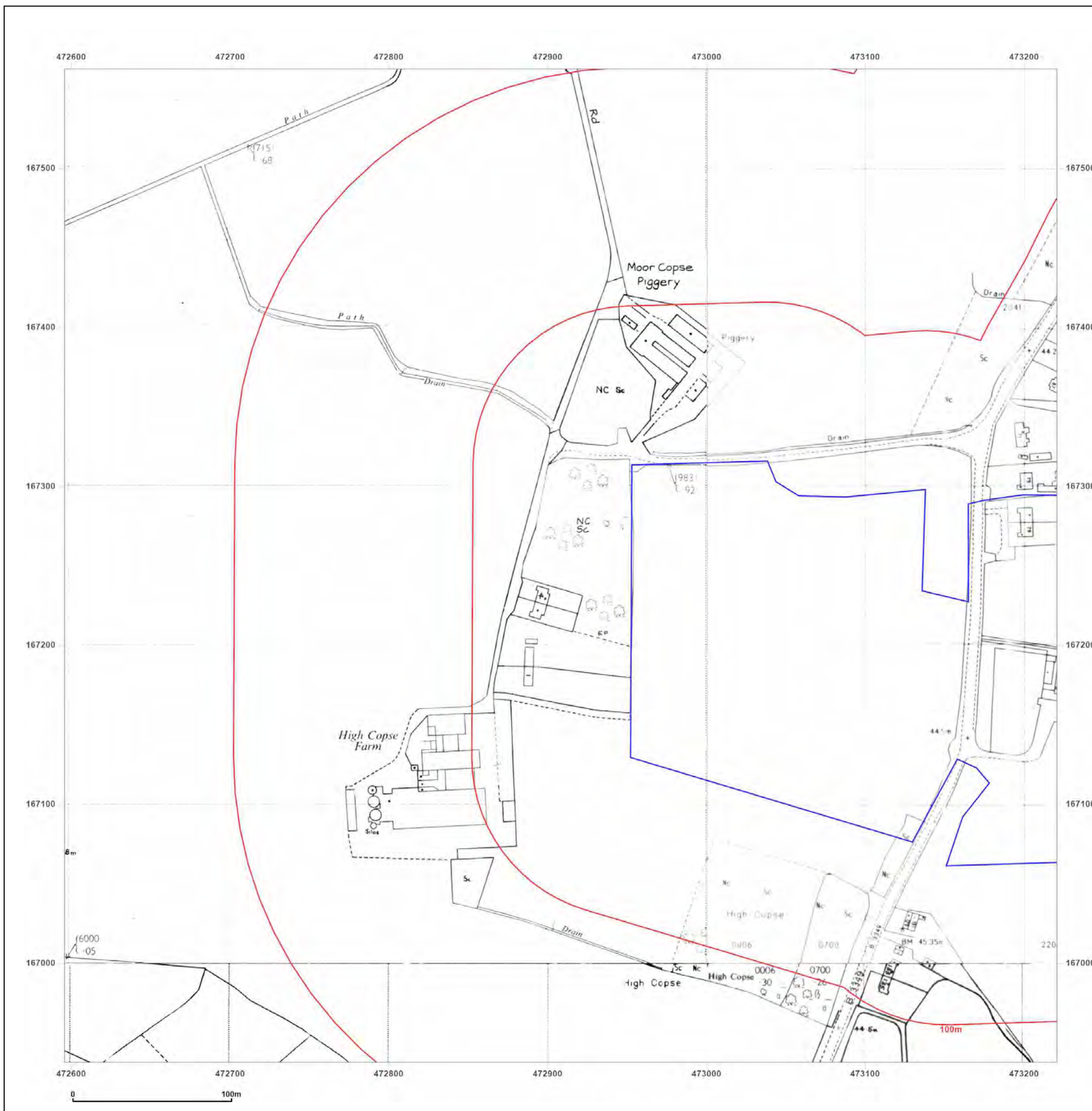


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_1_1
Grid Ref: 472908, 167250

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1994
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

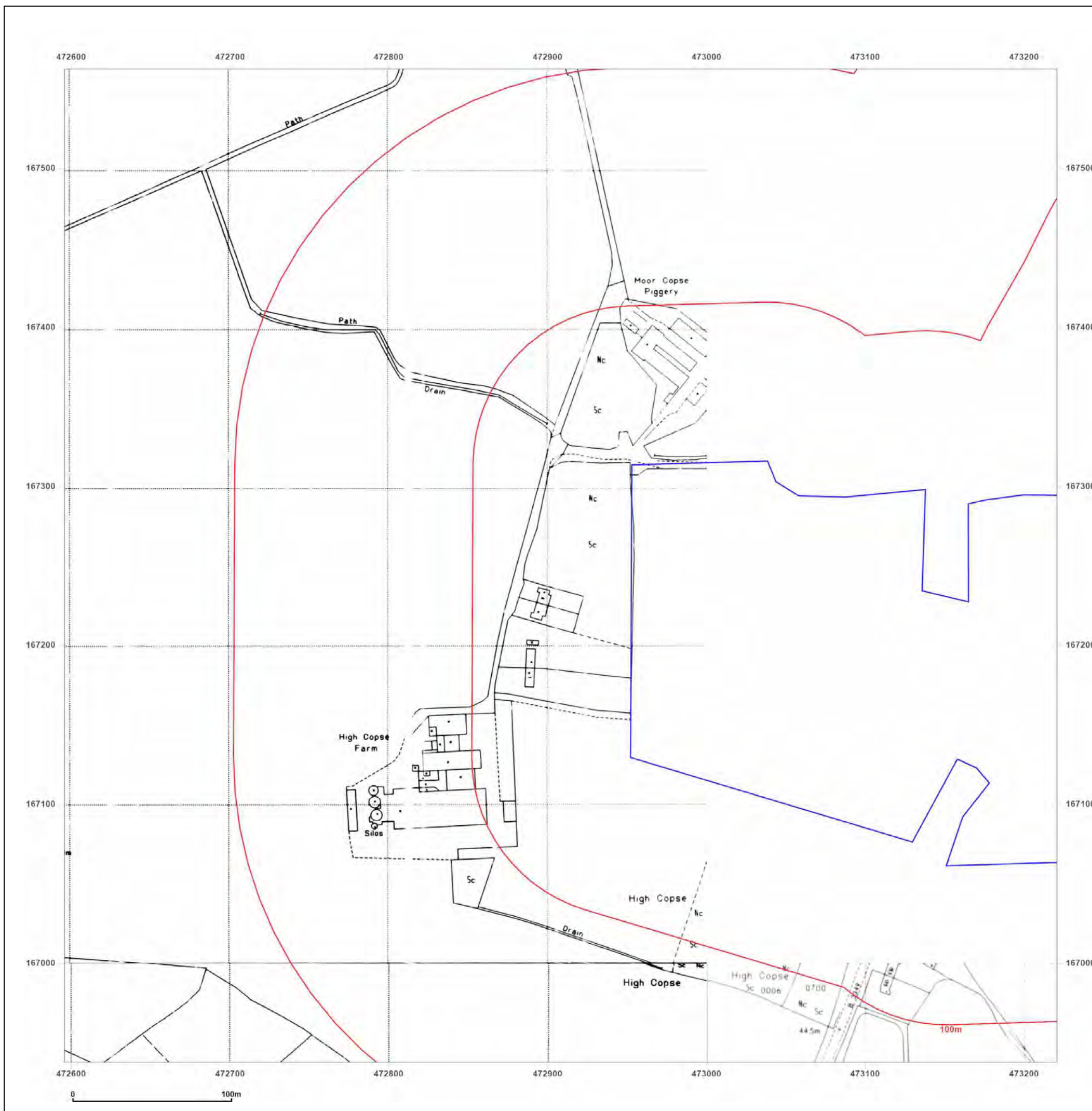


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: County Series

Map date: 1872

Scale: 1:2,500

Printed at: 1:2,500



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

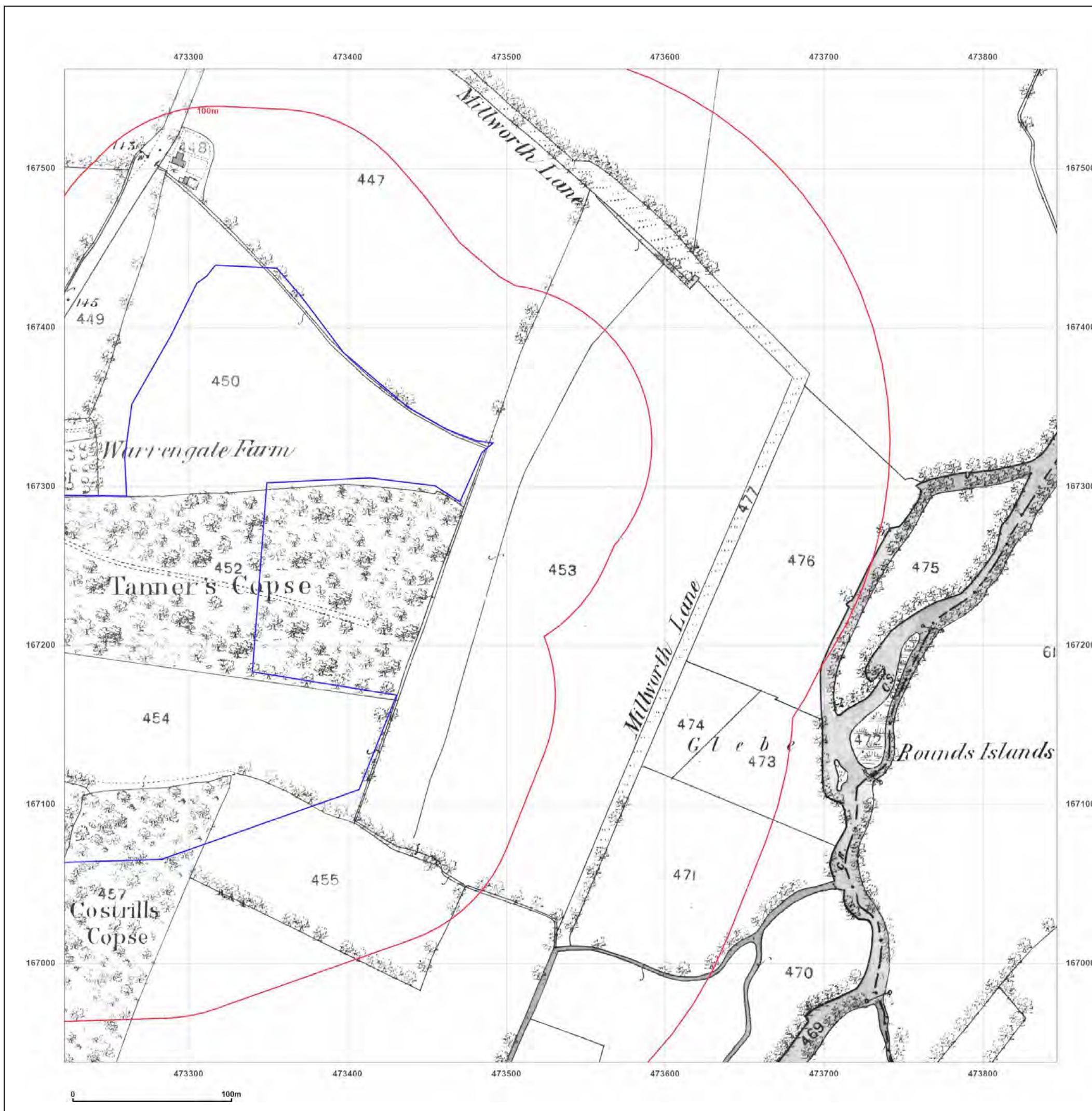


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

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

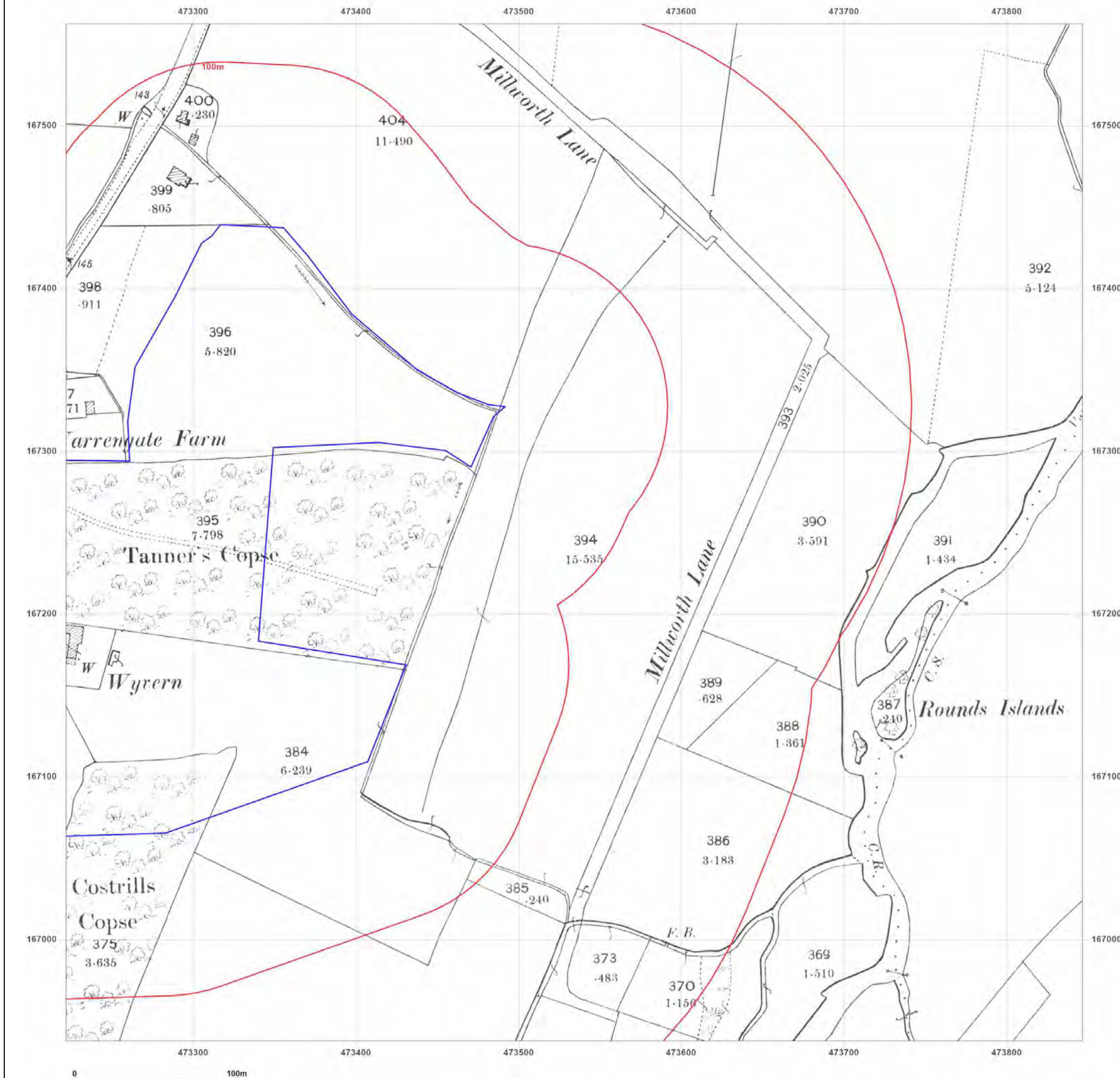


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

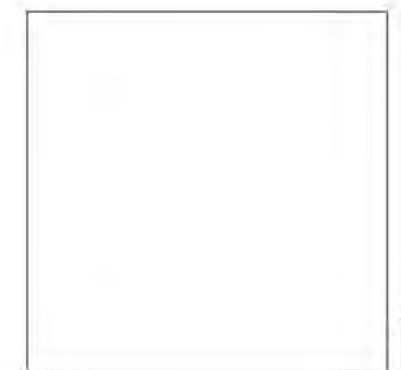
Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: County Series

Map date: 1911

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1911
Revised 1911
Edition N/A
Copyright N/A
Levelled N/A

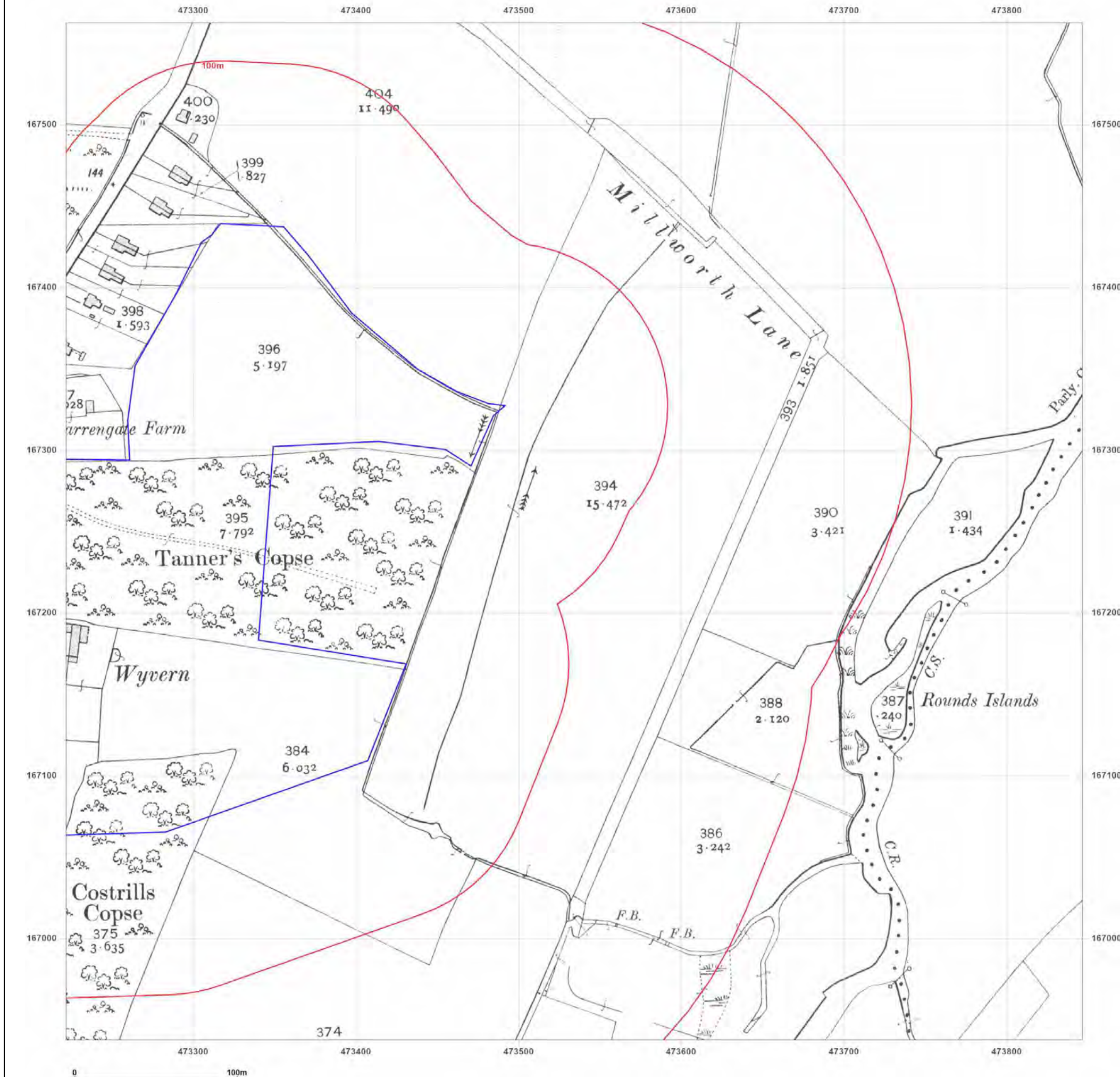


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



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

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

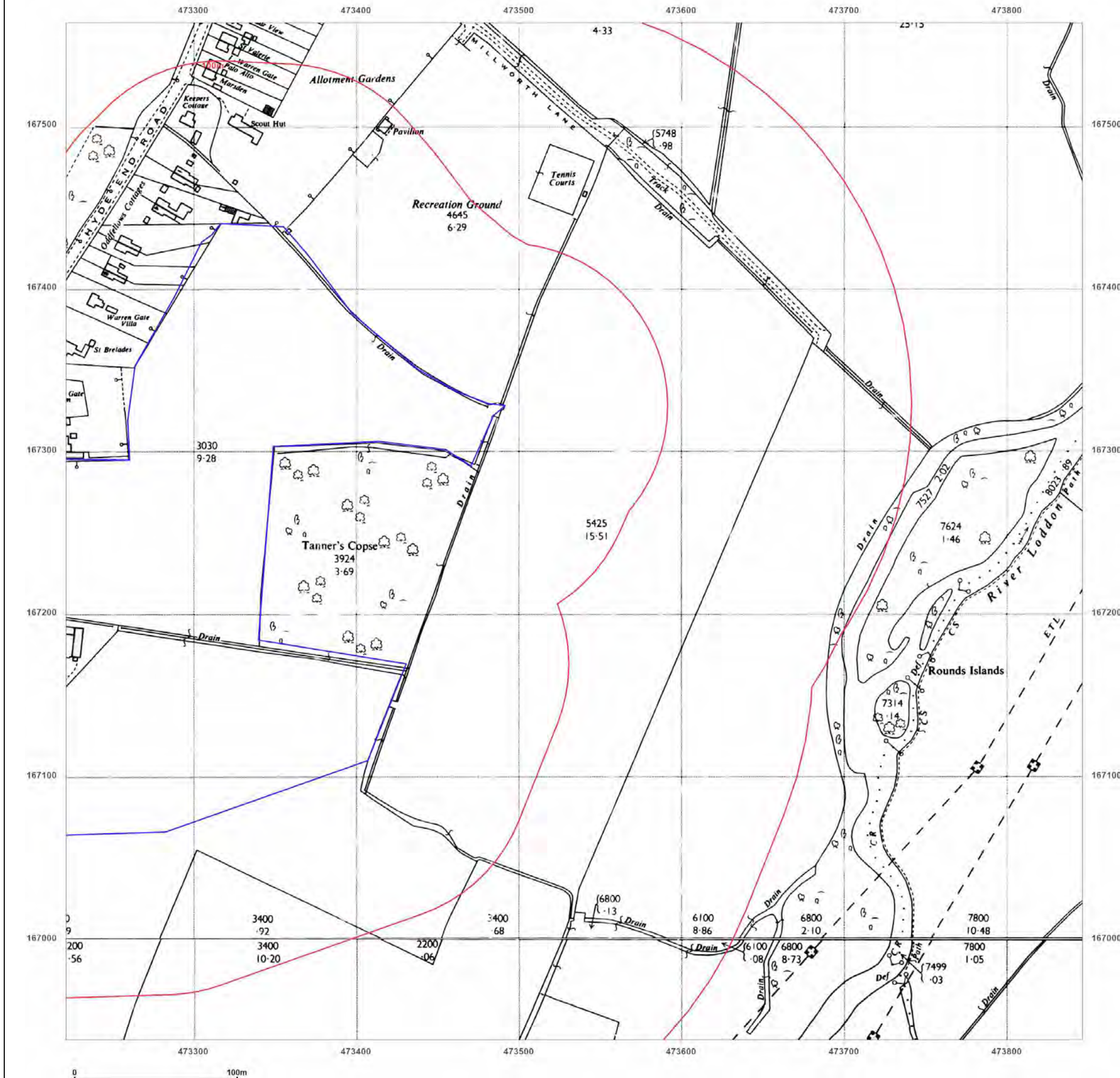


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1967
Revised 1967
Edition N/A
Copyright 1968
Levelled 1959

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1968
Levelled 1959

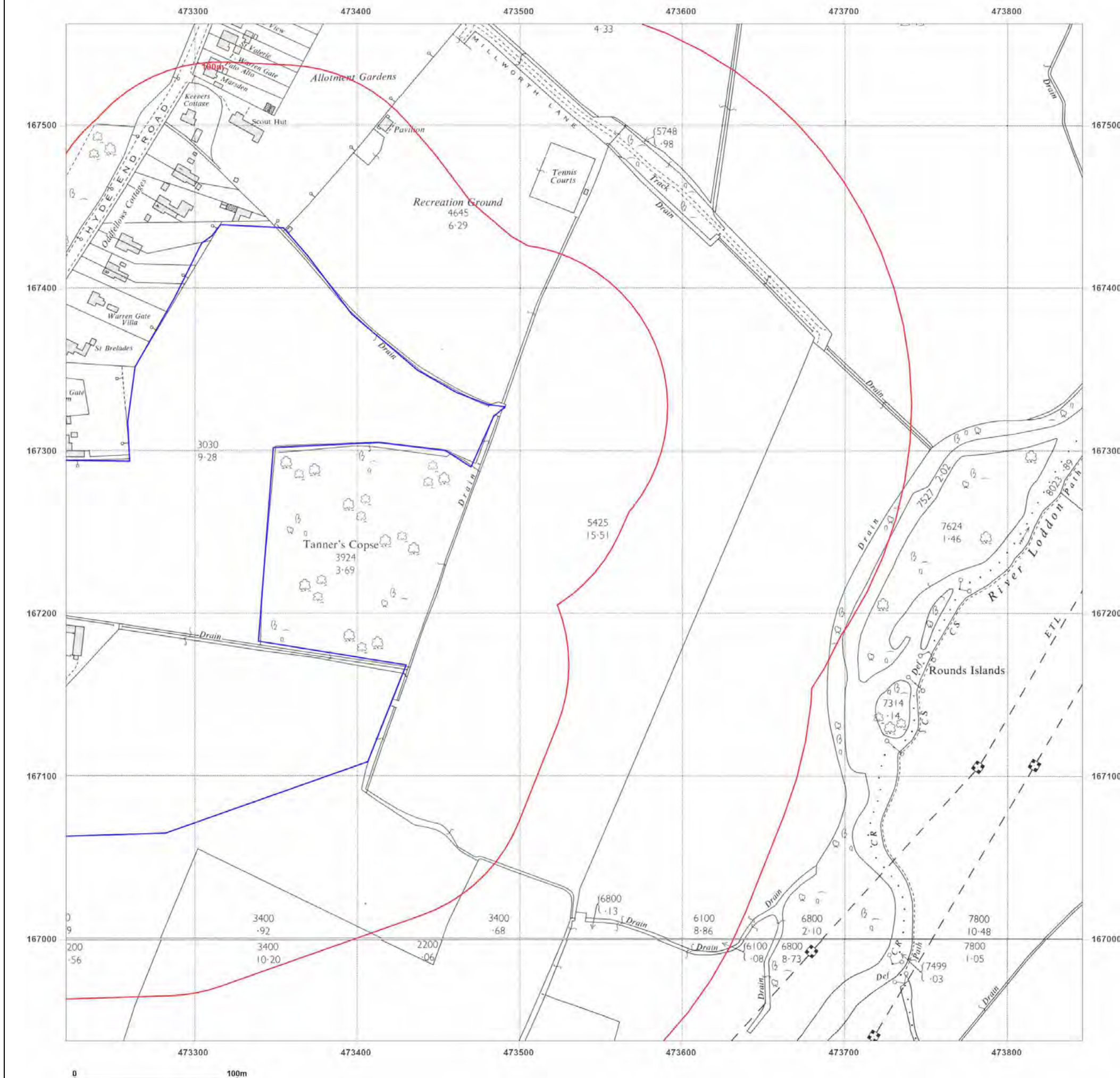


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: National Grid

Map date: 1974

Scale: 1:2,500

Printed at: 1:2,500



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

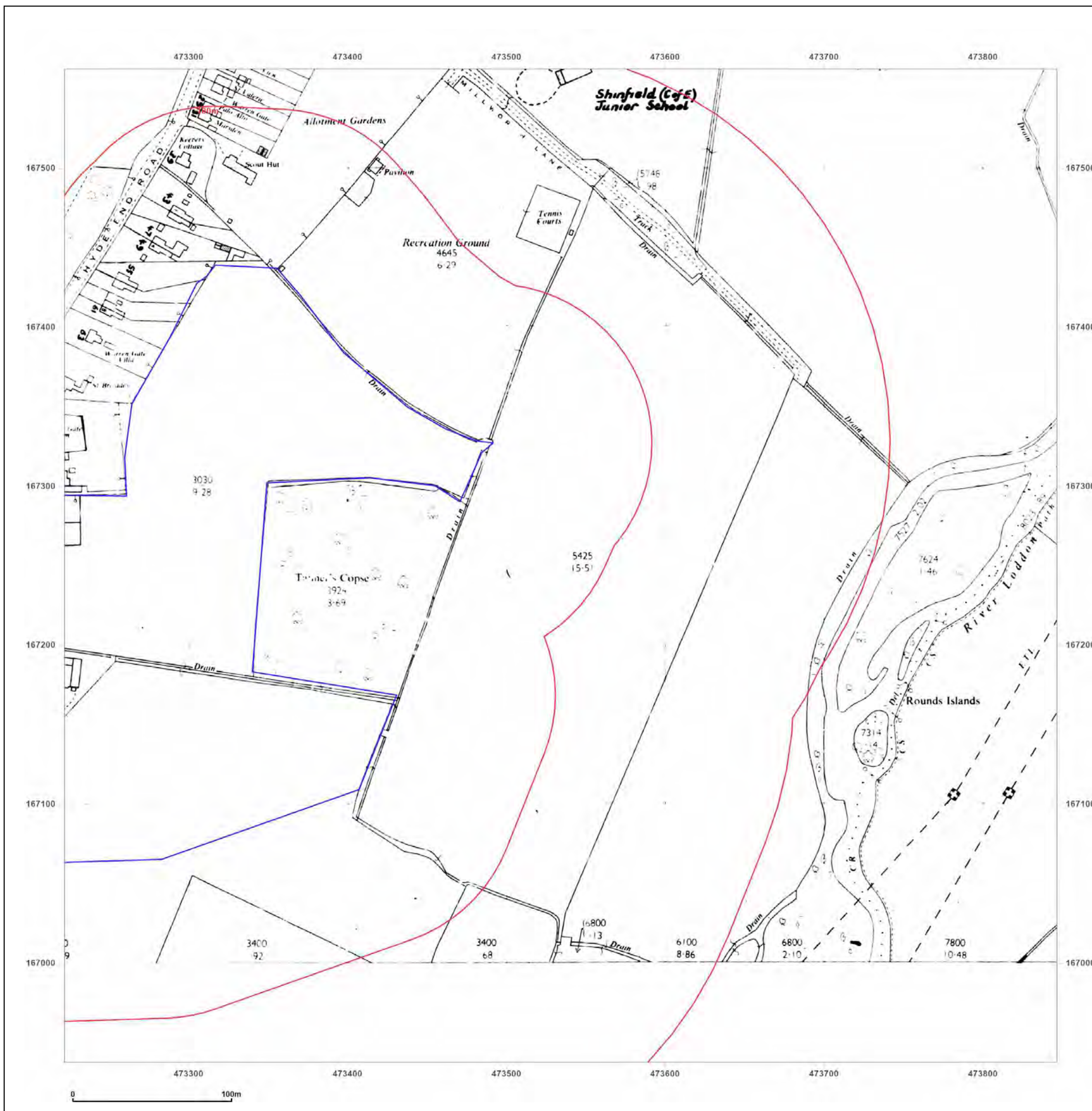


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: National Grid

Map date: 1983

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1973
Revised 1983
Edition N/A
Copyright 1983
Levelled 1973

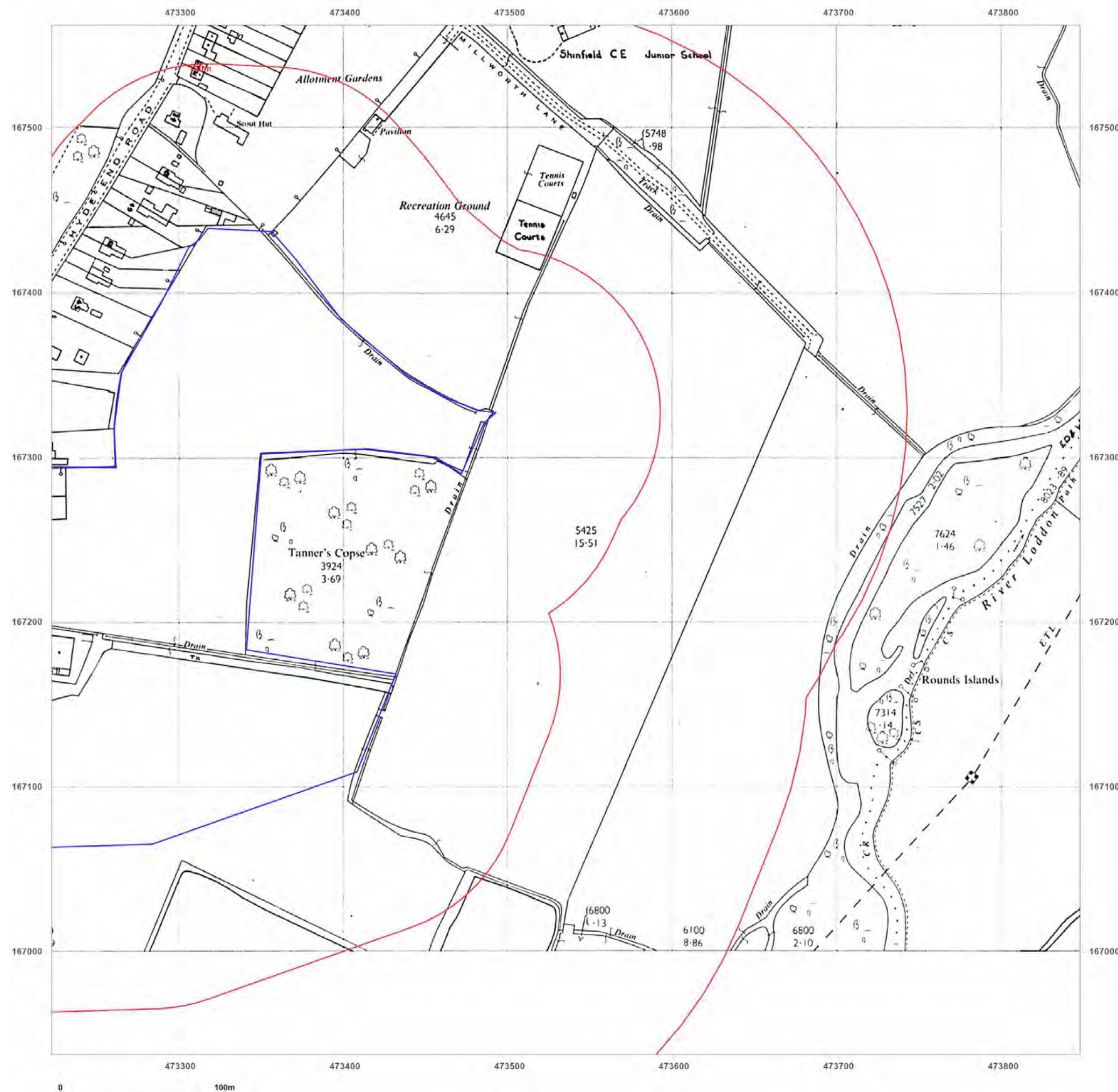


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ_LS_2_1
Grid Ref: 473534, 167250

Map Name: National Grid

Map date: 1989-1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1994
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1959
Revised 1989
Edition N/A
Copyright 1989
Levelled 1959

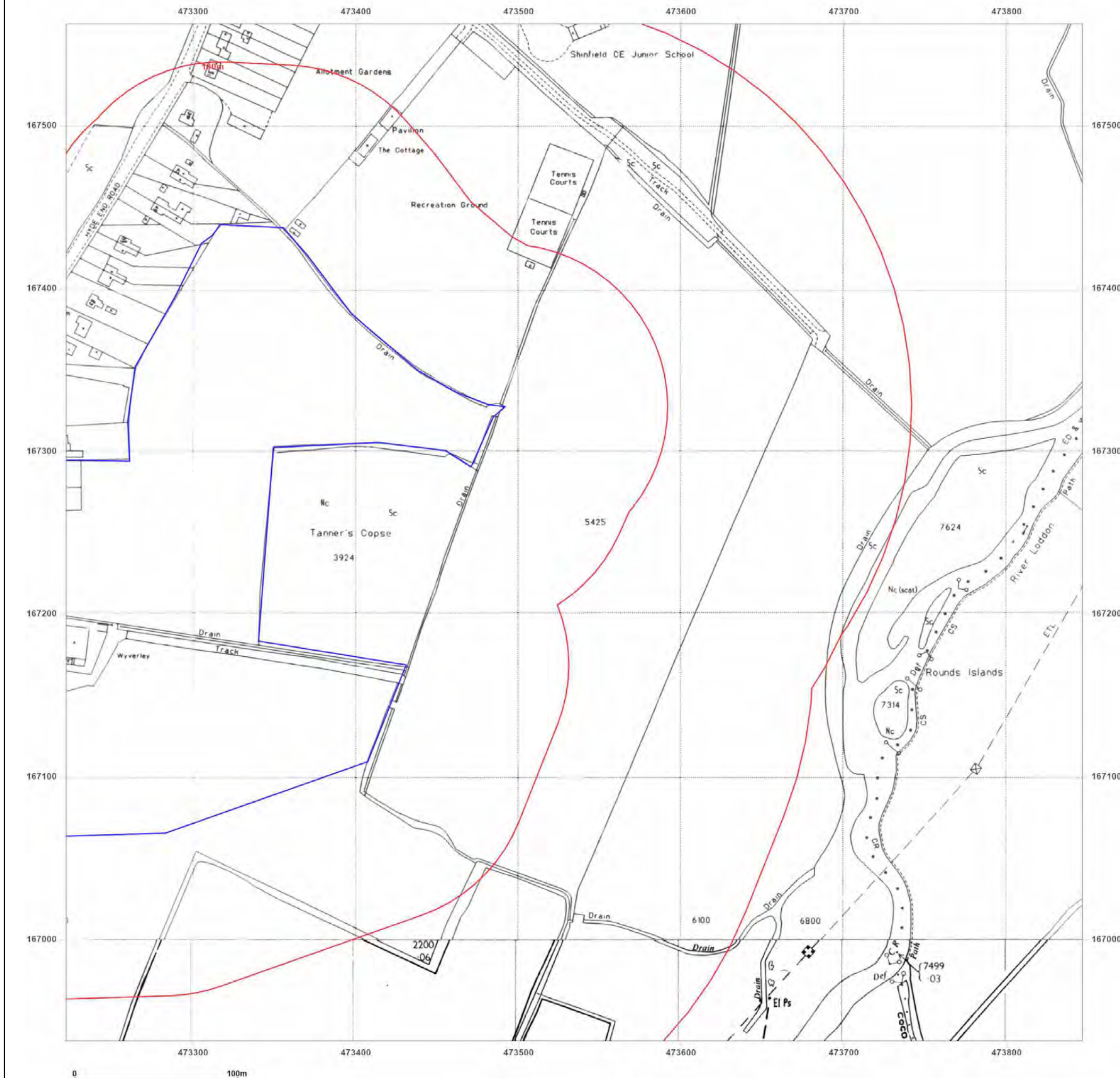


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: County Series

Map date: 1877

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised N/A
Edition 1877
Copyright N/A
Levelled 1874

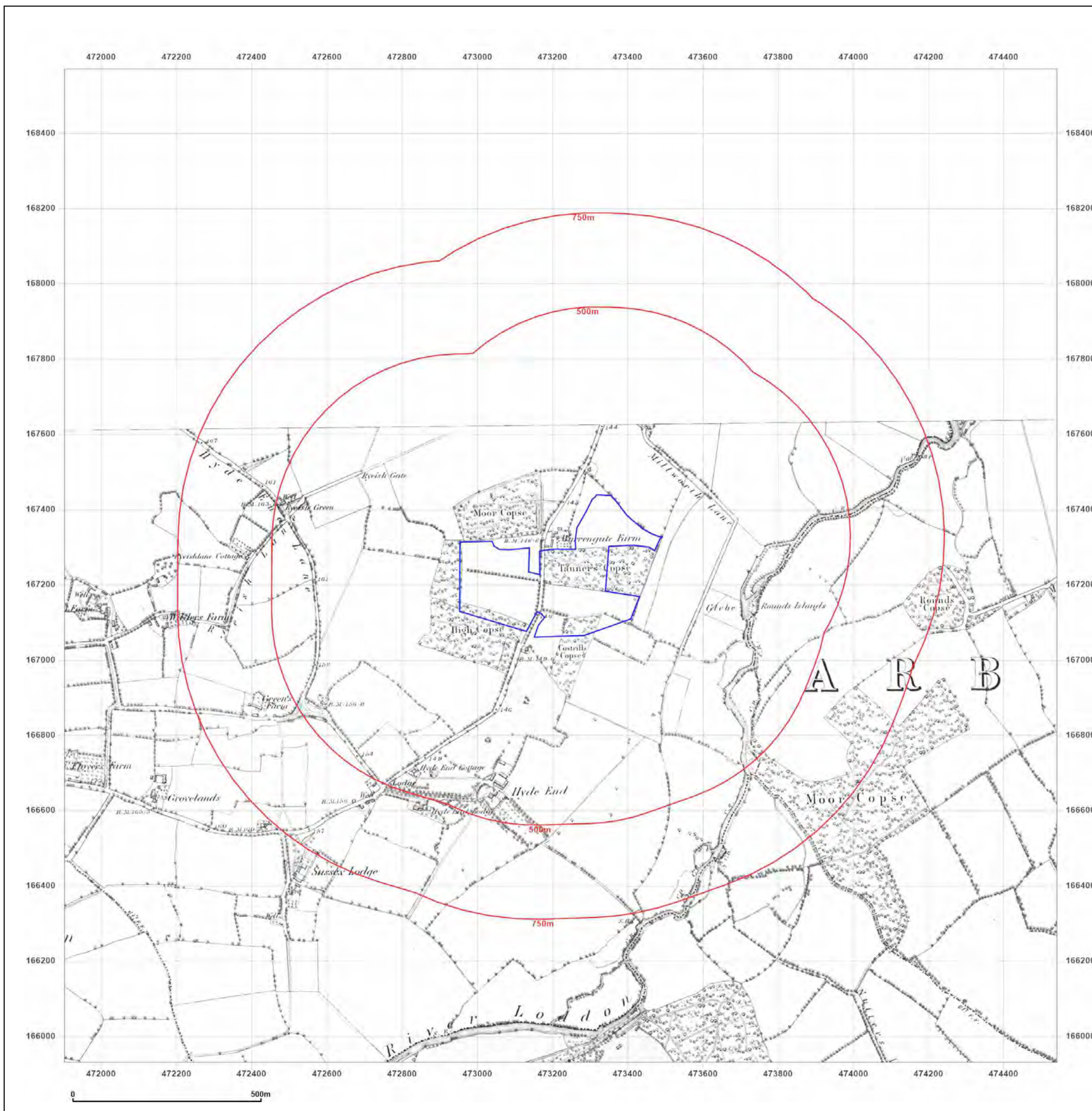


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: County Series

Map date: 1898-1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1871
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A

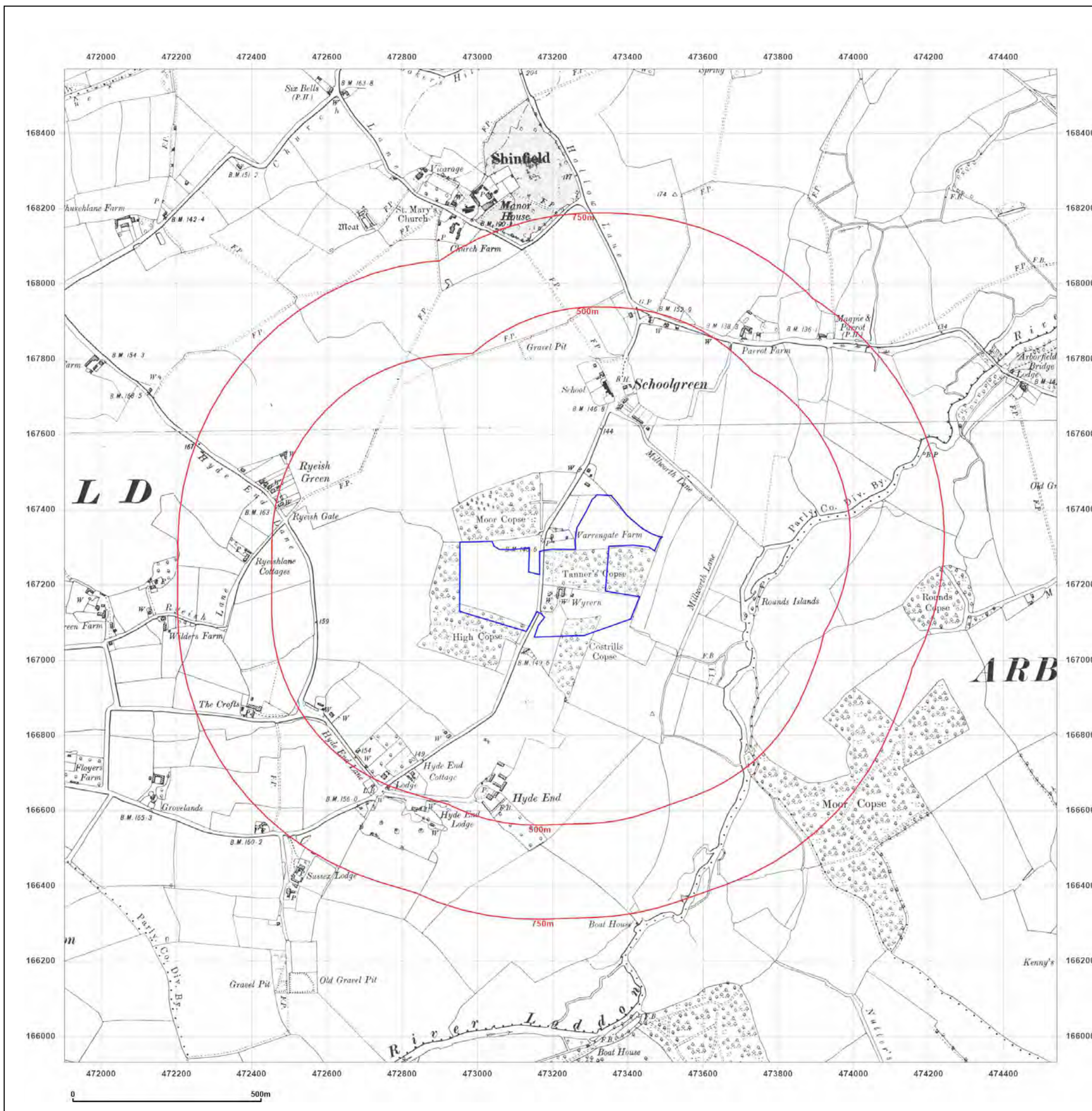


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: County Series

Map date: 1909-1913

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
Revised 1913
Edition 1913
Copyright N/A
Levelled N/A

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

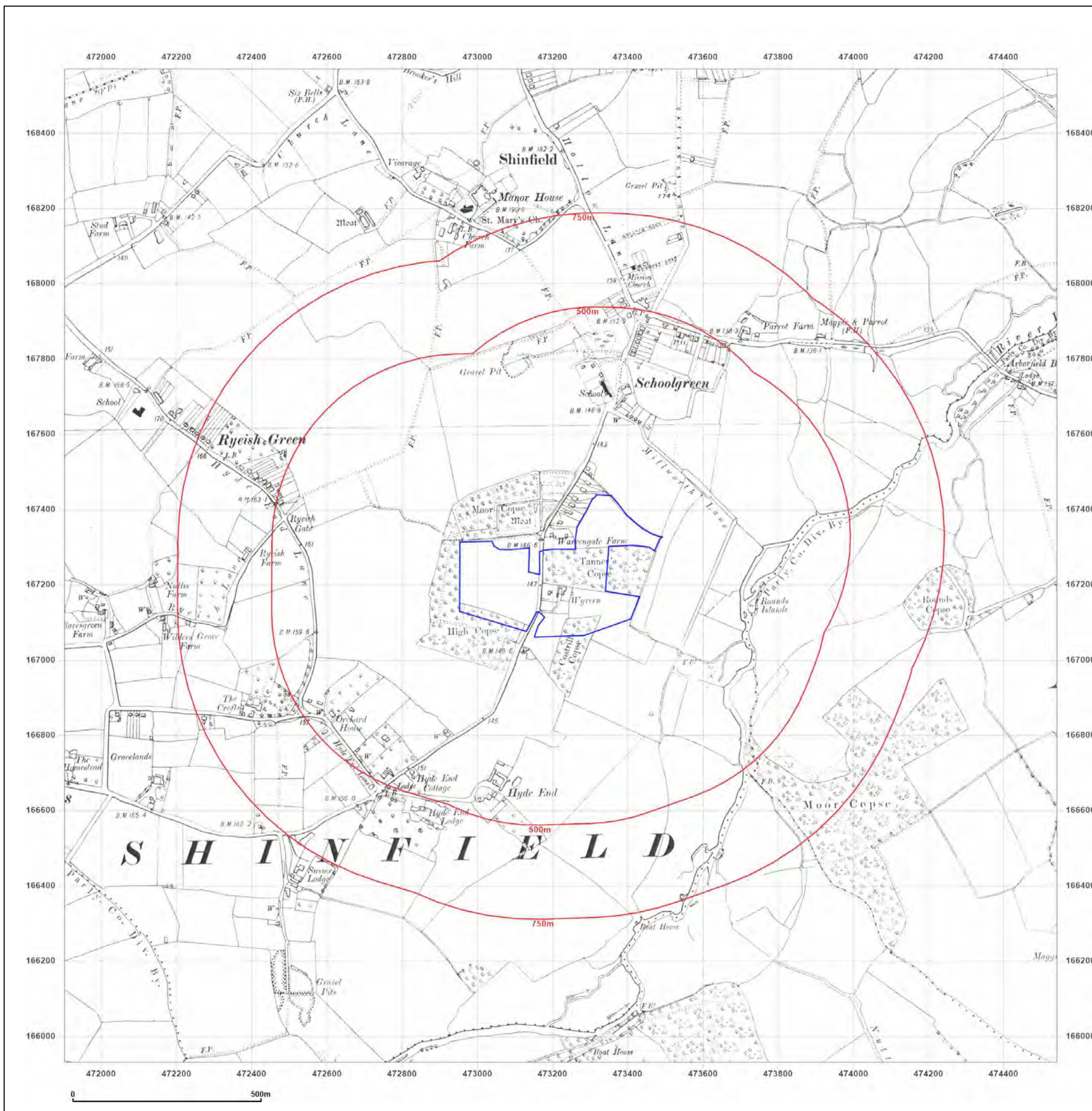


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: County Series

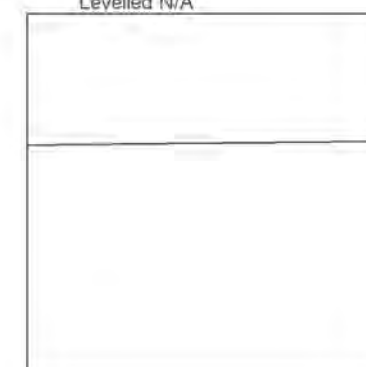
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1876
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

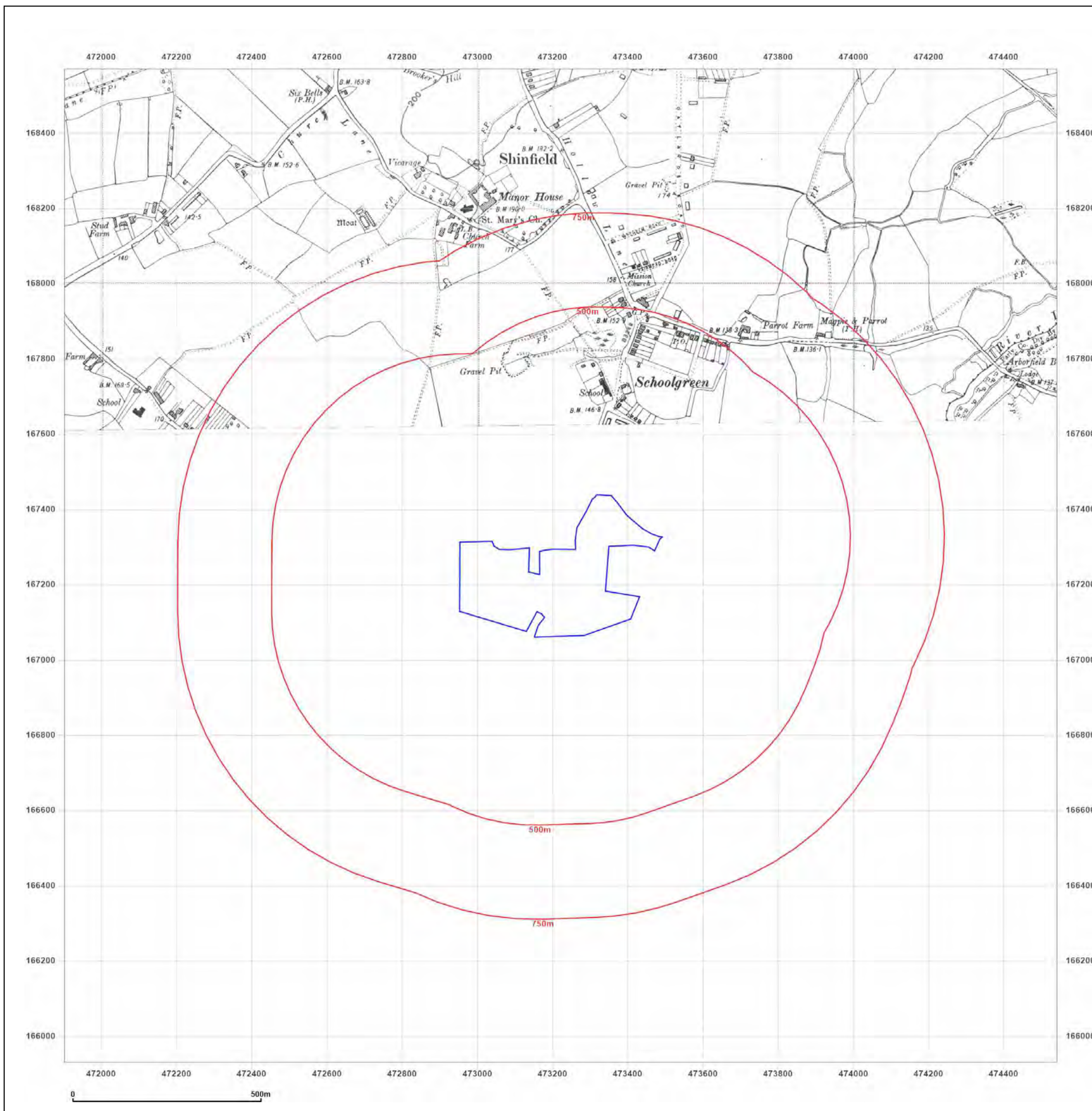


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: Provisional

Map date: 1961

Scale: 1:10,560

Printed at: 1:10,560



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

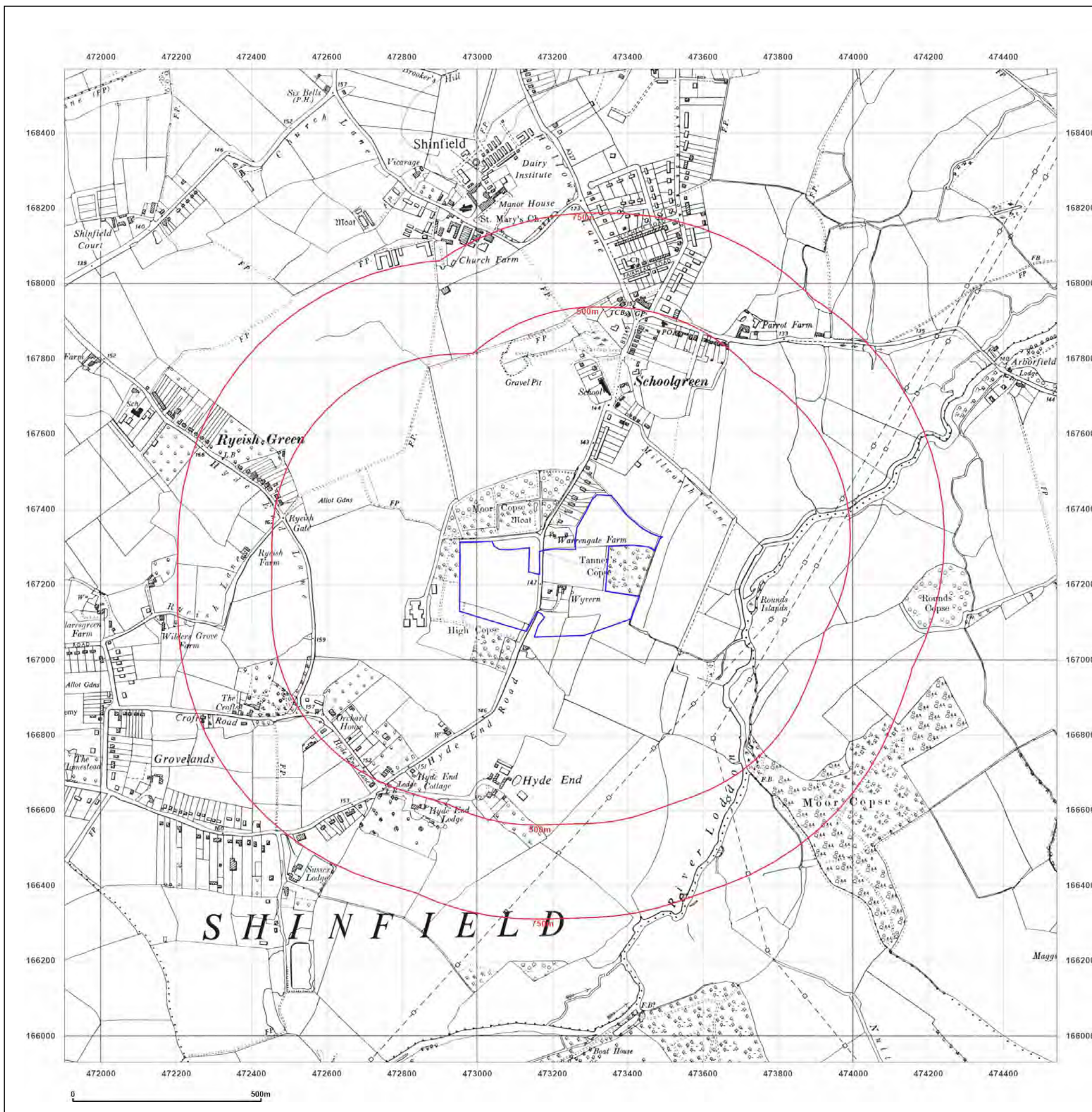


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: Provisional

Map date: 1961

Scale: 1:10,560

Printed at: 1:10,560



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

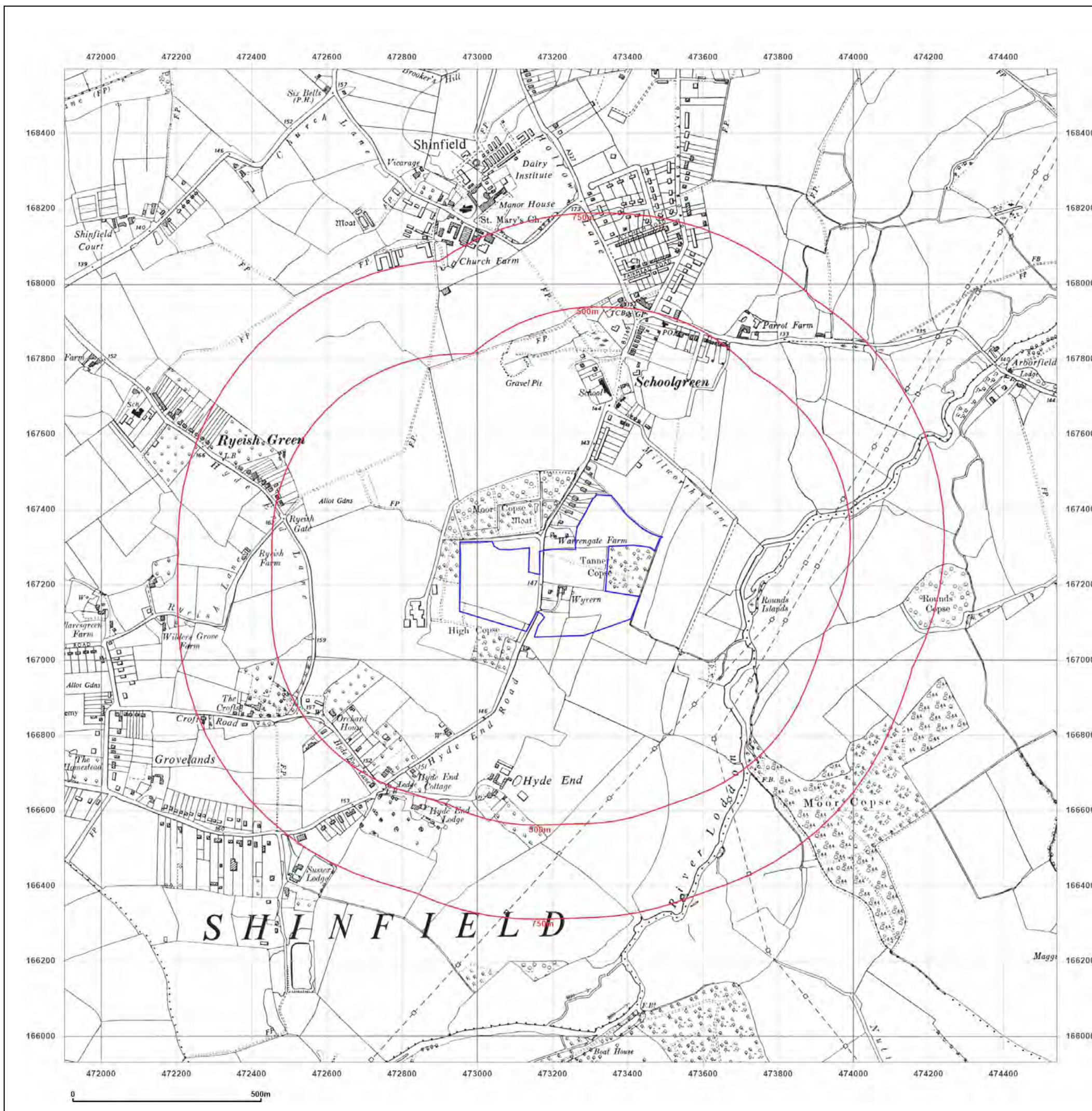


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 1969

Scale: 1:10,000

Printed at: 1:10,000



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

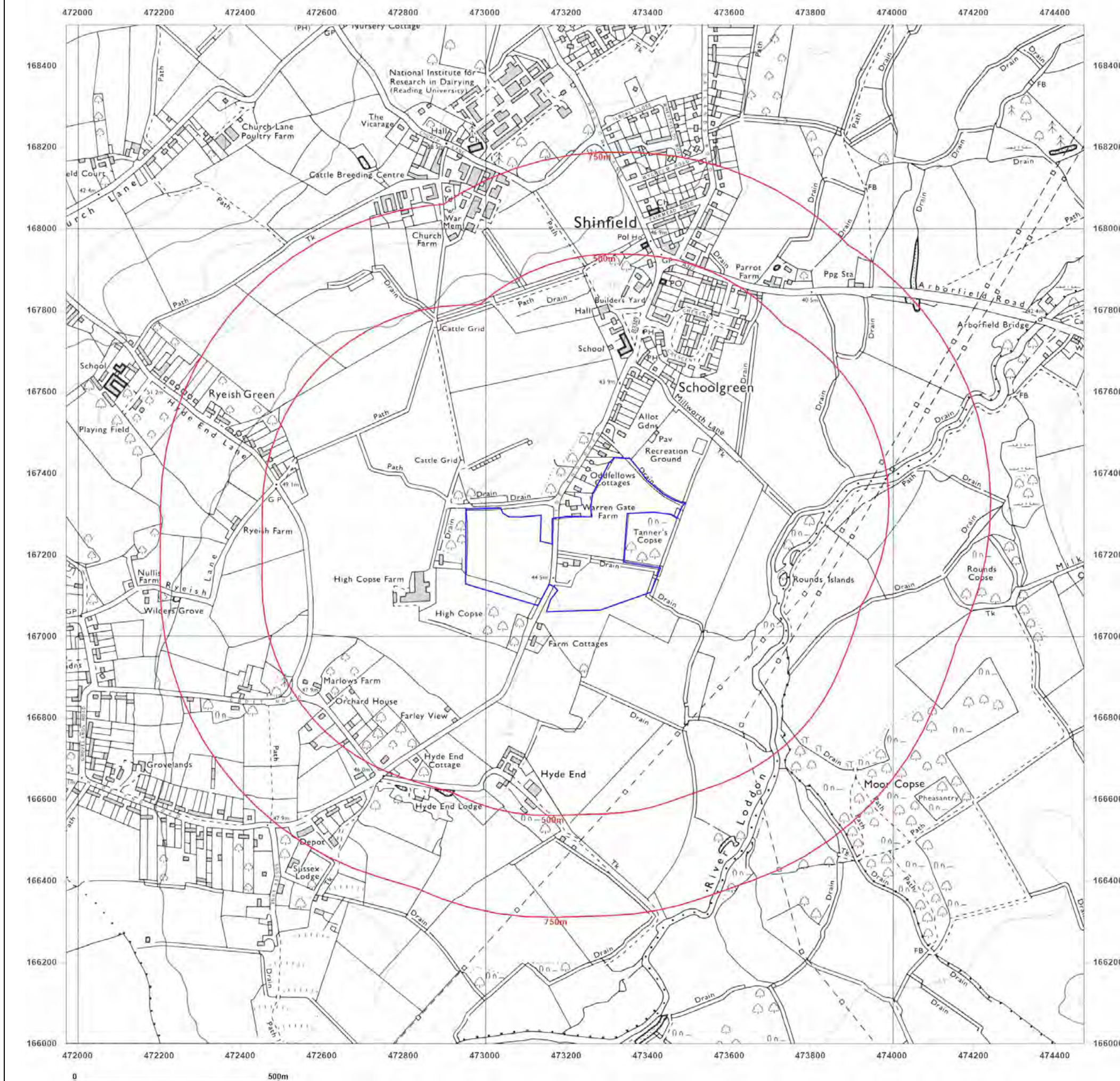


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 1976

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1976
Edition N/A
Copyright 1976
Levelled 1969

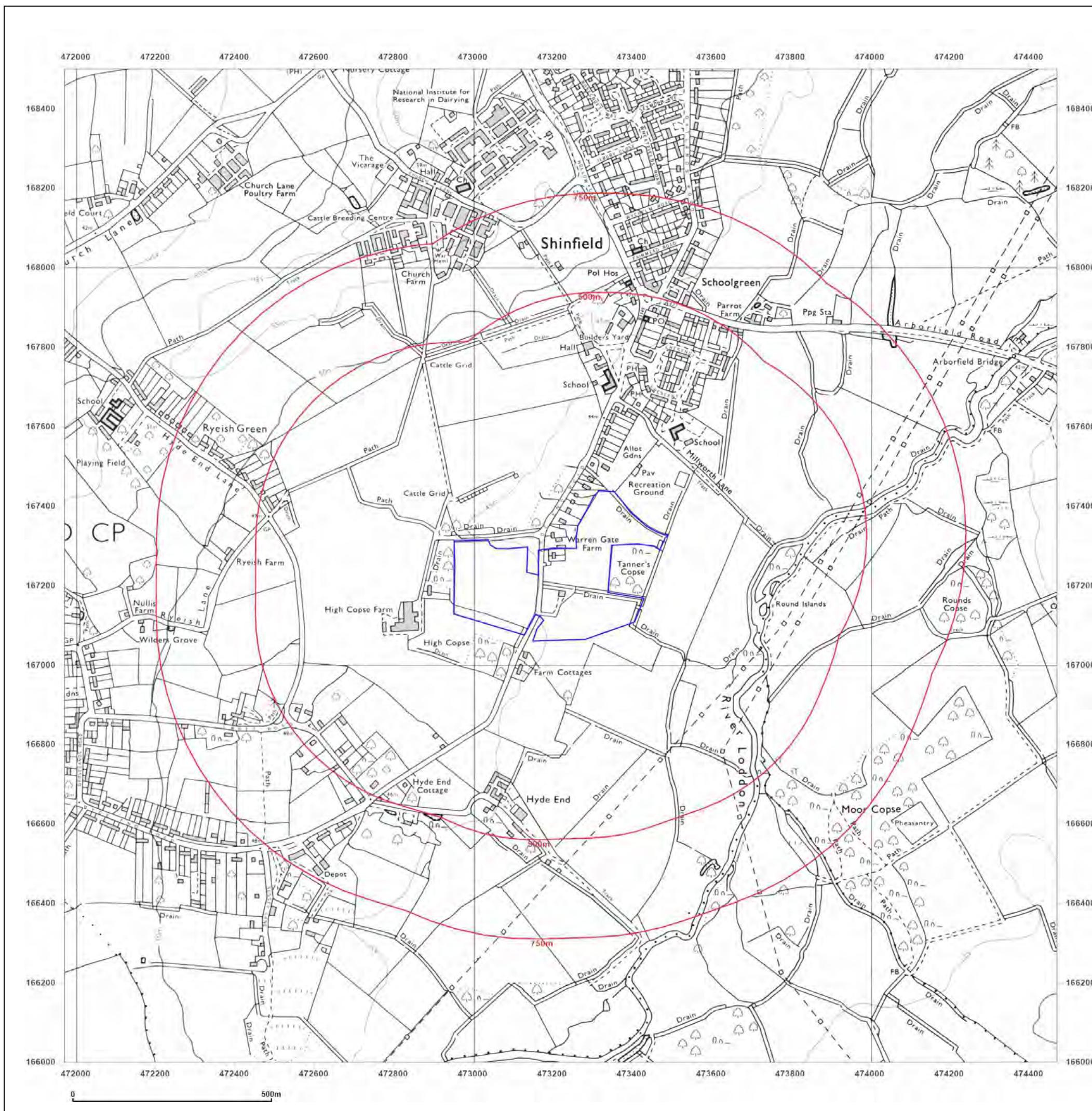


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: County Series

Map date: 1976

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1976
Revised 1898
Edition 1900
Copyright N/A
Levelled N/A

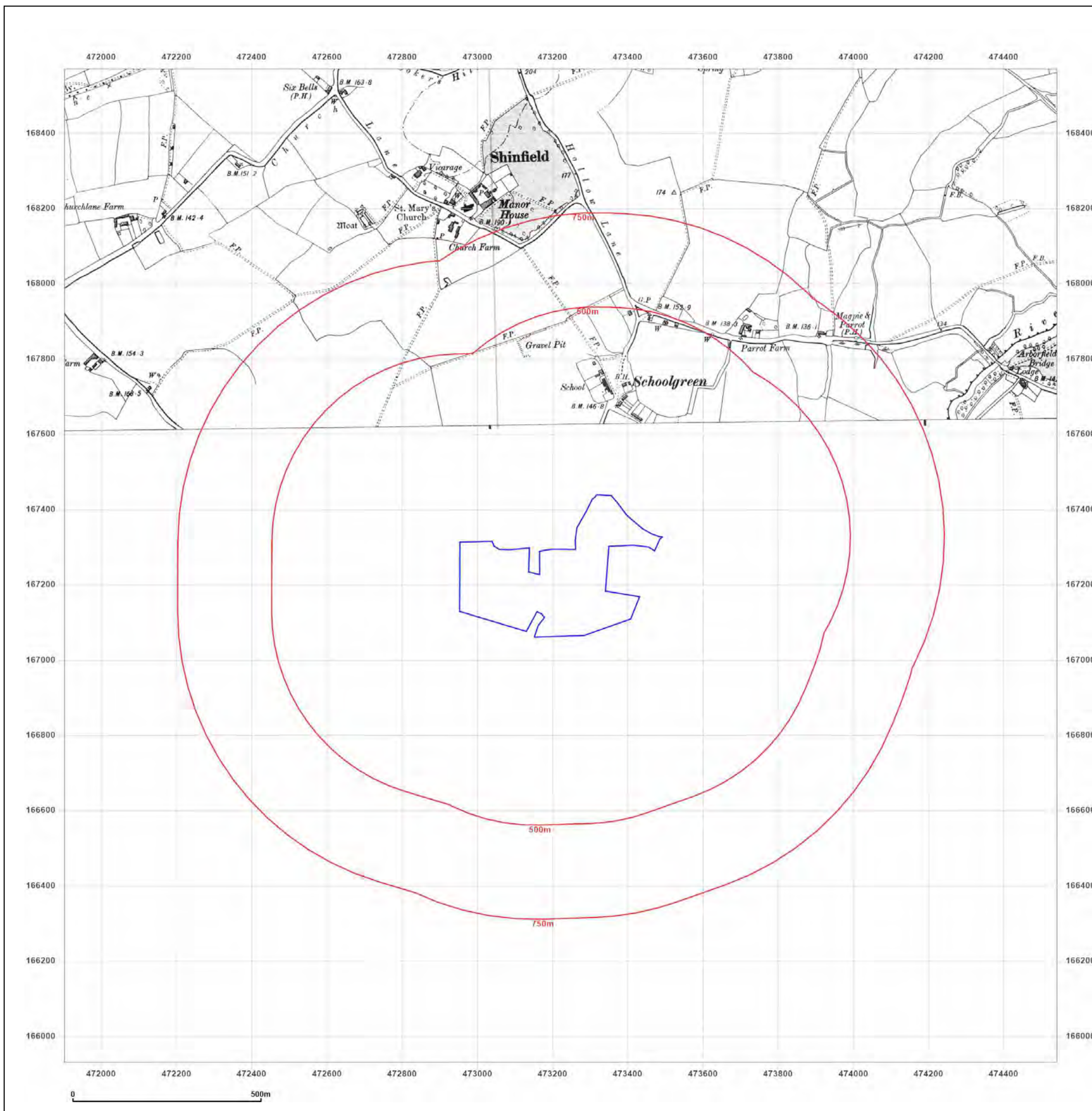


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 1983

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1982
Revised 1983
Edition N/A
Copyright N/A
Levelled N/A

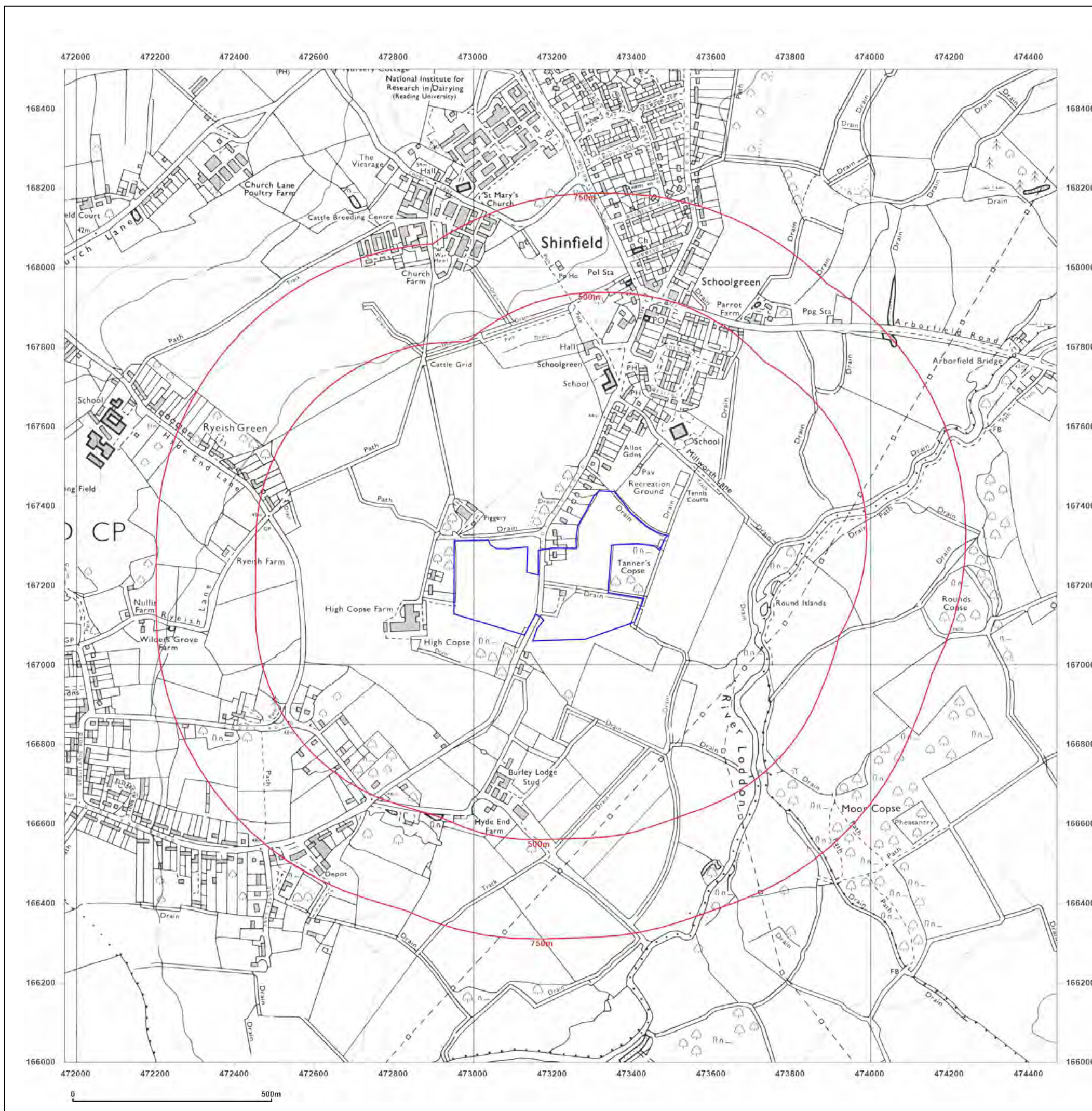


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1986
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

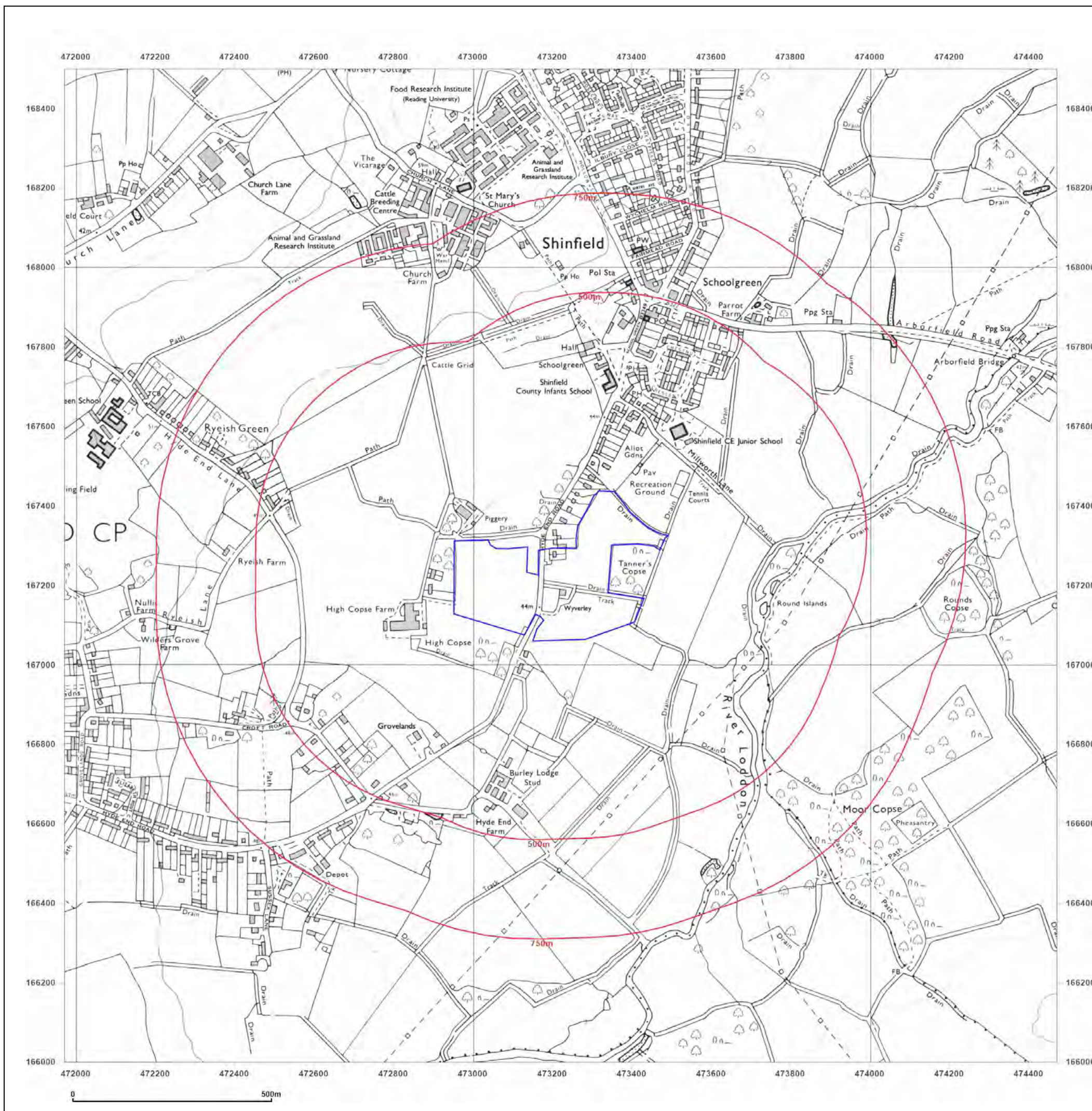


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

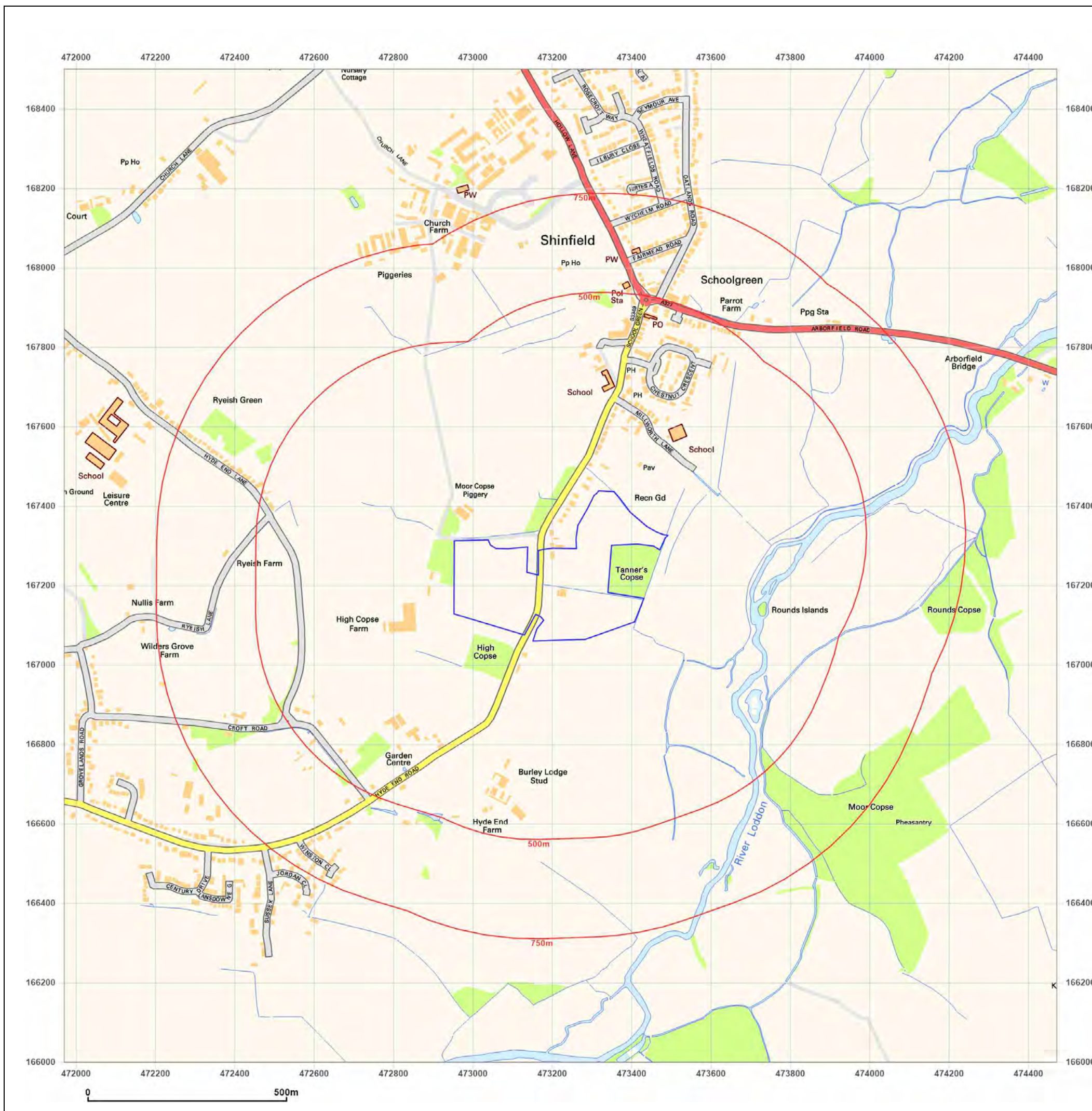


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

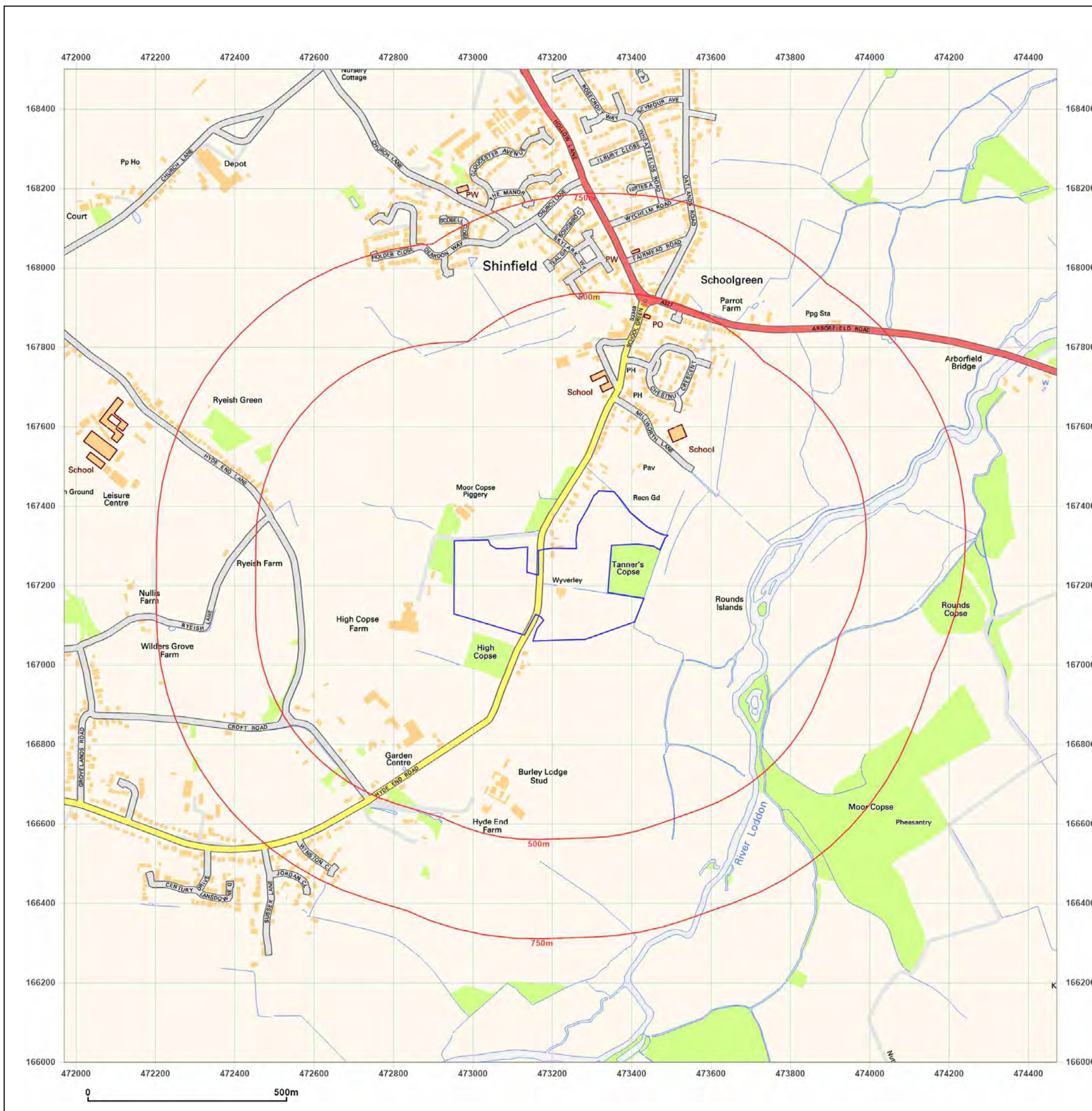


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

HYDE END ROAD, SHINFIELD,
WOKINGHAM, RG2 9EP

Client Ref: GE22615 - PO7581
Report Ref: GS-VK9-99F-BA3-OKJ
Grid Ref: 473221, 167250

Map Name: National Grid

Map date: 2024

Scale: 1:10,000

Printed at: 1:10,000

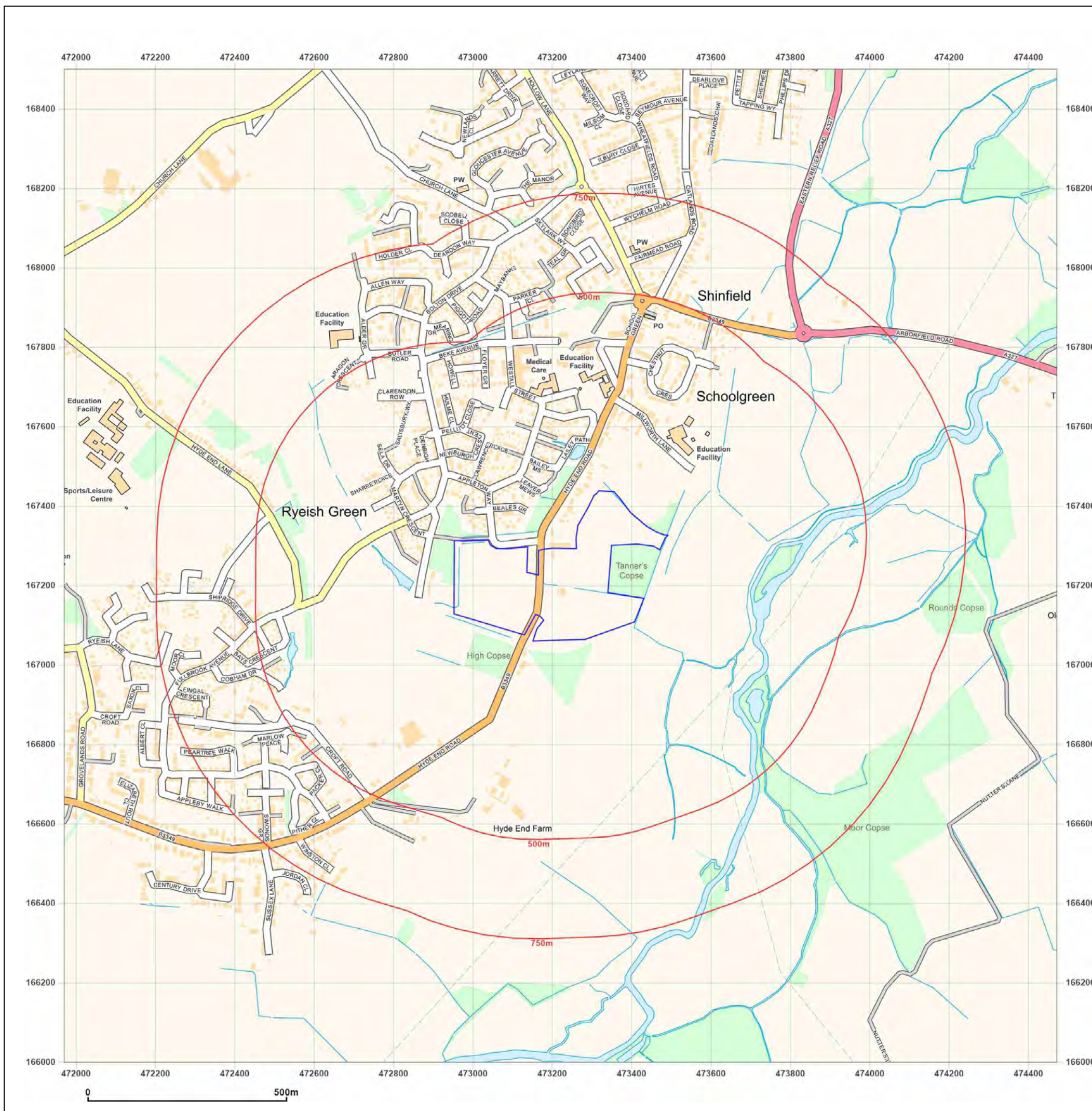


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 04 July 2024

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Borehole Log								RUK-TP7	
Project Name: Shinfield Eastern Relief Road Project No: D4071-14									
Borehole ID: RUK-TP7									
Location: Shinfield Eastern Relief Road Co-ords (British National Grid): 474033.88 - 167807.55 Level: 39.66									
Hole Type: TP Logged By: Dates: -									
Client: Hochtief (UK) Construction Ltd. Contractor: Project Engineer: Ramboll									
Plant Used: SPT Hammer Serial No:									
Well	Water	Samples		Result	Depth (m)	Level (m)	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.25 - 1.2	B		0.25	39.41		TOPSOIL	0.5
		1.0 - 1.2	D					Soft mottled orangish grey sandy slightly gravelly CLAY Gravel is subangular to subrounded fine to medium of flint Sand is fine to coarse ALLUVIUM	1.0
		1.2 - 1.7	B		1.20	38.46			1.5
		1.3	D						
		1.7 - 2.0	B		1.70	37.96			2.0
		1.8	D						
		2.0 - 2.2	B					2.5	
		2.2	D		2.20	37.46		Soft brown CLAY with occasional bands of dark bluish grey clay Strong organic odour and rare rootlets ALLUVIUM	3.0
								Bluish grey sandy GRAVEL Gravel is subangular to rounded fine to coarse of flint Sand is fine to coarse RIVER TERRACE DEPOSITS	3.5
									4.0
									4.5
IMPORTANT: This is a basic log auto-generated from AGS data held by the National Geoscience Data Centre (NGDC) and does not necessarily include all of the information supplied in the original AGS file. If you wish to deposit AGS files to the NGDC please see www.bgs.ac.uk/services/ngdc . Generated 11-07-2024 at 10:39. BGS Reference 2021120911501128222									

GENERAL REMARKS

Trial pit terminated at 2.2m depth due to collapse at gravel.

RUK-TP6

IMPORTANT: This is a basic log auto-generated from AGS data held by the National Geoscience Data Centre (NGDC) and does not necessarily include all of the information supplied in the original AGS file. If you wish to deposit AGS files to the NGDC please see www.bgs.ac.uk/services/ngdc. Generated 11-07-2024 at 10:38. BGS Reference 2021120911501128221

GENERAL REMARKS

Trial pit ended at 1.6m depth due to collapse of gravel at 1.2m.

SU 76 NW 26 7367 6777 Nt. Schoolgreen, Shinfield

Block C

Surface level (+ 40.4 m) + 133 ft

Water struck at + 39.2 m

Shell and Auger 152 mm (6 in) diameter

November 1974

Waste 2.0 m

Bedrock 0.5 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.3	0.3
Alluvium	Clay, medium brown, silty	0.9	1.2
River Terrace Deposits (2nd Terrace)	Gravel Gravel: fine to coarse, angular to rounded flint Sand: mainly medium to coarse quartz and flint	0.8	2.0
London Clay	Clay, firm, grey, silty	0.5 +	2.5

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand			Gravel	
				- 1/16	+ 1/16 - 1/8	+ 1/8 - 1/4	+ 1/4 - 1/2	+ 1/2 - 3/4	+ 3/4 - 1
6	26	68	1.2-2.0	6	3	15	8	32	36
			Mean	6	3	15	8	32	36



SU 76 NW 27 7378 6782 Nr. Parrot Farm, Shinfield

Block C

Surface level (+40.4 m) +133 ft
Water struck at +40.1 m
Shell and Auger 152 mm (6 in) diameter
November 1974

Overburden 0.6 m
Mineral 1.9 m
Bedrock 0.5 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.6	0.6
River Terrace Deposits (2nd Terrace)	Gravel Gravel: fine to coarse, angular to rounded flint Sand: mainly medium to coarse quartz and flint	1.9	2.5
London Clay	Clay, firm, grey	0.5 +	3.0

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages						
Fines	Sand	Gravel		Fines	Sand		Gravel			
				$-\frac{1}{16}$	$+\frac{1}{16}-\frac{1}{4}$	$+\frac{1}{4}-1$	$+1-4$	$+4-16$	$+16-64$	$+64$
3	30	67	0.6-1.6	3	1	12	15	37	32	0
			1.6-2.5	2	2	15	15	34	20	12
			Mean	3	1	13	16	35	26	6



SU 76 NW 28 7307 6696 Nr. Hyde End, Shinfield

Surface level (: 44.5 m) + 146 ft
Water not struck
Shell and Auger 152 mm (6 in) diameter
June 1974

Block C

Overburden 0.1 m
Mineral 2.7 m
Bedrock 1.0 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.1	0.1
River Terrace Deposits (3rd Terrace)	'Very clayey' sandy gravel, orange-brown and grey Gravel: fine to coarse (mainly fine above 1.9 m) angular to subrounded with occasional rounded flint Sand: mainly fine to medium quartz with some coarse flint	2.7	2.8
London Clay	Clay, brown silty	0.1	2.9
	Clay, grey silty	0.9+	3.8

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand			Gravel	
				- 1/16	+ 1/16 - 1/4	+ 1/4 - 1/2	+ 1/2 - 3/4	+ 3/4 - 16	+ 16
20	53	27	0.1-1.1	27	37	24	3	6	3
			1.1-1.9	28	27	16	8	18	3
			1.9-2.8	7	9	19	13	31	21
			Mean	20	25	21	7	18	9

SU 76 NW 31 7393 6731 N. of Moor Copse, Arborfield and Newland

Block C

Surface level (+39.0 m) +128 ft
Water struck at +37.4 m
Shell and Auger 152 mm (6 in) diameter
June 1974

Overburden 1.6 m
Mineral 2.0 m
Bedrock 1.4 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.3	0.3
Alluvium	Clay, grey and brown mottled silty	1.3	1.6
River Terrace Deposits (1st Terrace)	'Clayey' gravel Gravel: fine to coarse, angular to subangular with occasional rounded flint Sand: fine to coarse quartz and flint	2.0	3.6
London Clay	Clay, grey, silty	1.4 +	5.0

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand		Gravel		
				- 1/8	+ 1/8 - 1/4	+ 1/4 - 1	+ 1 - 4	+ 4 - 16	+ 16
12	24	64	1.6-2.6	19	1	12	17	26	25
			2.6-3.6	4	3	9	7	37	40
			Mean	12	2	10	12	32	32

81



SU 76 NW 32 7485 6734 Nr. New Farm, Arborfield and Newland

Surface level (+46.9 m) +154 ft
Water struck at +45.3 m
Shell and Auger 152 mm (6 in) diameter
June 1974

Block C

Overburden 0.1 m
Mineral 2.4 m
Bedrock 1.3 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.1	0.1
River Terrace Deposits (3rd Terrace)	'Clayey' sandy gravel Gravel: fine to coarse, angular to subrounded, with occasional rounded flint Sand: fine to coarse, quartz and flint	2.4	2.5
London Clay	Clay, firm, grey	1.3 +	3.8

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand			Gravel	
				-1 ϕ	+1 ϕ - $\frac{1}{2}$	+ $\frac{1}{2}$ -1	+1-4	+4-16	+16
18	47	35	0.1-1.2	35	35	20	3	5	2
			1.2-2.2	3	7	19	12	35	24
			2.2-2.5	5	3	18	16	25	33
			Mean	18	19	20	8	20	15



SU 76 NW 34 7270 6707 Nr. Orchard House, Shinfield

Block C

Surface level (+ 48.3 m) + 159 ft
Water struck at + 47.6 m
Shell and Auger 152 mm (6 in) diameter
December 1974

Overburden 0.3 m
Mineral 2.9 m
Bedrock 0.5 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
River Terrace Deposits (3rd Terrace)	Soil	0.3	0.3
	Gravel	2.9	3.2
	Gravel: fine to coarse, angular to subrounded with occasional very dark brown rounded flint, and traces of fine quartz Sand: mainly fine to coarse quartz and flint		
London Clay	Clay, firm brown becoming firm grey	0.5 +	3.7

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand		Gravel		
				- 1/16	+ 1/16 - 1/4	+ 1/4 - 1/2	+ 1/2 - 3/4	+ 3/4 - 1	+ 1 - 2
5	43	52	0.3-1.3	7	8	17	15	32	21
			1.3-2.3	3	5	22	20	28	22
			2.3-3.2	4	6	21	15	33	21
			Mean	5	6	20	17	31	21



SU 76 NW 50
7282, 6714

N14144

RECORD OF WELL

At HIGH CORSE FARM

Town or Village SHINFIELD

County BERKS

268/540

EXACT SIZE
OF WELL

Six-inch sheet 45NE/E Six-inch National Grid sheet SN 728 672
For NATIONAL INSTITUTE FOR State whether owner, tenant, builder,
contractor, consultant, etc. —

Address (if different from above) 1

* DELETE
WHICHEVER IS
INAPPLICABLE

Level of ground surface 157 ft. If well top is not at ground } above: 2 1/2 ft.
above sea level (O.D.) level, state how far } below:

SHAFT 400 ft.; diameter 8 in.; HEADINGS (please attach details—dimensions and directions)

BORE 400 ft.; diameter of bore: at top 8 in.; at bottom 7 1/2 in.

Full details of permanent lining tubes (position, length, diameter, plain, slotted etc.)

STRUCTURE FROM 2'0" TO 2'6" - 9"

Water struck at depths of 127 ft. below well top.

TEST
CONDITIONS

Rest level of water 52 1/2 ft. above* well top. Suction at 127 ft. Yield on 8 hours* test
pumping at 9480 galls. per 11.2 with depression to 123 ft. below well top.

Recovery to rest level in 15 mins.* Capacity of pump 15,000 g.p.h. Date of measurements 13/4/66

DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:

NORMAL
CONDITIONS

Make and/or type 3" H.C. 1 F.I. Motive power 20HP 415/3/50 AC

Capacity 10,000 galls. per hour. Suction at 127 ft. below well top.

Amount pumped 10,000 galls. per day. Estimated consumption 150,000 galls. per week.

Well made by ANTHONY HUSEBERRY & CO. Date of sinking 13/4/66

Information from

ADDITIONAL NOTES ANALYSIS (please attach copy if available)

For Survey use only

Date Received 18.7.66

Section 6

Pumping test

Observ. well

Recorder

E.R. log

Site marked on

1" map Q. 12

6" map Q. 12.7
(use symbols)

Record forwarded

to

date

GEOLOGICAL SURVEY
WATER DIVISION
SOUTH KENSINGTON
LONDON, S.W.7

LOG OF STRATA OVERLEAF

SU 76 NW | 50

Contact BGS: ngdc@bgs.ac.uk



EXACT SITE
OF WELL

DELETE
WHICHEVER IS
INAPPLICABLE

TEST
CONDITIONS

NORMAL
CONDITIONS

MAX

3/11/59 (3697) WL54188-PS47 10M 1/60 M.F.L.G. G.722

SU7284 6716

For Survey use only Licence No. L/29/92
N12141

RECORD OF WELL

At HIGH COPSE FARM

Town or Village SHINFIELD

County BERKS

268/540

SU761

Six-inch sheet 45NE/E Six-inch National Grid sheet SU 7284 6716
NATIONAL INSTITUTE FOR State whether owner, tenant, builder,
For RESEARCH IN DAIRYING contractor, consultant, etc.:-

Address (if different from above)

Level of ground surface
above sea level (O.D.) 157 ft.

If well top is not at ground } above*
level, state how far } below; 2 1/2 ft.

SHAFT ft.; diameter ft.; HEADINGS (please attach details—dimensions and directions)

BORE 400 ft.; diameter of bore: at top 8 in.; at bottom 7 1/2 in.

Full details of permanent lining tubes (position, length, diameter, plain, slotted etc.)

8" BORE TUBE FROM 2'0" TO 263'9"

Water struck at depths of ft. below well top.

Rest level of water 52 1/2 ft. above* well top. Suction at 127 ft. Yield on 8 hours* test
pumping at 9480 galls. per hr. with depression to 123 ft. below well top.

Recovery to rest level in mins.* Capacity of pump 10,000 g.p.h. Date of measurements 13/6/66

DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:

Make and/or type SUMO 6FI Motive power 20 HP 4.15/3/50 AC

Capacity 10,000 galls. per hour. Suction at 127 ft. below well top.

Amount pumped 100,000 galls. per day. Estimated consumption 150,000 galls. per week.

Well made by GUTHRIE ALLSEBROOK LTD Date of sinking MAR/MAY '66

Information from

ADDITIONAL NOTES ANALYSIS (please attach copy if available)

For Survey use only

Date Received 18.7.66

Section 6

Pumping test

Observ. well

Recorder

ER. log

Site marked on

1" map 0 0

6" map 0 18.7.66
(use symbol)

Record forwarded

to

date

GEOLOGICAL SURVEY,
WATER DIVISION,
SOUTH KENSINGTON,
LONDON, S.W.7.

Data Bank - FEB 1981



(For Survey use only)
GEOLOGICAL
CLASSIFICATION

Drift / Vastly / Limestone / Reading / Upper Chalk

Drift
Vastly / Limestone
Reading Beds
Upper Chalk

NATURE OF STRATA

If measurements start below
ground surface, state how far

THICKNESS

Feet Inches

DEPTH

Feet Inches

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

.. ..

16/6/66 23/6/66

BY
11/75

High Loper Farm
Sheffield part of N16

This is TWA 40/1

Visited and amended site slightly.
This is a sealed bore. The details on the record are
accurate. Mr N Jackson confirmed this.

29/1/75



N. 12141.
268/540

MINISTRY OF HOUSING AND LOCAL GOVERNMENT

SECTION 14 OF THE WATER ACT 1945

LICENCE NO.29/92

SU 76/1

Thames Valley (Conservation of Water) Order 1951

In this licence:-

- (a) "the Minister" means the Minister of Housing and Local Government;
- (b) a group of two letters and eight figures represents the map co-ordinates of the proposed position of the borehole which is the subject of this licence, estimated to the nearest ten metres on the grid of the national reference system used by the Ordnance Survey on its maps and plans.

The Minister, in exercise of his powers under section 14(6) of the Water Act 1945, hereby licenses the National Institute for Research in Dairying, to construct a borehole for the purpose of abstracting underground water at SU/72846718 at High Copse Farm, Shinfield near Reading subject to the following conditions:-

- (1) The depth of the borehole shall not exceed 400 feet.
- (2) The capacity of the pump to be installed for abstracting water from the borehole shall not exceed 10,000 gallons per hour.
- (3) Except with the consent of the Minister given after like proceedings with respect to the publication and service of notices, and the making and hearing of objections as apply to the applications for licence under section 14(6) of the Water Act 1945:-
 - (a) not more than 150,000 gallons of water in any one day of 24 hours and not more than 8,200,000 gallons of water in any calendar year shall be abstracted from the borehole during the period ending on 31st December 1970.
 - (b) No water shall be abstracted from the borehole after 31st December 1970.
- (4) As soon as practicable a satisfactory water meter shall be installed to measure the abstraction from the borehole, and readings of the said meter shall be taken and recorded to show the quantity of water abstracted in any one day of 24 hours.
- (5) Any officer authorised for the purpose of section 14(12)(a) of the Water Act 1945, shall on request be permitted to inspect or transcribe records required to be kept by the last preceding conditions and relating to any period not earlier than 5 years before the request is made.
- (6) If the borehole is not constructed within one year from the date of this licence, the licence shall cease to have effect.

GIVEN under the Official Seal of the

Minister of Housing and Local Government

on 6th May 1965.

L.S.

H. J. RYAN

Assistant Secretary,
Ministry of Housing and Local Government.

Sited by O on 6" Borehole

N.B. UNDER THE WATER ACT 1945, IT IS AN OFFENCE PUNISHABLE BY FINE TO CONTRAVENTE ANY CONDITION ATTACHED TO THIS LICENCE.

K.365 (Revised Feb. 1963)



EXACT SITE
OF WELL

*DELETE
AS
NECESSARY

TEST
CONDITIONS

NORMAL
CONDITIONS

LOG OF
STRATA
OVERLEAF

N.G.R. 7446.6782 (according to site plan)

For Institute use only Licence No.

268/500

At Arborfield Bridge
Observation Point SU 76/46
Town or Village Arborfield
County Berkshire
Six-inch County Sheet Berks 27 SE/E
Six-inch National Grid sheet and reference SU 7446.6780 (SU 76 NW)
For Thames Valley University London and Embankment Scheme
State whether owner, tenant, builder, contractor, consultant, etc.:
Address (if different from above) 22 Bohun Road Reading
Level of ground surface above sea level (O.D.) ft (43 metres A.O.D. m)
If well top is not at ground level, state how far above: ft (m)
SHAFT ft (m); diameter ft (m);
HEADINGS (please attach details—dimensions and directions)
BORE 318 ft (97 m); diameter: at top in (203 mm); at bottom in (90 mm)
Full details of permanent lining tubes (position, length, diameter, plain, slotted, etc.)
(98 ft) 30.00 of 203 mm plain lining tube } Outside of
(1'4") 2.50 203 mm taper face to 102 mm } tubes cement
(123 ft) 37.50 4 m plain lining } grouted from
(223 ft) 68.00 2 m with air } base to
Water struck at depths of (2'6") 4 203 ft (0.75 and 6.2 metres m) below well top
Rest level of water 33 ft (10 m) above* well top. Suction at ft (m) below
Yield on hours* test pumping at galls (m³) per with
depression to ft (m) below well top. Recovery to rest level in mins*
Capacity of pump g.p.h. (m³/h) No test hours
Date of measurements
DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:
Make and/or type Motive power
Capacity galls (m³) per hour. Suction at ft (m) below well top. Amount pumped galls (m³) per day. Estimated consumption galls (m³) per week
Well made by Le Grand Well Drilling and Engineering Date of sinking 24/1/74
Completed 21/2/74
O.B. Ltd
ADDITIONAL NOTES ANALYSIS (please attach copy if available)

Water level Recorder fixed
in Borehole.

Received from Le Grand
Date 13.3.75
Observation well
Recorder



For use only
at
CLASSIFICATION

SU 76 NW 57
N.G.C. 7446.6782
NATURE OF STRATA

If measurements start below
ground surface, state how far.

Thickness

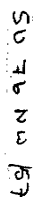
Depth

Feet Inches Metres Feet Inches Metres

	Top Soil		0.50		0.50
DRIFT	Sand and gravel		1.50		2.00
	Blue clay and gravel		6.00		8.00
London clay	Blue and grey clay		25.00		36.00
London clay	Brown mottled clay		12.00		50.0
	Sandy clay		11.00		61.0
UPPER	Soft chalk and flints		3.00		64.0
chalk	Chalk and flints		3.00		67.0
	Hard chalk and flints		30.00	315	97.0

B.Y.

14/2/77





EXACT SITE
OF WELL

*DELETE
AS
NECESSARY

TEST
CONDITIONS

NORMAL
CONDITIONS

LOG OF
STRATA
OVERLEAF

E.A.L.S.C. Ref:

SU76 NW/57

For Institute use only Licence No.

N. U.

RECORD OF WELL

At Adolfshof Bridge
Observation Borehole SU 76/44

Town or Village Adolfshof

County Berkshire

Six-inch County Sheet Berk 37 SE/E

Six-inch National Grid sheet and reference SU 7444 6780 (SU 76 NW)

For Thames Conservancy Loddon and Embankment Scheme

State whether owner, tenant, builder, contractor, consultant, etc. —

Address (if different from above) De Bohun Road Reading

Level of ground surface above sea level (O.D.) ft (4.3 metres A.O.D) m)

If well top is not at ground level, state how far above* ft (..... m)
below:

SHAFT ft (..... m); diameter ft (..... m);

HEADINGS (please attach details—dimensions and directions)

BORE 318 ft (97 m); diameter: at top in (203 mm); at
bottom in (90 mm)

Full details of permanent lining tubes (position, length, diameter, plain, slotted, etc.)

(98 ft) 30.00 of 203 mm plain lining tubes } Outside of
(1'4") .50 203 mm taper piece to 102 mm } tubes cement
(123 ft) 37.50 of 102 mm plain lining tubes } grouted from
(223 ft) 68.00 metres of sand with surface } Base to surface

Water struck at depths of (2'6") + 203 ft (.75 and 6.2 metres) below well top

Rest level of water 33 ft (10 m) above* well top. Suction at ft (..... m)
below

Yield on hours* test pumping at galls (..... m³) per with
days

Depression to ft (..... m) below well top. Recovery to rest level in mins*
hours

Capacity of pump g.p.h. (..... m³/h)

No Test

Date of measurements

DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:

Make and/or type Motive power

Capacity galls (..... m³) per hour. Suction at ft (..... m)

below well top. Amount pumped galls (..... m³) per day. Estimated

consumption galls (..... m³) per week

Well made by Le Grand Well Drilling and Engineering Date of sinking 24/1/74
6.11.74 Completed 21/2/74

ADDITIONAL NOTES ANALYSIS (please attach copy if available)

Water Level Recorder fixed
in Borehole

Received from Le Grand

Date 13.3.75

Observation well

Recorder

E.R. log

Site marked on

1" map 0

6" map 0

(use symbol)

Copy to

Date

[illegible]



For Institute use only Licence No.

N. N

RECORD OF WELL

At Arbosfield Bridge OBH.

268/569

SU76/44

Town or Village Arbosfield.

County Berks.

Six-inch County Sheet Berks. 37 SE/6

Six-inch National Grid sheet and reference NGR. 7444 6780 (Su 76 NW)

For Thames Water Authority, Thames Conservancy Division.

State whether owner, tenant, builder, contractor, consultant, etc.: Owner.

Address (if different from above) Urgent House, Vastern Road, Reading

Level of ground surface above sea level (O.D.) ft (..... 40.16 m)

*DELETE

If well top is not at ground level, state how far above:* ft (..... 0.30 m)

AS

SHAFT ft (..... m); diameter ft (..... m);

NECESSARY

HEADINGS (please attach details—dimensions and directions)

BORE: 320 ft (..... 9.7 m); diameter: at top in (..... 20 cm); at bottom in (..... 10 cm)

Full details of permanent lining tubes (position, length, diameter, plain, slotted, etc.) 0-30 m.
below g.l., 20cm dia plain; 30-68m, 10cm plain.

Water struck at depths of ft (..... m) below well top

Rest level of water ft (..... 10-30 m m) above* well top. Suction at ft (..... m) below

Yield on hours* test pumping at galls (..... m³) per with

depression to ft (..... m) below well top. Recovery to rest level in mins* hours

Capacity of pump g.p.h. (..... m³/h)

Date of measurements. 23/10/74

DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:

Make and/or type Motive power

Capacity galls (..... m³) per hour. Suction at ft (..... m)

below well top. Amount pumped galls (..... m³) per day. Estimated

consumption galls (..... m³) per week

Well made by he Grand (for Retaper) Date of sinking 18/2/74

ADDITIONAL NOTES ANALYSIS (please attach copy if available)

LOG OF

STRATA

OVERLEAF

INSTITUTE OF GEOLOGICAL SCIENCES,
WATER DEPARTMENT,
SOUTH KENSINGTON,
LONDON, S.W.7.

Received from T.W.A. (T.C.A.)

Date 13-2-1975

Observation well

Recorder

E.R. log

Site marked on

1" map 2

6" map 2

(use symbol)

Copy to

Date

[illegible]

St Leonards Bridge OBH. This is West
vicar. Part of West control scheme.

$$\begin{array}{r} 40/44 \quad 268 \\ \hline 569 \end{array}$$

JMA 11-849.

[illegible]

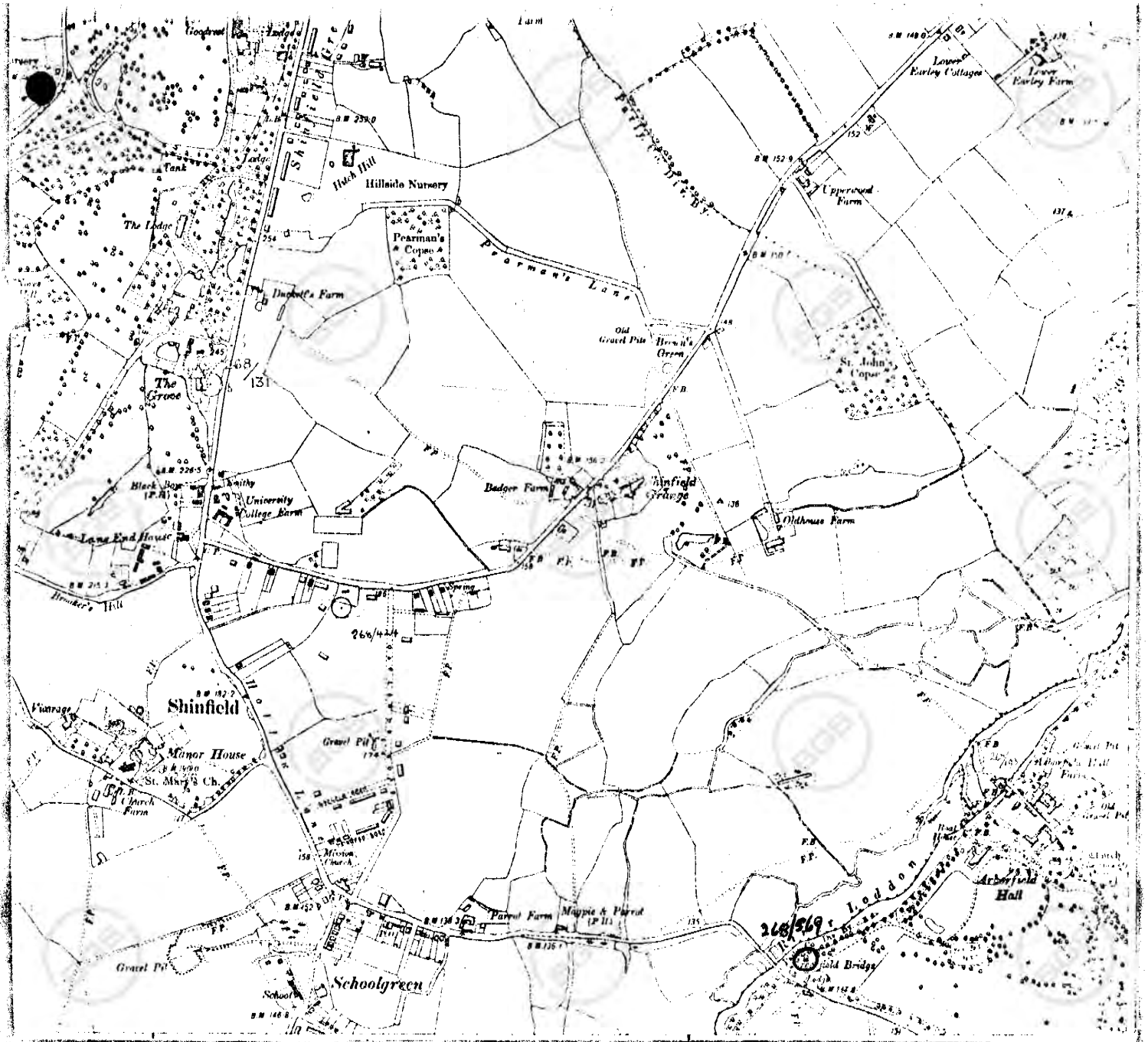


Arbury Bridge O.B.H.

SU 76/44

Owner J. J. A.	Licence No.	Nat. Grid Ref. 7444 6780	
Occupier	IGS Ref. No.	Status	
Ground Level 40.16 m OD	ft. OD	Aquifer Chalk	
Level of Well Top 40.463 m OD	ft. OD		
Rest Water Level m bwt	ft. bwt	Summary of Geological Section	
(Date 23/10/74) 30.16 m OD	ft. OD	Thickness	
Construction		Depth	
Depth bwt	Dia.	Linings (below well top)	
		From To Dia. Type	
0-30m	200mm	0m 30m 200mm Plain	Valley Gravel. 4m 4m
30-68-	100-	30- 68- 100- Plain	London Clay 34- 38-
68-97-	100-	68- 97- 100- Unlined	Reading Beds. 28- 66-
			Upper Chalk 31- 97-
Abstraction Rates	Type of Pump		
gph	Chem./Bact. Anal. YES NO		
gpd	Well Driller LeGrand for Pettifors		

If insufficient space has been allowed, continue in 'Notes' overleaf.





SU 76/44

BERKS .

37. SE/E.

268.

SU 76 NW 60 7430 6669 Nr. Moor Copse, Arborfield and Newland

Block C

Surface level (+43.8 m) +144 ft
Water struck at +41.9 m
Shell and Auger 152 mm (6 in) diameter
September 1977

Overburden 0.7 m
Mineral 2.5 m
Bedrock 1.3 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil, sandy, light brown	0.4	0.4
?Brickearth and Loam	Clay, silt, mottled orange and brown with scattered, fine subangular flint	0.3	0.7
River Terrace Deposits (2nd Terrace)	'Clayey' gravel Gravel: fine with coarse, subangular to subrounded flint, traces of fine well rounded flint Sand: medium and coarse with some fine quartz and flint	2.5	3.2
London Clay	Clay, stiff, bluish grey	1.3 +	4.5

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand			Gravel	
				-1/16	+1/16-1/4	+1/4-1	+1-4	+4-16	+16
19	30	51	0.7-1.5	33	4	13	12	28	10
			1.5-1.9	29	9	17	10	26	9
			1.9-2.9	10	5	15	10	34	26
			2.9-3.2	0	3	11	10	35	41
			Mean	19	5	15	10	31	20

APPENDIX B

Site Photographs





Plate 1 View north across western field



Plate 2 View of the overhead power cable in western field



Plate 3 View north west across western field



Plate 4 View north across western field



Plate 5 View north east across western field



Plate 6 View north along western boundary of western field



Plate 7 View west along southern boundary of western field



Plate 8 View towards south eastern corner of western field



Plate 9 View of entrance gateway to western field



Plate 10 View north across western field



Plate 11 View west across western field



Plate 12 View west across western field



Plate 13 View of entrance to wester field from B3349



Plate 14 View west along north boundary of western field



Plate 15 View south west across western field



Plate 16 View of culverted waterway located in the north western corner of the western field



Plate 17 View south along western boundary of western field



Plate 18 View of gateway entrance to eastern field



Plate 19 View south across eastern field



Plate 20 View east across eastern field



Plate 21 View of the farm buildings located centrally on the site



Plate 22 View west along the farm track running across the eastern portion of the site



Plate 23 View south west across eastern field



Plate 24 View west across eastern field



Plate 25 View north across eastern field



Plate 26 View along the eastern boundary of the eastern field



Plate 27 View north west across eastern field



Plate 28 View south west across eastern field



Plate 29 View south along the eastern boundary of the eastern field

APPENDIX C

UXO Risk Screening Map



UNEXPLODED BOMB RISK MAP



SITE LOCATION

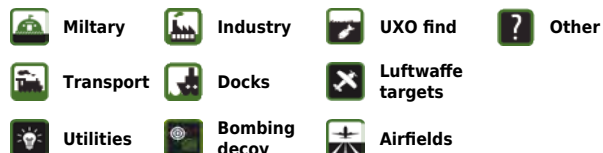
Map Centre: 473299,167556



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.



How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 email: uxo@zetica.com web: www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.