ADAM HELSOP



OWLERS, MUNTHAM DRIVE, BINES GREEN,
WEST SUSSEX RH13 0NH

Preliminary Contamination Risk Assessment

May 2024

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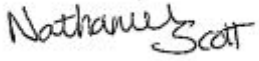
Environmental Assessment Services Ltd

ADAM HESLOP

REPORT DATA SHEET

Requirement	**Data**
Report Reference	694/NJA/AHelsop/Owlers/PCRA
Date	May 2024
Client	Adam Helsop
Report type	Preliminary Contamination Risk Assessment
Purpose	To satisfy environmental health concerns for planning application DC/24/0218.
Revisions	-
Prepared by	Nathaniel Scott BSc (Hons), MSc Signed 
Approved by	Eur Ing Malcolm McKemey BSc (Hons), CEng, CEnv, MICE, MIEAust, MCIWEM, MIEnvSc Signed 

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1. CAUTION

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

2. THE SITE & PROPOSED DEVELOPMENT

2.1 The site comprises a timber barn situated on land to the north of Owlers, a detached two-storey residential dwelling located to the east of Smugglers Lane, set within Barns Green, West Sussex. The site area is approximately 0.15 ha. The Ordnance Survey map reference for the site is TQ 12316 27386. The site elevation is approximately + 55 m OD. See Figure 1 for Site Location Plan and Figure 3 for the Existing Site Layout.

2.2 It is proposed to convert the existing building into a two-storey one-bedroom residential dwelling. The redevelopment of the site will include the removal of an existing lean-to element along with the provision of a car parking area to the west of the dwelling. Access to the site is via an existing gated access extending from Muntham Drive. See Figure 3 for the Proposed Site Layout.

3. GEOLOGY & HYDROGEOLOGICAL CONSIDERATIONS

3.1 According to the British Geological Survey (available online), the site lies on Weald Clay Formation (mudstone).

3.2 The Department for Environment, Food and Rural Affaires (Defra) online mapping (MAGIC) shows the site to lie on unproductive strata. The site is not considered to be hydrogeologically sensitive.

3.3 According to the EA's online Flood map for planning, the site lies within Flood Zone 1 (low risk of flooding from rivers and / or the sea). The EA’s online ‘Risk of Flooding From Surface Water’ map shows that the site is at low risk of

surface water flooding. An unidentified tributary of the River Adur lies approximately 200 m to the west of the site.

4. SITE DEVELOPMENT HISTORY

4.1 The site development history is derived from a review of historic maps and other references. Historic maps centred on the site are provided in Appendix A, and a summary of the relevant information provided in these maps is given in Table 4.1 below.

TABLE 4.1
SITE DEVELOPMENT HISTORY

Map date (Scale)	Features on site	Features within surrounding area (<250 m)
1875-1876 (1:2,500, 1:10,560)	The site is set within the grounds of Muntham House, situated approximately 200 m to the north of the site. A number of trees can be found within the site with a pond partially lying within the site's northwestern corner. The site is accessed via Smugglers Lane which extends to the northwest of Barns Green.	Muntham House and its associated grounds lie to the north and northwest of the site. To the east, south and west, the site is surrounded by agricultural land with areas of trees and woodland forming field margins. A large area of woodland identified as Muntham Gill lies approximately 200 m to the west of the site.
1896 (1:10,560)	An access track associated with Muntham House has been developed and extends from Smugglers Lane through the site. The pond partially within the site is no longer identified.	Two buildings have been developed within the adjacent western field. A pond situated approximately 100 m to the south of the site has been identified.
1911 (1:2,500)	The formerly identified access track to Muntham house is no longer present.	An additional building has been developed to the west of the site.
1913 (1:10,560)	No significant changes to the site.	No significant changes to the surrounding area.
1939-1945	No recorded war-time incidents or activities affecting the site.	No recorded war-time incidents or activities affecting the surrounding area.
1961 (1:10,560)	A building has been identified within the site.	The three existing buildings situated to the west of the site have been removed and replaced by a single building. A building has been developed to the northeast of the site.

		A building has been identified to the south of the site.
1975 (1:2,500)	No significant changes to the site.	The building situated to the northeast of the site has been identified as Highdown with an additional building being developed. To the south of the site, Owlers has been identified with an additional building. Muntham Gill has been reduced in size.
1977 (1:2,500)	No significant changes to the site.	No significant changes to the surrounding area
1993-2003 (1:2,500)	No significant changes to the site.	A pond associated with Owlers has been identified to the south of the site.
2010-2024 (1:10,000)	No significant changes to the site.	A lake has been created to the southwest of the site.

4.2 The post war development history may also be traced from the planning history of the site. There is no relevant planning history associated with the site. The significant applications relating to the Owlers are summarised in Table 4.2 below.

TABLE 4.2
A SUMMARY OF RECENT PLANNING APPLICATIONS

Ref. Nos.	Description	Decision & Date
1/35/55	Proposed dwellinghouse and small holding.	✓ 24/08/1955
1/4/61	Additional living space and veterinary surgery.	✓ 12/04/1961
1/43/70	Porch extension to form additional living and dining room area.	✓ 04/01/0971
DC/06/1262	Two storey and first floor extensions and erection of detached swimming pool building.	✓ 14/07/2006
DC/08/0790	Ground floor and first floor extensions and room in existing roof.	✓ 23/05/2008
DC/09/1237	Proposed two storey side extension to replace existing single storey flat roof extension and single storey side extension.	✓ 04/09/2009

Key: ✓ planning permission granted ✗ planning permission refused *r* registered

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

TABLE 4.3
A SUMMARY OF RECENT AERIAL PHOTOGRAPHS

Photo date	Features on site	Features adjacent to the site
29/08/1999	The site is set within a roughly rectangular parcel of land. Two buildings connected by an area of hardstanding are present within the site. A suspected outbuilding/shed lies to the east of the barn within the site. A square shaped walled enclosure forms part of the site's southern boundary.	Immediately adjacent to the north of the site is a parcel of woodland. A residential dwelling is situated to the northeast of the site. Two residential buildings and a pond are situated to the south of the site. To the west of the site is an area of agricultural land.
17/07/2005	The square shaped enclosure along with the outbuilding / shed are no longer identified.	The area of land to the west is no longer actively farmed.
31/08/2012	No significant changes to the site.	The residential dwelling to the northeast has been further developed. The area of land to the west has a gained significant number of trees.
14/05/2018	No significant changes to the site.	No significant changes.
24/04/2021	No significant changes to the site.	The area to the west of the site resembles and area of young woodland.

5. THE EXISTING SITE

5.1 The site was visited on 26 April 2024. Photographs of the site are provided in Appendix B.

5.2 The site is approximately 0.15 ha and comprises a detached timber barn. The site is situated to the north of Owlers, a residential dwelling situated within Barns Green, West Sussex. A wooden fence divides the site from the adjacent residential dwelling. The site is accessed via an existing gate extending from Muntham Drive.

5.3 The site's eastern, southern, and western boundaries comprise wooden fencing with the northern boundary comprising wire fencing together with hedging forming a visual screen.

5.4 The existing barn is clad with rough sawn timber plank cladding and has a felt covered pitched roof. The flooring comprises concrete throughout with a mezzanine situated within the eastern section. The barn is currently used for the storage of miscellaneous items including furniture. No fuels are stored within the building.

5.5 A concrete apron extends from the existing barn to the east. This area is used for the storage of garden furniture and other miscellaneous items.

5.6 Surrounding the barn, forming the remainder of the site are areas of soft landscaping.

5.7 A number of building materials including wire fencing and corrugated metal sheets can be found within the southwest corner of the site, adjacent to the access gate.

6. RECORD DATA SEARCH RESULTS

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

6.1.1 *Historical Land Use*

There are a total of 16 records of potentially contaminative land uses recorded from standard 1:10,560 and 1:10,000 scale historic mapping within 500 m of the site. The closest of these records are for a number of unspecified pits situated 249 m, 253 m, and 305 m northeast of the site, respectively.

Records for historical energy features from 1:1,250 and 1:2,500 scale historic maps indicate the presence of one energy feature situated 402 m southeast of the site.

6.1.2 *Landfill and other Waste Sites*

There are two waste exemptions associated with 2 Elm Cottages situated 435 m southeast of the site. The exemptions involve the burning of waste in the open.

6.1.3 *Current Land Uses*

There are no current land uses thought to be of significant contamination risk to the site.

There are no records of high-voltage underground electricity cables or high-pressure underground gas pipelines within 500 m of the site.

6.1.4 *Environmental Permits, Incidents and Registers*

There is one recorded pollution incident within 500 m of the site. Occurring 28 m southwest in 2003. The incident involved oils and fuels and had minor impacts on land. This incident is not thought likely to have significantly affected the site.

There is one recorded licensed discharge to controlled waters. Situated 222 m northwest of the site and associated with Muntham House School, the licensed discharge involved sewage discharge into an unidentified freshwater river.

The site has not been determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990, and there are no records of such designations within 500 m of the site.

6.1.5 *Hydrology and Flood Risk*

The site lies on Unproductive strata (Weald Clay). Groundwater vulnerability within the site is rated as low.

The site does not lie within a Source Protection Zone (SPZ). The site does not lie within 20 m of a Main River (as identified by the EA).

The site lies within Flood zone 1 (low risk of flooding from tidal and fluvial sources). There is a negligible risk of surface water flooding within the site.

6.1.6 *Designated Environmentally Sensitive Sites*

The site does not lie within 2000 m of any Sites of Special Scientific Interest (SSSI), Conserved Wetland sites (RAMSAR), Special Areas of conservation (SACs), Special Protection Areas (SPAs), National Nature Reserves (NNRs), or Local Nature Reserves (LNRs). However, the site lies within an SSSI Impact Risk Zone. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar.

There is a total of 57 areas of designated ancient woodland within 500 m of the site. The closest of these lie 164 m and 177 m west, respectively.

The site does not lie within a Nitrate Vulnerable Zone.

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The site and the surrounding area lie within an SSSI Impact Risk Zone. The proposed development is not thought likely to impact any statutory or non-statutory sites.

6.1.7 *Natural Hazards Findings and Mining*

There is a low – negligible risk rating for natural hazards (Shrink-swell, running sands, compressible deposits, collapsible deposits, landslides, and soluble rocks) within 50 m of the site as identified from BGS GeoSure Data.

Records suggest that underground non-coal mining works may have taken place within the area including the site.

The site lies within an area where less than 1% of properties are affected by radon. No radon protection measures are necessary.

7. POTENTIAL SOURCES OF CONTAMINATION

7.1 Land use history at the site has comprised:

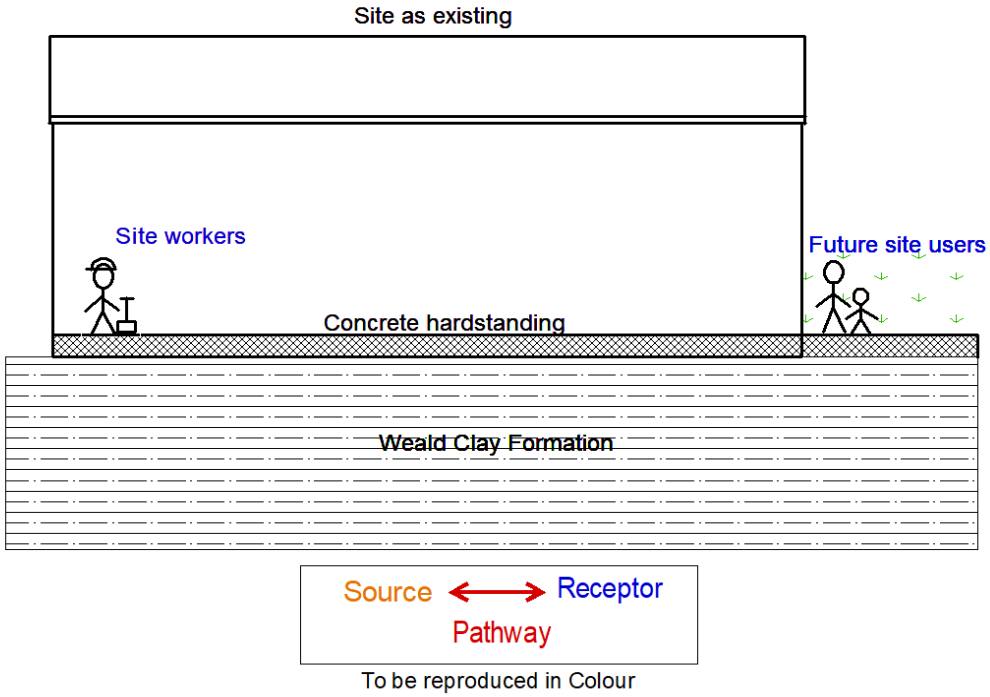
- Storage use as existing, from circa 1950.

7.2 It is understood after a conversation with the current landowner that the site has not been used for agricultural storage. Land use at the site has comprised of miscellaneous storage. Therefore, it is thought likely that contamination risk from historic land use at the site is considered to be negligible.

8. RISK ASSESSMENT

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

DIAGRAM 8.1
CONCEPTUAL MODEL



To be reproduced in Colour

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

TABLE 8.1
POTENTIAL CONTAMINANT LINKAGES

Source		Pathway	Receptor	Risk
Contaminated soil	**Contaminated groundwater**			
Negligible contamination risk associated with historic land use	No significant risk	Contact with contaminated soil, groundwater or soil gas	Existing and future site users	×
		Ingestion of or skin contact with contaminated soil, dust or groundwater	Maintenance or construction workers engaged in groundworks on the site	×
		Contact with contaminated soil or ground water	Building & services	×
		Leeching of site contaminants into groundwater	Wider environment	×

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

8.3 From a review of available information, it is considered that there is negligible potential for contamination associated with historic land use.

8.4 It is proposed to redevelop the site for residential use including garden soft landscaping areas. In this case, potential *receptors* may include site workers (during the development and future maintenance of the site), future site users (considered to include children), buildings and services (including underground water mains) and the wider environment (considered *not* to be particularly hydrogeologically sensitive).

8.5 Source – Receptor Pathways

8.5.1 Site workers (notably demolition and ground workers) may come into contact with building materials containing asbestos, contaminated soil, groundwater and/or soil gas during the development of the site. See recommendations in Section 10 below.

8.5.2 In the absence of remediation, future site users / maintenance workers (e.g. gardeners) may come into contact with contamination within the gardens / soft landscaping areas. See recommendations in Section 10.

8.5.3 Future site users may come into direct contact with contaminated soils in garden areas, and/or may consume produce grown within the garden. Exposure to contamination in this case may be via dermal contact, inhalation and/or ingestion. See recommendations in Section 10.

9. CONCLUSIONS

9.1 The site lies on Weald Clay Formation, an Unproductive stratum. The site does not lie within a groundwater Source Protection Zone (SPZ) and is not considered likely to be hydrogeologically sensitive.

9.2 The site is not considered to be at significant risk of ground gas at this time. The site does not lie within 250 m of waste disposal landfill. The site lies within an area where < 1 % of properties are affected by radon, no protection measures are required.

9.3 The land use history at the site has comprised of storage and does not identify activities with a significant contamination risk. There was no evidence of the current storage of fuels during our visit.

9.4 The site lies within a SSSI Risk Impact Zone. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar.

9.5 It is proposed to redevelop the site for a more sensitive land use: residential use with soft landscaping and garden areas.

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

TABLE 9.1
RISK ASSESSMENT MATRIX

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

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

9.7 In this case, no significant contamination has been identified. The probability of impact for residential land use, in this case, is low as the existing building is under hardcover. The overall risk rating for the site is low (1).

10. RECOMMENDATIONS

10.1 In this case, no further intrusive site investigation is indicated.

10.2 Should any unexpected contamination be identified during the development phase, the Council is to be notified, and any necessary remediation work carried out as required.

☆ ☆ ☆ ☆ ☆ ☆ ☆

FIGURES

FIGURE 1: **Site Location Plan**
FIGURE 2: **Existing Site Layout**
FIGURE 3: **Proposed Site Layout**

NOTES
WRITTEN DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALE, AND ARE TO BE CHECKED ON SITE PRIOR TO COMMENCING WORK.
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IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH THE BUILDING REGULATIONS.

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Scale bar (m)
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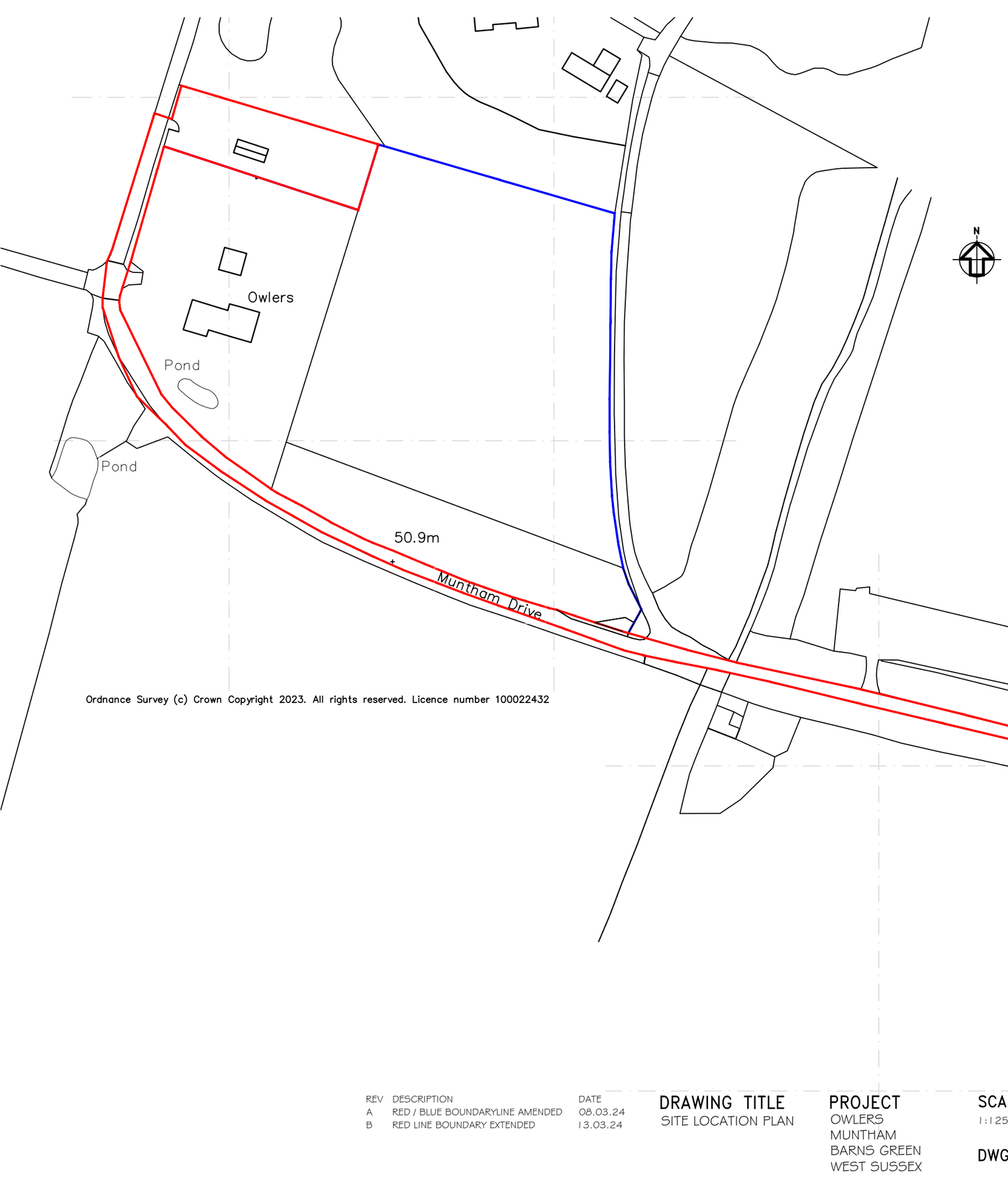
12.5
25
37.5
50
62.5



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REV	DESCRIPTION	DATE
A	RED / BLUE BOUNDARYLINE AMENDED	08.03.24
B	RED LINE BOUNDARY EXTENDED	13.03.24

DRAWING TITLE
SITE LOCATION PLAN

PROJECT
OWLERS
MUNTHAM
BARNS GREEN
WEST SUSSEX

SCALE
1:1250 @A3

DRAWN BY
ML

DATE
DEC 23

DWG NO 1299/04

REV. B

Unit 3b Woodhorn Business Centre
Woodhorn Lane
Oving Chichester
West Sussex PO20 2BX
Tel 01243 774764
www.sloaneandbrown.co.uk

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1:1250

Scale bar (m)
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12.5
25
37.5
50
62.5

REV DESCRIPTION DATE

PROJECT
OWLERS
MUNTHAM
BARNS GREEN
WEST SUSSEX

DRAWING TITLE
SITE LOCATION PLAN

SCALE	DRAWN BY	DATE
1:1250 @A3	ML	DEC 23

DWG NO 1299/04 REV.-

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Woodhorn Lane
Oving Chichester
West Sussex PO20 2BX
Tel 01243 774764
www.sloaneandbrown.co.uk

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Highdown Copse

Smugglers Lane

Owlers

Pond

Pond

N

1:500

Scale bar (m)
0
5
10
15
20
25
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REV	DESCRIPTION	DATE

PROJECT
OWLERS
MUNTHAM
BARNS GREEN
WEST SUSSEX

DRAWING TITLE
BLOCK PLAN

SCALE	DRAWN BY	DATE
1:500 @A3	ML	DEC 23

DWG NO 1299/03 **REV.** -

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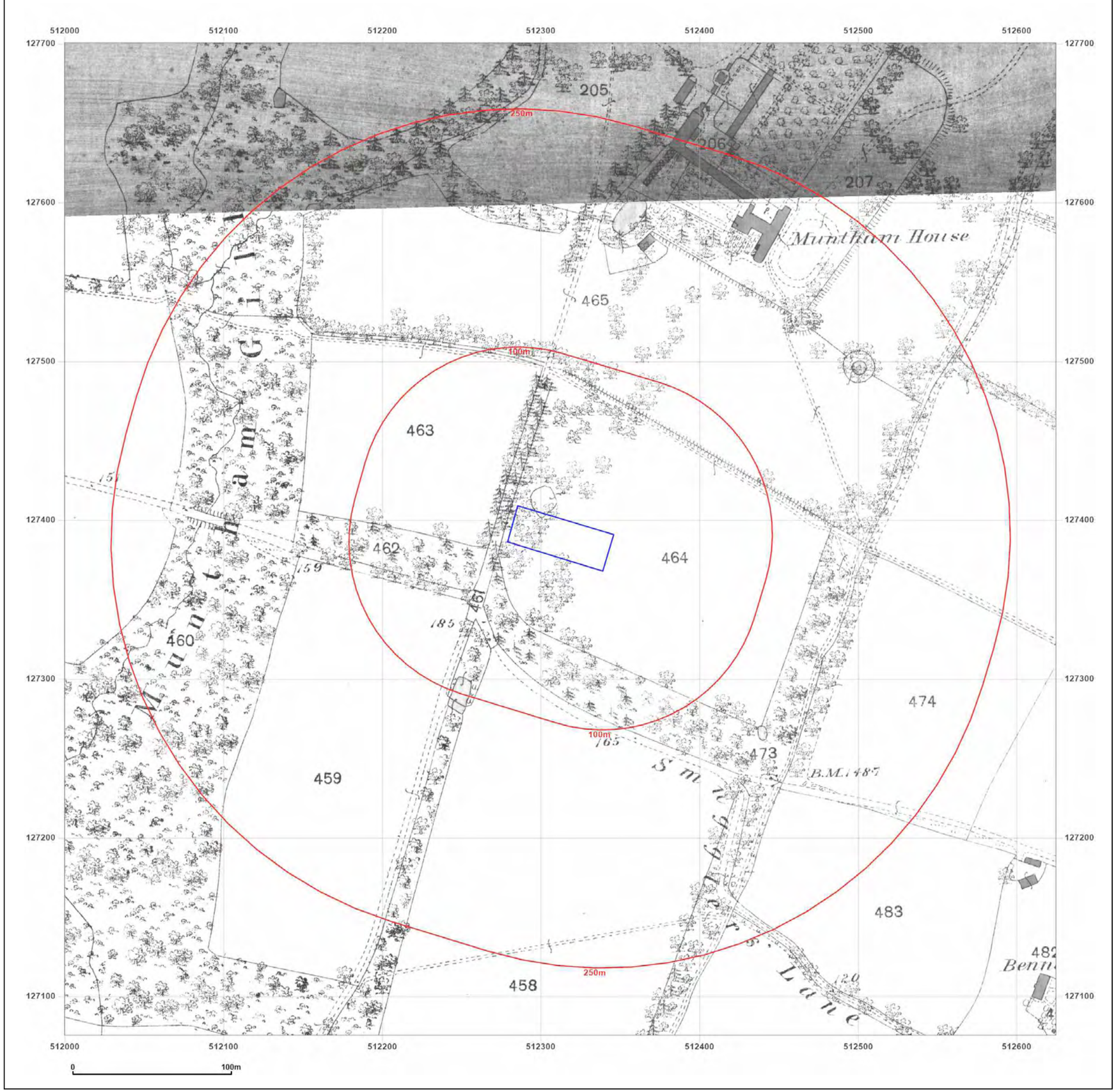
APPENDIX A
Historic Maps



Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: County Series

Map date: **1875-1876**

Scale: 1:2,500

Printed at: 1:2,500

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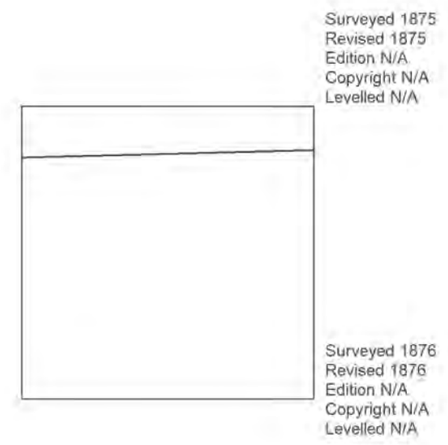

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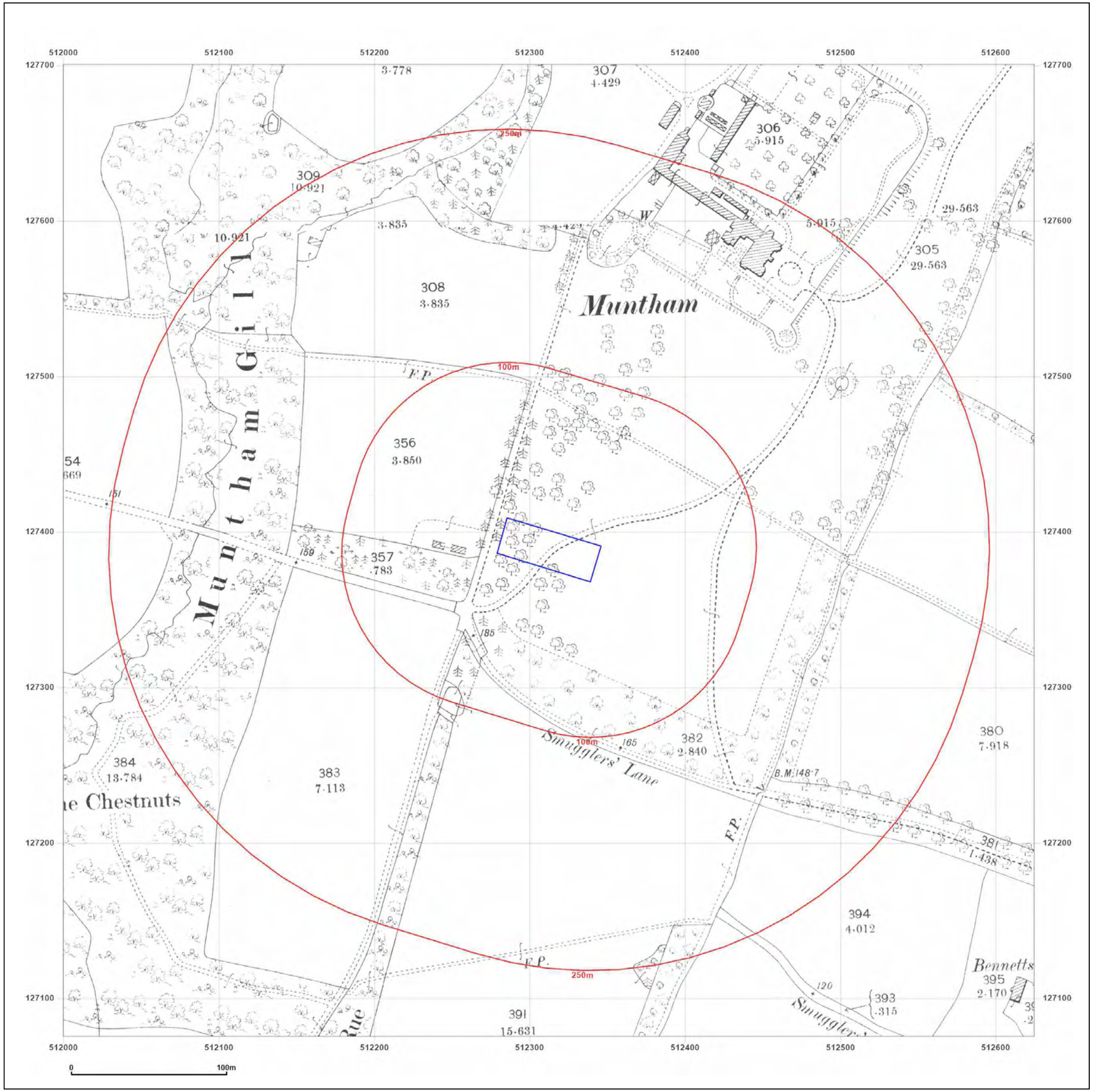
Production date: 18 April 2024

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



Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

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Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

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

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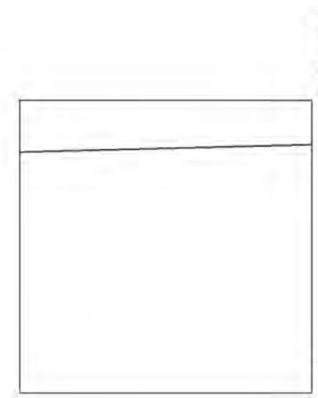

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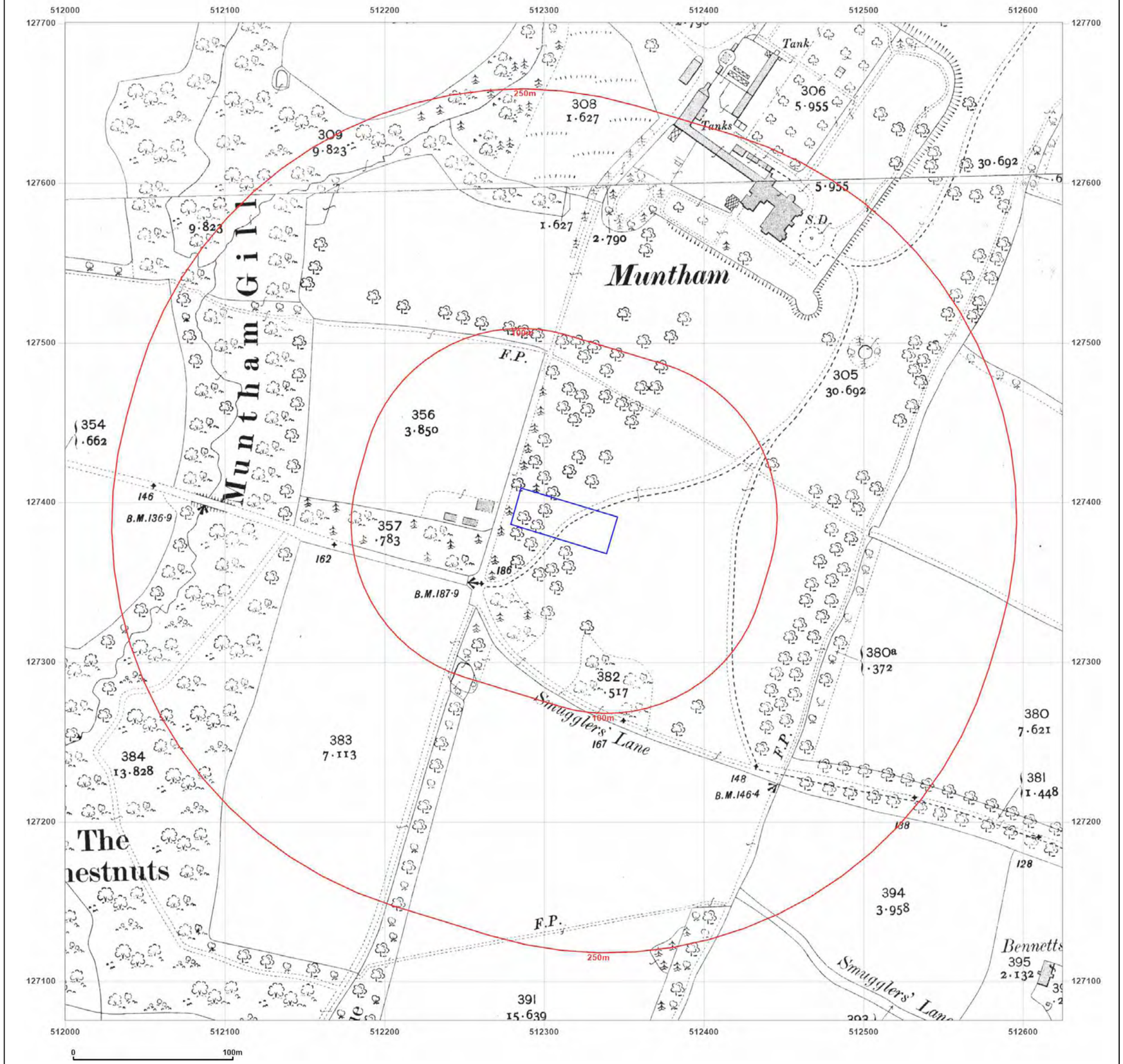

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: County Series
Map date: **1911**
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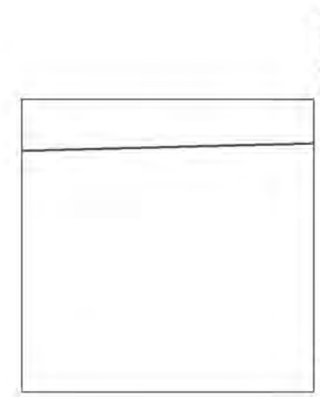

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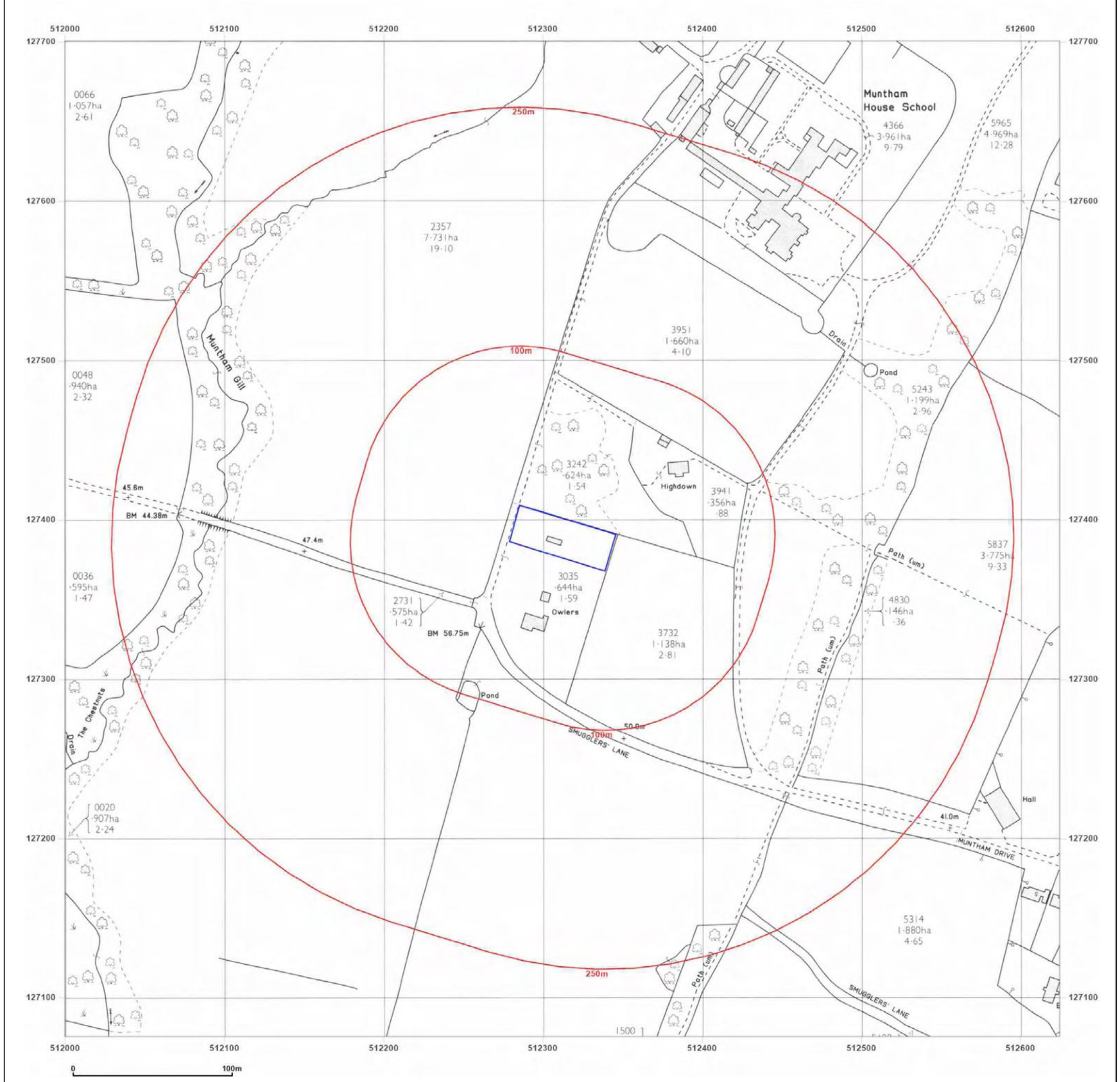

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

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Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: National Grid

Map date: **1975**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1975
Edition N/A
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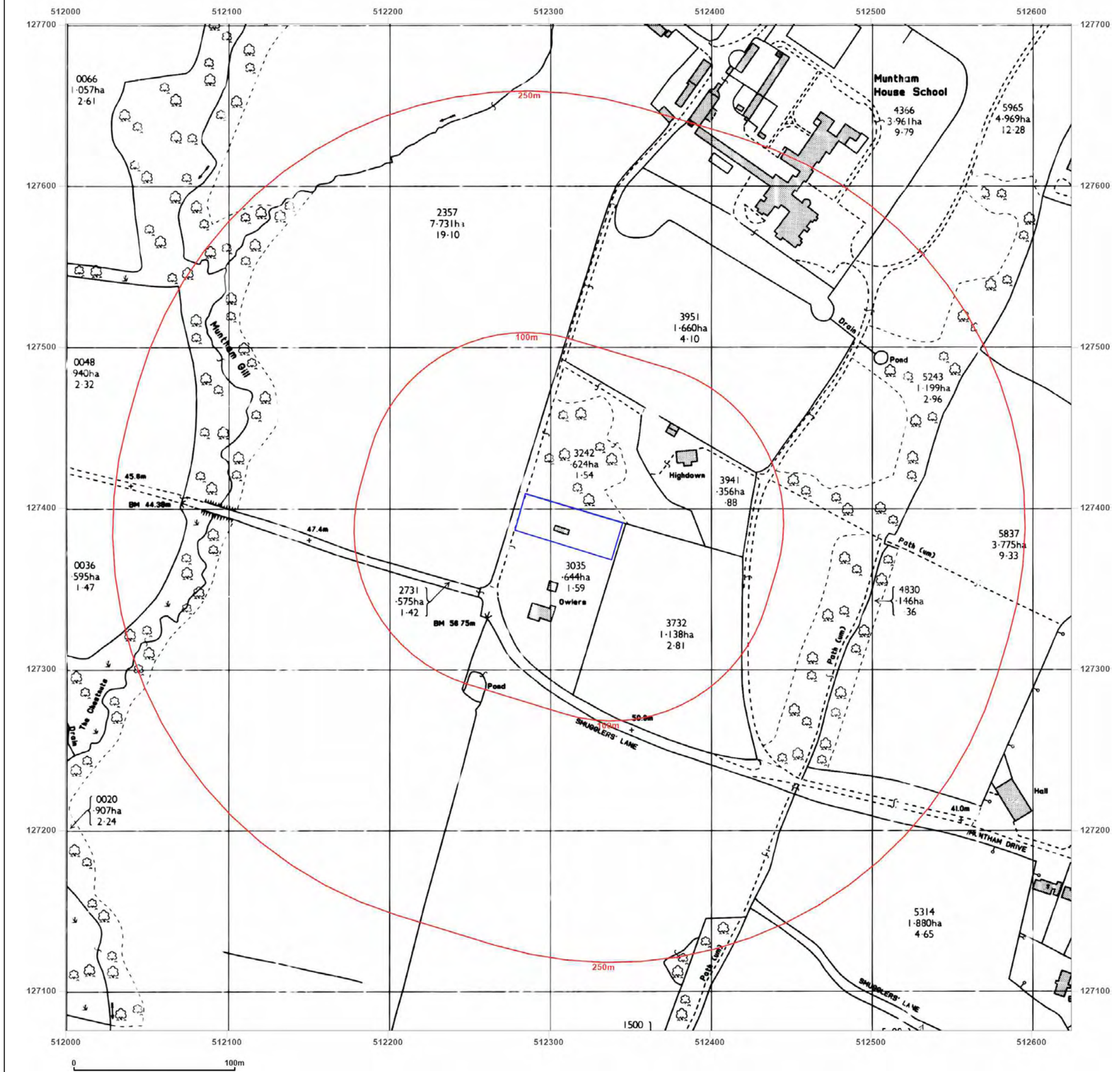

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: National Grid

Map date: **1977**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed N/A
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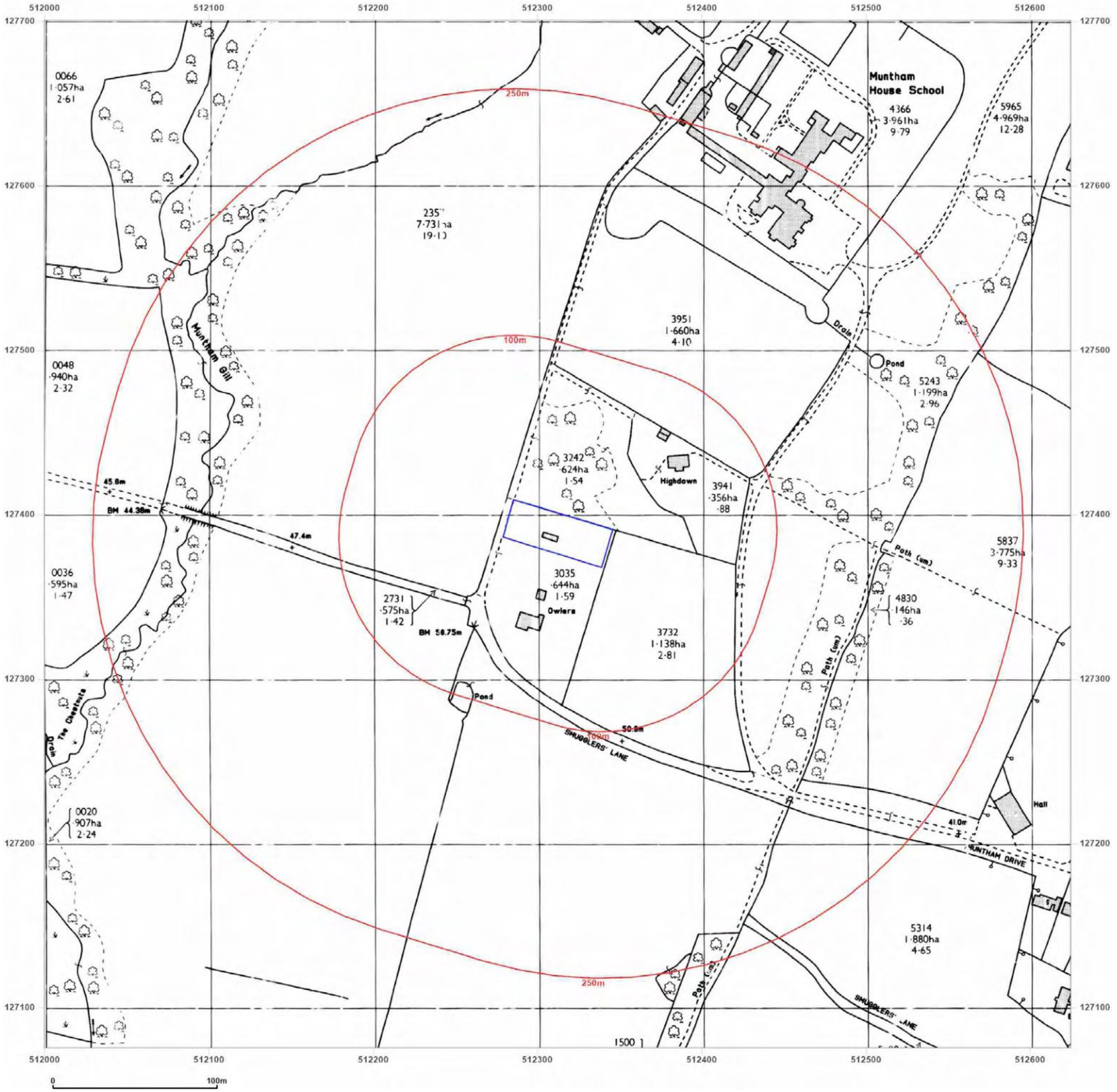

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Site Details:

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SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: National Grid

Map date: **1977**

Scale: 1:2,500

Printed at: 1:2,500

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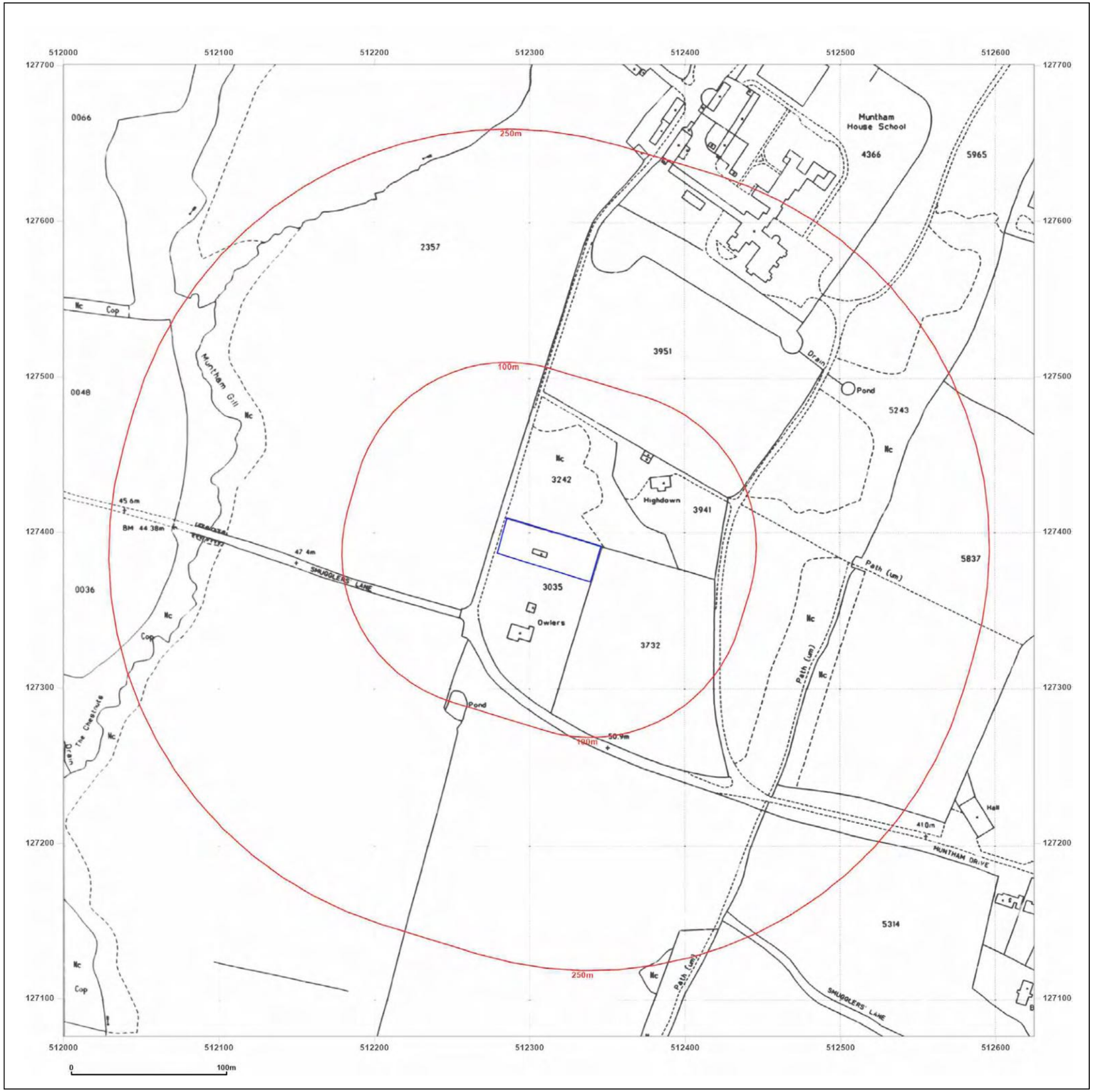

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: National Grid
Map date: **1993**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1993
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Edition N/A
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Levelled N/A

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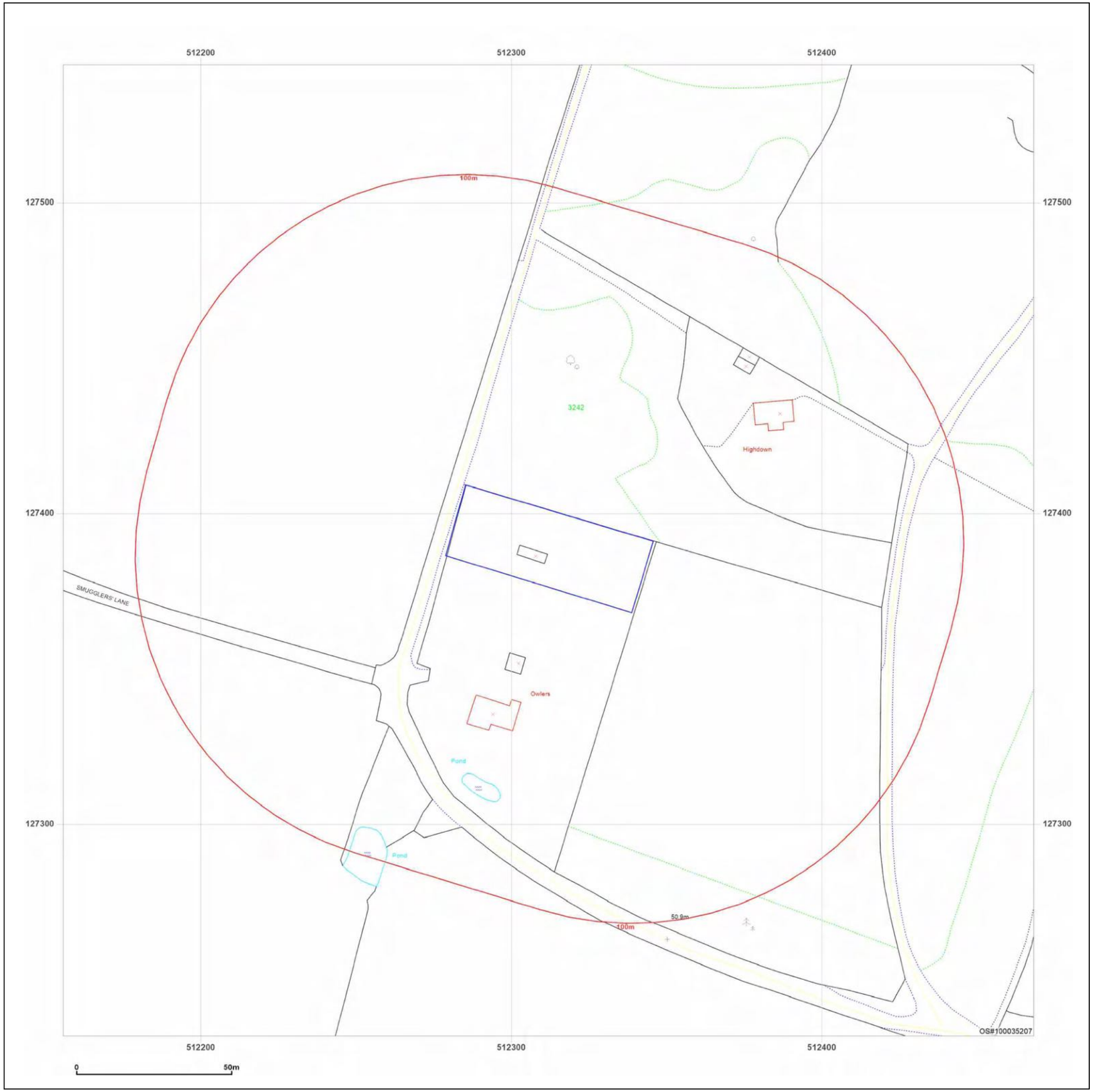

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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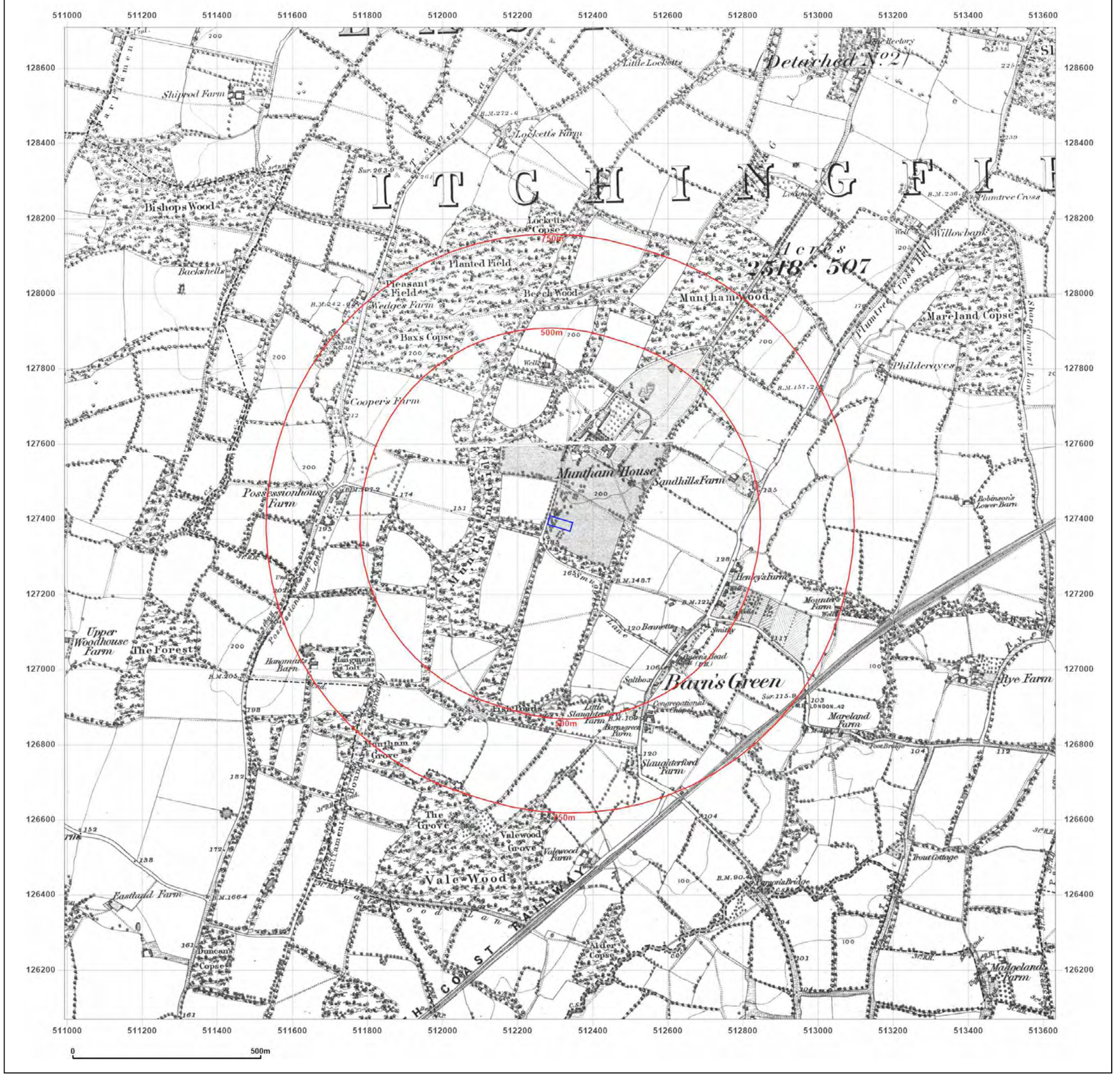

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: County Series

Map date: **1876**

Scale: 1:10,560

Printed at: 1:10,560

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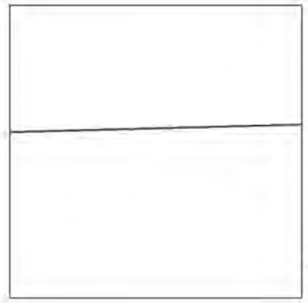
Surveyed 1876
Revised 1876
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1876
Revised 1876
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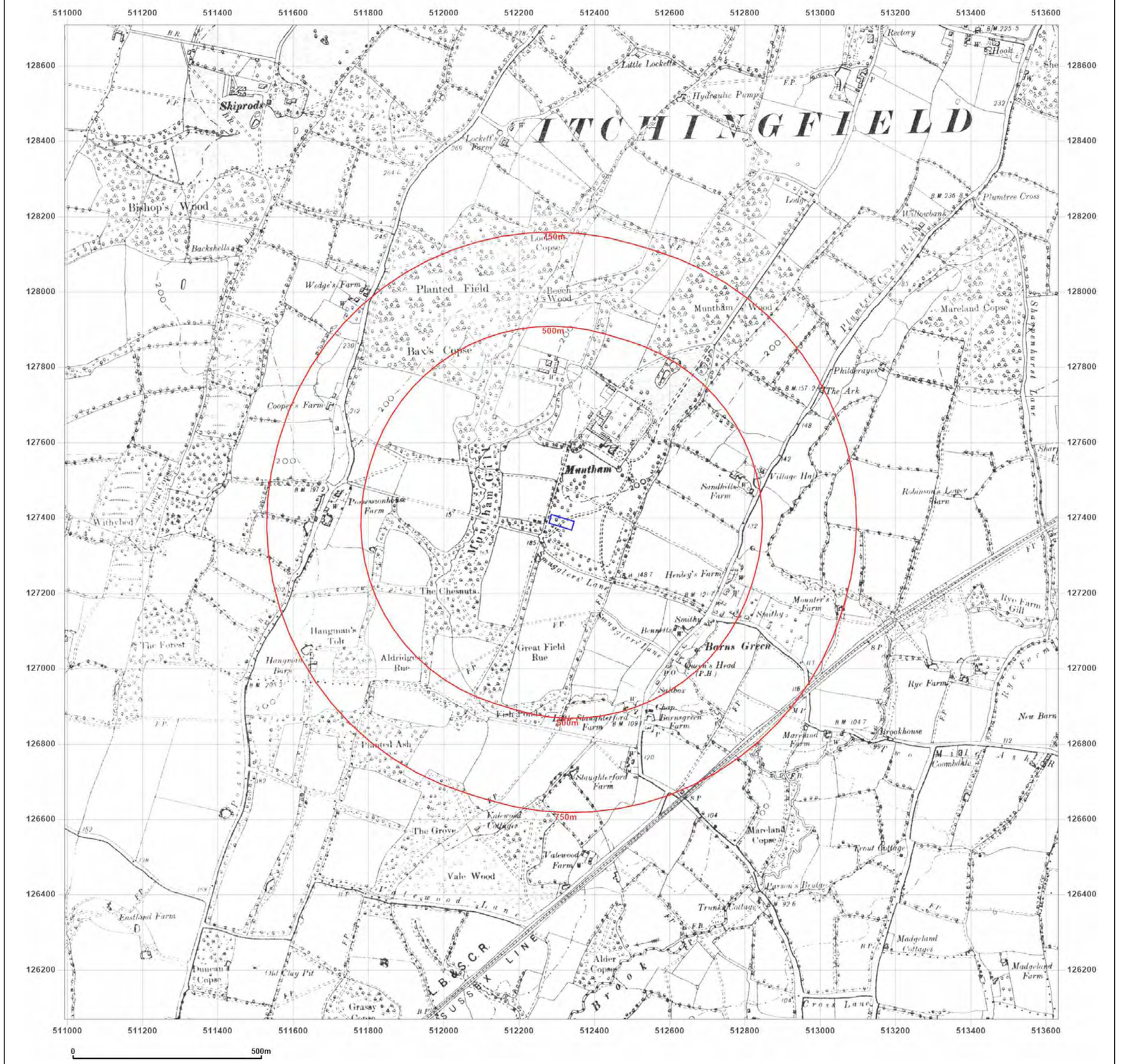

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: County Series

Map date: **1896**

Scale: 1:10,560

Printed at: 1:10,560

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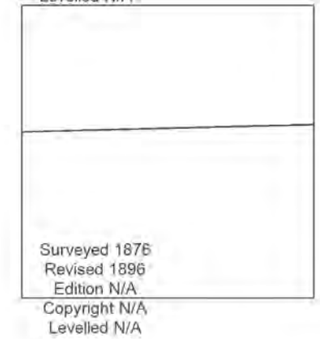

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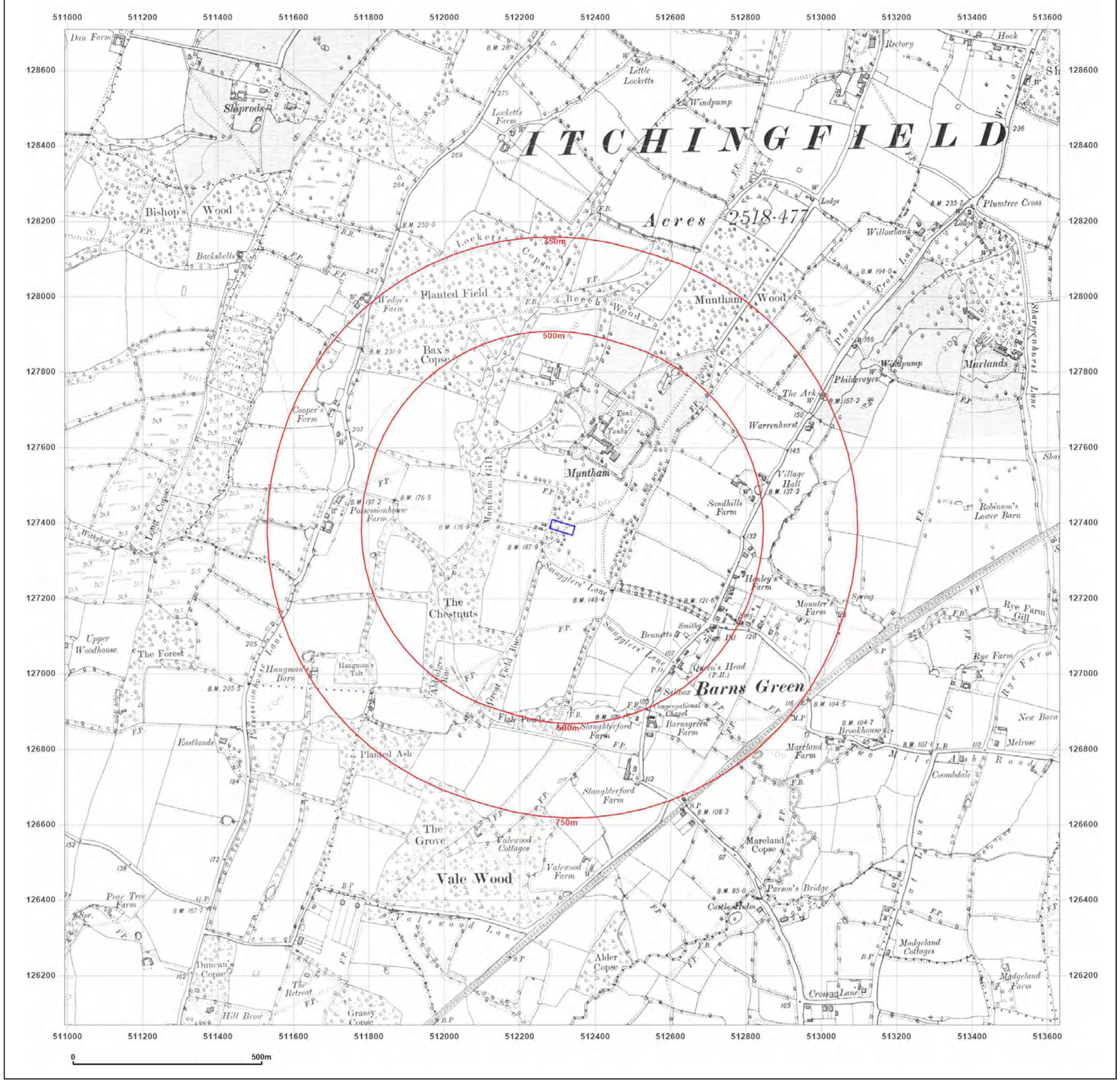

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: County Series

Map date: **1913**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1874
Revised 1913
Edition 1913
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Levelled N/A

Surveyed 1875
Revised 1913
Edition 1913
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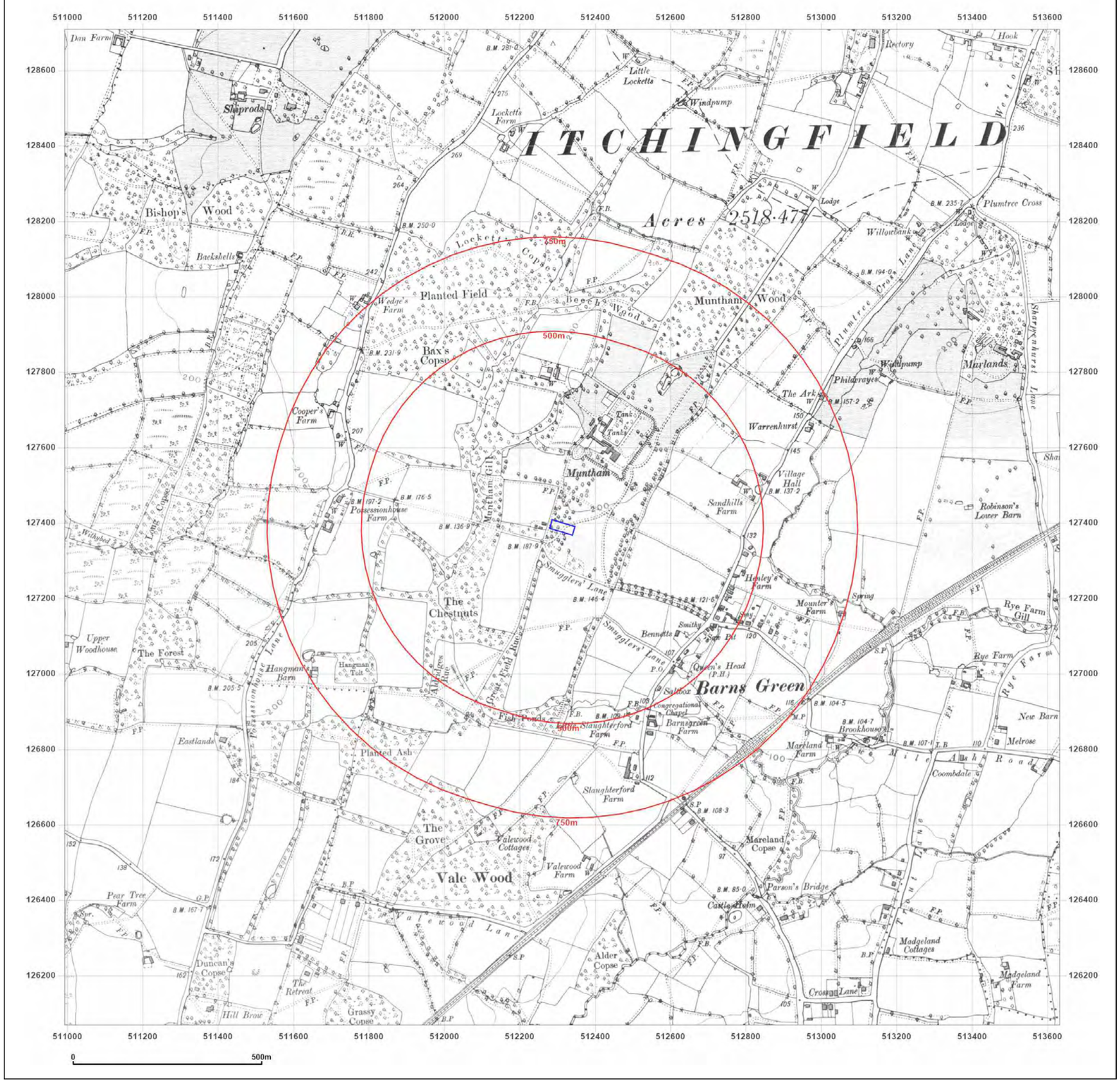

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: County Series
Map date: **1913**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1874
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1913
Edition N/A
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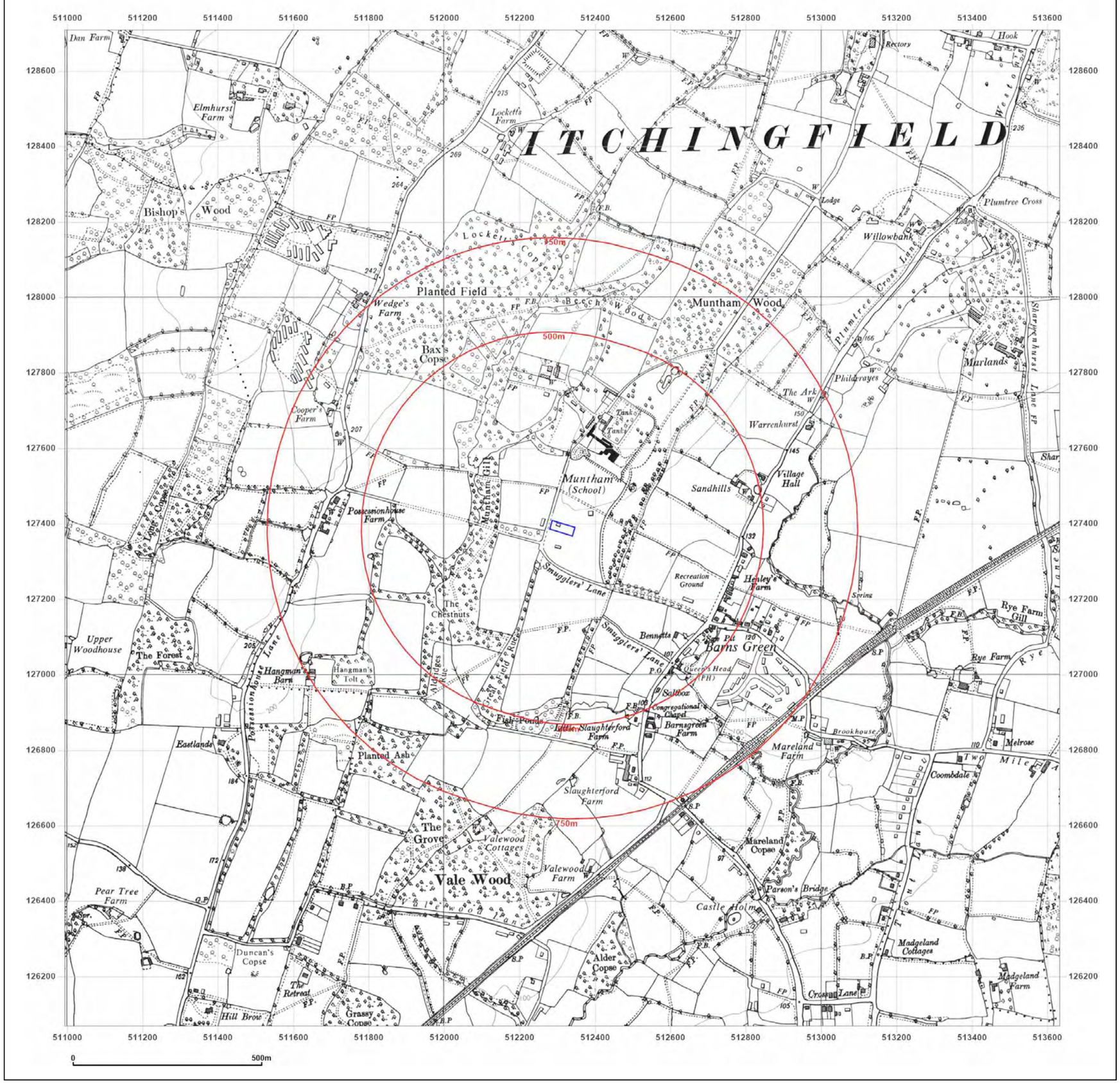

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: Provisional

Map date: **1961**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1956
Edition N/A
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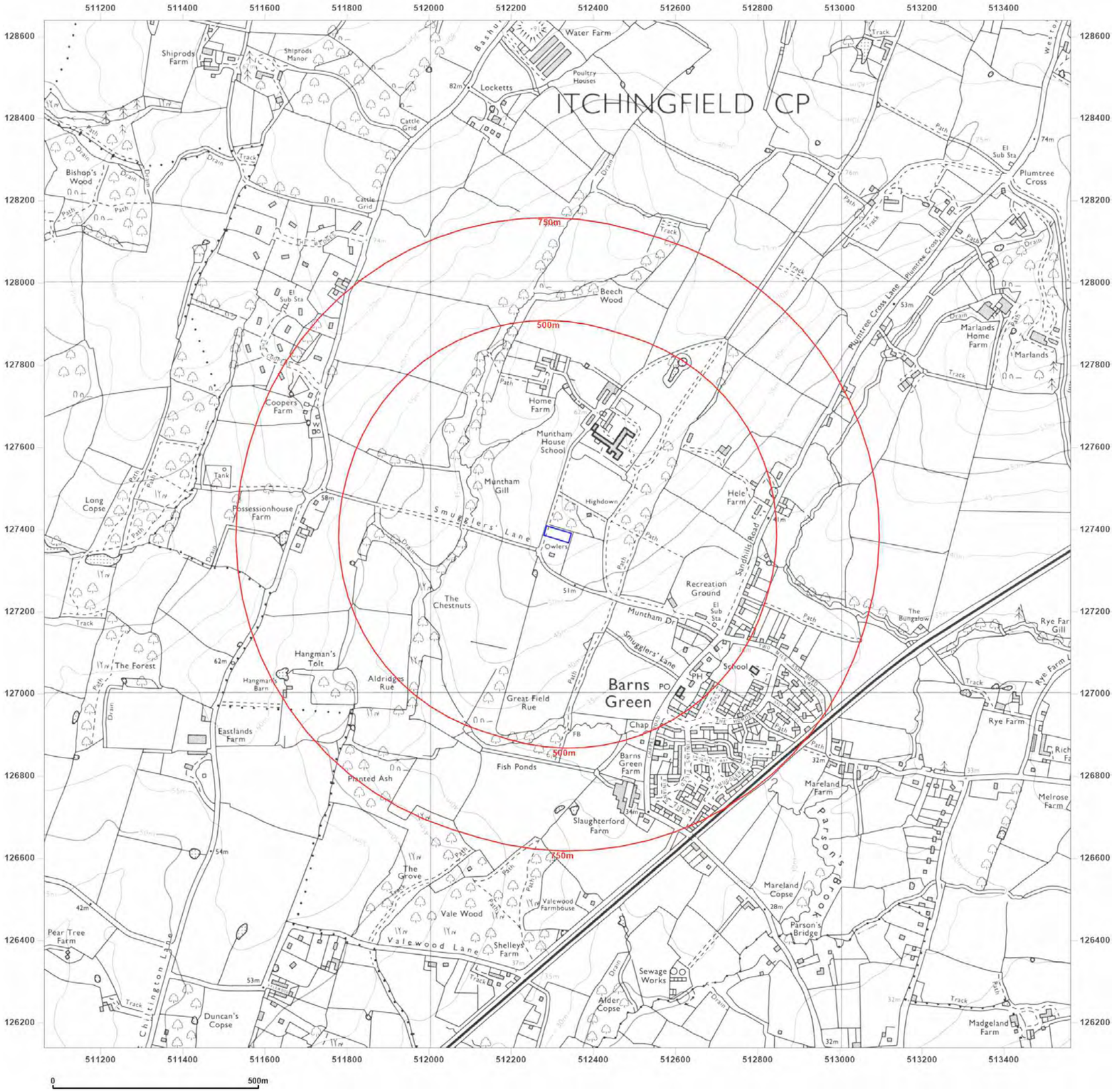

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY
SCHOOL, THE HORDENS,
BARNS GREEN, WEST SUSSEX,
RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: National Grid

Map date: **1981**

Scale: 1:10,000

Printed at: 1:10,000

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Edition N/A
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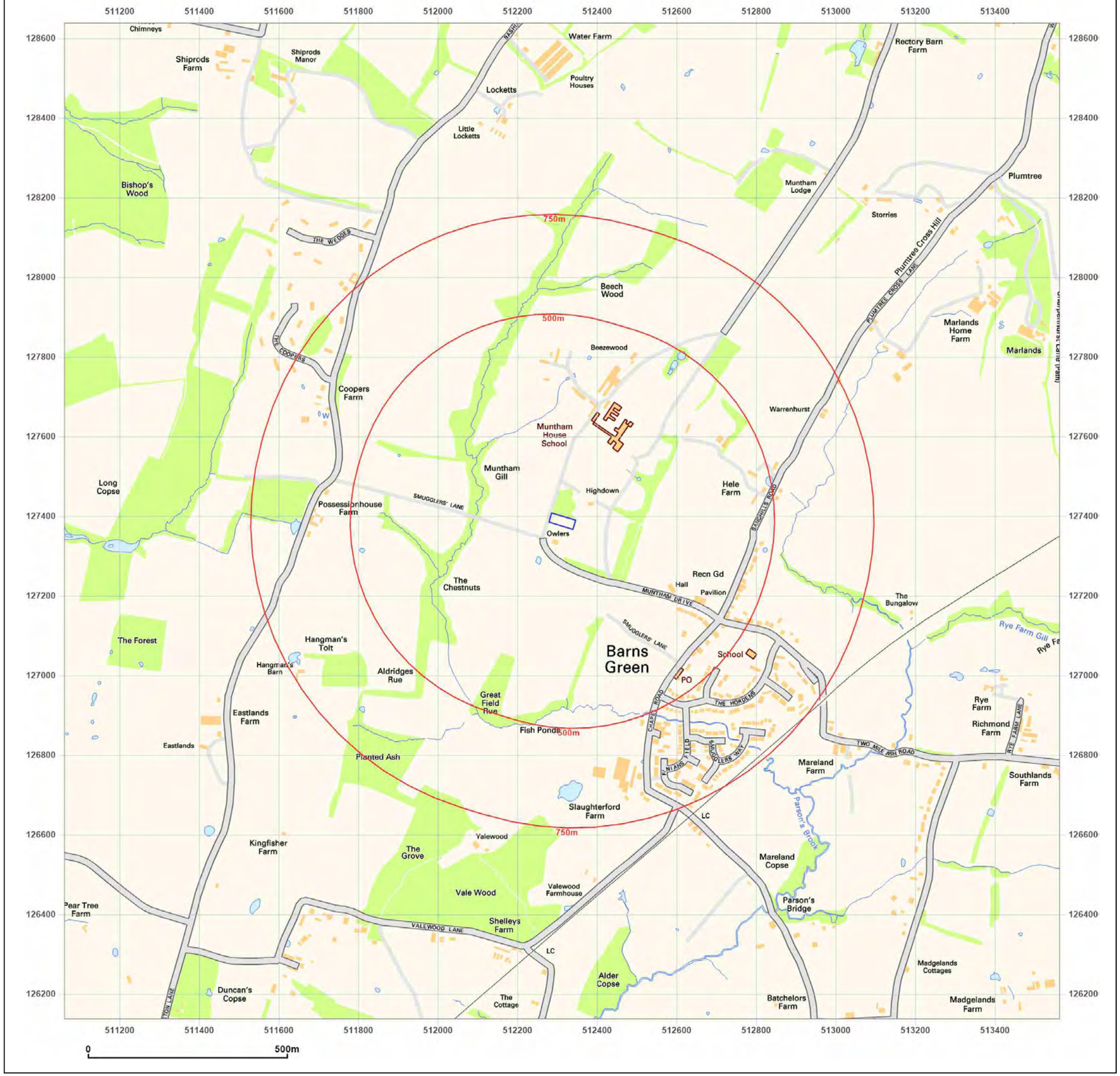

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

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

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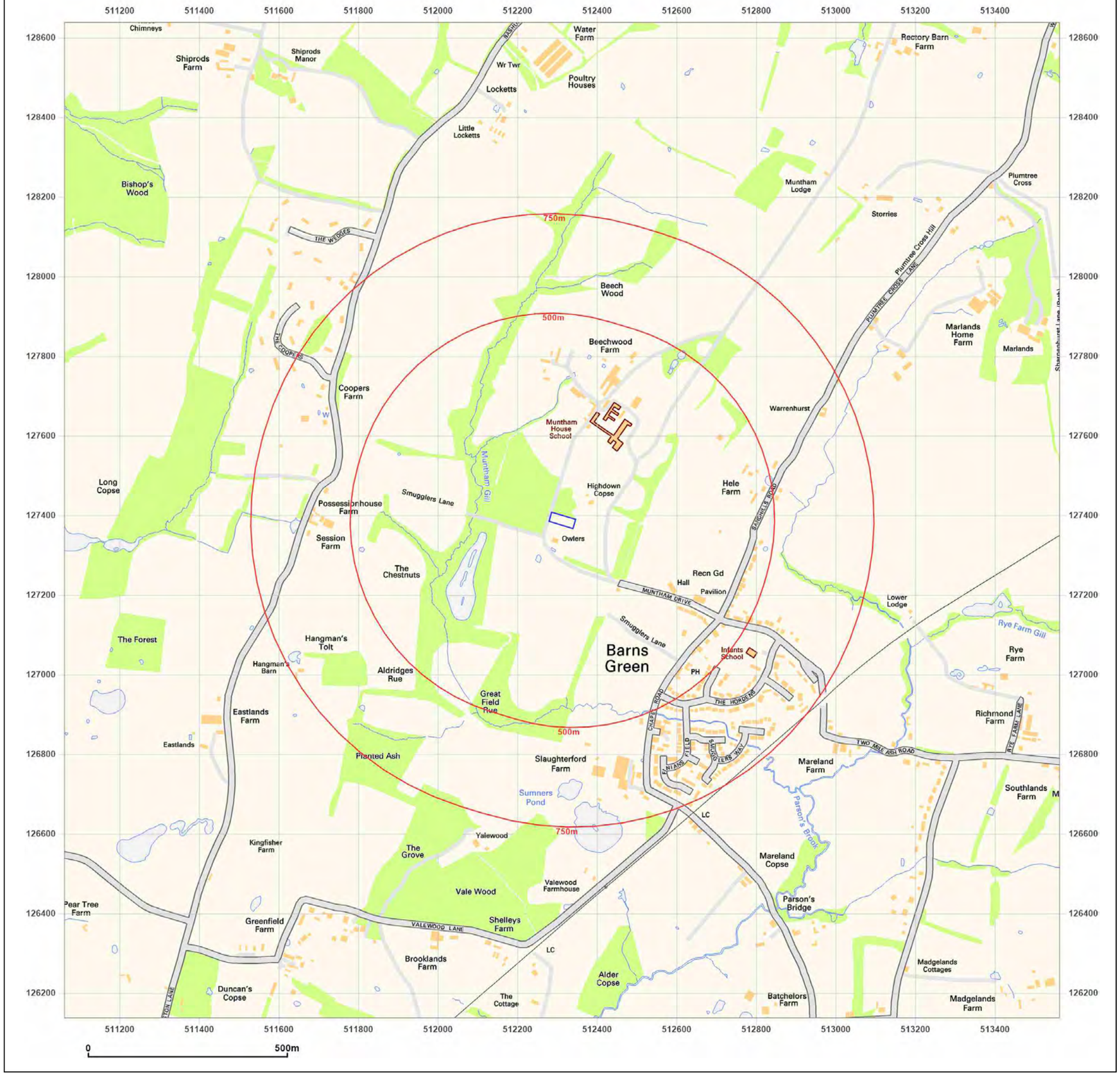

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

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

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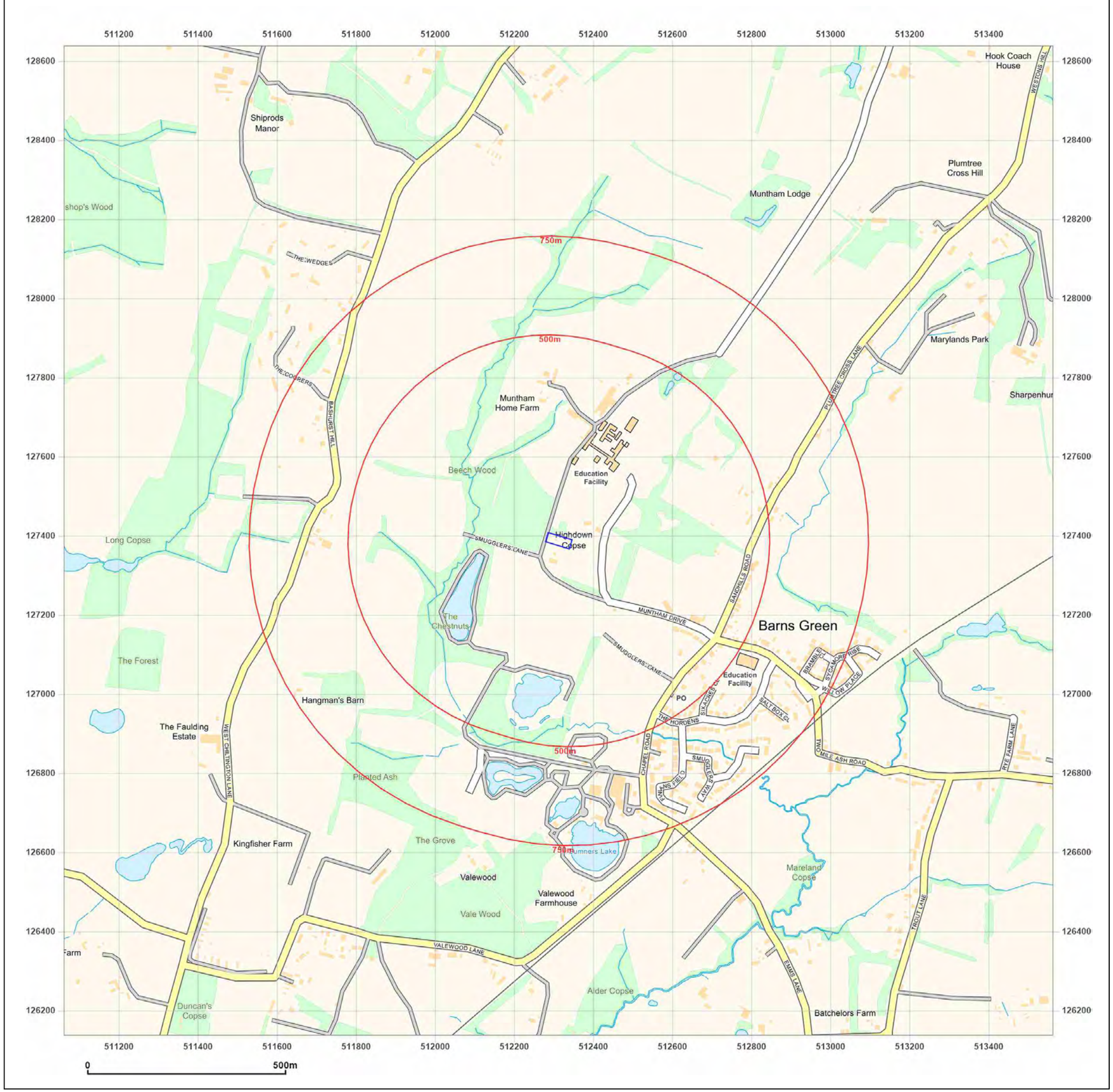

Groundsure INSIGHTS

Site Details:

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Client Ref: 694
Report Ref: GS-CP5-CPQ-Z42-PUY
Grid Ref: 512312, 127388

Map Name: National Grid
Map date: **2024**
Scale: 1:10,000
Printed at: 1:10,000

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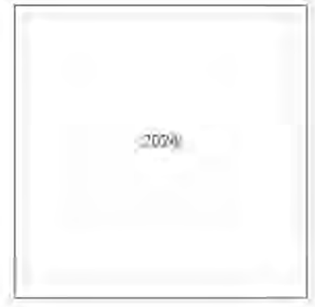

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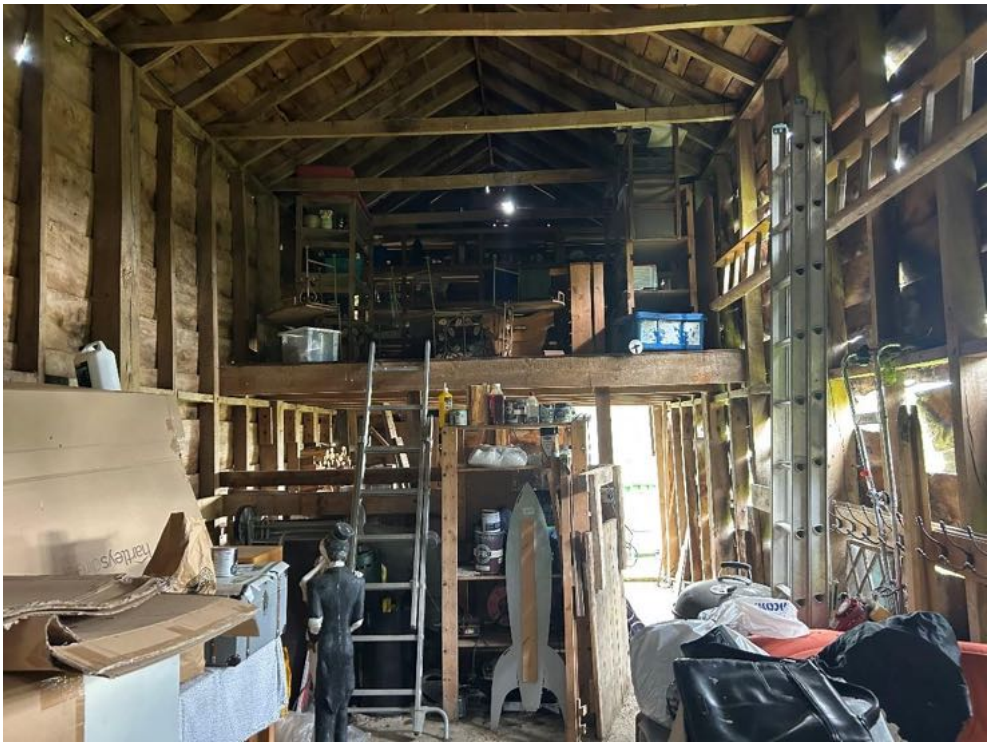
APPENDIX B
Photographs



Photograph 1. The site comprises a timber-clad barn with a concrete apron extending to the east. The remainder of the site comprises soft landscaping.



Photograph 2. The existing barn with concrete flooring is currently used for storage. No fuels were present at the time of our visit.

© Environmental Assessment Services Limited



Photograph 3. The remainder of the site to the east of the existing barn.



Photograph 4. Building materials including wire fencing and corrugated metal sheeting can be found within the sites southwestern corner, adjacent to the access gate.

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APPENDIX C
GroundSure EnviroInsight Report

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

BARNS GREEN PRIMARY SCHOOL, THE HORDENS, BARNS GREEN, WEST SUSSEX, RH13 0PJ

Order Details

Date: 18/04/2024

Your ref: 694

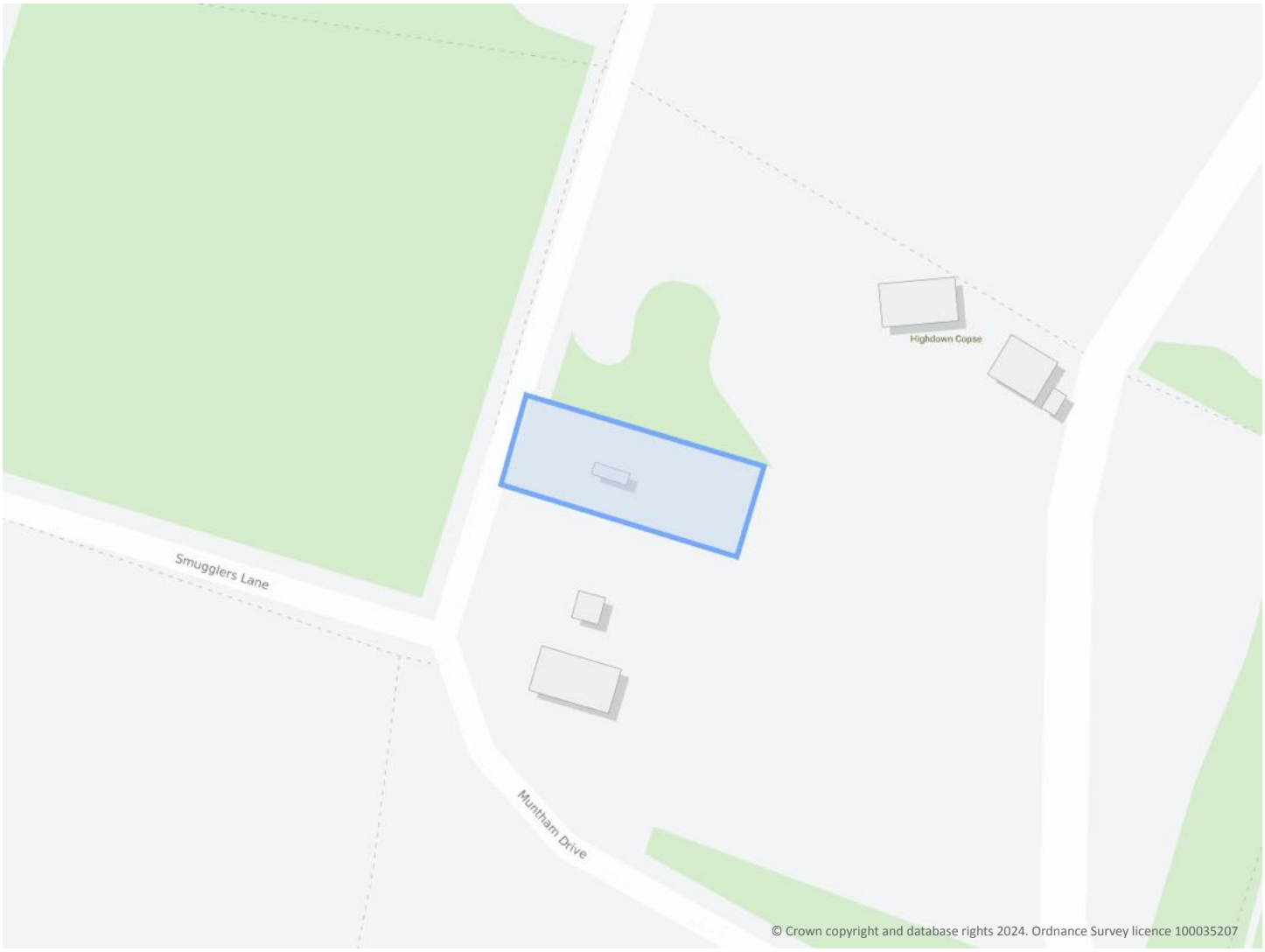
Our Ref: GS-N5H-GFR-2CP-FK2

Site Details

Location: 512312 127388

Area: 0.15 ha

Authority: Horsham District Council ↗



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Summary of findings p. 2 >

OS MasterMap site plan p.14 >

Aerial image p. 9 >

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info@groundsure.com ↗
01273 257 755

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	1	15	-
16 >	1.2 >	Historical tanks >	0	0	0	2	-
17 >	1.3 >	Historical energy features >	0	0	0	1	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
18	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
19 >	2.1 >	Historical industrial land uses >	0	0	1	19	-
20 >	2.2 >	Historical tanks >	0	0	0	2	-
21 >	2.3 >	Historical energy features >	0	0	0	2	-
21	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
23 >	3.7 >	Waste exemptions >	0	0	0	2	-
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	0	-	-
25	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	-

26	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
26	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	-
27	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
27	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	1	0	-
28	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
28	4.15	Pollutant release to public sewer	0	0	0	0	-
28	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	1	0	0	-
29	4.19	Pollution inventory substances	0	0	0	0	-
29	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	None (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	0	0	0
35	5.7	Surface water abstractions	0	0	0	0	0
35	5.8	Potable abstractions	0	0	0	0	0
35	5.9	Source Protection Zones	0	0	0	0	-
36	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
37 >	**6.1 >**	**Water Network (OS MasterMap) >**	0	0	5	-	-

38 >	6.2 >	Surface water features >	0	0	5	-	-
38 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
39 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
39	6.5	WFD Groundwater bodies	0	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
40	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
40	7.2	Historical Flood Events	0	0	0	-	-
40	7.3	Flood Defences	0	0	0	-	-
41	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
41	7.5	Flood Storage Areas	0	0	0	-	-
42	7.6	Flood Zone 2	None (within 50m)				
42	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
43	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
44 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
45	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
46	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
46	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
46	10.4	Special Protection Areas (SPA)	0	0	0	0	0
46	10.5	National Nature Reserves (NNR)	0	0	0	0	0
47	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
47 >	10.7 >	Designated Ancient Woodland >	0	0	3	0	54
49	10.8	Biosphere Reserves	0	0	0	0	0
49	10.9	Forest Parks	0	0	0	0	0
50	10.10	Marine Conservation Zones	0	0	0	0	0
50	10.11	Green Belt	0	0	0	0	0
50	10.12	Proposed Ramsar sites	0	0	0	0	0

50	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
50	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
51	10.15	Nitrate Sensitive Areas	0	0	0	0	0
51 >	10.16 >	Nitrate Vulnerable Zones >	0	0	0	0	3
52 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
53	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
54	11.1	World Heritage Sites	0	0	0	-	-
54	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
54	11.3	National Parks	0	0	0	-	-
54	11.4	Listed Buildings	0	0	0	-	-
55	11.5	Conservation Areas	0	0	0	-	-
55	11.6	Scheduled Ancient Monuments	0	0	0	-	-
55	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
56 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
57	12.2	Open Access Land	0	0	0	-	-
57	12.3	Tree Felling Licences	0	0	0	-	-
57	12.4	Environmental Stewardship Schemes	0	0	0	-	-
57	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
58 >	13.1 >	Priority Habitat Inventory >	0	1	6	-	-
59	13.2	Habitat Networks	0	0	0	-	-
59	13.3	Open Mosaic Habitat	0	0	0	-	-
59	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
60 >	14.1 >	10k Availability >	Identified (within 500m)				
61	14.2	Artificial and made ground (10k)	0	0	0	0	-
62	14.3	Superficial geology (10k)	0	0	0	0	-

62	14.4	Landslip (10k)	0	0	0	0	-
63 >	14.5 >	Bedrock geology (10k) >	1	0	0	0	-
64	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
65 >	15.1 >	50k Availability >	Identified (within 500m)				
66	15.2	Artificial and made ground (50k)	0	0	0	0	-
66	15.3	Artificial ground permeability (50k)	0	0	-	-	-
67	15.4	Superficial geology (50k)	0	0	0	0	-
67	15.5	Superficial permeability (50k)	None (within 50m)				
67	15.6	Landslip (50k)	0	0	0	0	-
67	15.7	Landslip permeability (50k)	None (within 50m)				
68 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
69 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
69	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
70	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
71 >	17.1 >	Shrink swell clays >	Low (within 50m)				
72 >	17.2 >	Running sands >	Negligible (within 50m)				
73 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
74 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
75 >	17.5 >	Landslides >	Very low (within 50m)				
76 >	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
78	18.1	BritPits	0	0	0	0	-
79	18.2	Surface ground workings	0	0	0	-	-
79	18.3	Underground workings	0	0	0	0	0
79	18.4	Underground mining extents	0	0	0	0	-
79	18.5	Historical Mineral Planning Areas	0	0	0	0	-

79 >	18.6 >	Non-coal mining >	1	0	0	0	0
80	18.7	JPB mining areas	None (within 0m)				
80	18.8	The Coal Authority non-coal mining	0	0	0	0	-
80	18.9	Researched mining	0	0	0	0	-
81	18.10	Mining record office plans	0	0	0	0	-
81	18.11	BGS mine plans	0	0	0	0	-
81	18.12	Coal mining	None (within 0m)				
81	18.13	Brine areas	None (within 0m)				
81	18.14	Gypsum areas	None (within 0m)				
82	18.15	Tin mining	None (within 0m)				
82	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
83	19.1	Natural cavities	0	0	0	0	-
83	19.2	Mining cavities	0	0	0	0	0
83	19.3	Reported recent incidents	0	0	0	0	-
83	19.4	Historical incidents	0	0	0	0	-
84	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
85 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
87 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	0	-	-	-
87	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
87	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
88	22.1	Underground railways (London)	0	0	0	-	-
88	22.2	Underground railways (Non-London)	0	0	0	-	-
88	22.3	Railway tunnels	0	0	0	-	-
88	22.4	Historical railway and tunnel features	0	0	0	-	-
88	22.5	Royal Mail tunnels	0	0	0	-	-

89	22.6	Historical railways	0	0	0	-	-
89	22.7	Railways	0	0	0	-	-
89	22.8	Crossrail 1	0	0	0	0	-
89	22.9	Crossrail 2	0	0	0	0	-
89	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 24/04/2021

Site Area: 0.15ha

Recent site history - 2018 aerial photograph



Capture Date: 14/05/2018

Site Area: 0.15ha

Recent site history - 2012 aerial photograph



Capture Date: 31/08/2012

Site Area: 0.15ha

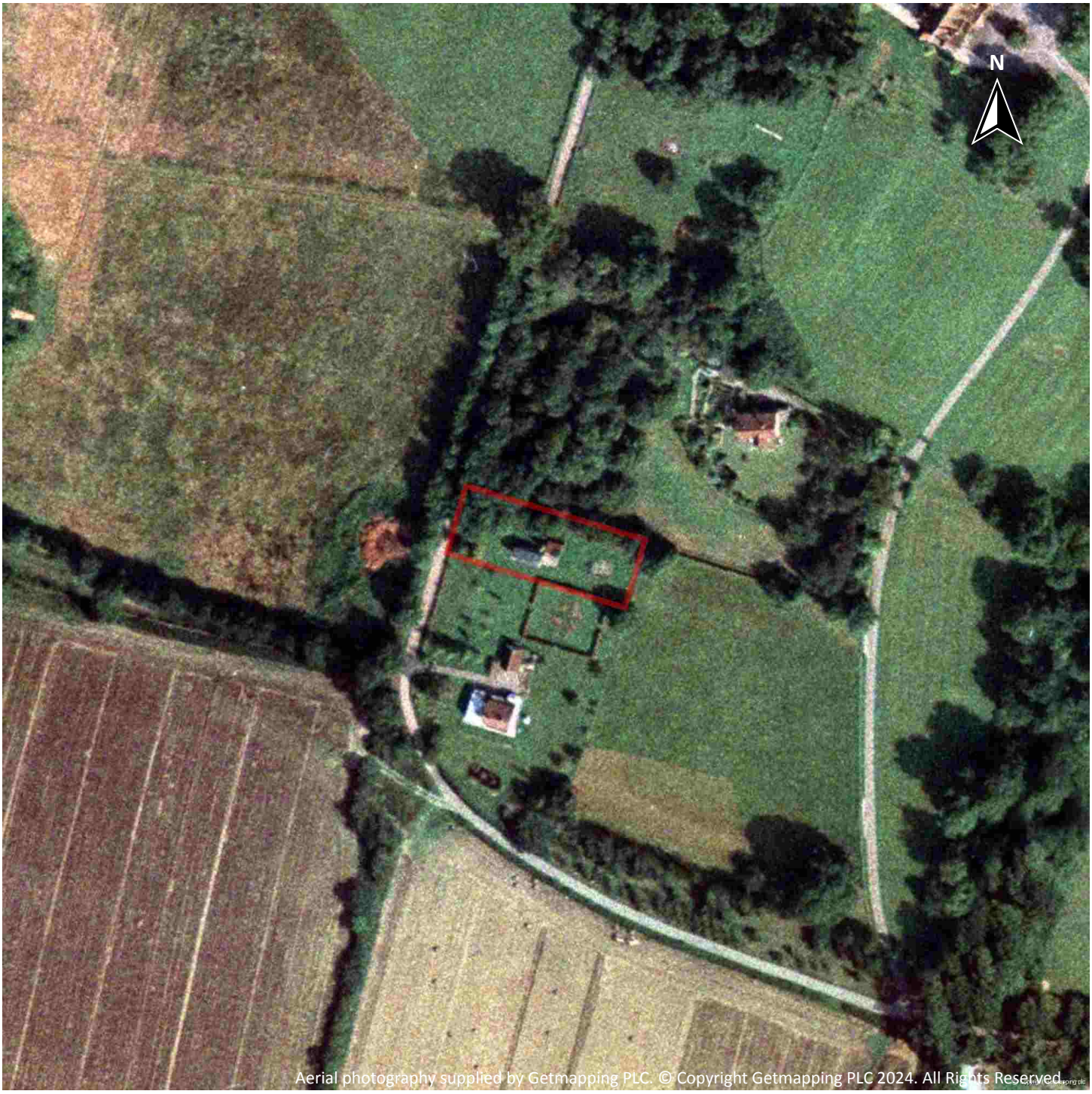
Recent site history - 2005 aerial photograph



Capture Date: 17/07/2005

Site Area: 0.15ha

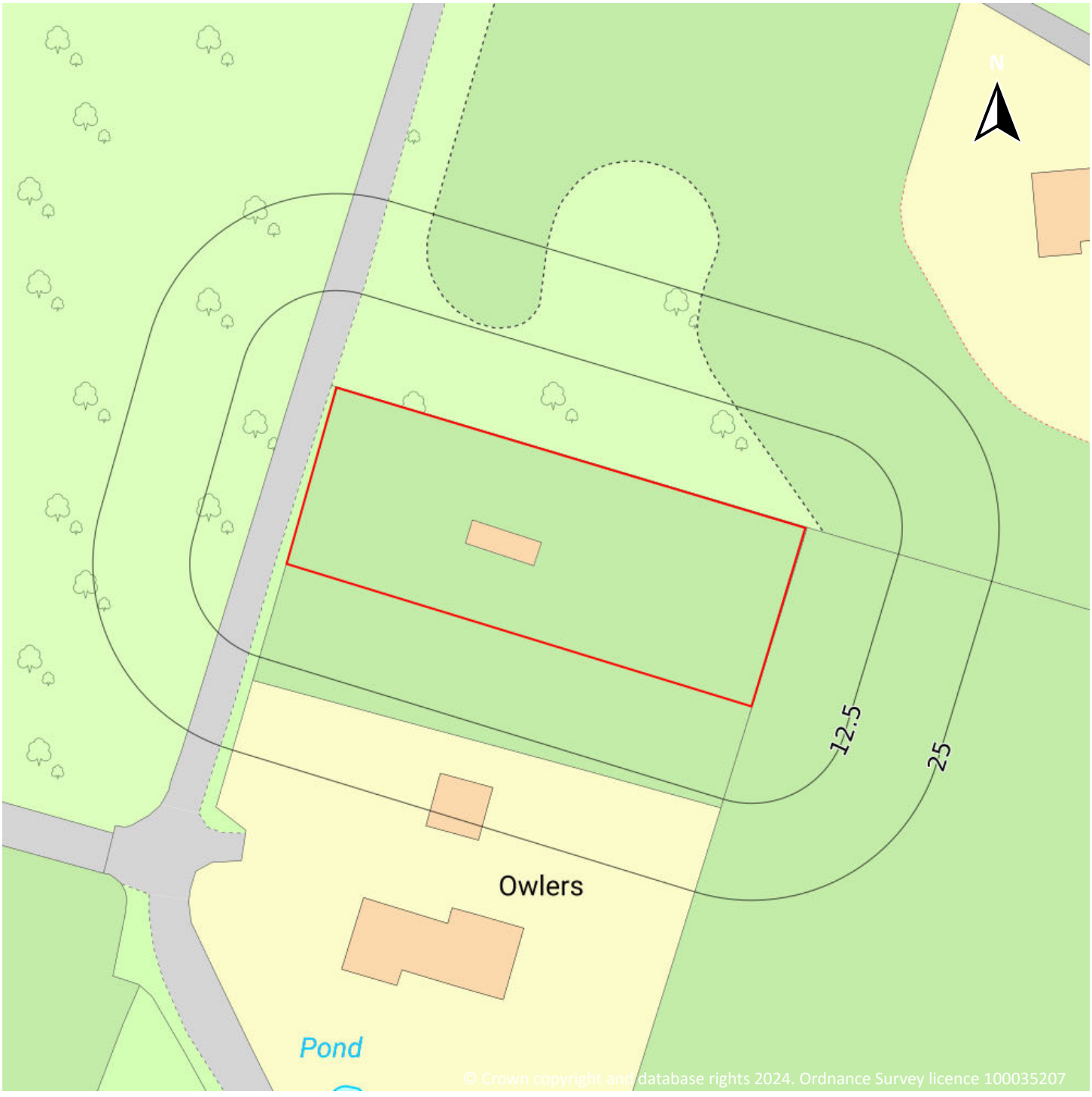
Recent site history - 1999 aerial photograph



Capture Date: 29/08/1999

Site Area: 0.15ha

OS MasterMap site plan



Site Area: 0.15ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	16

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	249m NE	Unspecified Tanks	1913	2269638

ID	Location	Land use	Dates present	Group ID
A	253m NE	Unspecified Tanks	1913 - 1961	2263221
A	305m NE	Unspecified Tank	1913	2235488
A	309m NE	Unspecified Tank	1913	2179896
A	311m NE	Unspecified Tank	1961	2153321
B	373m SE	Smithy	1913	2207339
1	378m NE	Unspecified Heap	1876	2135733
B	400m SE	Saw Pit	1913	2214470
B	403m SE	Electric Substation	1981	2164381
2	422m S	Unspecified Heap	1913 - 1961	2282639
B	423m SE	Smithy	1876 - 1896	2184389
B	434m SE	Smithy	1913	2170275
B	450m SE	Saw Pit	1961	2239695
B	452m SE	Saw Pit	1913	2175672
3	477m SE	Smithy	1913	2265131
4	484m S	Unspecified Heap	1961	2135732

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**2**

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

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	254m NE	Tanks	1911	374932
A	305m NE	Unspecified Tank	1911	359506

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

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
B	402m SE	Electricity Substation	1975 - 1993	270198

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	20

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 19 >**

ID	Location	Land Use	Date	Group ID
A	249m NE	Unspecified Tanks	1913	2269638
A	253m NE	Unspecified Tanks	1913	2263221
A	256m NE	Unspecified Tanks	1961	2263221

ID	Location	Land Use	Date	Group ID
A	305m NE	Unspecified Tank	1913	2235488
A	309m NE	Unspecified Tank	1913	2179896
A	311m NE	Unspecified Tank	1961	2153321
B	373m SE	Smithy	1913	2207339
1	378m NE	Unspecified Heap	1876	2135733
B	400m SE	Saw Pit	1913	2214470
B	403m SE	Electric Substation	1981	2164381
C	422m S	Unspecified Heap	1913	2282639
B	423m SE	Smithy	1896	2184389
C	426m S	Unspecified Heap	1961	2282639
B	428m SE	Smithy	1876	2184389
B	434m SE	Smithy	1913	2170275
B	450m SE	Saw Pit	1961	2239695
B	452m SE	Saw Pit	1913	2175672
B	452m SE	Saw Pit	1913	2175672
2	477m SE	Smithy	1913	2265131
3	484m S	Unspecified Heap	1961	2135732

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**2**

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 19 >**

ID	Location	Land Use	Date	Group ID
A	254m NE	Tanks	1911	374932
A	305m NE	Unspecified Tank	1911	359506

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	2

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 19 >**

ID	Location	Land Use	Date	Group ID
B	402m SE	Electricity Substation	1993	270198
B	402m SE	Electricity Substation	1975	270198

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	2

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

Features are displayed on the Waste and landfill map on **page 22 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	435m SE	2 ELM COTTAGES, CHAPEL ROAD, BARNS GREEN, HORSHAM, RH13 0PS	WEX191586	Disposing of waste exemption	On a Farm	Burning waste in the open

ID	Location	Site	Reference	Category	Sub-Category	Description
A	435m SE	2 ELM COTTAGES, CHAPEL ROAD, BARNS GREEN, HORSHAM, RH13 0PS	WEX036742	Disposing of waste exemption	On a farm	Burning waste in the open

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	0

Current potentially contaminative industrial sites.

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	
2	222m NW	MUNTHAM HOUSE SCHOOL, MUNTHAM HOUSE SCHOOL, BARNS GREEN, NR HORSHAM, WEST SUSSEX	Effluent Type: SEWAGE DISCHARGES - UNSPECIFIED - NOT WATER COMPANY Permit Number: S01548 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 08/12/1966 Effective Date: 08/12/1966 Revocation Date: 01/07/1991

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 25 >**

ID	Location	Details	
1	28m SW	Incident Date: 17/06/2003 Incident Identification: 166507 Pollutant: Oils and Fuel Pollutant Description: Other Oil or Fuel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer

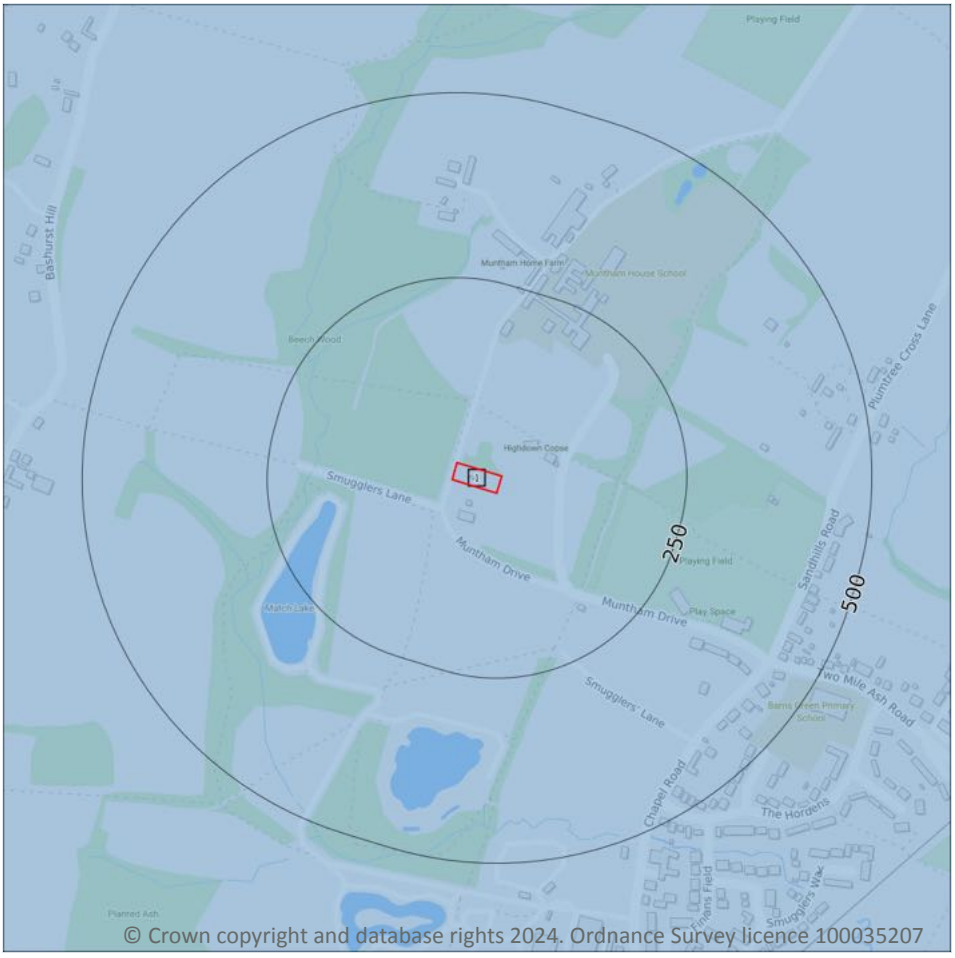
5.1 Superficial aquifer

Records within 500m	0

Aquifer status of groundwater held within superficial geology.

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

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	1

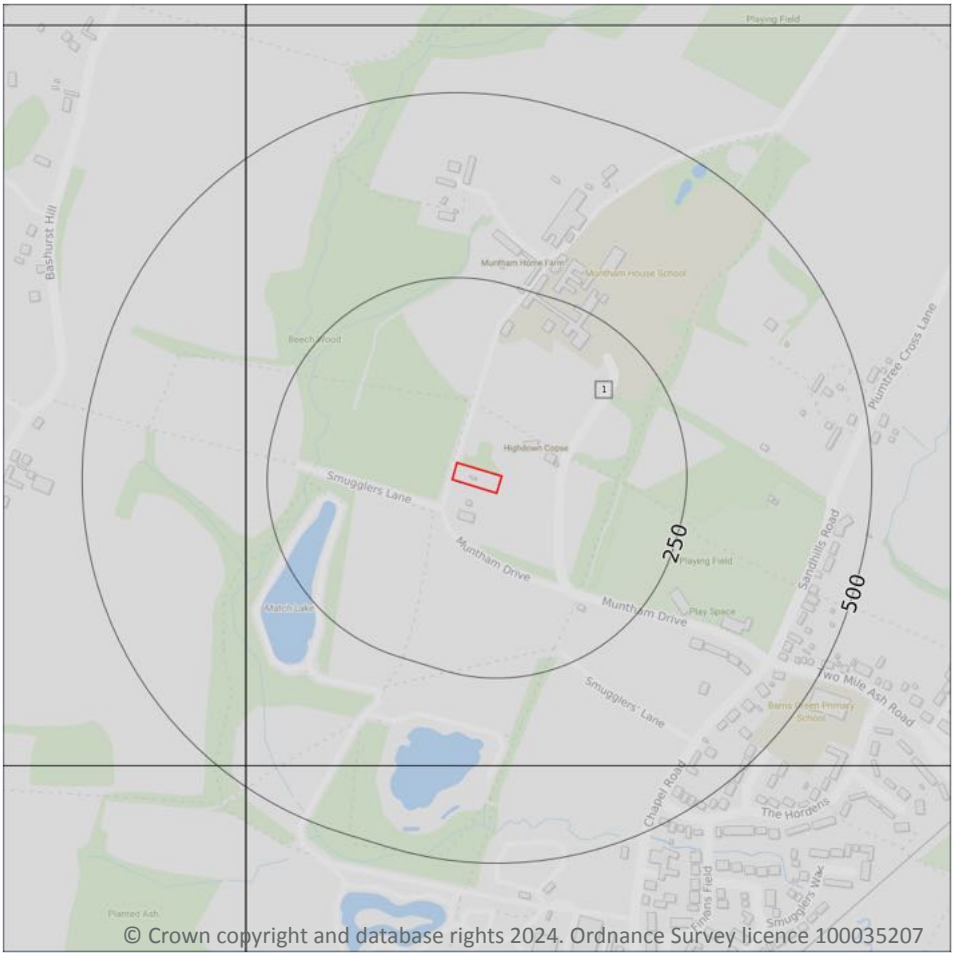
Aquifer status of groundwater held within bedrock geology.

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



5.3 Groundwater vulnerability

Records within 50m	1

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

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

Features are displayed on the Groundwater vulnerability map on **page 33 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Unproductive aquifer (may have productive aquifer beneath) Combined classification: Unproductive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: 40-70% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Unproductive Aquifer type: Unproductive Flow mechanism: Well connected fractures**

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

5.6 Groundwater abstractions

Records within 2000m	0

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

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

5.7 Surface water abstractions

Records within 2000m	0

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

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

5.8 Potable abstractions

Records within 2000m	0

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	5

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 37 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	181m W	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
3	187m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	189m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	223m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	235m NW	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	**5**

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 37 >**

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 37 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**River**	**Adur West**	**GB107041012290**	**Adur Upper**	**Adur and Ouse**

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 37 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1061m SE	River	Adur West	GB107041012290 ↗	Poor	Fail	Poor	2019

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

6.5 WFD Groundwater bodies

Records on site	0

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

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

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

7.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

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

7.7 Flood Zone 3

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

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

8 Surface water flooding

8.1 Surface water flooding

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

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

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

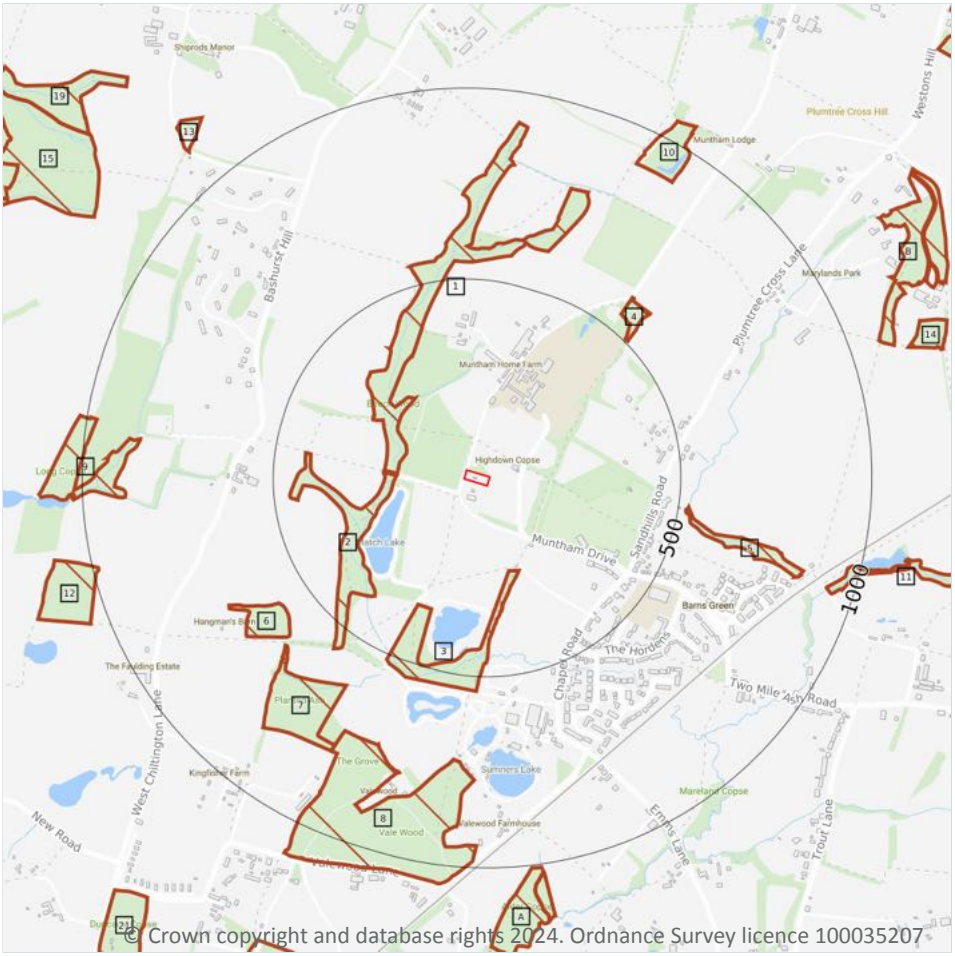
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 44 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



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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	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

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

10.7 Designated Ancient Woodland

Records within 2000m	57

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 45 >**

ID	Location	Name	Woodland Type
1	164m W	Unknown	Ancient & Semi-Natural Woodland
2	177m W	Unknown	Ancient & Semi-Natural Woodland
3	230m S	Unknown	Ancient & Semi-Natural Woodland
4	506m NE	Unknown	Ancient & Semi-Natural Woodland
5	521m E	Unknown	Ancient & Semi-Natural Woodland
6	579m SW	Unknown	Ancient & Semi-Natural Woodland
7	623m SW	Unknown	Ancient & Semi-Natural Woodland
8	721m S	Vale Wood	Ancient & Semi-Natural Woodland
9	854m W	Unknown	Ancient & Semi-Natural Woodland
10	906m NE	Unknown	Ancient & Semi-Natural Woodland
11	927m E	Unknown	Ancient & Semi-Natural Woodland
12	986m W	Unknown	Ancient & Semi-Natural Woodland
A	1007m S	Alder Copse	Ancient & Semi-Natural Woodland
A	1022m S	Unknown	Ancient & Semi-Natural Woodland
B	1080m E	Unknown	Ancient & Semi-Natural Woodland
13	1105m NW	Unknown	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
14	1147m E	Unknown	Ancient & Semi-Natural Woodland
15	1179m NW	Unknown	Ancient & Semi-Natural Woodland
B	1252m NE	Unknown	Ancient & Semi-Natural Woodland
-	1268m W	Unknown	Ancient & Semi-Natural Woodland
B	1279m NE	Unknown	Ancient & Semi-Natural Woodland
-	1282m E	Unknown	Ancient & Semi-Natural Woodland
18	1318m S	Unknown	Ancient & Semi-Natural Woodland
19	1321m NW	Unknown	Ancient Replanted Woodland
-	1357m N	Unknown	Ancient & Semi-Natural Woodland
21	1374m SW	Unknown	Ancient & Semi-Natural Woodland
22	1389m NW	Unknown	Ancient & Semi-Natural Woodland
-	1403m W	Unknown	Ancient & Semi-Natural Woodland
-	1451m S	Unknown	Ancient & Semi-Natural Woodland
-	1499m W	Unknown	Ancient & Semi-Natural Woodland
-	1546m S	Unknown	Ancient & Semi-Natural Woodland
-	1592m NW	Unknown	Ancient & Semi-Natural Woodland
-	1610m SW	Unknown	Ancient & Semi-Natural Woodland
29	1622m NE	Shelleys Wood	Ancient & Semi-Natural Woodland
-	1634m S	Unknown	Ancient & Semi-Natural Woodland
-	1640m NE	Unknown	Ancient & Semi-Natural Woodland
-	1654m W	Unknown	Ancient & Semi-Natural Woodland
-	1660m W	Unknown	Ancient & Semi-Natural Woodland
-	1675m W	Unknown	Ancient & Semi-Natural Woodland
-	1676m SE	Madgeland Wood	Ancient Replanted Woodland
-	1705m N	Unknown	Ancient & Semi-Natural Woodland
-	1711m NW	Unknown	Ancient & Semi-Natural Woodland
-	1739m S	Unknown	Ancient & Semi-Natural Woodland
-	1754m N	Unknown	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
-	1760m NW	Unknown	Ancient & Semi-Natural Woodland
-	1776m NW	Unknown	Ancient & Semi-Natural Woodland
-	1782m N	Unknown	Ancient & Semi-Natural Woodland
-	1826m N	Unknown	Ancient & Semi-Natural Woodland
-	1827m W	Unknown	Ancient & Semi-Natural Woodland
-	1864m W	Unknown	Ancient & Semi-Natural Woodland
-	1894m NW	Unknown	Ancient Replanted Woodland
-	1922m SW	Unknown	Ancient & Semi-Natural Woodland
-	1922m N	Unknown	Ancient & Semi-Natural Woodland
-	1923m NE	Hunters Wood	Ancient & Semi-Natural Woodland
-	1943m N	Unknown	Ancient & Semi-Natural Woodland
-	1985m N	Unknown	Ancient & Semi-Natural Woodland
-	1999m S	Unknown	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

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

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

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

10.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or ‘classified’) under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

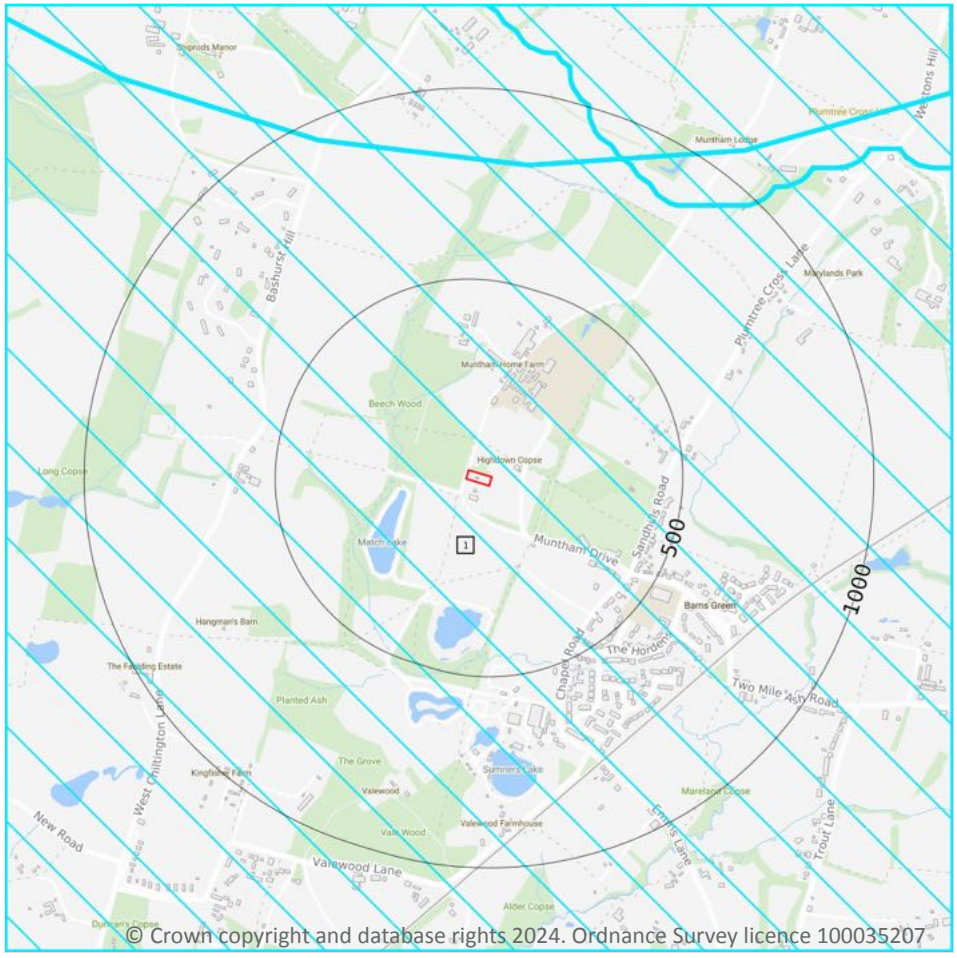
Records within 2000m	3

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
1003m NE	River Arun (u/s Pallingham) NVZ	Surface Water	523	Existing
1904m NE	River Arun (u/s Pallingham) NVZ	Surface Water	523	Existing
1908m NE	River Arun (u/s Pallingham) NVZ	Surface Water	523	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 52 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². 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: SUSSEX NORTH WATER SUPPLY ZONE. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar. LPAs to refer to Natural England's Statement and Advice Note.**

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.

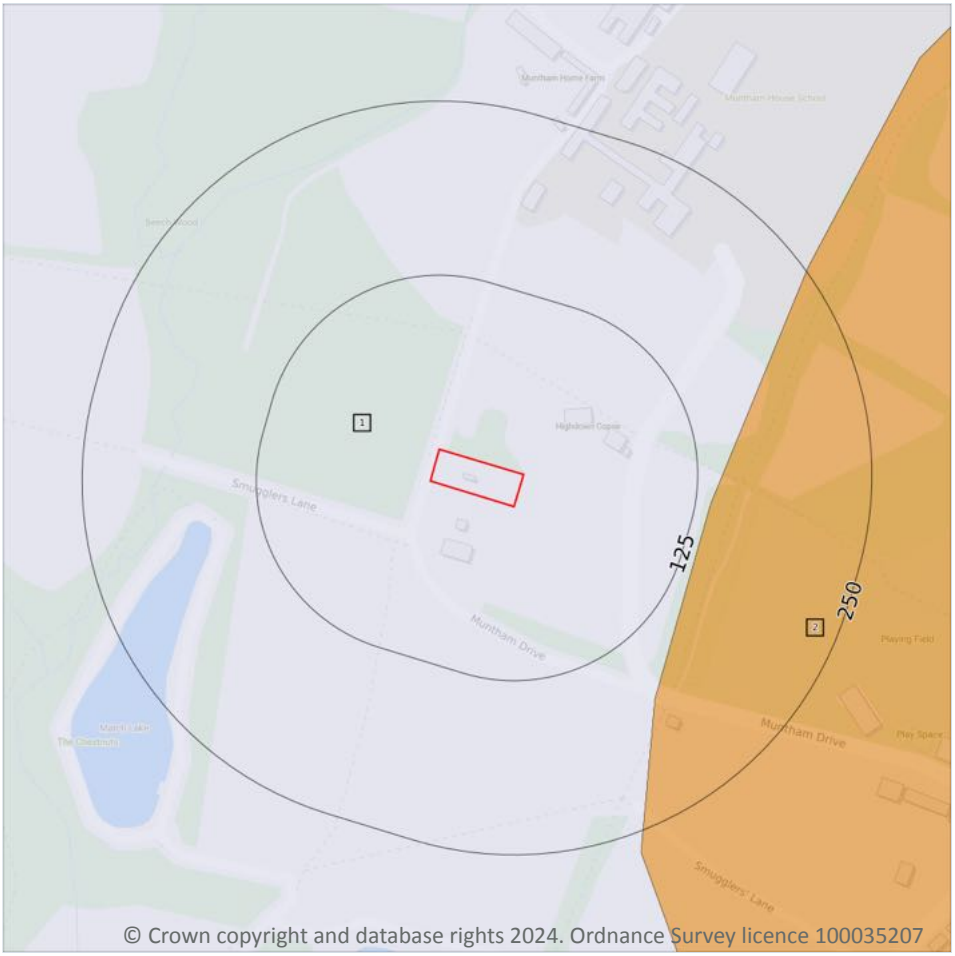
11.7 Registered Parks and Gardens

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	2

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 56 >**

ID	Location	Classification	Description
1	On site	Grade 4	**Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.**

ID	Location	Classification	Description
2	135m E	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.

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	7

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 58 >**

ID	Location	Main Habitat	Other habitats
1	0m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	70m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	94m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	152m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	164m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	169m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	177m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 60 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**TQ12NW**

This data is sourced from the British Geological Survey.

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

14.2 Artificial and made ground (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

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.

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



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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 63 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WC-MDST**	**Weald Clay Formation - Mudstone**	**Barremian Age - Hauterivian Age**

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 65 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW302_horsham_v4**

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial

15.4 Superficial geology (50k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	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 68 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WC-MDST**	**WEALD CLAY FORMATION - MUDSTONE**	**HAUTERIVIAN**

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	**Fracture**	**Low**	**Very Low**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

16 Boreholes

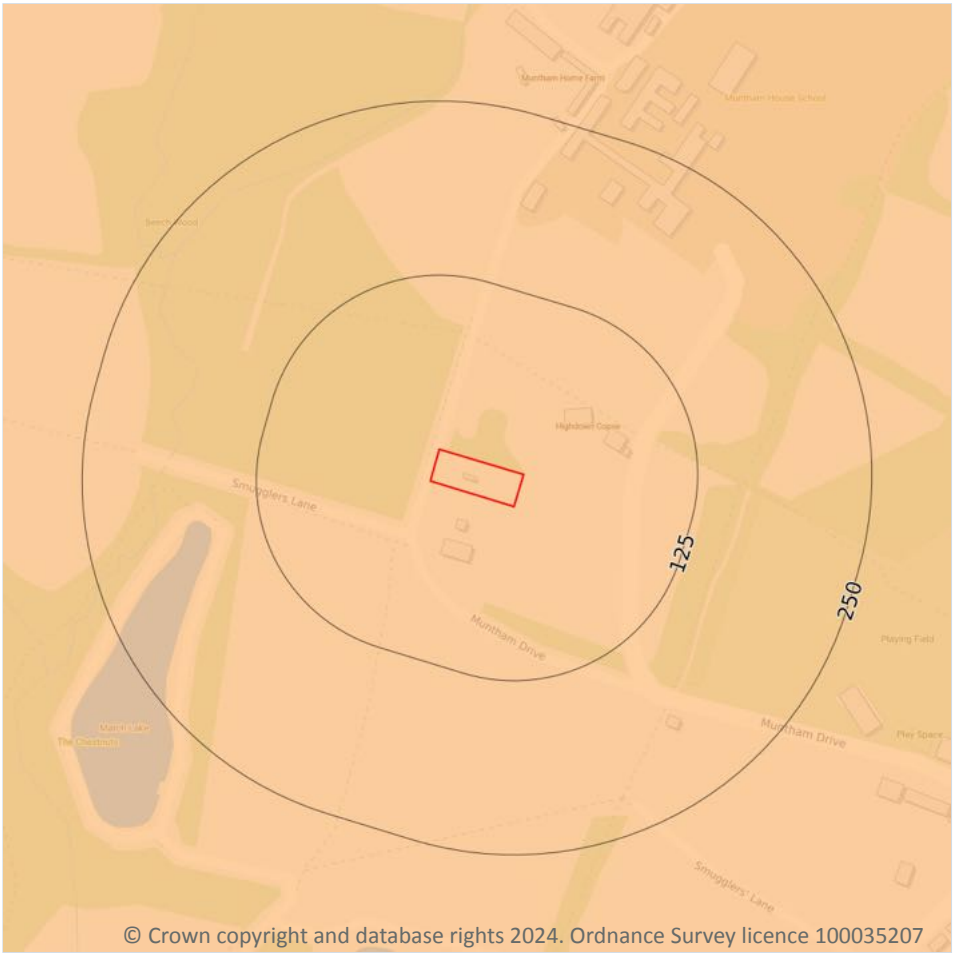
16.1 BGS Boreholes

Records within 250m	0

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

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	1

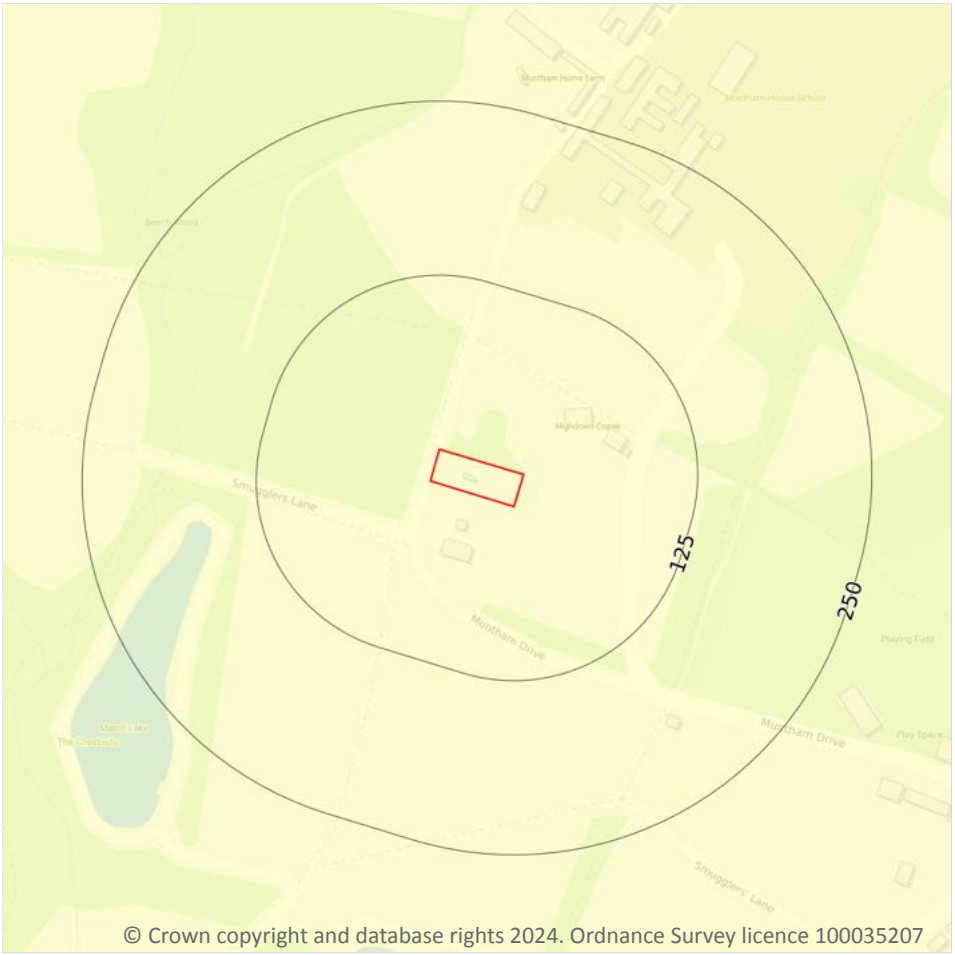
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 71 >**

Location	Hazard rating	Details
On site	**Low**	**Ground conditions predominantly medium plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



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Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

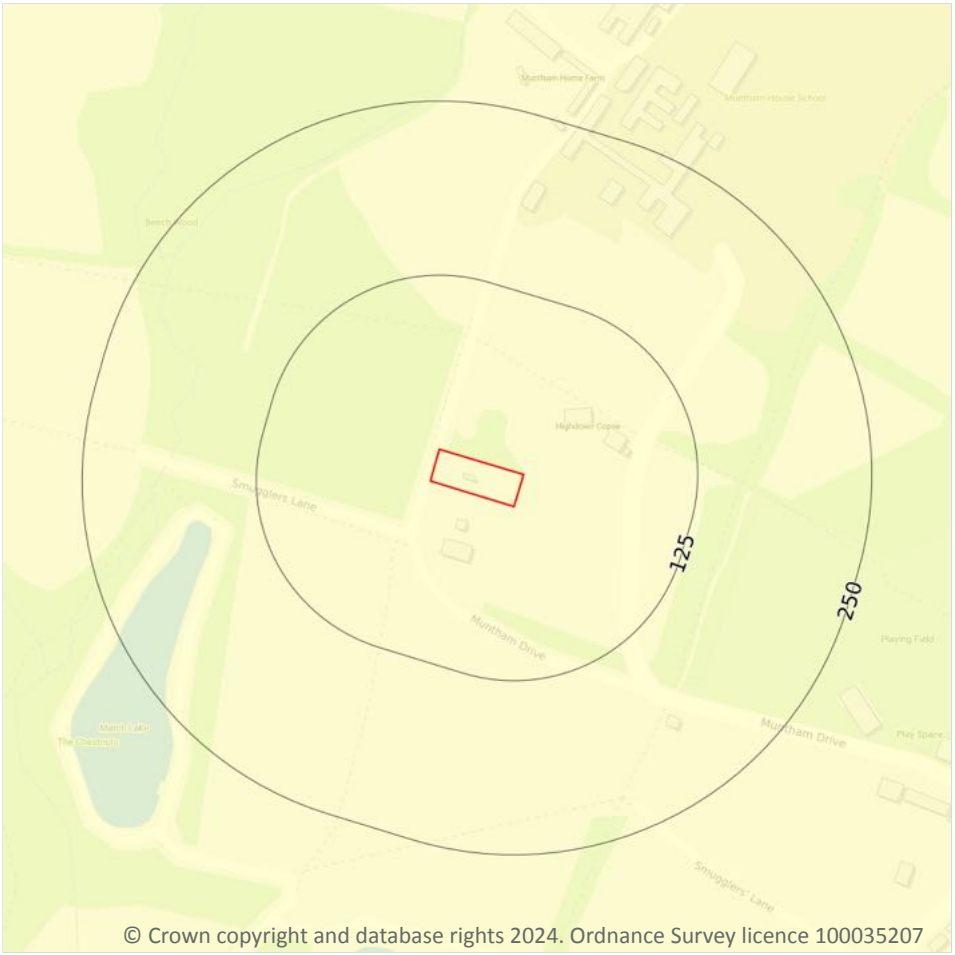
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 72 >**

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

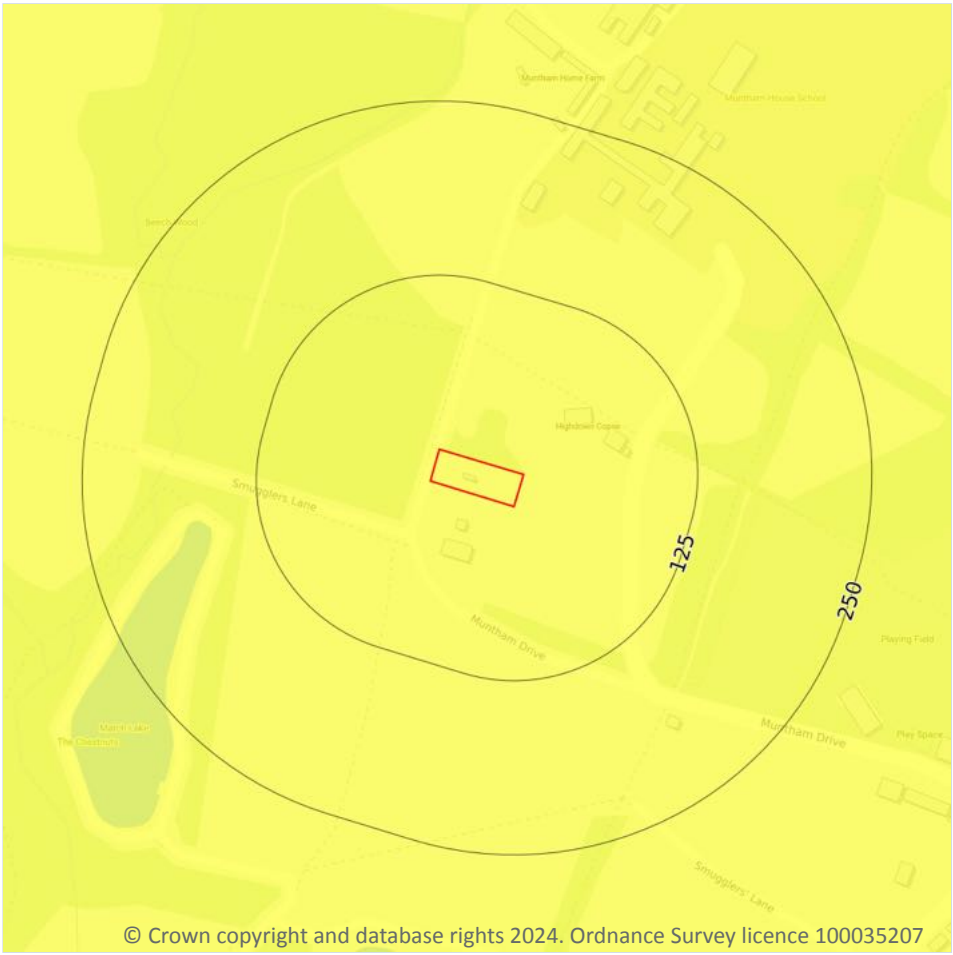
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 73 >**

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

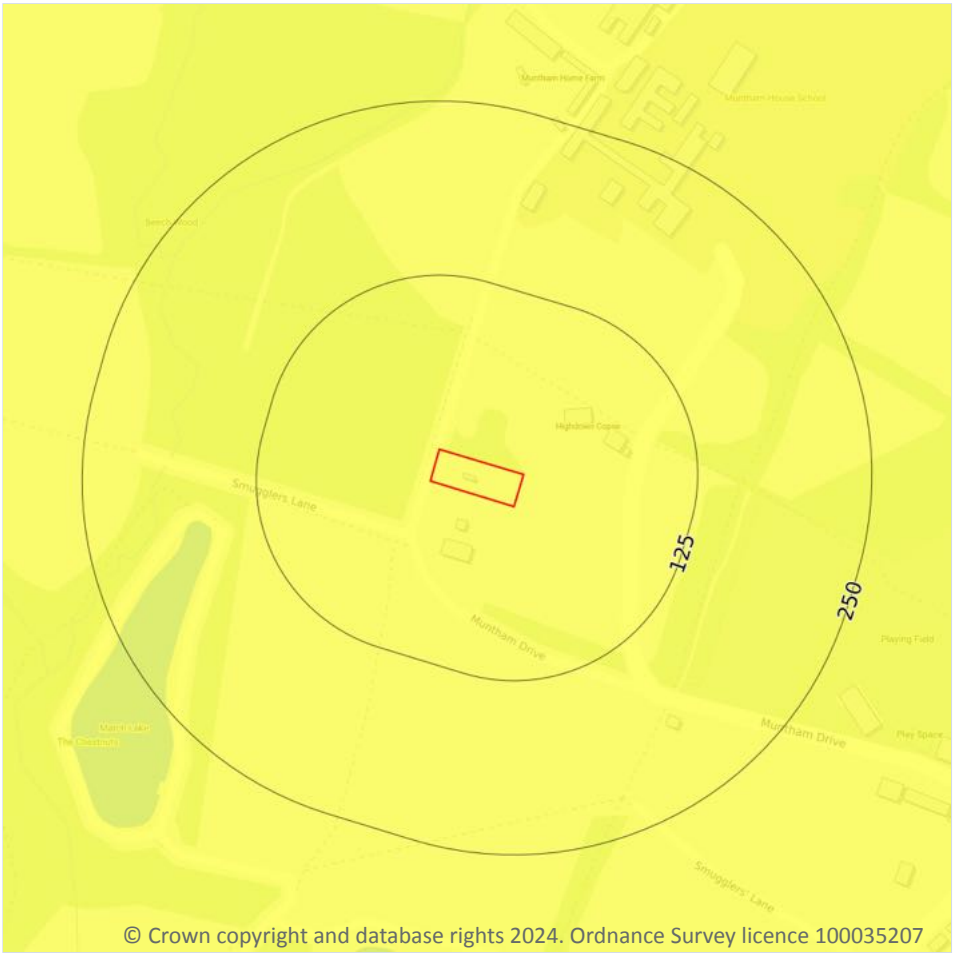
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 74 >**

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

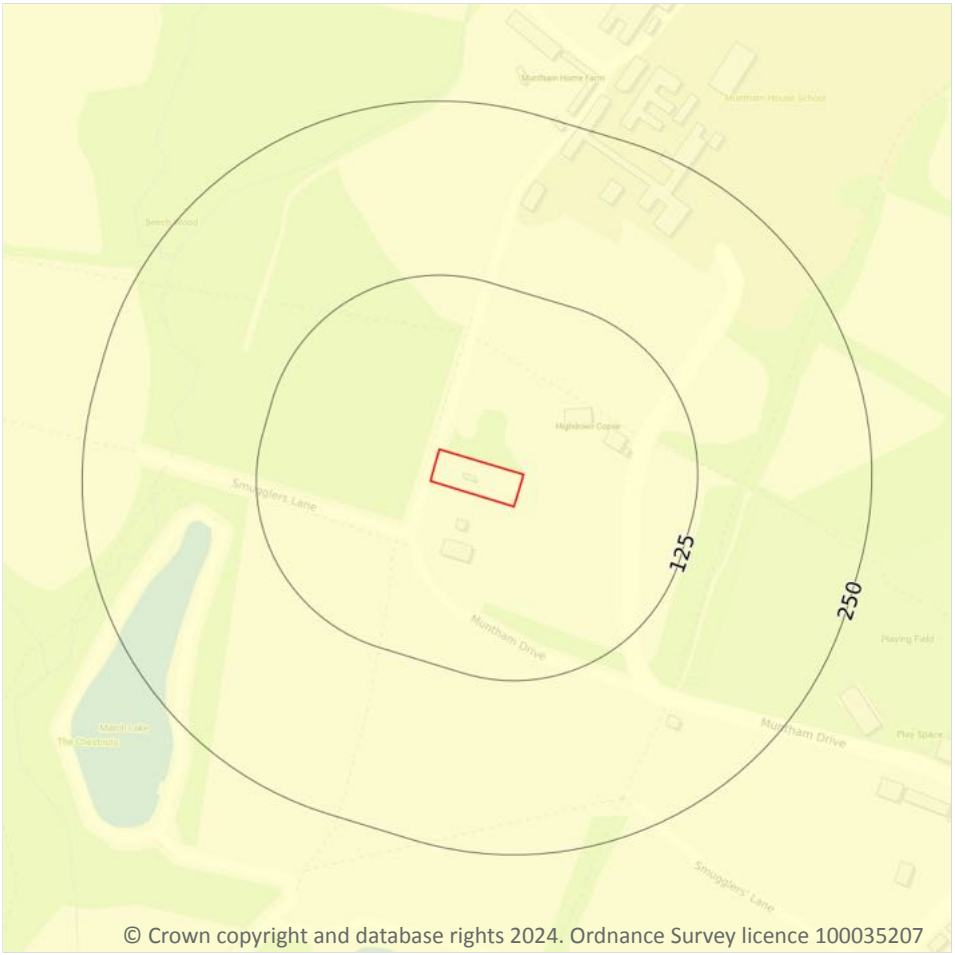
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 75 >**

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

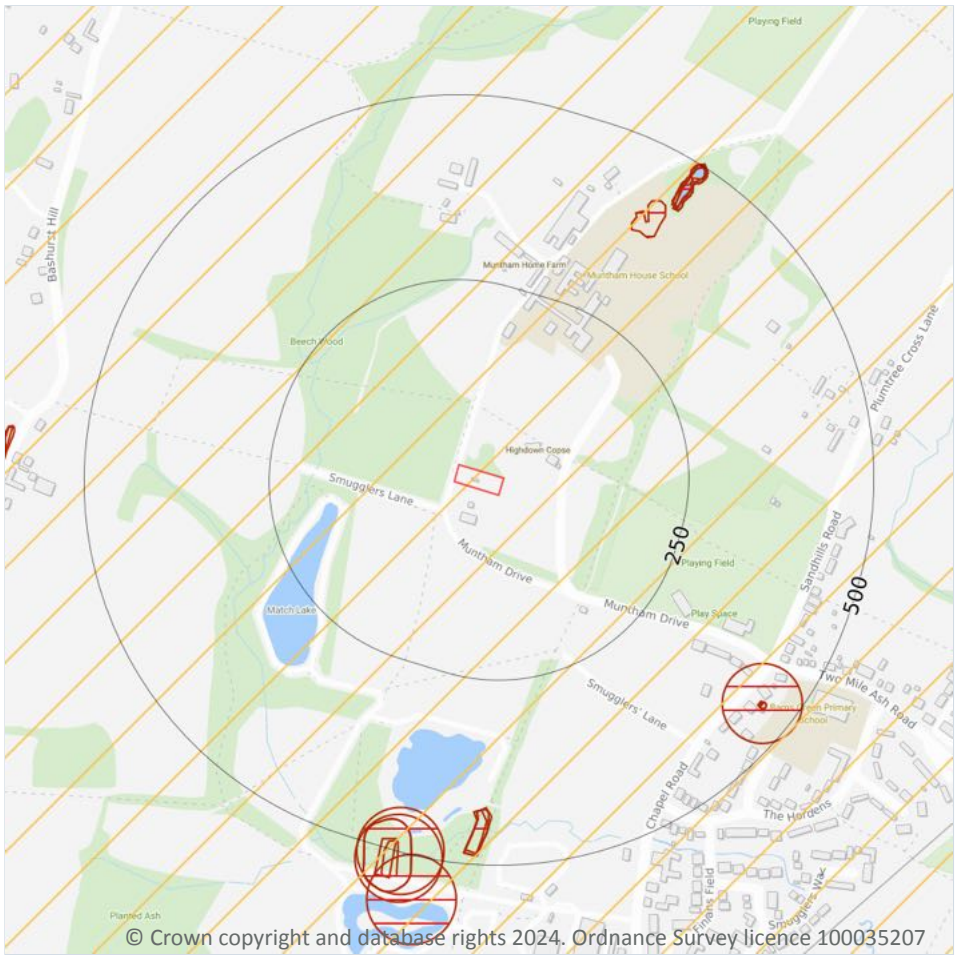
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 76 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	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	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	1

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on **page 78 >**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Iron Ore**	**B**	**Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	**0**

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	**0**

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	**0**

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

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

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

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

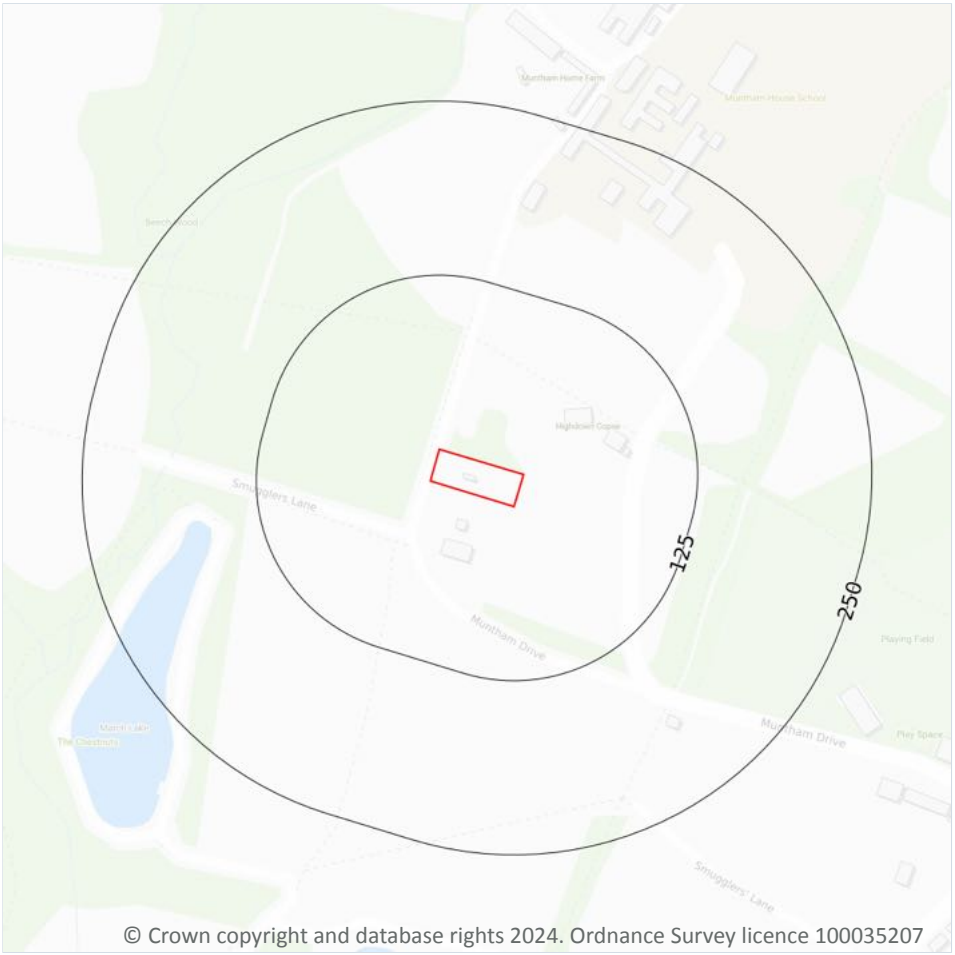
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

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



Site Outline

Search buffers in metres (m)

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

20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 85 >**

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	1

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

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

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

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 ↗.

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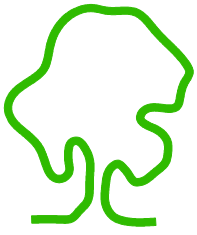

eas ltd
Environmental Assessment Services Ltd
Unit 4B, The Courtyard, Holmsted Farm, Staplefield Road, Cuckfield,
West Sussex, RH17 5JT
Phone : +44 (0) 1444 882552 email : info@easltd.co.uk
web site : www.easltd.co.uk