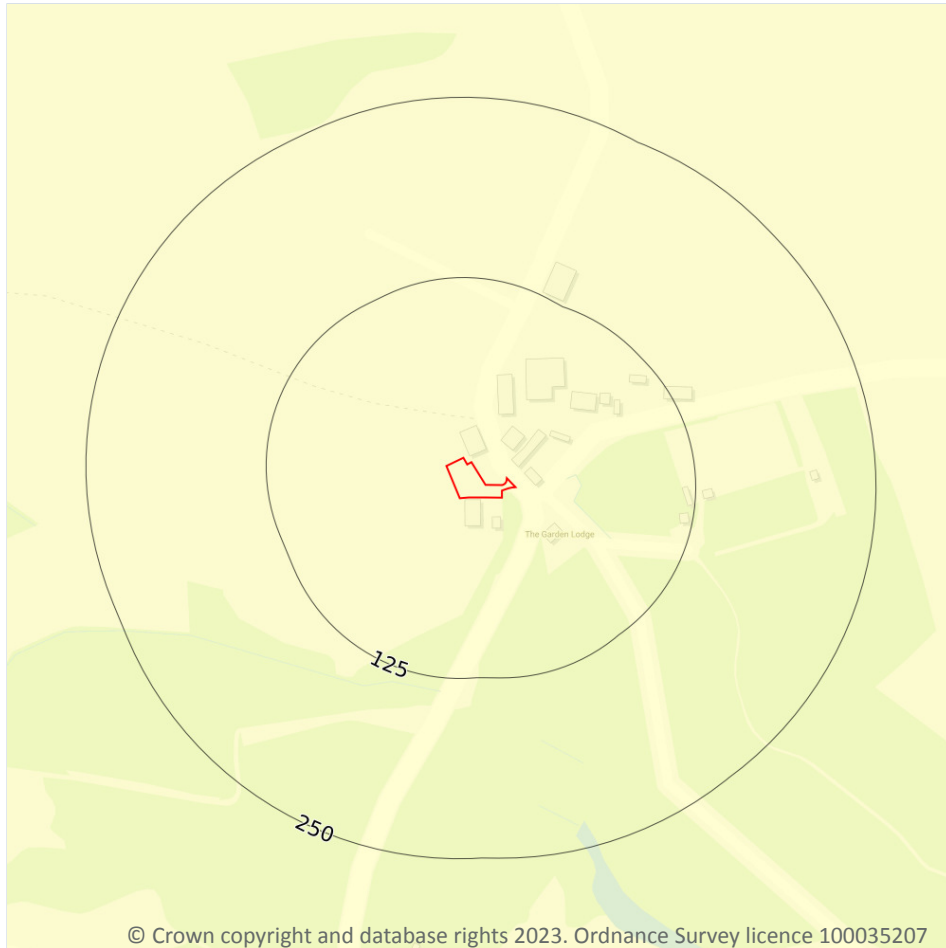


Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

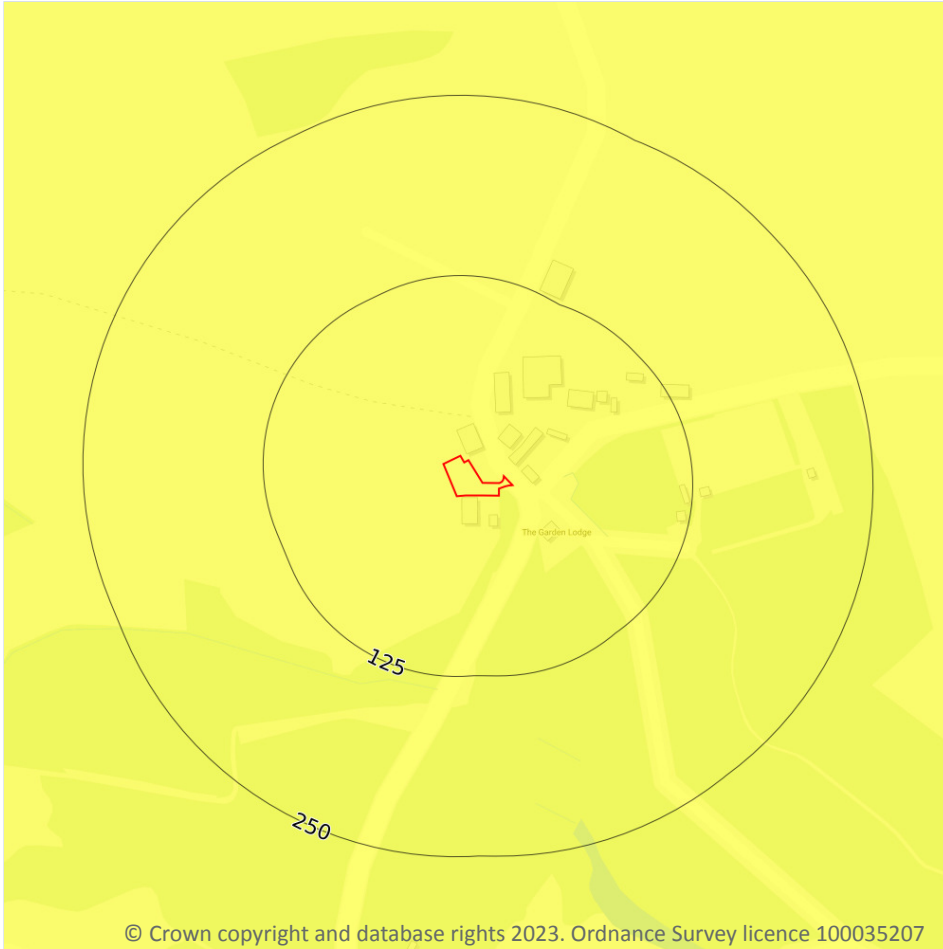
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 93](#) >

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



© Crown copyright and database rights 2023. Ordnance Survey licence 100035207

17.4 Collapsible deposits

Records within 50m

1

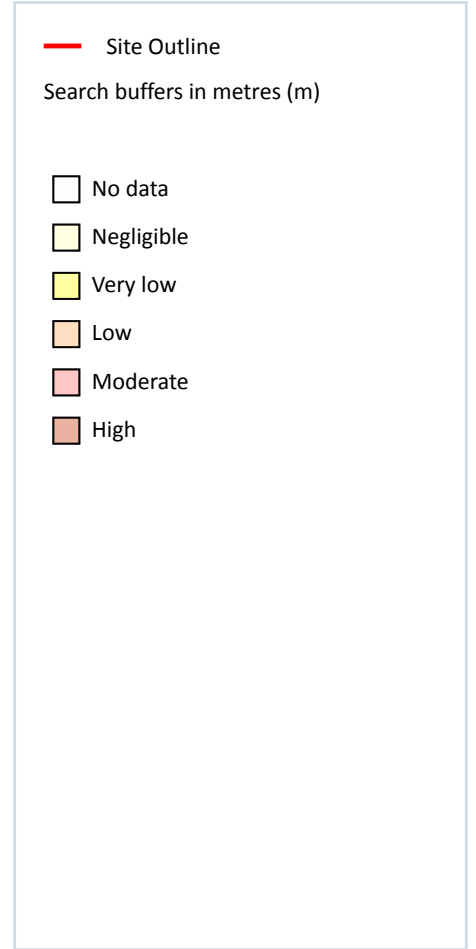
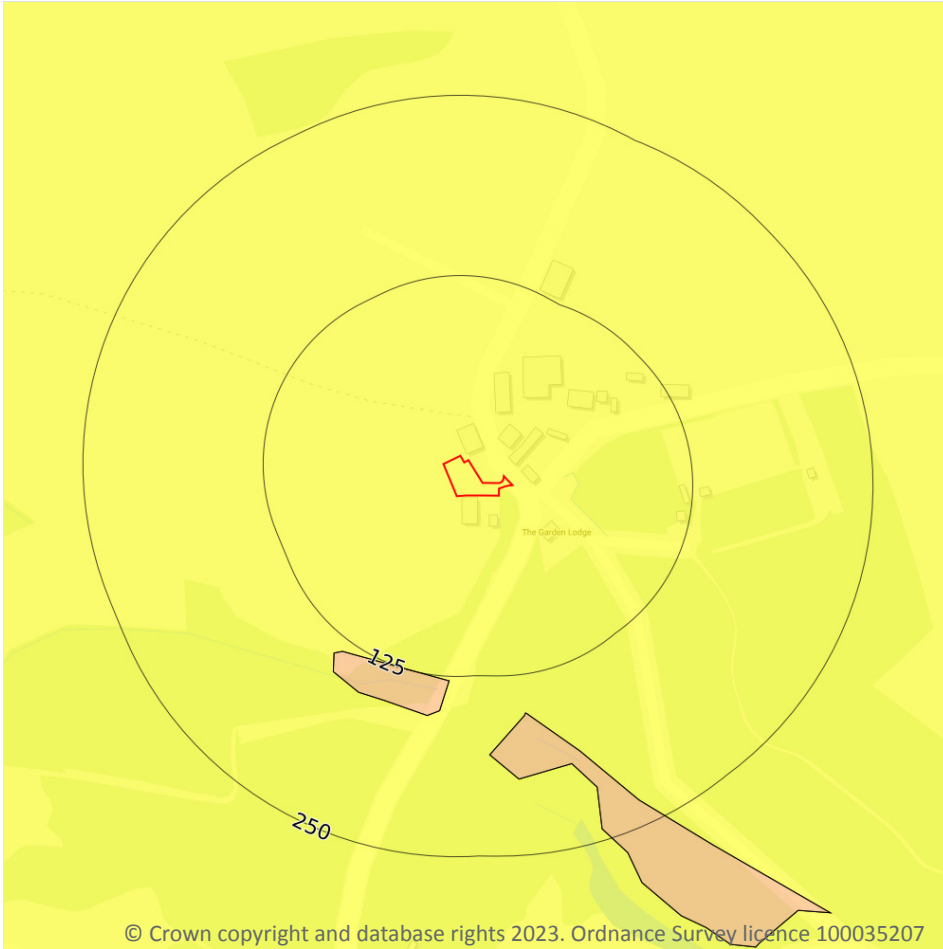
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 94 >](#)

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



17.5 Landslides

Records within 50m

1

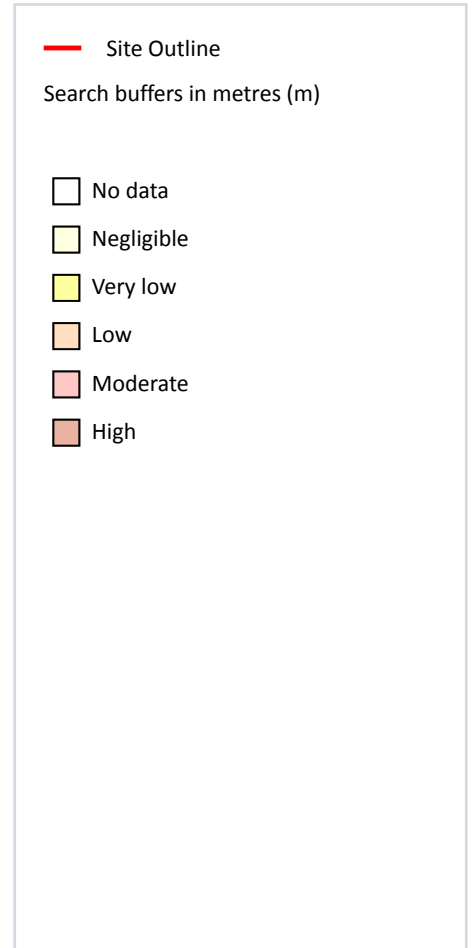
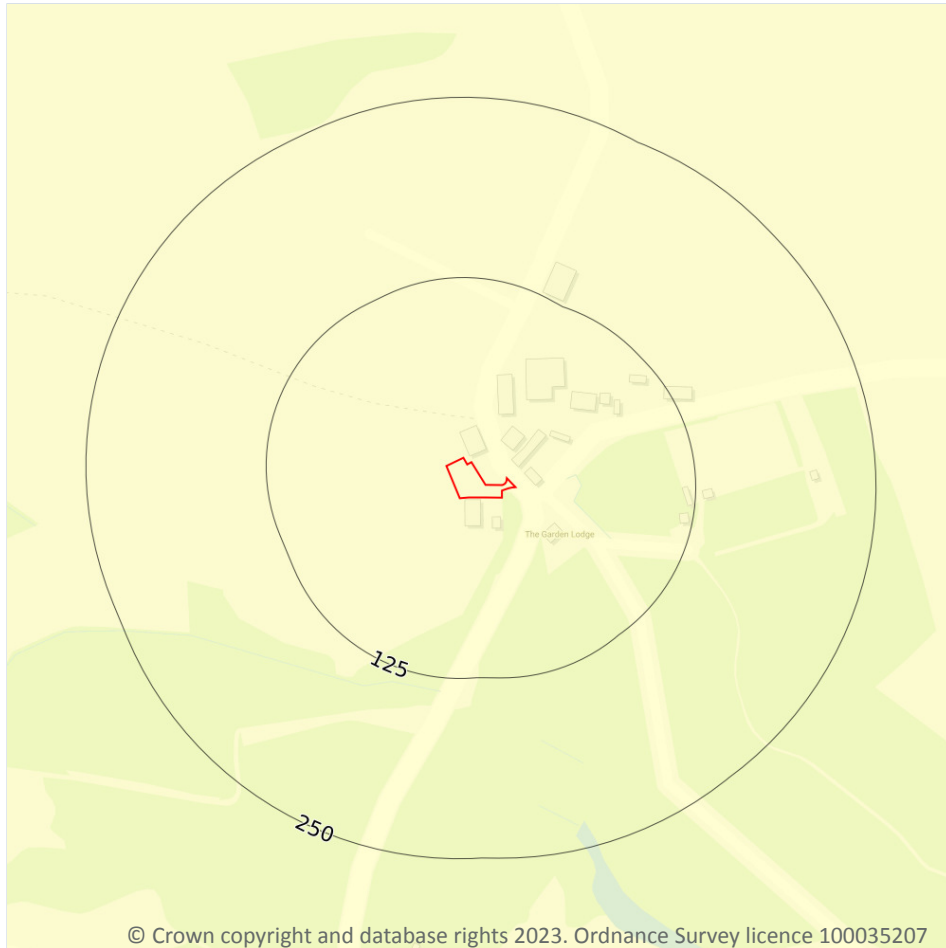
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on [page 95 >](#)

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



© Crown copyright and database rights 2023. Ordnance Survey licence 100035207

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.

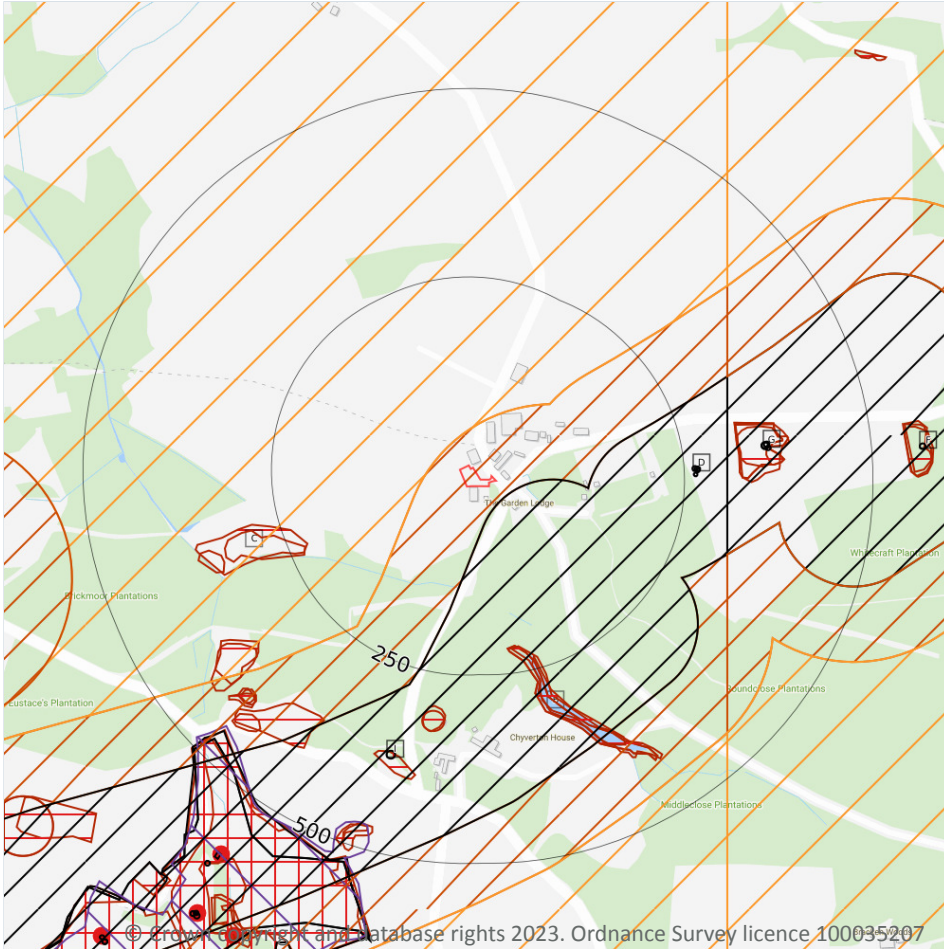
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 96](#) >

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

6

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

Features are displayed on the Mining and ground workings map on [page 98 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
B	214m S	Water Body	1879	1:10560
B	214m S	Water Body	1906	1:10560
B	216m S	Water Body	1958	1:10560
C	224m W	Refuse Heap	1958	1:10560
C	229m W	Unspecified Heap	1879	1:10560
B	234m S	Pond	1974	1:10000

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

40

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

Features are displayed on the Mining and ground workings map on [page 98 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
D	261m E	Unspecified Old Shaft	1906	1:10560
D	262m E	Unspecified Shaft	1879	1:10560
D	264m E	Unspecified Disused Shaft	1974	1:10000
D	265m E	Unspecified Old Shaft	1958	1:10560
G	355m E	Unspecified Disused Shaft	1993	1:10000
G	355m E	Unspecified Disused Shaft	1974	1:10000
G	359m E	Unspecified Shaft	1906	1:10560
G	360m E	Unspecified Shaft	1958	1:10560
I	364m S	Unspecified Disused Shaft	1974	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
J	457m SW	Unspecified Disused Mine	1974	1:10000
J	473m SW	Lead and Blende Mine	1879	1:10560
J	473m SW	Lead and Blende Mine	1906	1:10560
F	564m E	Unspecified Old Shaft	1879	1:10560
J	586m SW	Unspecified Shaft	1906	1:10560
J	603m SW	Unspecified Shaft	1879	1:10560
J	667m SW	Unspecified Shaft	1958	1:10560
J	669m SW	Unspecified Shaft	1879	1:10560
J	669m SW	Unspecified Shaft	1906	1:10560
-	703m S	Unspecified Old Shaft	1958	1:10560
-	706m S	Disused Mine Shaft	1974	1:10000
-	706m S	Unspecified Old Shaft	1879	1:10560
-	706m S	Unspecified Old Shaft	1906	1:10560
-	726m SW	Unspecified Old Shaft	1879	1:10560
N	766m SW	Unspecified Shaft	1958	1:10560
N	768m SW	Unspecified Shaft	1879	1:10560
N	768m SW	Unspecified Shaft	1906	1:10560
-	869m SW	Unspecified Shaft	1958	1:10560
-	872m SW	Unspecified Shaft	1906	1:10560
-	875m SW	Unspecified Shaft	1879	1:10560
-	914m W	Unspecified Disused Mine	1958	1:10560
-	921m W	Disused Lead and Blende	1879	1:10560
-	921m W	Disused Lead and Blende	1906	1:10560
-	940m W	Unspecified Old Shaft	1906	1:10560
-	943m W	Unspecified Old Shaft	1879	1:10560
-	945m W	Unspecified Old Shaft	1958	1:10560
-	948m W	Unspecified Disused Shafts	1974	1:10000
-	975m W	Unspecified Old Shaft	1958	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	975m W	Unspecified Disused Shafts	1974	1:10000
-	981m W	Unspecified Old Shaft	1879	1:10560
-	981m W	Unspecified Old Shaft	1906	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

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

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	1
----------------------------	----------

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

Features are displayed on the Mining and ground workings map on [page 98 >](#)

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
J	450m SW	West Chiverton	Sand and gravel	Surface mineral working	Valid	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	10
-----------------------------	-----------

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 98 >](#)



ID	Location	Name	Commodity	Class	Likelihood
A	On site	Not available	Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
1	24m SE	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
2	33m NW	South West England	Vein Mineral	C	Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered.
F	307m E	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
3	322m E	Not available	Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
5	401m NE	South West England	Vein Mineral	C	Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered.
6	454m SE	South West England	Vein Mineral	C	Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered.
7	529m W	Not available	Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	629m W	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	955m SE	Not available	Vein Mineral	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

7

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.

Location	Mineral
On site	Lead
139m SE	Lead
182m SW	Lead



Location	Mineral
200m SE	Lead
298m S	Tin
319m E	Lead
457m SW	Lead

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	1
----------------------------	----------

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.

Location	Mineral
On site	Lead

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 **1**

Generalised areas that may be affected by historical tin mining.

Location	Details
On site	The site is within an area where tin mining is reported to have occurred. This does not mean that the site is definitely directly affected but further consideration of tin mining is advised. Further mining searches are available at Groundsure.

This data is sourced from Groundsure.

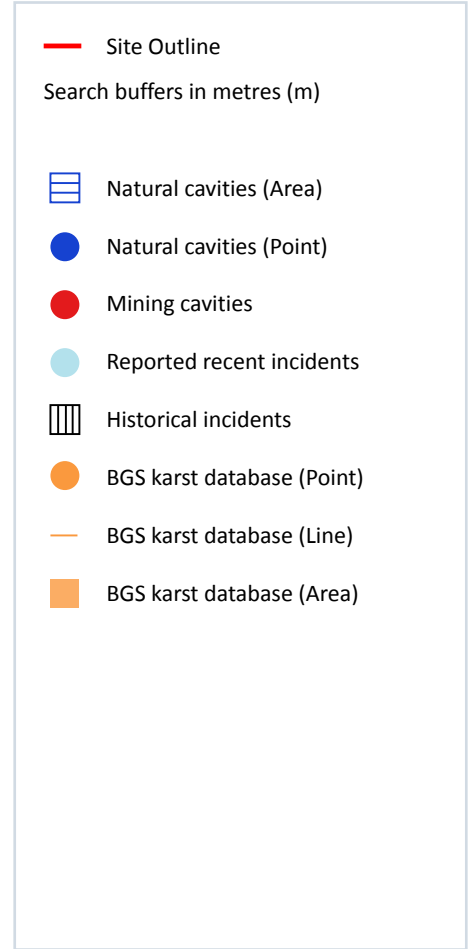
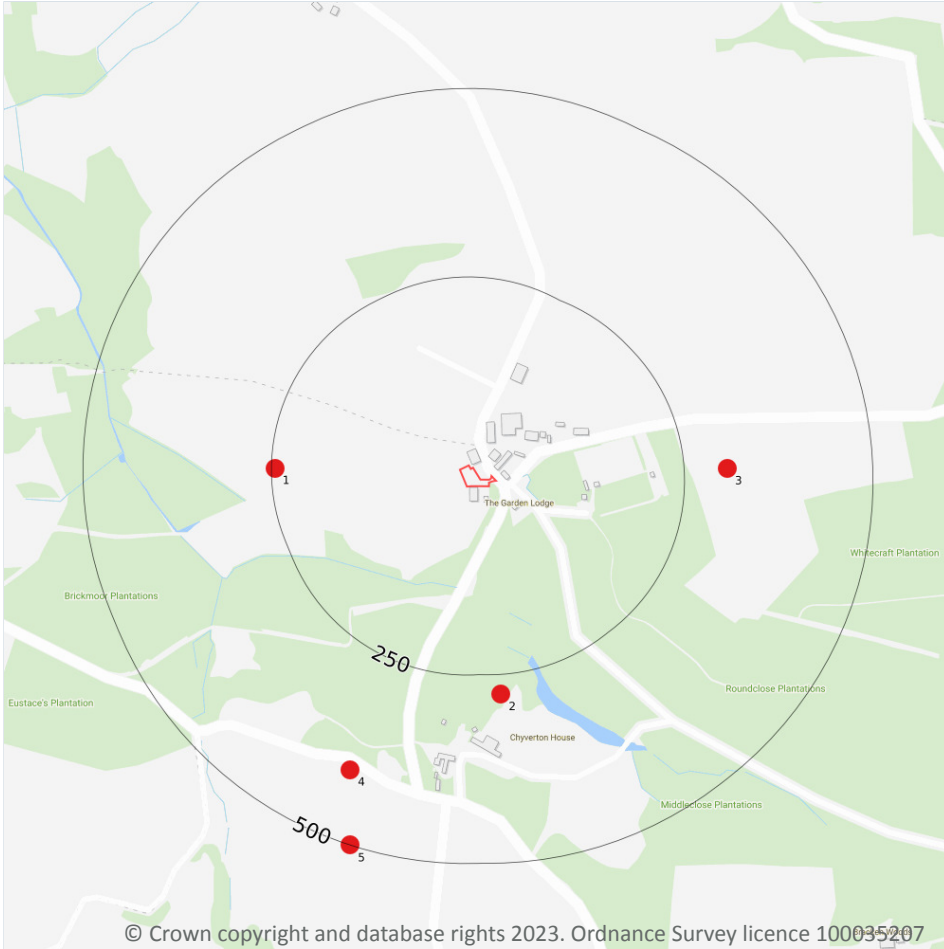
18.16 Clay mining

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

8

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.

Features are displayed on the Ground cavities and sinkholes map on [page 106 >](#)

ID	Location	Mine Address	Mineral	Data source	Publisher
1	245m W	Mineral Bottom, Zelah, Cornwall	Lead	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
2	277m S	Chiverton, Zelah, Cornwall	Lead	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
3	307m E	Chiverton East, Zelah, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
4	406m SW	Cornubian Mines, Zelah, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
5	500m S	Chiverton East, Zelah, Cornwall	Lead	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	763m SW	Chiverton West, Zelah, Cornwall	Lead	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	785m S	Ventongimps Adit, Zelah, Cornwall	Unknown	COMPUTERISED DATABASE OF BATSITES IN GREAT BRITAIN	NATURE CONSERVANCY COUNCIL(UNPUBLISHED)
-	951m W	Wentworth Consols, Goonhavern, Cornwall	Lead	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.



19.4 Historical incidents

Records within 500m

0

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

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

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m

0

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

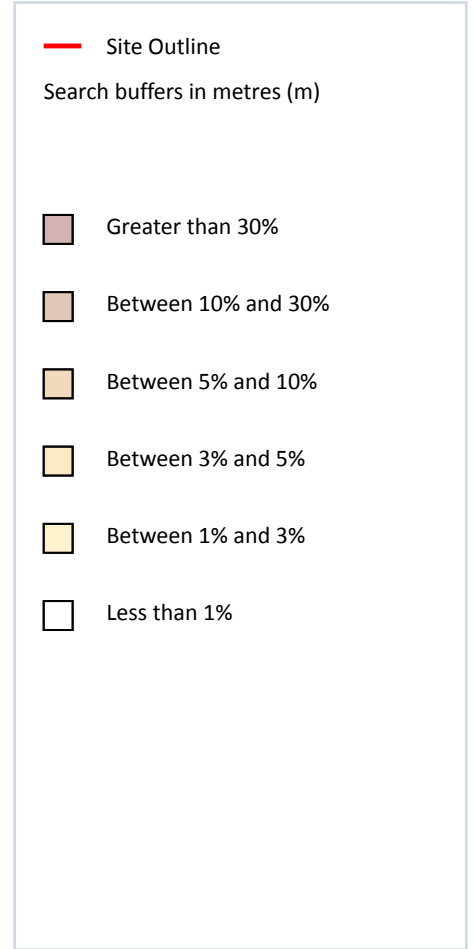
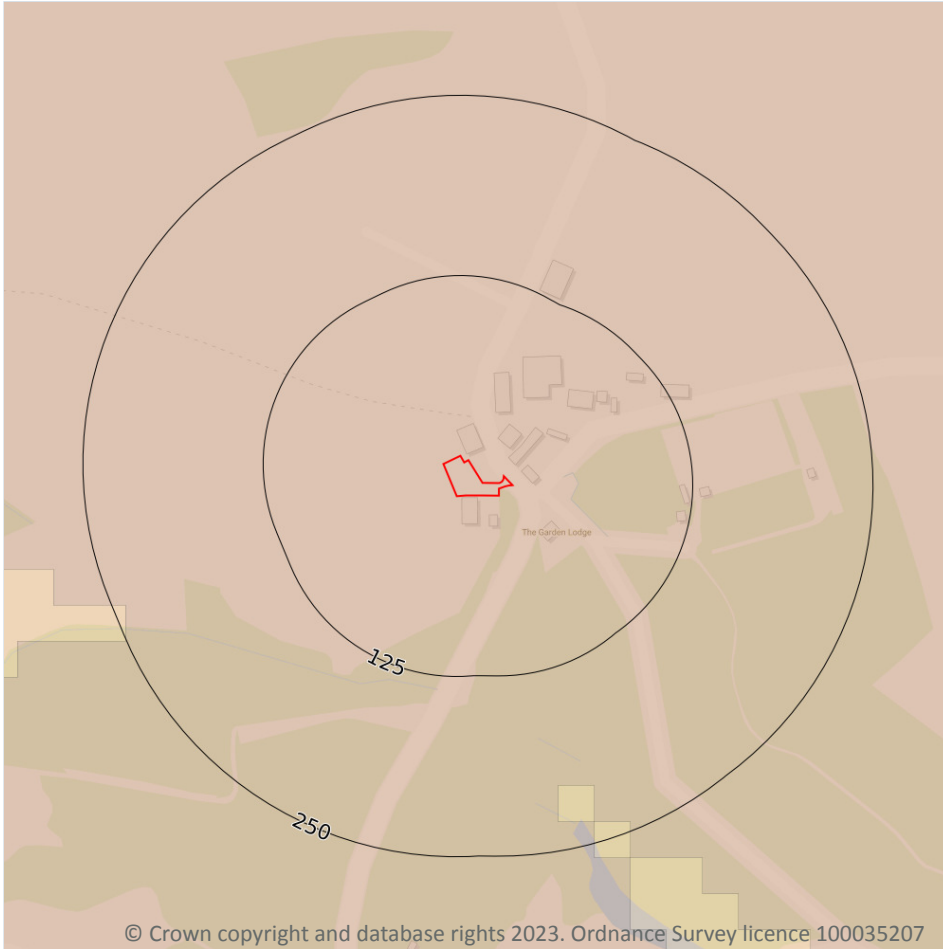
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over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

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

This data is sourced from the British Geological Survey.



20 Radon



20.1 Radon

Records on site

1

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

Features are displayed on the Radon map on [page 109](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 10% and 30%	Full

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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	35 - 45 mg/kg	5 - 7 mg/kg	>1200 mg/kg	>720 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	5 - 7 mg/kg	600 - 1200 mg/kg	360 - 720 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

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



Appendix C

Historical Maps



Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: County Series

Map date: 1880

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1880
 Revised 1880
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1880
 Revised 1880
 Edition N/A
 Copyright N/A
 Levelled N/A



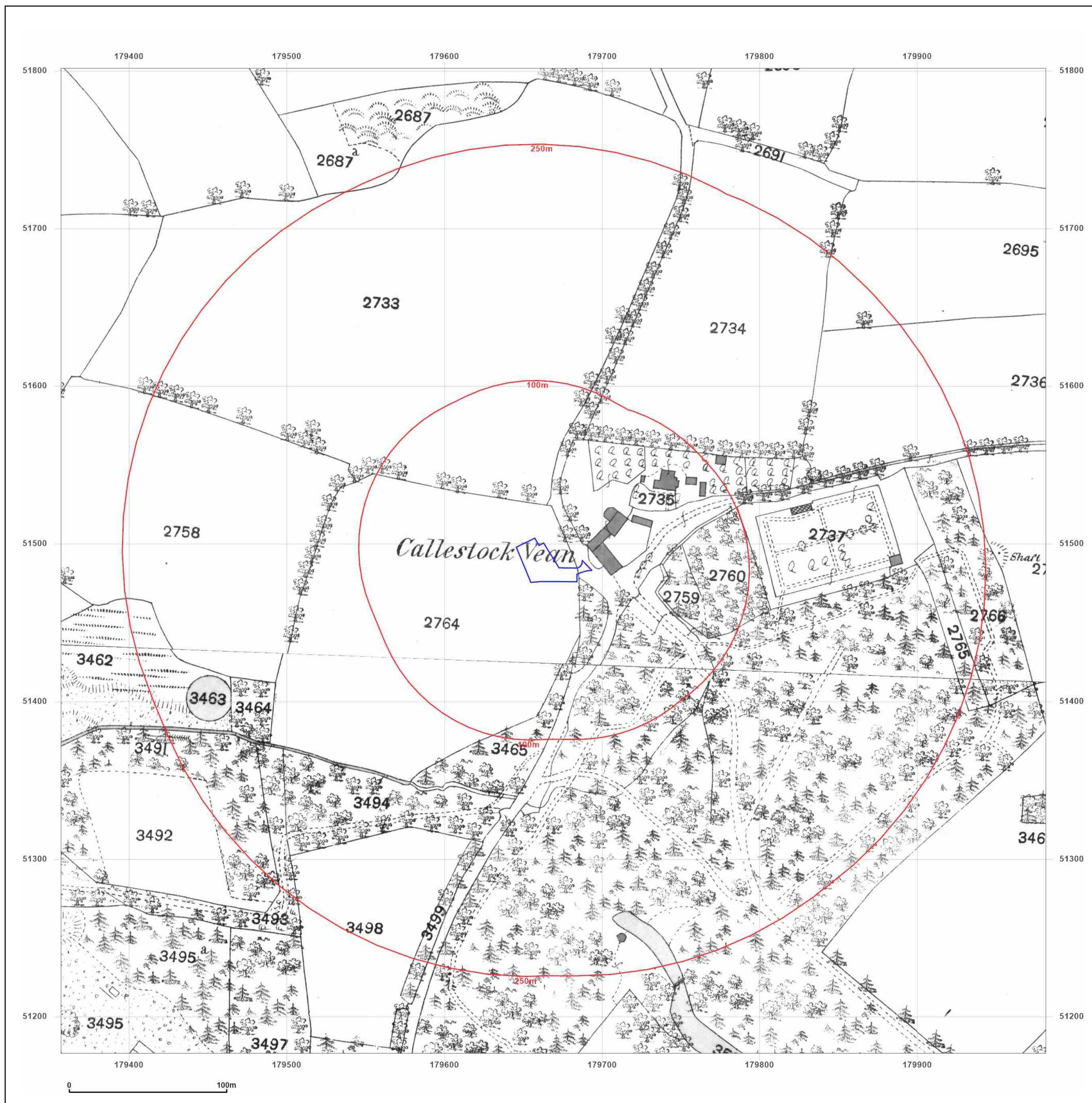
Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

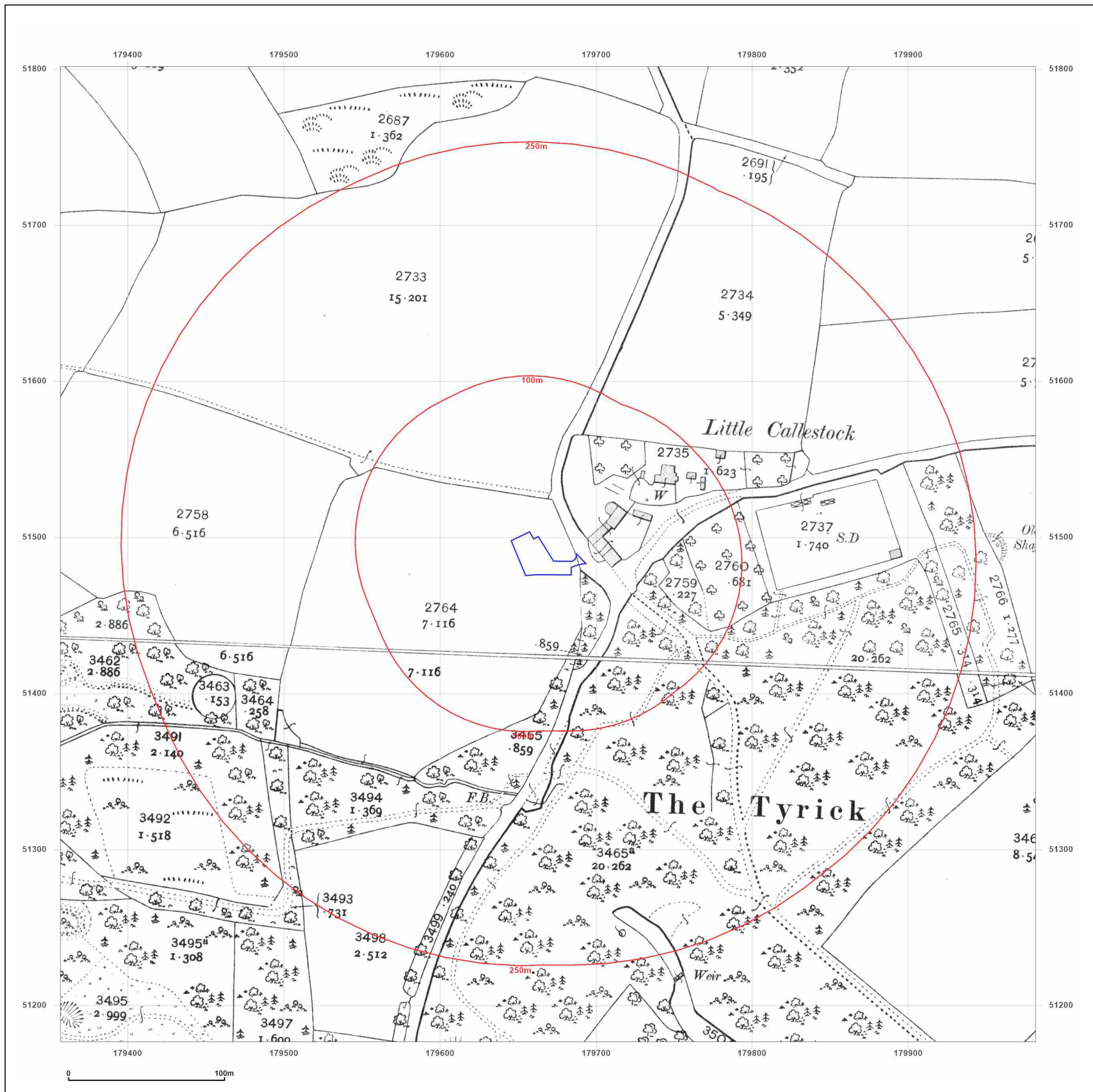


© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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





Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: County Series

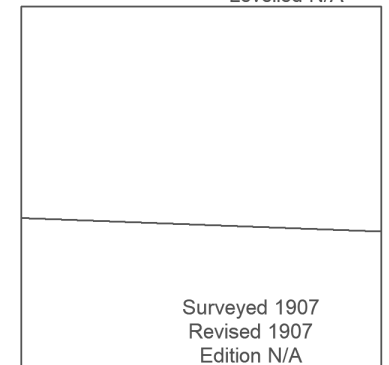
Map date: 1907

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1907
 Revised 1907
 Edition N/A
 Copyright N/A
 Levelled N/A



Surveyed 1907
 Revised 1907
 Edition N/A
 Copyright N/A
 Levelled N/A



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

© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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

Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: National Grid

Map date: 1973

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1972
 Revised 1972
 Edition N/A
 Copyright 1973
 Levelled 1971



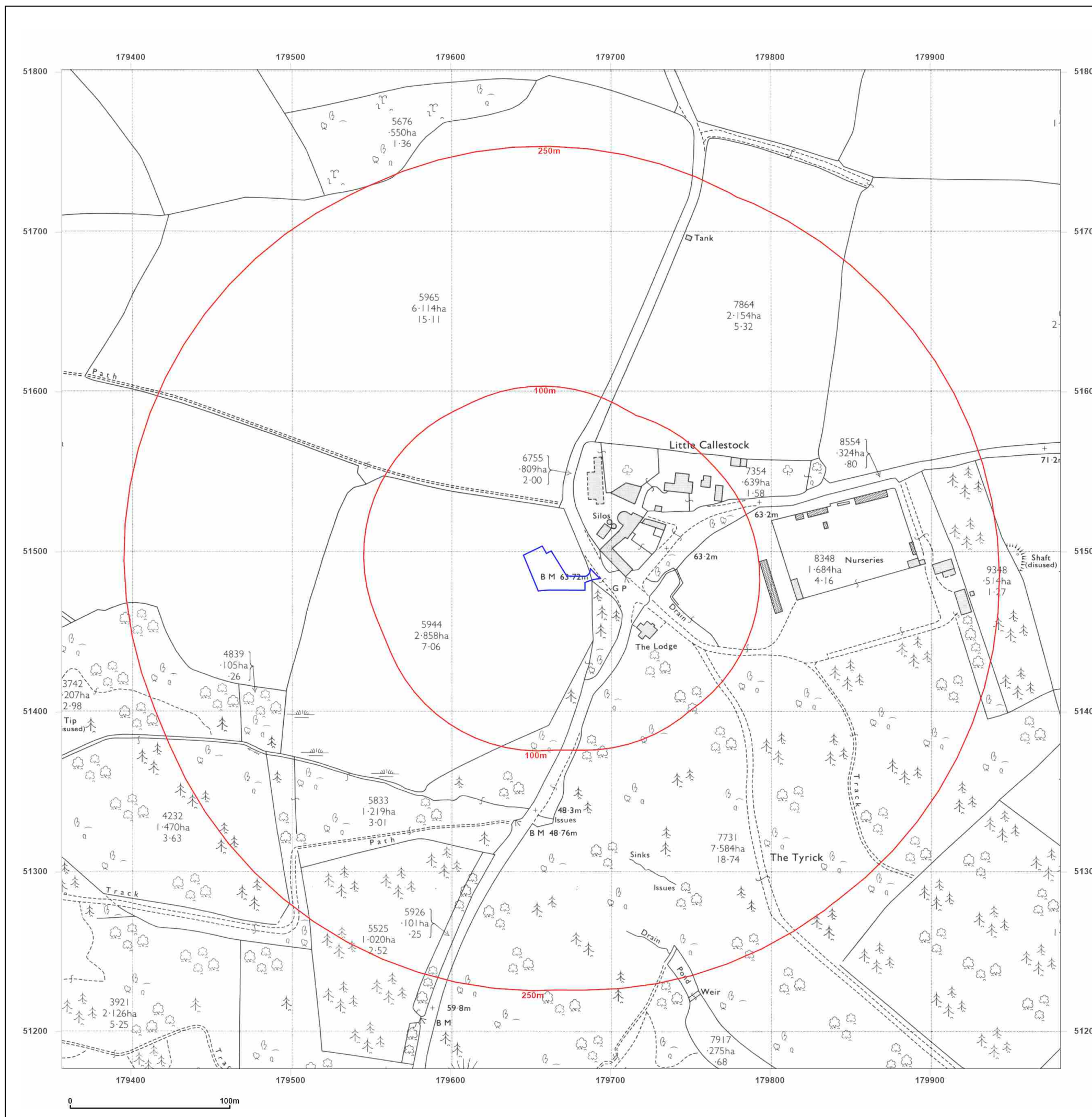
Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com



© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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



Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1995
 Levelled N/A



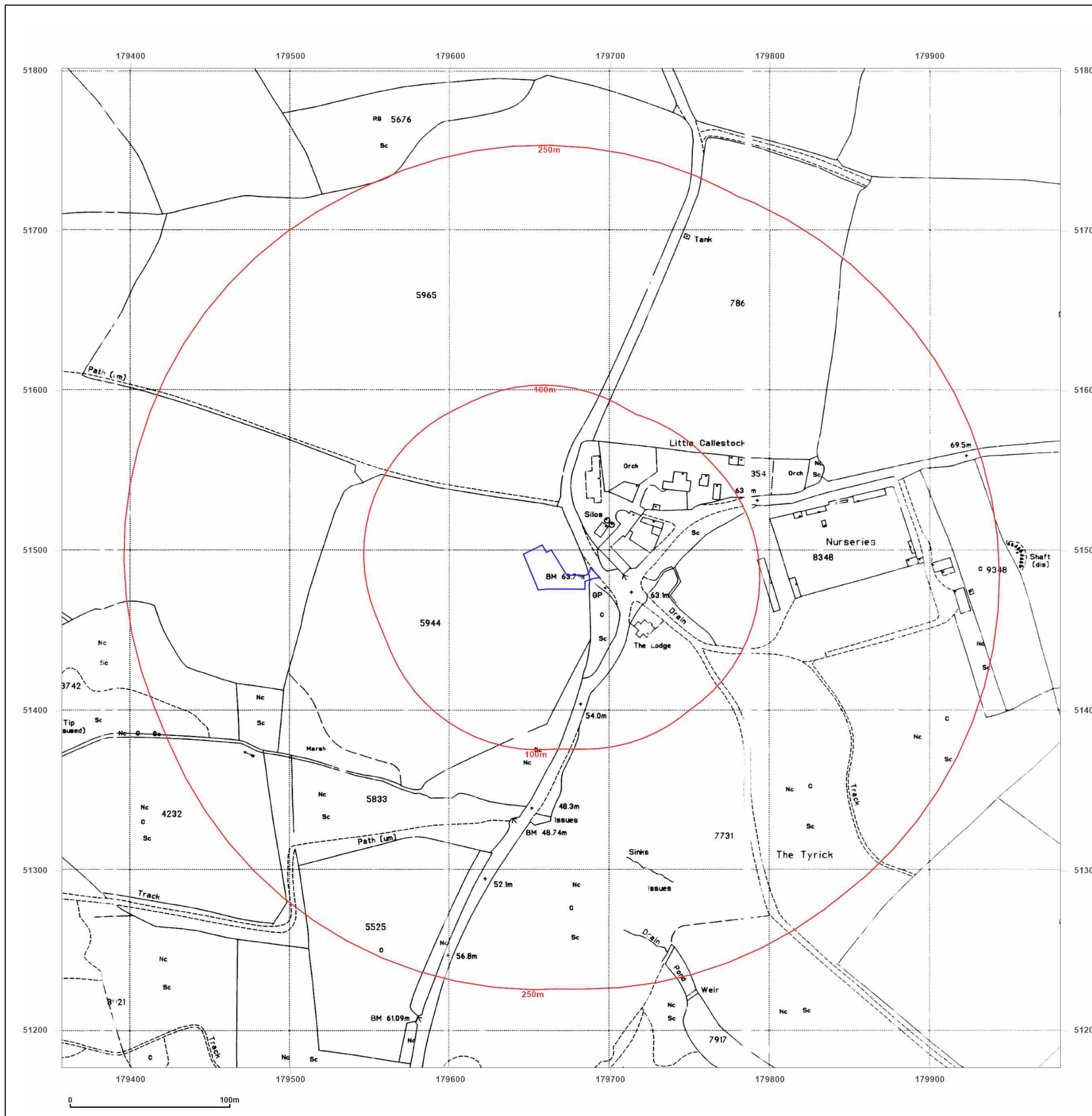
Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

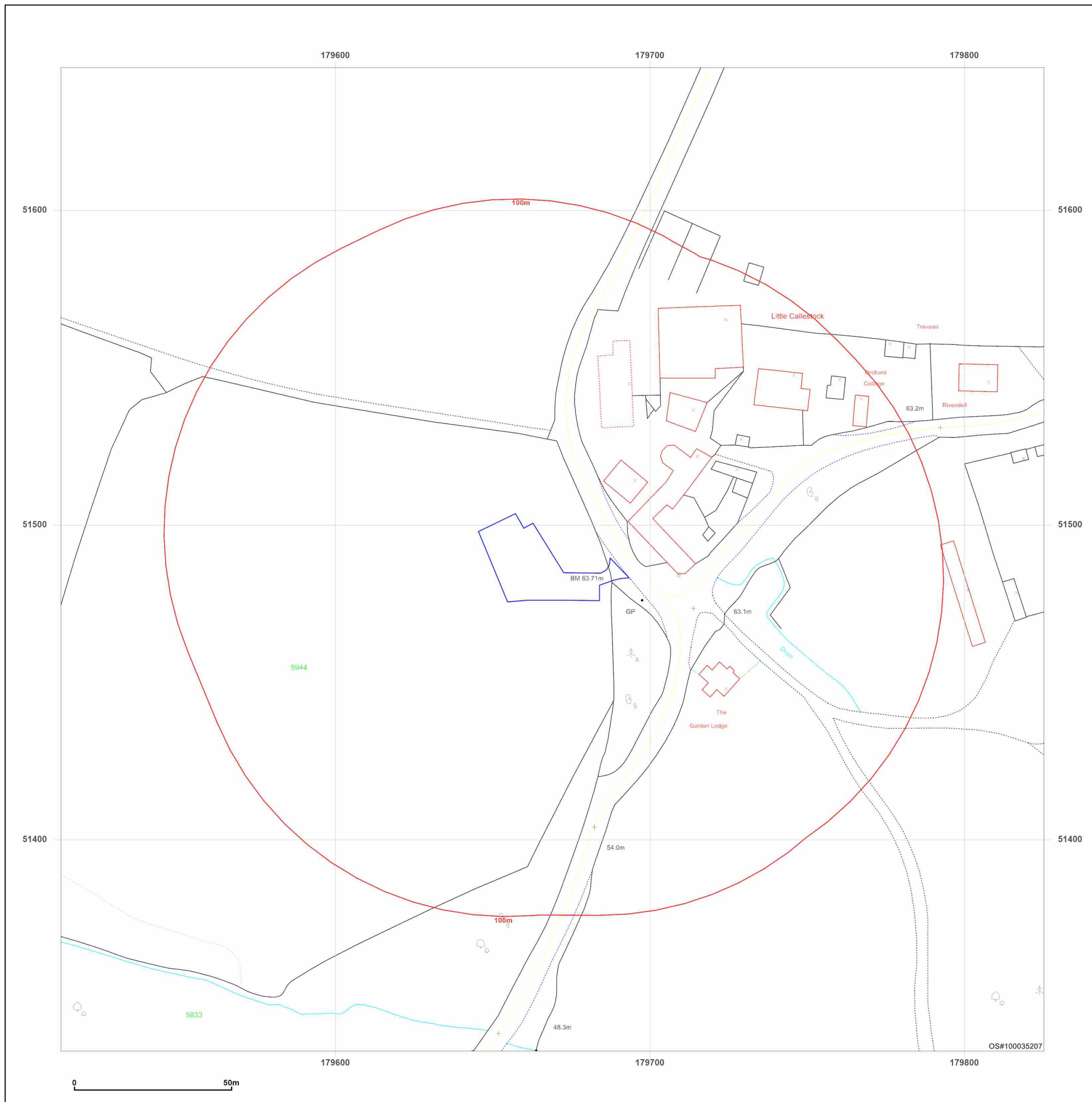


© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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





Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

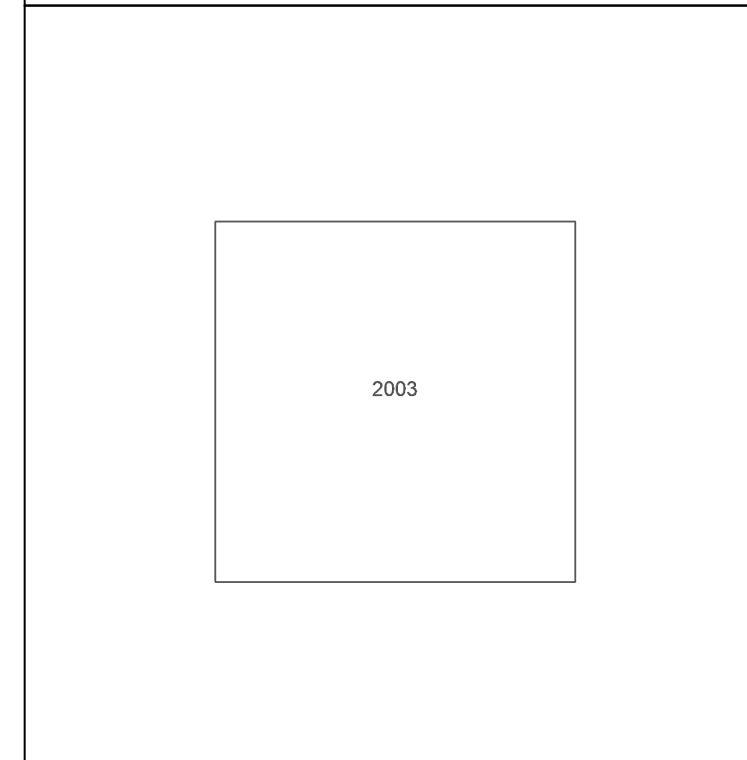
Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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

© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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

Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: County Series

Map date: 1888

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879
 Revised N/A
 Edition 1888
 Copyright N/A
 Levelled N/A

Surveyed 1879
 Revised N/A
 Edition 1888
 Copyright N/A
 Levelled N/A



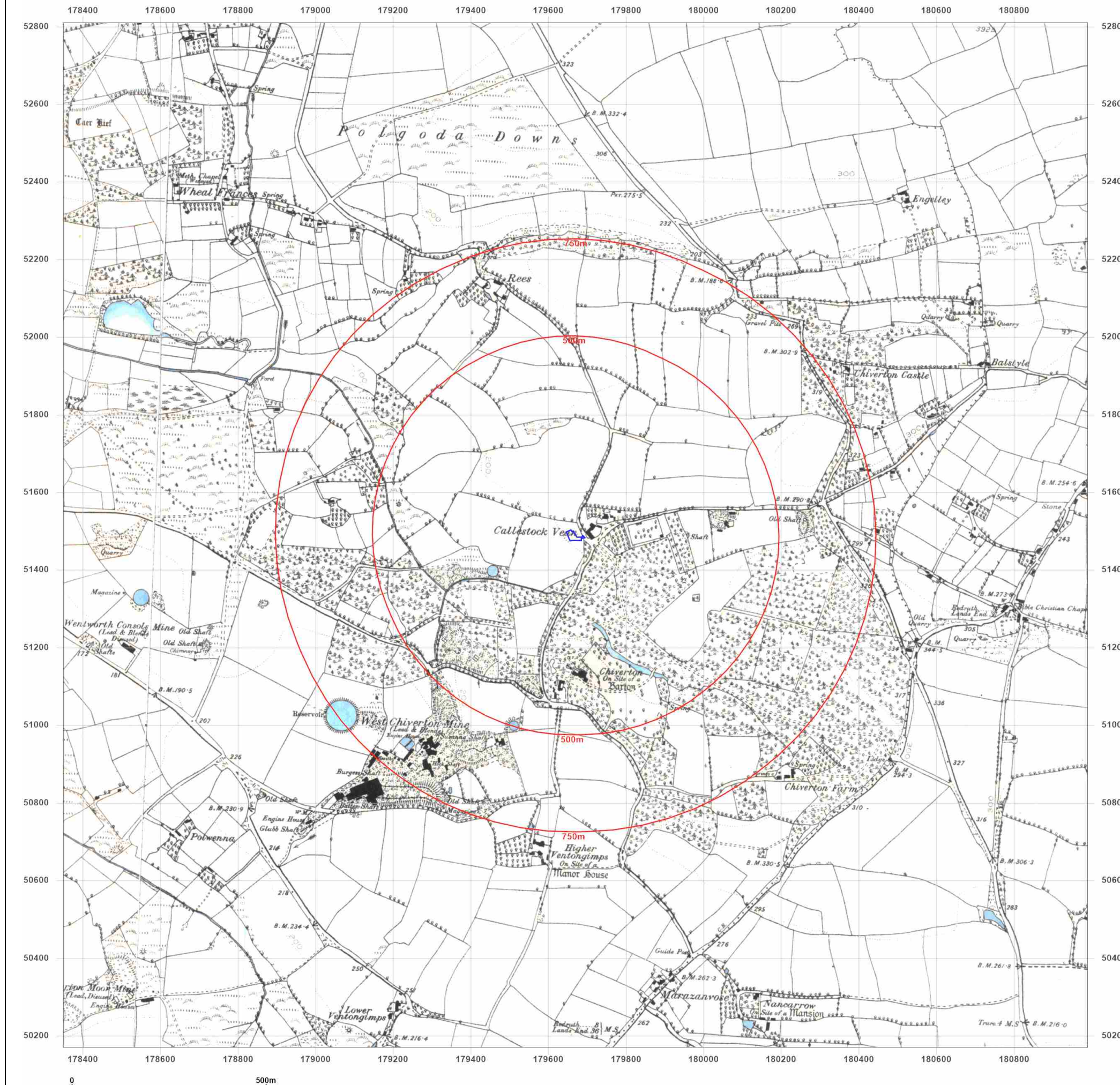
Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com



© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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



Site Details:

LITTLE CALLESTOCK FARM,
ROAD FROM ZELAH TO
MIDDLECLOSE PLANTATIONS,
ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: County Series

Map date: 1906-1908

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1878
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1879
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A



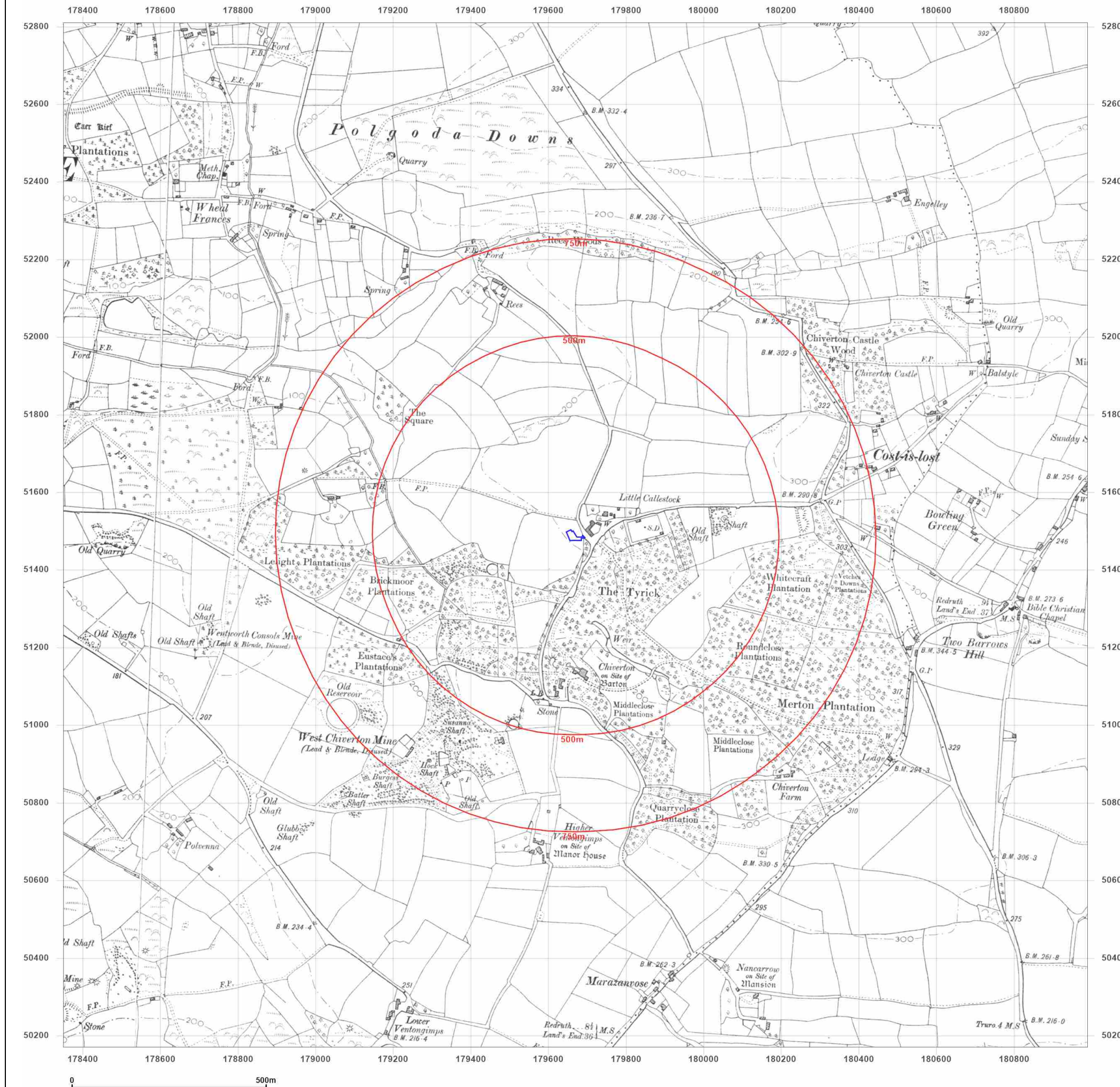
Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com



© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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



Site Details:

LITTLE CALLESTOCK FARM,
ROAD FROM ZELAH TO
MIDDLECLOSE PLANTATIONS,
ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: Provisional

Map date: 1958

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1958
Revised 1958
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1958
Revised 1958
Edition N/A
Copyright N/A
Levelled N/A



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

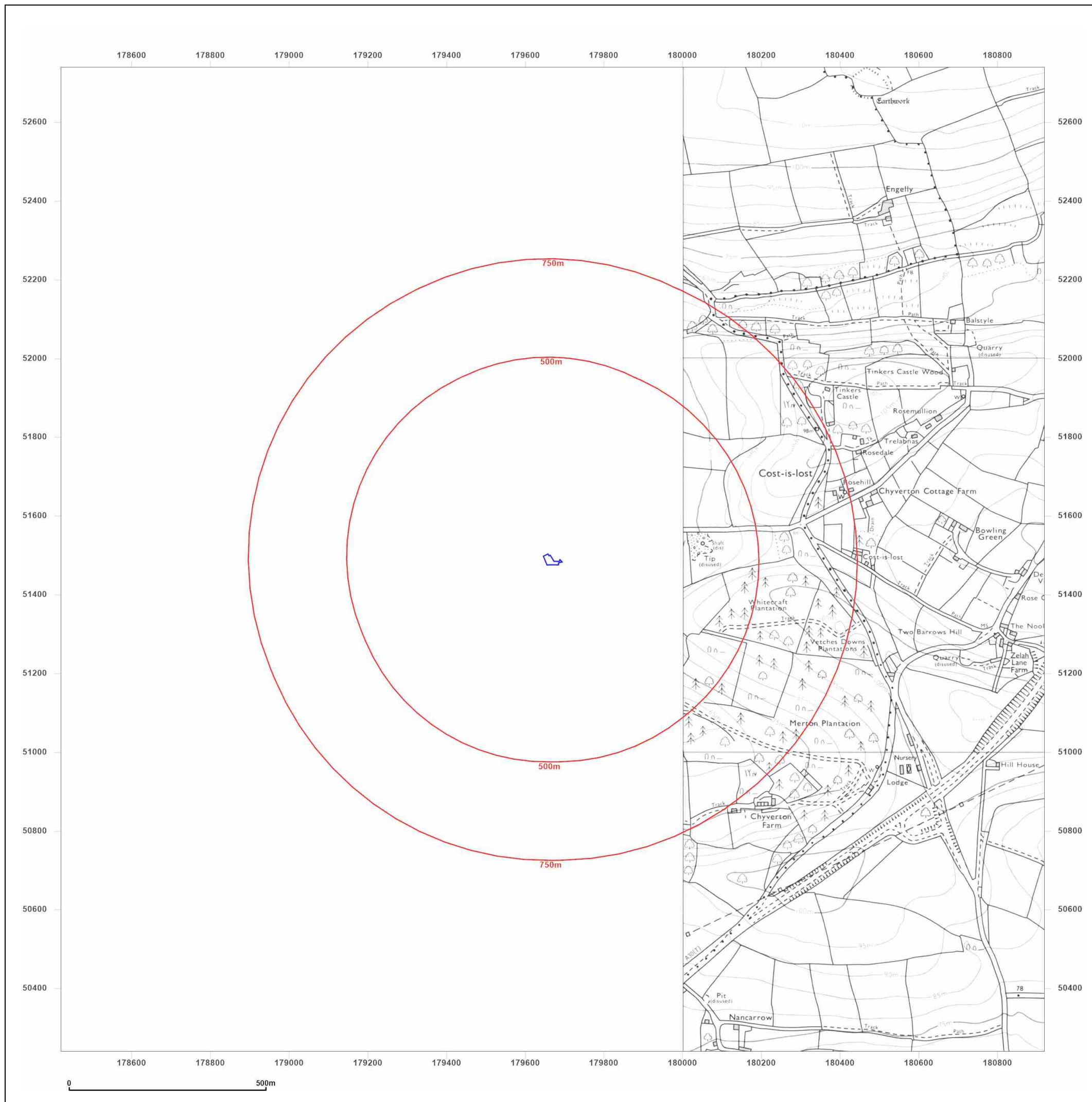


© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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





Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

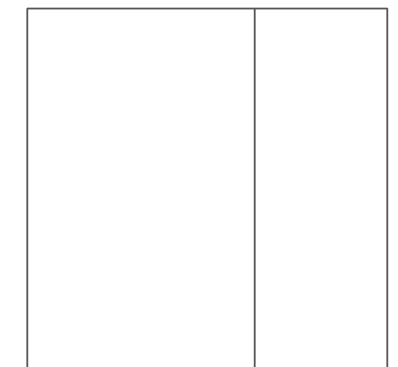
Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: National Grid

Map date: 1993

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1971
 Revised 1993
 Edition N/A
 Copyright N/A
 Levelled N/A



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

© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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

Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

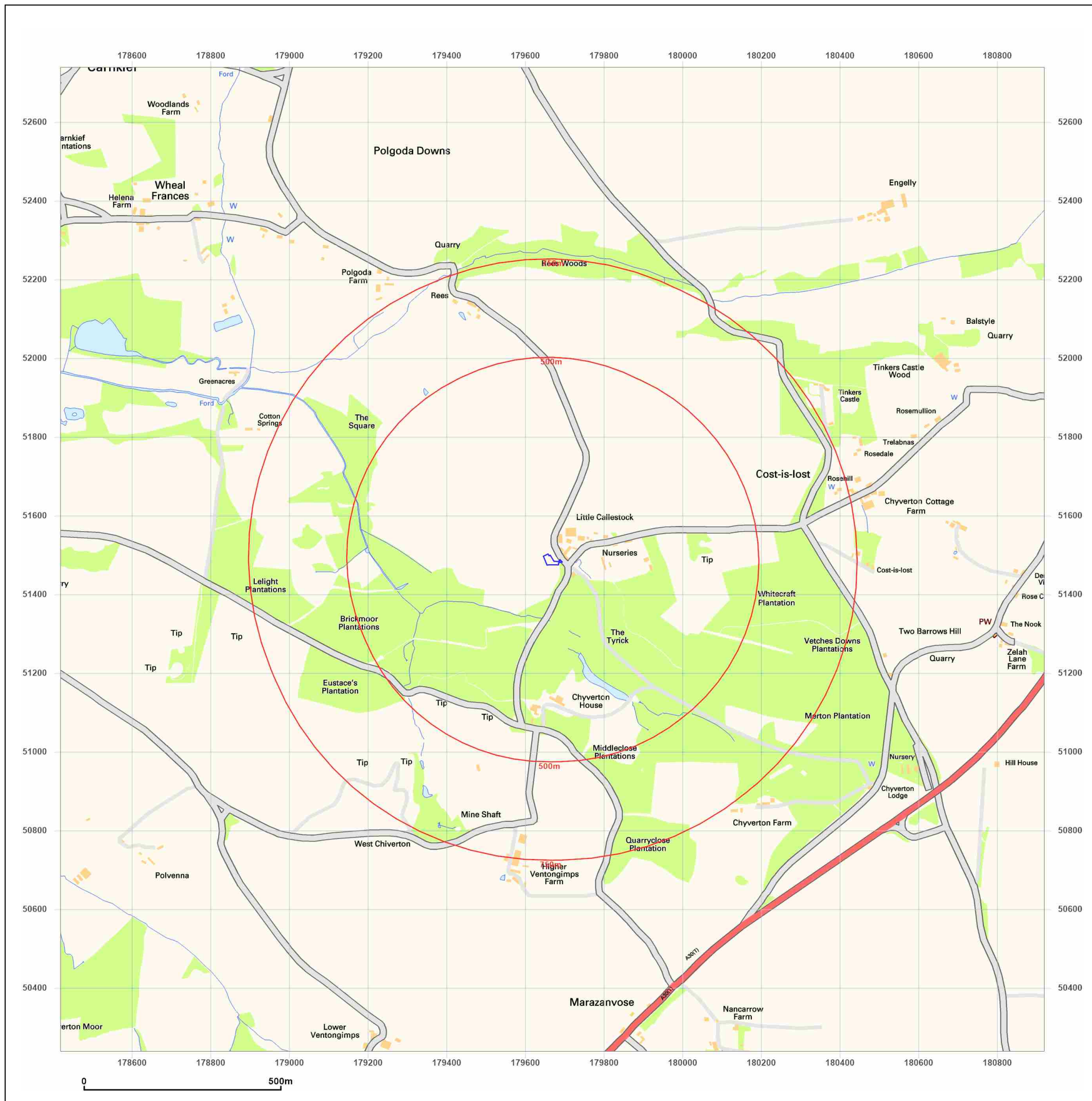
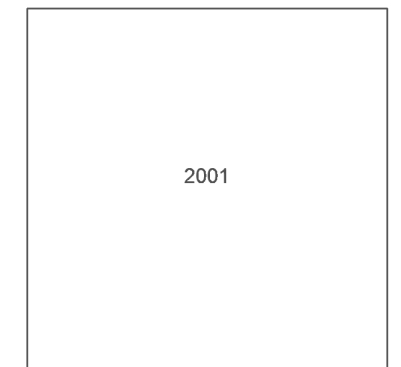
Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



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

© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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

Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

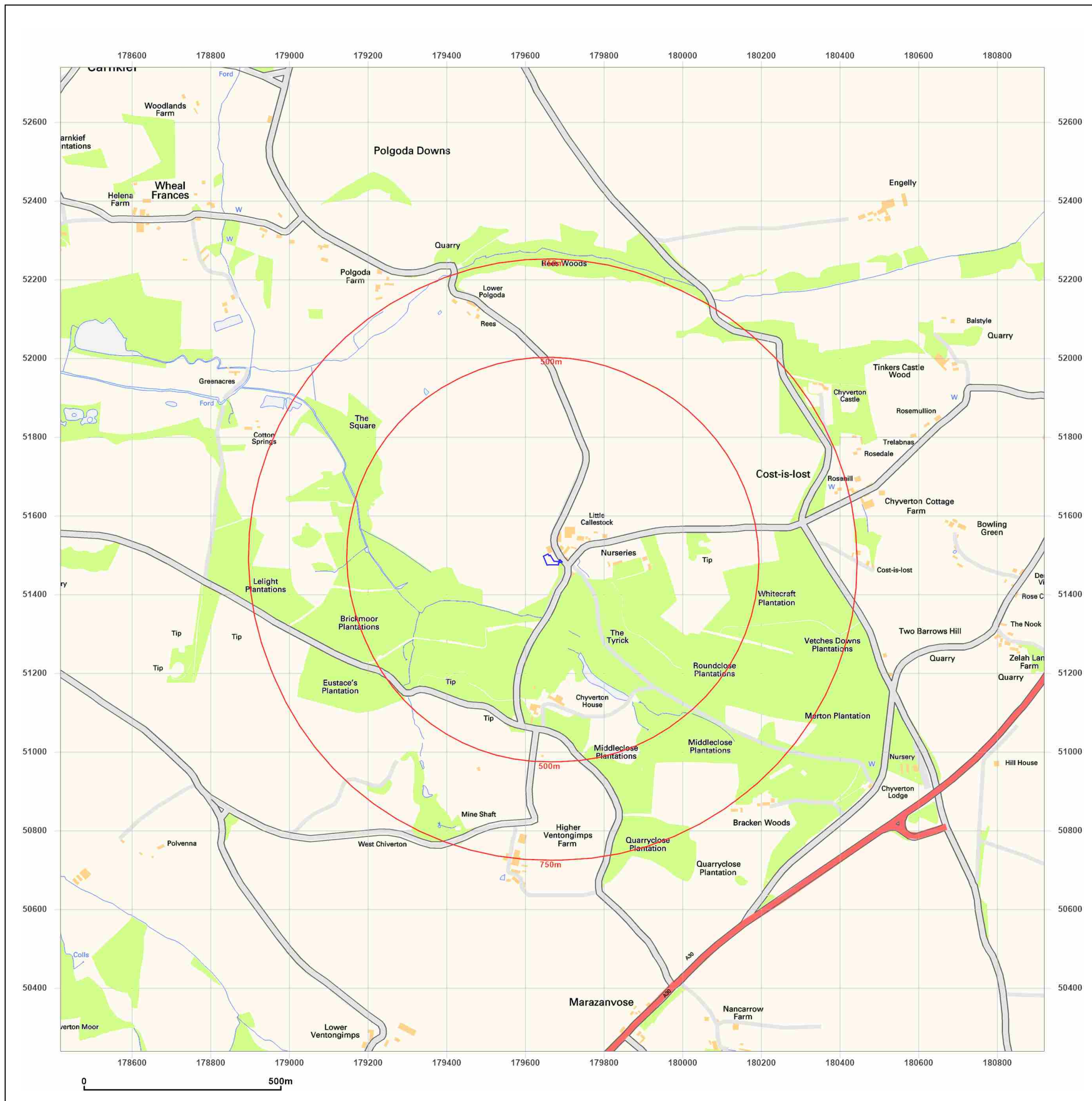


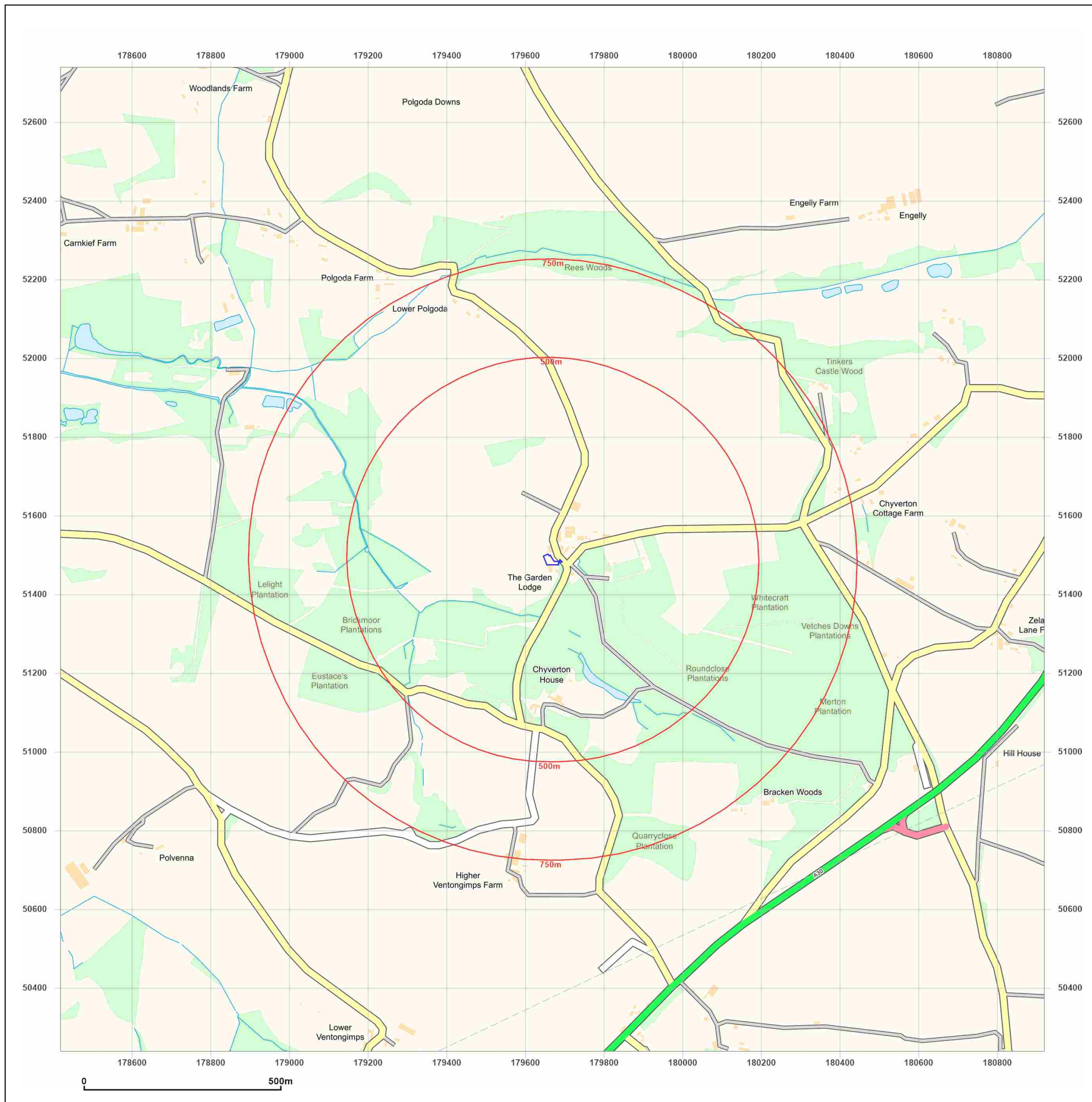
Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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





Site Details:

LITTLE CALLESTOCK FARM,
 ROAD FROM ZELAH TO
 MIDDLECLOSE PLANTATIONS,
 ZELAH, TR4 9HB

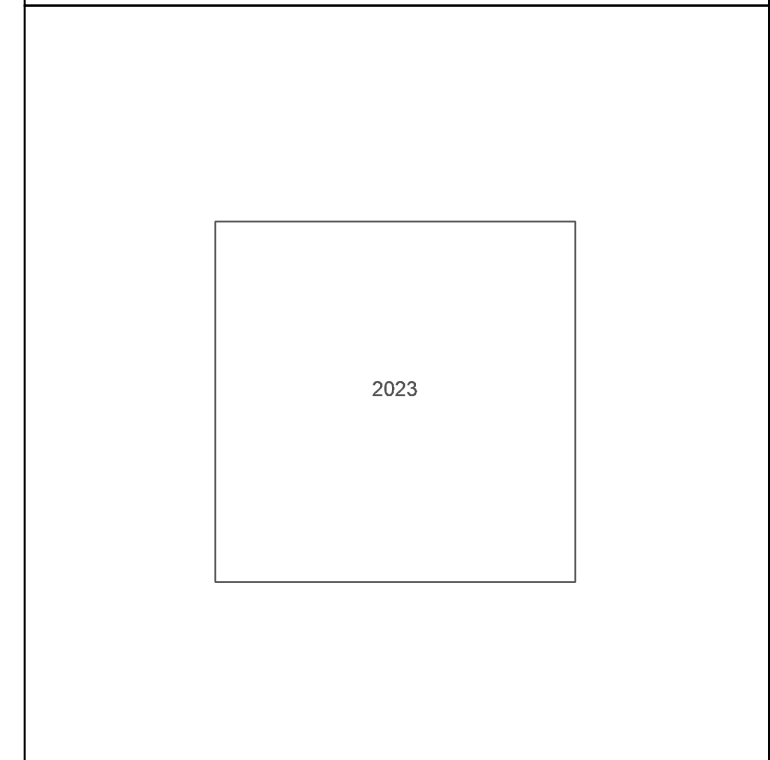
Client Ref: 23525
Report Ref: GCL-8IN-4IZ-H8N-GEK
Grid Ref: 179669, 51489

Map Name: National Grid

Map date: 2023

Scale: 1:10,000

Printed at: 1:10,000



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

© Crown copyright and database rights 2022 Ordnance Survey 100035207

Production date: 25 October 2023

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

Appendix D

UXO Risk Map



UNEXPLODED BOMB RISK MAP



SITE LOCATION

Location: TR4 9HB,
Map Centre: 179782,51558



LEGEND

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

- military
- industry
- UXO find
- transport
- dock
- Luftwaffe targets
- utilities
- Bombing decoy
- other

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

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

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

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

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

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

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

Appendix E

Archival Mine Search





Order Ref: 2405
Our Ref: GWH/LAS/CMS/119169

4th October 2016

Elizabeth Down
Little Callestock Farm
Zelah
TRURO
Cornwall
TR4 9HB

Dear Madam

MINING SEARCH: METALLIFEROUS MINERALS

Re: Little Callestock Farm, Zelah, Truro, Cornwall TR4 9HB
NG Ref: SW 7966 5149

We thank you for your request of 19th September. Accordingly, we have carried out a Mining Search on the above property and are able to report as follows.

Introduction

This desk-top search, which is based on maps, plans and records, is an assessment of the risk of subsidence to the property associated with historic extractive metal mining.

Mining Activity

The property is situated in an area where historic metalliferous mining activity has taken place. It straddles the northeastern boundary of Chiverton Mine (also known as Cornubian Mine) and the neighbouring Mineral Bottom Mine lease area. These mines ceased activity in the 1880s.

Our plans and records do not indicate the presence of any mine workings or shafts under, within or immediately adjacent to the boundaries of the property. However, the abandoned mine plans of this area are poor and incomplete. Not until 1872 did it become mandatory for metalliferous mines to keep accurate and up-to-date plans of the workings and to deposit these with the Mining Records Office upon abandonment. As much of the mining activity, especially at shallow depths, was carried out prior to 1872, it has not been recorded.

Mineralisation in the locality occurs in planar structures (lodes) which occupy former fissures in the slate (killas) bedrock. The lodes, which generally course in a southwest to northeast and south-southwest to north-northeast direction, vary in width from 1 metre up to several metres and are either vertical or inclined at angles usually steeper than 60° from the horizontal.

In the early days of mining, the district was extensively prospected by means of pits excavated to bedrock, in order to discover the outcrop at surface of mineral-bearing lodes. Where found to be viable, these lodes may initially have been mined by shallow openworks sunk along the alignment of the outcrop. In order to continue exploitation at depth, shafts were sunk and horizontal tunnels (levels) were driven away from the shafts along the lodes. The payable ore was then extracted from between the levels.

The principal lode worked at the Chiverton Mine was Chiverton Lode, which courses in a southwest to northeast direction and is inclined to the southeast at an angle of 60° from the horizontal. This lode is projected to outcrop approximately 150 metres southeast of the property within the area between Chiverton Mine and East Chiverton Mine. The nearest shafts on this structure are Eastern Shaft approximately 200 metres southeast and Old Boundary Shaft approximately 280 metres east of the property.

Another lode, known as Caunter Lode, was worked at Chiverton Mine. This lode courses in a south-southwest to north-northeast direction and is inclined steeply to the east-southeast. Deep workings on this lode extend to a position approximately 120 metres east of the property. However, these workings would not present a risk to the subject property.

A district mining map (dated 1869) shows the positions of two southwest to northeast coursing lodes and one south-southwest to north-northeast coursing lode in the vicinity of the property. The south-southwest to north-northeast coursing lode is shown to be inclined down to the west and the southern most of the southwest to northeast coursing lodes is shown to be inclined down to the southeast. The elevations and angles of inclinations of the lodes are not recorded, we are therefore unable to determine the inferred surface outcrop zones of the lodes with any accuracy. However, with the limited information available, it can be inferred that the outcrop zones may possibly lie closer to the property boundary than shown.

Discussions

One of the main causes of mining related subsidence in Cornwall is the collapse of often unrecorded shallow mine workings which exist along lode outcrops. It is likely these workings have been backfilled with unconsolidated waste rock material and are not evident at surface until they collapse. These backfilled shallow mine workings and any associated prospecting pits present an adverse risk to safety and structural integrity at surface. Therefore, lode outcrops have to be treated as potentially untoward features, whether indicated, inferred or proven.

Conclusions

Based on the documentary evidence available, we believe that the property is unlikely to be affected by subsidence caused by historic extractive metalliferous mining. However, as the property is to be developed and lies within a former mining area, we recommend that a precautionary Foundation Trench Inspection be undertaken by a mining consultant in order to confirm the absence of any unrecorded mining issues and to provide final assurances.

We are not aware of any current plans to explore for, or exploit, metallic minerals in the locality.

Limitations

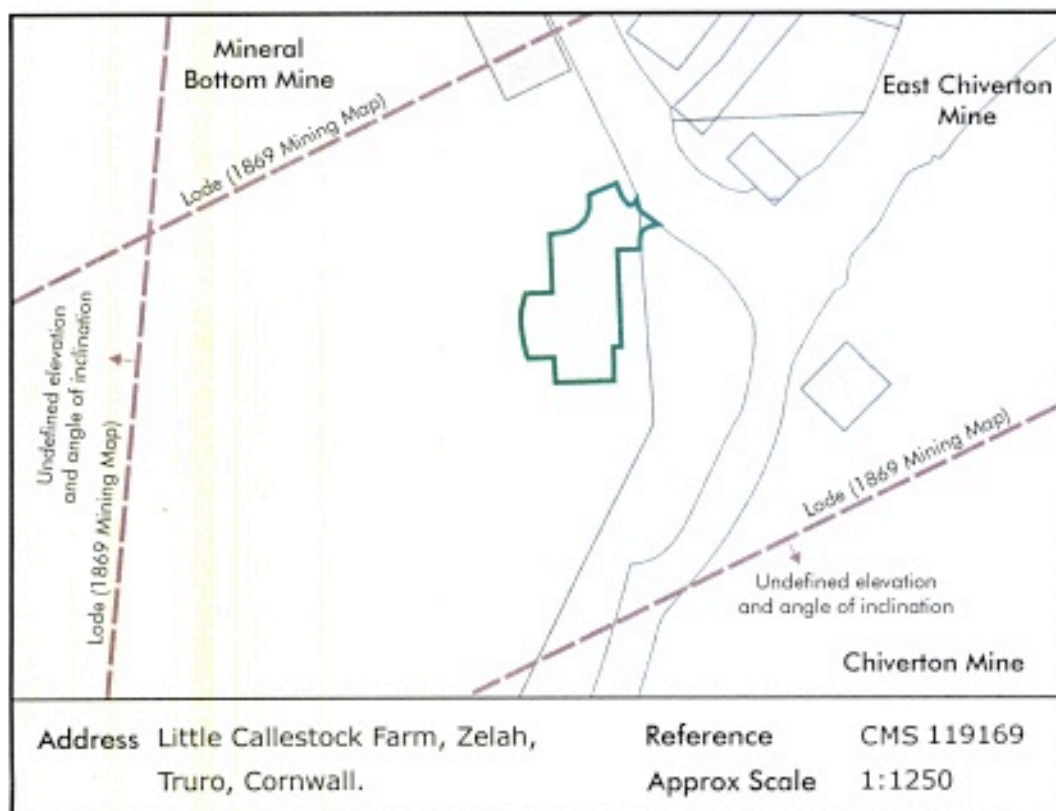
This Mining Search has been carried out with reference to the extensive collection of abandoned mine plans, maps, records and archives in our possession and from this material we have endeavoured to provide as accurate a report as possible. However, taking into account that such records may not be

wholly complete or accurate, we cannot accept liability for any inaccuracies or omissions there may be with respect to those records. A property situated in a mining or mineralised area may be at risk from elevated levels of metallic elements within the soil, however this Mining Search does not include any assessment of the contamination risk to the subject property. This report and any mining features described are applicable to the subject property only, the location or boundaries of which have been indicated by the client. We cannot be liable for any erroneous or omitted information with respect to the property as portrayed on the plan supplied to us for the purpose of this Mining Search. The report must not be relied upon for neighbouring properties, as any adjacent mining features may have been omitted for clarity. This report is confidential to the client, client's solicitor and/or mortgage lender or those acting through a conveyance service provider (as per the quoted reference number) and may not be reproduced or further distributed without our permission. We shall be under no liability whatsoever to any person who has not been party to the commissioning and fee paid for this report. We have not visited the property as part of this Mining Search.

We trust this report provides the information you require. Please contact us if you have any queries or if we can be of any further assistance.

Yours faithfully
for **Cornwall Consultants Limited**

Mr D Berriman, BSc (Hons)
Managing Director



	Property boundary
	Recorded lode
	Inferred lode outcrop
	Inferred lode outcrop zone
	Adit
	Crosscourse
	Elvan dyke
	Shaft
	Mine waste
	Surface/opencast working
	Stone quarry

Please note:

This plan serves to illustrate the contents of the report and shows only the approximate locations of the recorded and inferred mining features in the immediate vicinity of the property. It applies to the shown/named property only and cannot be used accurately for neighbouring properties. This information is confidential to the client designated in the attached report and must not be further distributed without our permission.

Based upon the Ordnance Survey map with the permission of the controller of Her Majesty's Stationary Office. © Crown copyright licence No AL100014361
Reproduced with the permission of Land Registry © Crown copyright and database right (2016), Ordnance Survey 100026316