

PHASE

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▼ Preliminary Risk Assessment (PRA)

▼ Land Adjacent to Botallack Veian, St Just

TR19 7QQ

For Mark (Farmer) and Jess Morris

Ref: GCLGCL24659_P1

26 March 2024

Project

Land Adjacent to Botallack Vean, St Just TR19 7QQ

Report Type

Phase 1 Preliminary Risk Assessment (PRA)

Client

Mark (Farmer) and Jess Morris

Project Ref

GCL24659_P1

Date

26 March 2024

Prepared by

Frank Westcott

Associate

Checked by

Dan Jobson

Managing Director

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Where field investigations are carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

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Executive Summary													
Commissioning	Ground Consultants Limited (GCL) were commissioned by Laurence Associates on behalf of Mark (Farmer) and Jess Morris to undertake a Phase I Preliminary Risk Assessment at the site known as 'Land Adjacent to Botallack Vean, St Just TR19 7QQ.' GCL were formally instructed to proceed via email on the 3rd March 2024.												
Development Proposals	It is proposed to develop the site with a single residential property. Based on the development proposals, the most applicable CLEA land use class for the site is considered to be Residential with Consumption of Homegrown Produce.												
Site History	<p>On Site: The site contained buildings likely associated with Botallack Mine until 1906, when they appeared derelict. All remains of these buildings had disappeared by 1976 and the site has remained undeveloped and covered with scrub vegetation thereafter.</p> <p>Off Site: Features associated with Botallack Mine, including buildings, shafts and waste tipping, have been present in the surrounding area from before 1880. Of particular note is an arsenic calciner and labyrinth ('Lambreth') condenser north-west of the site, which although not mapped before 1976 is recorded to have operated between 1906-14. The ruined mining features have remained extant since the cessation of mining.</p>												
Geology	<p>The geological map shows no superficial deposits to be present on site. Although the mapping contains no records of made ground, soil at the surface of the site was observed to contain anthropogenic material. Given the extent of mining in the immediate vicinity, the presence of made ground associated with tipped mine waste is likely.</p> <p>The geological map indicates that the site is underlain by the Land's End Intrusion comprising granite of Carboniferous-Permian age, intruded into Devonian strata between 359.3 and 251.9 million years ago. The BGS describes this unit as "Medium and coarse-grained biotite-granite." A mineral vein is mapped on the site and a further vein 9m north, both inferred. Fault lines are recorded 24m south-west and 72m west of the site, possibly associated with mineralisation.</p>												
Conceptual Site Model Summary	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #008080; color: white;">Source</th> <th style="background-color: #008080; color: white;">Risk Rating</th> </tr> </thead> <tbody> <tr> <td>On Site: Radon Gas</td> <td style="background-color: #f08080; text-align: center;">High</td> </tr> <tr> <td>On Site: Naturally Occurring Heavy Metals</td> <td style="background-color: #f0e68c; text-align: center;">Moderate/Low</td> </tr> <tr> <td>On/Off Site: Historic Mining and Mine Waste Tipping</td> <td style="background-color: #f0e68c; text-align: center;">Moderate</td> </tr> <tr> <td>Off Site: Arsenic Calcining and Refining and Airborne Deposition</td> <td style="background-color: #f0e68c; text-align: center;">Moderate</td> </tr> <tr> <td>Off Site: Mine Gas from Old Workings</td> <td style="background-color: #90ee90; text-align: center;">Low</td> </tr> </tbody> </table>	Source	Risk Rating	On Site: Radon Gas	High	On Site: Naturally Occurring Heavy Metals	Moderate/Low	On/Off Site: Historic Mining and Mine Waste Tipping	Moderate	Off Site: Arsenic Calcining and Refining and Airborne Deposition	Moderate	Off Site: Mine Gas from Old Workings	Low
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Off Site: Mine Gas from Old Workings	Low												
Recommendations	<p>It is recommended that a Phase 2 Site Investigation be implemented in order to identify, quantify and delineate any potential areas of contamination on site. The Phase II Site Investigation could also include a geotechnical assessment of the site.</p> <p>The Phase 2 Investigation will be aimed at identifying possible sources of contamination highlighted in the Preliminary Conceptual Model.</p> <p>A mining search is also recommended.</p> <p>Full radon protective measures are required for the proposed development in-line with BRE guidelines.</p> <p>In the event unexpected contamination is found during development, work should cease until the material can be identified and remediated appropriately.</p> <p>All site workers should be equipped with the correct PPE and have undertaken suitable risk assessments, job safety and environmental analysis before work commences.</p> <p>Waste material to be removed from site should be handled by a suitably licensed waste contractor.</p>												

1 INTRODUCTION

1.1 Commissioning

Ground Consultants Limited (GCL) were commissioned by Laurence Associates on behalf of Mark (Farmer) and Jess Morris to undertake a Phase I Preliminary Risk Assessment at the site known as 'Land Adjacent to Botallack Vean, St Just TR19 7QQ.' GCL were formally instructed to proceed via email on the 3rd March 2024.

This report has been prepared by GCL solely for the benefit of the client. It shall not be relied upon or transferred to any third party without the prior written authorisation of GCL.

1.2 Existing Reports

GCL has not been made aware of any previous land contamination reports commissioned for this site.

1.3 Scope and Objectives

The objective of this desk study is;

- ✓ To provisionally identify any land contamination associated with the proposed development and to support the discharge of relevant planning conditions and/or building control requirements.
- ✓ To provisionally assess the risk of ground instability
- ✓ To identify the need for investigation or remediation works to demonstrate that the site is suitable for use.

Any recommendations for further works have been made as deemed appropriate, based upon the findings of the investigation.

This assessment has been undertaken with guidance from BS10175:201, Environment Agency report CLR11, LCRM, and as such represents a Phase 1 Desk Study / Qualitative Risk Assessment.

1.4 Limitations

The opinions expressed in this report, along with the comments and recommendations, are derived from desk assessments and site surveys. Reliance may have been placed on third-party site plans/data appended to this report. Any plans/data included should be considered in light of this reliance.

It is important to note that this report does not constitute an asbestos inspection as defined by the 'Control of Asbestos' regulations of 2006. Additionally, it should not be used as a basis for assessments concerning neighbouring properties.

Conclusions presented in this report are based on prevailing guidance at the time of its preparation. We cannot accept liability for retroactive effects resulting from changes or amendments to legislation or guidance.

Identified risks are perceived based on reviewed information. However, actual risk assessment requires physical on-site investigations. The ground's dynamic nature, influenced by ongoing natural and artificial processes, leads to varied characteristics across the site. Despite ground investigations, complete elimination of resulting risks is unattainable.

Detailed surveys for invasive species, such as Japanese Knotweed, are beyond the scope of this investigation. Land ownership carries legal responsibilities regarding environmental harm, as defined in Section 57 of the Environment Act 1995, concerning "Contaminated Land."

This report's conclusions and recommendations are based solely on desk assessments and site surveys without intrusive investigations. Validity spans 12 months from the report's issuance. Beyond this timeframe, a qualified geoenvironmental engineer/environmental scientist should review the report to align with industry standards, policies, or guideline alterations.

It is recommended to submit this report to the local authority for approval before initiating further required work.

1.5 Information Sources

This assessment has been based upon mapping and information obtained from a number of trusted third-party sources. Although we only use information from trusted sources, GCL cannot accept any responsibility for any inaccuracy of third party information. The sources used in this assessment are listed below:

- ✓ Environmental and historical data supplied by Groundsure
- ✓ Zetica Unexploded Ordnance (UXO) risk map
- ✓ British Geological Mapping (both online viewer and map scans)
- ✓ Historic England online records
- ✓ Planning application: PA23/00277 (Certificate of Lawfulness application)

1.6 Proposed Development

It is proposed to develop the site with a single residential property. Based on the development proposals, the most applicable CLEA land use class for the site is considered to be Residential with Consumption of Homegrown Produce.

The proposed site plan is contained in Figure 2.3, to the rear of the report.

If the development proposals are substantively changed following completion of this report, the conceptual site model and conclusions must be reconsidered.

2 SITE LOCATION AND DESCRIPTION

2.1 Site Location and Layout

The site is located to the north-west of the village of Botallack, 0.5km north-west of the B3306 St Just to Pendeen road and approximately 2.0 km north of St Just. The site is approximately centred on National Grid Reference SW 36552 33138.

The site is roughly square in shape and covers an area of 0.12ha.

A site location plan (SLP) is contained in Figure 2.1, to the rear of the report.

The current site plan is contained in Figure 2.2, to the rear of the report.

2.2 Surrounding Area

Table 2.1: Surrounding Land Use

Direction	Land Use
North	National Trust building and car park, heathland
East	Heathland, agricultural land
South	Residential, heathland, agricultural land
West	Agricultural land, historic mining remains

2.3 Site Walkover Survey

GCL conducted a site walkover survey on 25th March 2024. Photographs from the walkover survey are provided in Appendix A.

The site is currently rectangular, with hardcore, including brick, stone and mud, surfacing the entire site [Plates 1 and 2]. The site appears to have been recently cleared, with a small stockpile of granite boulders noted in the western corner of the site at the time of the walkover [Plates 2 and 3].

Concrete posts, joined by wire, fence off the perimeter of the site, with a hedgerow and bushes lying along the northern and northeastern boundaries [Plates 1 and 2].

Topographically speaking, the site appeared level with no significant changes in elevation noted. A small mound of made ground, containing bricks, stone, ash/clinker and gravel appeared to have been excavated from the northern corner to provide a level surface [Plates 3 and 4].

2.4 Ecological Observations

No invasive species were spotted in the walkover survey. However, conducting an invasive species survey is beyond this report's scope. Consider engaging a specialist surveyor for a thorough assessment if needed.

2.5 Anecdotal Information

No anecdotal information has been supplied by the Client, landowner or any other third parties.

3 SITE HISTORY

3.1 Historical Map Review

Using historical Ordnance Survey mapping and recent aerial photography provided by Groundsure, together with Historic England online records, an overview of pertinent findings relating to the site and its surroundings can be found below in Table 3.1.

Table 3.1: Summary of Historical Site Usage

On Site	Surroundings	Date & Scale
The site is partially occupied by two large buildings extending to the north. The eastern edge of the site appears to be occupied by tipped ground.	Several features associated with Botallack Mine (tin and copper) are present including areas of tipping surrounding the site, a shaft 20m west, an engine house, shaft and windlass 60m south, tramways 60m south-west and 70m south, an unidentified building (identified as the Count House on later mapping) 50m north, a smithy 90m north-west and various unidentified buildings. A tip associated with a shaft is present 90m north-east. Further afield, 120m north-west, a large building, settling ponds, an engine house and stamps, are present.	1880 1:2,500
No significant changes	No significant changes	1888 1:10,560
The building on site appears to be derelict.	The mine is shown as disused and the buildings, with the exception of the Count House, and the tramways have been cleared. A flue is present 90m west of the site, connecting a series of chambers (possibly arsenic condensers) 110m west, to a chimney 130m north-west.	1906-08 1:2,500, 1:10,560
No significant changes	No significant changes	1938 1:10,560
No significant changes	No significant changes	1958 1:10,560
No development is shown on the site.	A building is present 15m south-west. Disused arsenic flues (A labyrinth ['Lambreth'] condenser) are shown 130m north-west, linked by flues to a square building 200m north-west (a Brunton calciner) and a chimney 180m north-west. Although only mapped from 1976, these features date	1976-78 1:2,500, Historic England records

	from 1906 and operated until 1914 according to Historic England.	
No significant changes	Building 15m south-east identified as Botallack Vean (residential property)	1981 1:10,000
No significant changes	No significant changes	1995 1:2,500
The site is shown as undeveloped and with dense scrub vegetation	Count house buildings and car park visible to north. Botallack Vean buildings visible to south-east. Remainder of surrounding area undeveloped, including heathland and agricultural land to north-east, heathland to south-west, historic mining remains to west/north-west.	1999 Aerial Photo
No significant changes	No significant changes	2001-03 1:1,250, 1:10,000
No significant changes	Linear excavation visible 80m east of site, purpose unknown, possibly related to sewerage.	2005 Aerial Photo
Scale too small to show detail	No significant changes	2010 1:10,000
No significant changes	No sign of linear excavation remains	2013-22 Aerial Photos
Scale too small to show detail	No significant changes	2024 1:10,000

3.2 Site History Summary

On Site: The site contained buildings likely associated with Botallack Mine until 1906, when they appeared derelict. All remains of these buildings had disappeared by 1976 and the site has remained undeveloped and covered with scrub vegetation thereafter.

Off Site: Features associated with Botallack Mine, including buildings, shafts and waste tipping, have been present in the surrounding area from before 1880. Of particular note is an arsenic calciner and labyrinth ('Lambreth') condenser north-west of the site, which although not mapped before 1976 is recorded to have operated between 1906-14. The ruined mining features, although disused, have remained extant since the cessation of mining.

3.3 UXO Risk

The risk to the site and its surroundings from the presence of UXO is low (see Appendix D).

3.4 Nearby Planning Applications

There are no planning applications pertinent to land contamination that have been identified in the Cornwall Council online planning register.

4 GEOLOGICAL & GEOTECHNICAL SETTING

4.1 Geological Setting

Reference has been made to the BGS geological mapping at 1:10,000 and 1:50,000 scales in the Groundsure report, as well as the BGS online map viewer.

The geological map shows no superficial deposits to be present on site. Although the mapping contains no records of made ground, soil at the surface of the site was observed to contain anthropogenic material. Given the extent of mining in the immediate vicinity, the presence of made ground associated with tipped mine waste is considered likely.

The geological map indicates that the site is underlain by the Land's End Intrusion comprising granite of Carboniferous-Permian age, intruded into Devonian strata between 359.3 and 251.9 million years ago. The BGS describes this unit as "Medium and coarse-grained biotite-granite."

A mineral vein is mapped on the site and a further vein 9m north, both inferred. Fault lines are recorded 24m south-west and 72m west of the site, possibly associated with mineralisation.

4.2 Borehole Records

There are no BGS borehole records within 100m of the site.

4.3 Anticipated Geological Sequence

Based on our experience of the local area, as well as BGS mapping, it is anticipated that the following geological sequence can be expected;

Table 4.1: Anticipated Geological Sequence

Strata	Description	Estimated Thickness (m)	Estimated Permeability	Location
Made Ground	Tipped mining waste comprising broken country rock, gangue minerals, brick and ash/clinker.	0 - 1	Unsuitable for conventional drainage	Across the site. Up to 3m thick in north-east corner.
Lands End granite, weathered at surface	Clayey sandy gravel and cobbles at surface rapidly transitioning into solid granite	20m+	Moderate – good	Across the site

4.4 Potential for Ground Instability

There are many natural and human-induced geotechnical processes which can give rise to ground stability issues. While in all cases instability may arise whether or not there is any development on the surface, it is important to recognise that the development itself or the intensification of development may be the triggering factor, which initiates instability problems.

The risks posed by common types of unstable ground are tabulated below. The assessment of risk is based upon the proposed development, using a range of information sources, including geological and topographical mapping, as well as Groundsure data.

Table 4.2: Unstable Ground Risk Summary

Instability Risk	Risk Rating	Details
Shrinking or Swelling Clay	Negligible	Ground conditions predominantly non plastic.
Running Sand	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on land use due to running conditions.
Compressible Deposits	Negligible	Compressible strata are not thought to occur.
Collapsible Deposits	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
Landslides	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
Ground Dissolution of Soluble Rocks	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.

4.5 Mining, Ground Workings & Natural Cavities

A mining search has not been commissioned as part of the current scope of work and no previous mining search information has been made available to Ground Consultants Ltd.

According to the Groundsure report, 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. Historical land uses identified from Ordnance Survey mapping in the Groundsure Data (Appendix B) indicate the presence of underground workings. A tin and copper mine, later identified as disused, are identified on site and an unspecified disused mine is recorded on site and 5m south. Old shafts are recorded 15-20m west, 27m west and 48m south of the site.

Given the extent of mining in the vicinity of the site and the presence of mineral veins on the site, a mining search is recommended.

4.6 Groundwater

It is unlikely that groundwater will be shallow in this area. It is anticipated that groundwater will be underdrained by adits draining old mine workings and will be close to sea level.

5 ENVIRONMENTAL, HYDROLOGICAL & HYDROGEOLOGICAL SETTING

5.1 Hydrology & Hydrogeology

A summary of the hydrological and hydrogeological setting is tabulated below, with respect to the anticipated geological sequence set out in section 4.1.

Table 5.1: Overview of the hydrological and hydrogeological setting

Hydrogeology	
Superficial Aquifer	There are no superficial deposits recorded on site.
Bedrock Aquifer	The Lands End Granite is designated as a “Secondary A” Aquifer. The Environment Agency describes this type of aquifer as Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
Groundwater Vulnerability	Bedrock geology is designated as high vulnerability. The flow mechanism is defined as well connected fractures.
Groundwater Abstractions	The nearest Groundwater water abstraction license records are duplicate historical entries 227m east of the site. Two further duplicate historical entries are located 459m north of the site. The records all relate to abstraction for general farming and domestic uses. There are no more recorded groundwater abstraction licenses within 500m of the site.
Surface Water Abstractions	There are no surface water abstraction licences within 500m of the site.
Source Protection Zones	The site is not within a groundwater Source Protection Zone.
Hydrology	
Ordnance Survey Water Network and Surface Water Features	There are no surface water features within 500m of the site. The coast is approximately 350m north-west of the site.
Water Framework Directive (WFD) Surface Water Body Catchments	The site is within the coastal surface water body catchment.
Flooding and Drainage	
Risk of Flooding from Rivers and Sea (RoFRaS)	The site is not in an area considered to be at risk from flooding from rivers and the sea.
Historical Flood Events	None recorded.
Flood Defences	None within 250m of the site.
Areas Benefitting from Flood Defences	The site is not in an area benefitting from flood defences.
Flood Storage Areas	None within 250m of the site.
Flood Zones	The site is not within a Zone 2 or Zone 3 area at risk from flooding.
Surface Water Flooding	The site is considered to be at negligible risk from surface water flooding.
Groundwater Flooding	The site is considered to be at a negligible risk of groundwater flooding.

5.2 Environmental Setting

The following table summarises all pertinent environmental factors relating to the site, with respect to the ground conditions set out in section 4.

Table 5.2: Environmental Setting

Radon	
Percentage of Properties in above Action Level for Radon	Required Protection Levels
Greater than 30%	Full Radon Protection
<i>Radon protection measures should be installed in line with Building Research Establishment (BRE) 211 "Guidance on Protective Measures for New Buildings."</i>	

Background Estimated Soil Chemistry (mg / kg)		
Arsenic	35 - 45	The background estimated soil chemistry provided by BGS is considered to relate to the granite bedrock and will not be representative of more mineralised material in tipped mine waste, or soil affected by airborne deposition of particulates from arsenic refining in the locality. Arsenic in the bedrock is indicated to narrowly exceed the Generic Acceptance Criteria (GAC) for the residential with plant uptake setting.
Cadmium	<1.8	
Chromium	40 - 60	
Lead	100 - 200	
Nickel	15 - 30	

Sensitive Land Use	Within pertinent radius of site? (250m)*		Distance & Direction (Comments if applicable)
	Yes	No	
Site of Special Scientific Interest	<input checked="" type="checkbox"/>	<input type="checkbox"/>	→ 26m north-west: Aire Point to Carrick Du
Ramsar Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Special Areas of Conservation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Special Protection Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
National Nature Reserves	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Local Nature Reserves	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Designated Ancient Woodland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Biosphere Reserves	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Forest Parks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Marine Conservations Zones	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Green Belt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Proposed Ramsar Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Possible Special Area of Conservation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Potential Special Protection Areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Nitrate Sensitive Areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Nitrate Vulnerable Zones	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Waste & Landfill	Within pertinent radius of site? (250m)*		Distance & Direction (Comments if applicable)
	Yes	No	
Active or Recent Landfill	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Landfill (BGS, LA or EA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Waste Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Licensed Waste Sites

**Initial search extent limited to 250m from site, unless source of contamination and/or sensitive receptor is considered significant enough to warrant a greater radius of up to 1,000m.*

Past and Present Land Uses

Land Use	Within pertinent radius of site? (100m)*		Distance & Direction (Comments if applicable)
	Yes	No	
			<ul style="list-style-type: none"> ➔ On site: unspecified disused tip; tin and copper mine, tin and copper mine (disused), unspecified disused mine ➔ 3m south – 105m north: a large number of mining related features including: unspecified disused mine, refuse heap/unspecified heap (assumed mine waste tipping), unspecified shaft/old/disused shaft, engine house, railway sidings, smithy
Historical Industrial Land Uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Historical Tanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Energy Features	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Petrol Stations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Military Land	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Recent Industrial Land Uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	➔ 42m south: shaft
Current Or Recent Petrol Stations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Electricity Cables	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Gas Pipelines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sites Determined as Contaminated Land	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Control Of Major Accident Hazards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Regulated Explosive Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hazardous Substance Storage/Usage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Licensed Industrial Activities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Licensed Industrial Activities (Part A(1))	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Licensed Industrial Activities (Part A(2)/B)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Radioactive Substance Authorisations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Licensed Discharge to Controlled Water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pollutant Release to Surface Waters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pollutant Release to Public Sewer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
List 1 Dangerous Substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
List 2 Dangerous Substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pollution Incidents	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Initial search extent limited to 100m from site, unless source of contamination and/or sensitive receptor is considered significant enough to warrant a greater radius of up to 1,000m.*

6 PRELIMINARY CONCEPTUAL MODEL

6.1 Introduction

A Preliminary Risk Assessment is underpinned by the conceptual model, which is based on the relationship between the source of contamination, potential receptors, and any pathway between. If a viable source, pathway and receptor is identified, an assessment of the risk is required. CIRIA C552 offers guidance on risk valuation, based on the likelihood of an event, and its severity.

The following table outlines the classification of probability, based on CIRIA C552;

Table 6.1: Classification of Probability

Classification	Definition
High Likelihood	A pollutant link has been identified and a pollution event is very likely in the short term and almost inevitable in the long term.
Likely	A pollutant link has been identified, and it is probable that an event will occur in the long term, and possible in the short term.
Low Likelihood	There is a pollutant linkage and circumstances are such that an event could occur, but it is not probable in the long term and even less likely in the short term.
Unlikely	There is a pollutant linkage but it is unlikely that an event would occur even in the very long term.

The following table outlines the classification of consequence, based on CIRIA C552;

Table 6.2: Classification of Consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in “significant harm” as defined by the Environmental Protection Act 1990 and/or short-term risk of pollution of sensitive water resources and/or catastrophic damage to buildings or property.
Medium	Long term (chronic) damage to human health likely to result in “significant harm” as defined by the Environmental Protection Act 1990 and/or significant pollution of sensitive water resources and/or significant change in a defined ecosystem.
Mild	Long term harm to human health but not significant as defined by the Environmental Protection Act 1990 and/or pollution of non-sensitive water resources and non-significant pollution of sensitive water resources.
Minor	Harm, not significant, but that could result in financial loss or cost implications. Non-permanent human health effects.

Following classification of the probability and severity, a risk category can be assigned. The following table, taken from CIRIA C552 summarises this process;

Table 6.3: Risk Classification Matrix

Risk Classification Matrix					
Taken from CIRIA C552		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High	High	Moderate	Moderate / Low
	Likely	High	Moderate	Moderate / Low	Low
	Low Likelihood	Moderate	Moderate / Low	Low	Very Low
	Unlikely	Moderate / Low	Low	Very Low	Very Low

The risk categories are defined as follows;

Table 6.4: Risk Categories

Classification	Definition
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard OR there is evidence that severe harm to a designated receptor is currently happening. Urgent investigation and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Urgent investigation is required and remedial works may be necessary.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However it is relatively unlikely that any such harm would be severe.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

6.2 Preliminary Conceptual Site Model

This conceptual site model has been undertaken with due regard to guidance provided in BS10175:2011, CLR11 and CIRIA C552. The assessment of risk from land contamination also pays due regard to the definition of contaminated land, as defined within Part 2A of the Environment Protection Act 1990. This legislation defines contaminated land as any land that is in such a condition that by reason of substances in, on or under the land:

- ✓ Significant harm is being caused or there is a significant possibility of such harm being caused; or
- ✓ Pollution of controlled water is being, or is likely to be, caused.

Potential sources of contamination identified from current activities and the history of the site and surrounding area are presented in table 6.5 below.

Table 6.5: Potential Sources of Contamination

Potential Sources	Contaminants of Concern
Natural Geology	Radon Gas Arsenic
On/Off Site: Historic tin and copper mining and mine waste tipping	Metals including arsenic, TPH, PAH
Off Site: arsenic calcining and refining and airborne deposition	Arsenic
Off Site: Mine gas in old workings	Methane, carbon monoxide, carbon dioxide

The conceptual site model is derived from an assessment of the above potential sources of contamination, using the criteria set out in CIRIA C552 and tables 6.1-6.4 above. The table, overleaf, is based on the proposed use and the site in its current condition.

6.3 Preliminary Conceptual Site Model Matrix

Table 6.6: Preliminary Conceptual Site Model

Preliminary Conceptual Model					
Source(s)	Pathway(s)	Receptor(s)	Probability	Severity	Risk Assessment
On Site: Radon Gas	Ingress into proposed buildings	Future site users	High Likelihood	Medium	High Risk – Development is within an area where greater than 30% of properties are above the action level.
On Site: Naturally occurring heavy Metals including arsenic	Dermal contact Soil and dust ingestion and inhalation	Future site users Site workers Site flora and fauna	Low Likelihood	Medium	Moderate/Low Risk – The background estimated soil chemistry provided by BGS is considered to relate to the granite bedrock and will not be representative of more mineralised material in tipped mine waste, or soil affected by airborne deposition of particulates from arsenic refining in the locality. Arsenic in the bedrock is indicated to narrowly exceed the Generic Acceptance Criteria (GAC) for the residential with plant uptake setting.
On/Off Site: Historic tin and copper mining and mine waste tipping	Dermal contact Soil and dust ingestion and inhalation Ground & surface waters	Future site users Site workers Site flora and fauna	Likely	Medium	Moderate Risk – Tipped mine waste may comprise more highly mineralised country rock than the natural bedrock near the site surface, together with gangue minerals from mineral lodes. The concentration and bioaccessibility of metals including arsenic is likely to be higher in this material. Other wastes such as ash/clinker and lubricants from engine houses may also be present in tipped mining waste.
Off Site: arsenic calcining and refining and airborne deposition	Airborne deposition followed by dermal contact Soil and dust ingestion and inhalation Ground & surface waters	Future site users Site workers Site flora and fauna	Unlikely	Medium	Moderate Risk – Near surface soils may be affected by historical airborne deposition of arsenic from fugitive emissions from the arsenic calcining and refining processes formerly carried out nearby. The concentration and bioaccessibility of metals including arsenic is likely to be higher in near surface soils affected by airborne deposition.
Off Site: Mine gas in old workings (methane, carbon monoxide, carbon dioxide)	Ingress into proposed buildings	Future site users	Unlikely	Medium	Low Risk – Mine gas was not common in metalliferous mines and there is no record of its occurrence at the Botallack or nearby mines. It is not considered a source of contamination likely to affect the proposed development.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Geotechnical Considerations

Any Made Ground encountered on site will not suffice as a suitable bearing, therefore shallow foundations should be placed in the underlying natural material.

Conventional strip foundations may be viable at this site; however a site investigation will be required to confirm this. It would also be considered prudent to carry out soakaway testing in accordance with BRE 365 to assess the sites suitability for conventional drainage.

In view of the level of mining activity in the immediate surrounding area, the potential for the site to be affected by mine workings is high. A mine search is therefore recommended.

7.2 Conclusions

Development is within an area where greater than 30% of properties are above the action level for Radon.

Levels of naturally occurring arsenic may narrowly exceed the relevant guideline value of 37mg/kg (for residential with plant uptake). However, the likely presence of made ground containing tipped mine waste on the site, and the potential for historical airborne deposition from arsenic processing in the vicinity, both indicate that the potential for more significantly elevated arsenic, as well as other metals, is high. Organic contamination such as PAH and TPH may also be present

The site historically contained buildings likely associated with Botallack Mine until 1906, when they appeared derelict.

Off site, features associated with Botallack Mine, including buildings, shafts and waste tipping, have been present in the surrounding area from before 1880. Of particular note is an arsenic calciner and labyrinth ('Lambreth') condenser north-west of the site, which although not mapped before 1976 is recorded to have operated between 1906-14.

It can be concluded that the site is likely to be suitable for the proposed development, once the recommendations contained within this report have been implemented.

7.3 Recommendations

It is recommended that a Phase 2 Site Investigation be implemented in order to identify, quantify and delineate any potential areas of contamination on site. The Phase II Site Investigation could also include a geotechnical assessment of the site.

The Phase 2 Investigation will be aimed at identifying possible sources of contamination highlighted in the Preliminary Conceptual Model.

Full radon protective measures are required for the proposed development in-line with BRE guidelines.

In the event unexpected contamination is found during development, work should cease until the material can be identified and remediated appropriately.

All site workers should be equipped with the correct PPE and have undertaken suitable risk assessments, job safety and environmental analysis before work commences.

Waste material to be removed from site should be handled by a suitably licensed waste contractor.

8 REFERENCES

- BSI (2011) BS 10175:2011 +a1:2013 Investigation of Potentially Contaminated Sites – Code of Practice. London, British Standards Institution
- Building Research Establishment (BRE) (2007) BR211 - Radon: Guidance on Protective Measures for New Buildings. Watford, BRE
- CIRIA (2001) CIRIA C552 - Contaminated land risk assessment: A guide to good practice. London, CIRIA
- CIRIA (2007) CIRIA C665 – Assessing Risks Posed by Hazardous Ground Gases to Buildings. London, CIRIA
- Contaminated Land: Applications in Real Environments (CL:AIRE), Association of Geotechnical and Geo-environmental Specialists (AGS) and The Environmental Industries Commission (EIC) (2010) Soil Generic Assessment Criteria for Human Health Risk Assessment. London, CL:AIRE
- Department of Communities and Local Government (2012) National Planning Policy Framework. London, DCLG
- Environment Agency (2004) Contaminated Land Report 11 - Model Procedures for the Management of Land Contamination. Bristol, Environment Agency
- Environment Agency (2005) Guidance on Assessing the Risk Posed by Land Contamination and Its Remediation on Archaeological Resource Management. Bristol, EA
- Great Britain. Environmental Protection Act (1990). London, The Stationery Office
- Great Britain. Environmental Damage (Prevention and Remediation) Regulations (2009). London, The Stationery Office
- Great Britain. Water Act (2003). London, The Stationery Office
- Great Britain. The Water Framework Directive (Standards and Classification) Directions (England and Wales) (2015). London, The Stationery Office
- Land Quality Press (2015) The LQM/CIEH Suitable 4 Use Levels for Human Health Risk Assessment (2nd Edition). Nottingham, Land Quality Press
- National House Building Council (NHBC), Environment Agency and Chartered Institute of Environmental Health (CIEH) (2008) Research & Development Publication 66: Guidance for the Safe Development of Housing on Land Affected by Contamination. Amersham, NHBC
- Royal Institution of Chartered Surveyors (RICS) (2012) Japanese Knotweed and Residential Property. Coventry, RICS

▼ **Figure 2.1** **Site Location Plan**

Plan may be provided by a third party

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 Any discrepancies to be reported to Laurence Associates before
 work proceeds. This drawing shall be used only for the purpose
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Notes:
 Site Area: 1,216 m²

Rev.	Description	Drawn	Date



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t: +44(0)1872 225 259
 e: hello@laurenceassociates.co.uk
 w: www.laurenceassociates.co.uk

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 CONSTRUCTION OF DWELLING

Project Address:
 LAND ADJ BOTALLACK VEAN
 BOTTALLACK, ST JUST
 TR19 7QQ

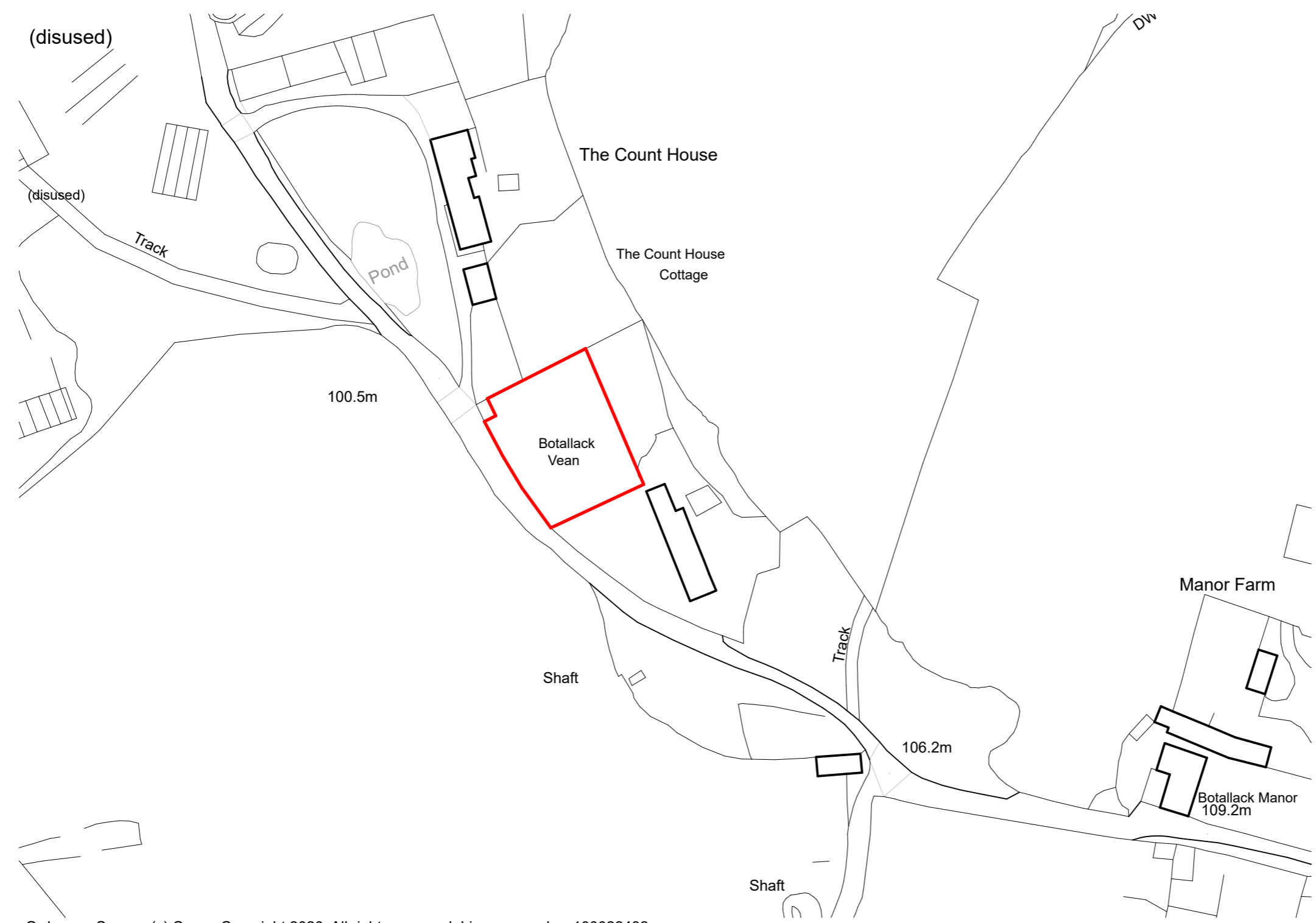
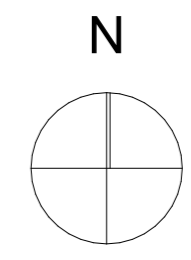
Client:
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Drawing Title:
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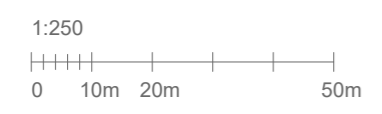
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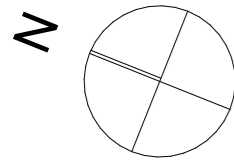
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LOCATION PLAN
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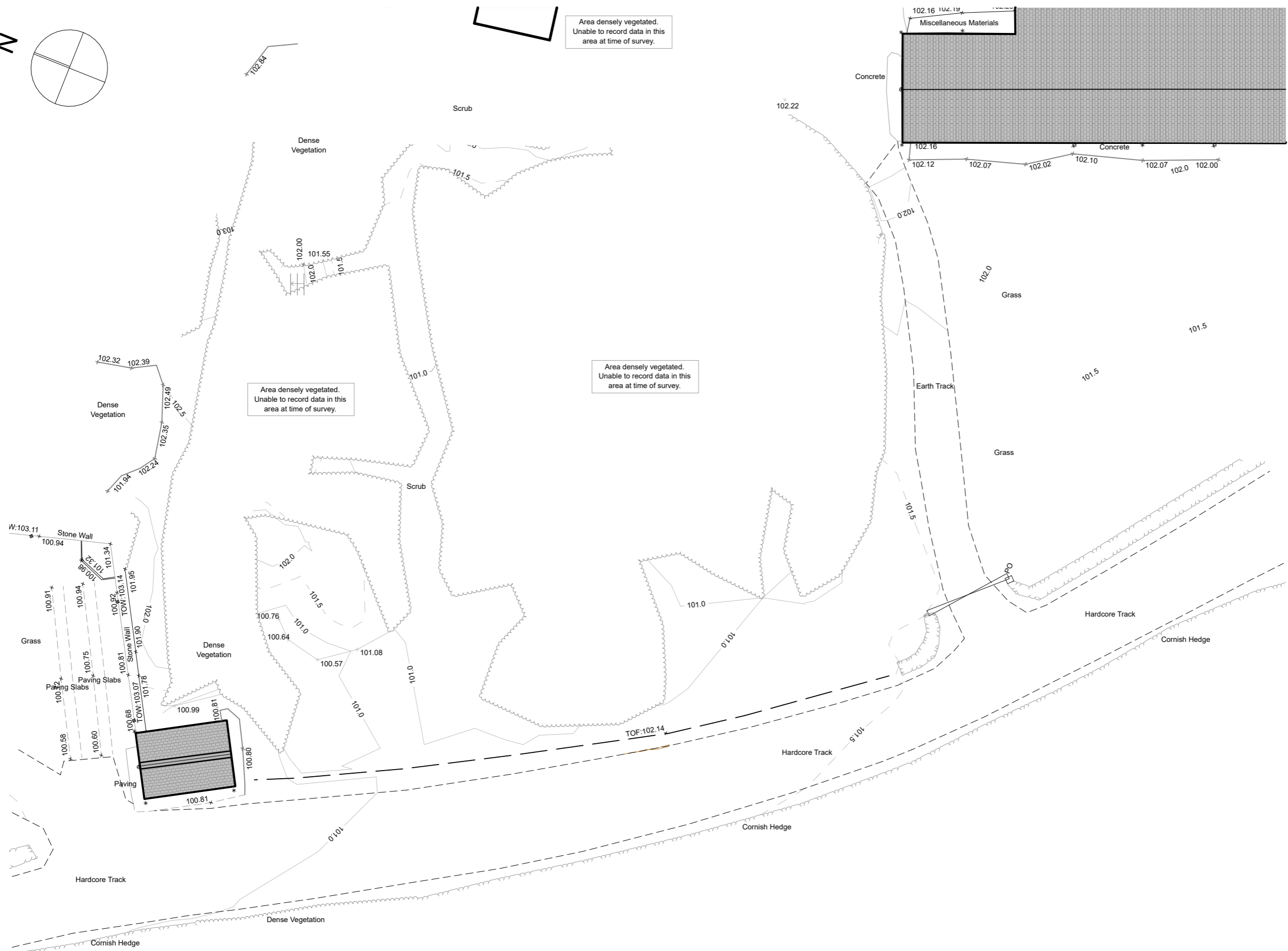


▼ Figure 2.2 Current Site Layout

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Area densely vegetated.
Unable to record data in this
area at time of survey.



Area densely vegetated.
Unable to record data in this
area at time of survey.

Area densely vegetated.
Unable to record data in this
area at time of survey.

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e: hello@laurenceassociates.co.uk
w: www.laurenceassociates.co.uk

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Project Address:
LAND ADJ BOTALLACK VEAN
BOTTALLACK, ST JUST
TR19 7QQ

Client:
MR & MRS MORRIS

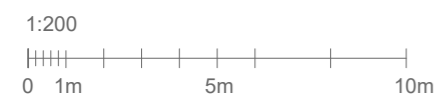
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EXISTING SITE PLAN

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Drawing No: 23109-PL-04	Rev:
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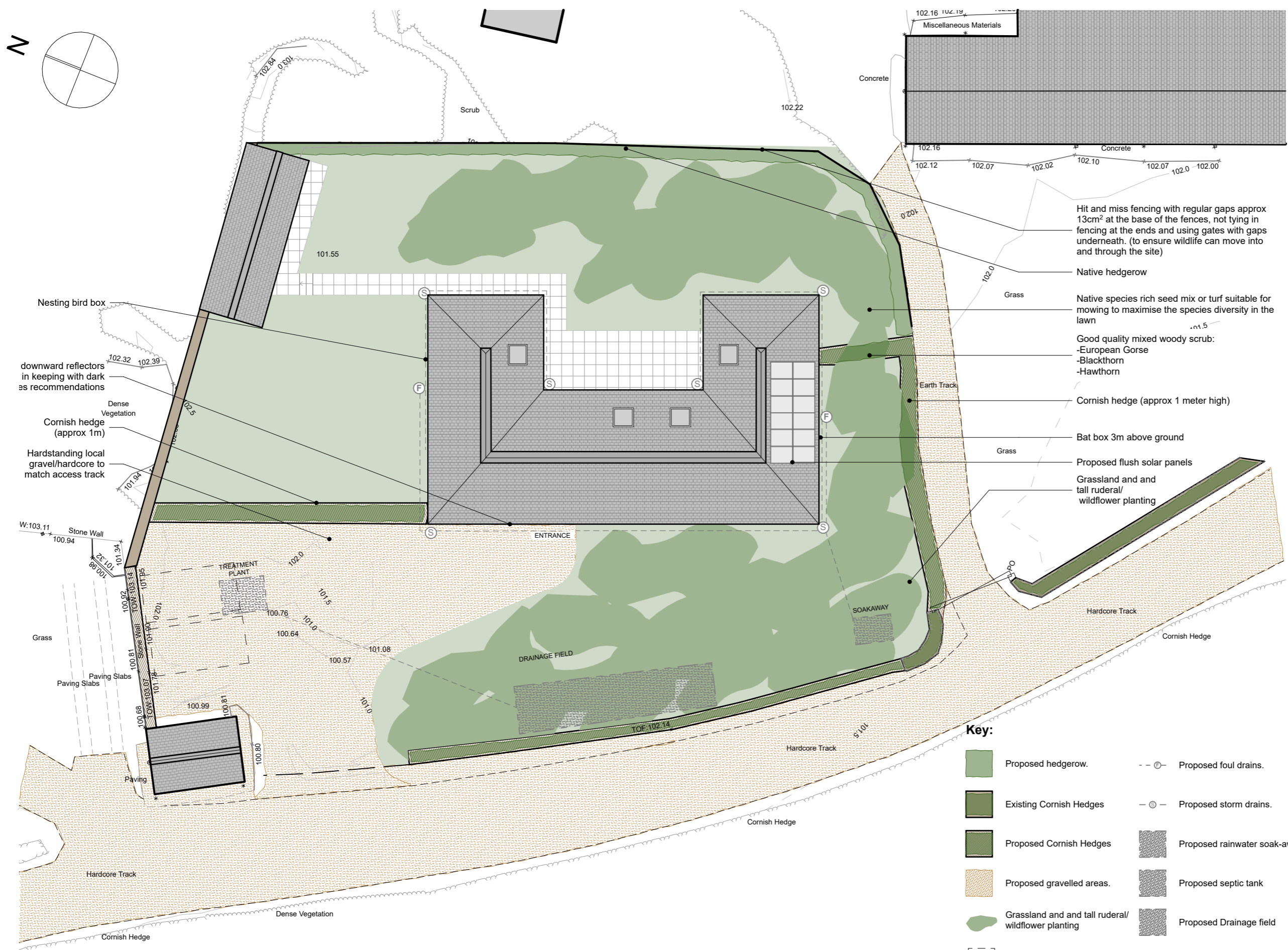
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EXISTING SITE PLAN
1:200



▼ Figure 2.3 Proposed Site Plan

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PROPOSED SITE PLAN

1:200



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t: +44(0)1872 225 259
 e: hello@laurenceassociates.co.uk
 w: www.laurenceassociates.co.uk

Project Title:
CONSTRUCTION OF DWELLING

Project Address:
**LAND ADJ BOTALLACK VEAN
 BOTTALLACK, ST JUST
 TR19 7QQ**

Client:
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Drawing Title:
PROPOSED SITE PLAN

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▼ Appendix A Site Photographs

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SITE PHOTOGRAPHS



PLATE 1



PLATE 2

SITE: Land Adjacent to Botallack Vean, St Just

REF: GCL24659_P1

CLIENT: Mark (Farmer) and Jess Morris

SITE PHOTOGRAPHS



PLATE 3



PLATE 4

SITE: Land Adjacent to Botallack Vean, St Just

REF: GCL24659_P1

CLIENT: Mark (Farmer) and Jess Morris

▼ Appendix B Groundsure Environmental Data

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BOTALLACK VEAN, ACCESS TO ROSCOMMON COTTAGE AND FARMHOUSE, BOTALLACK, ST JUST, CORNWALL, TR19 7QQ

Order Details

Date: 18/03/2024
Your ref: 24659
Our Ref: GS-JGG-LNG-UO7-4KP

Site Details

Location: 136552 033138
Area: 0.12 ha
Authority: [Cornwall Council \(Unitary\)](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#)

groundsure.com/insightuserguide ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	4	16	43	91	-
21 >	1.2 >	Historical tanks >	0	0	1	4	-
22	1.3	Historical energy features	0	0	0	0	-
22	1.4	Historical petrol stations	0	0	0	0	-
22	1.5	Historical garages	0	0	0	0	-
22	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
23 >	2.1 >	Historical industrial land uses >	5	18	46	99	-
30 >	2.2 >	Historical tanks >	0	0	2	4	-
30	2.3	Historical energy features	0	0	0	0	-
30	2.4	Historical petrol stations	0	0	0	0	-
31	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
32	3.1	Active or recent landfill	0	0	0	0	-
32	3.2	Historical landfill (BGS records)	0	0	0	0	-
33	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
33 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	3	-
34	3.5	Historical waste sites	0	0	0	0	-
34	3.6	Licensed waste sites	0	0	0	0	-
34 >	3.7 >	Waste exemptions >	0	0	13	17	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
37 >	4.1 >	Recent industrial land uses >	0	1	6	-	-
38	4.2	Current or recent petrol stations	0	0	0	0	-
38	4.3	Electricity cables	0	0	0	0	-
38	4.4	Gas pipelines	0	0	0	0	-
38	4.5	Sites determined as Contaminated Land	0	0	0	0	-



39	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
39	4.7	Regulated explosive sites	0	0	0	0	-
39	4.8	Hazardous substance storage/usage	0	0	0	0	-
39	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
40	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
40	4.12	Radioactive Substance Authorisations	0	0	0	0	-
40 >	4.13 >	<u>Licensed Discharges to controlled waters ></u>	0	0	0	5	-
41	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
41	4.15	Pollutant release to public sewer	0	0	0	0	-
41	4.16	List 1 Dangerous Substances	0	0	0	0	-
42	4.17	List 2 Dangerous Substances	0	0	0	0	-
42	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
42	4.19	Pollution inventory substances	0	0	0	0	-
42	4.20	Pollution inventory waste transfers	0	0	0	0	-
42	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
43	5.1	Superficial aquifer	None (within 500m)				
44 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
45 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
46	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
46	5.5	Groundwater vulnerability- local information	None (within 0m)				
47 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	2	2	2
49 >	5.7 >	<u>Surface water abstractions ></u>	0	0	0	0	1
49	5.8	Potable abstractions	0	0	0	0	0
50	5.9	Source Protection Zones	0	0	0	0	-
50	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
51	6.1	Water Network (OS MasterMap)	0	0	0	-	-



51	6.2	Surface water features	0	0	0	-	-
52 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
52	6.4	WFD Surface water bodies	0	0	0	-	-
52 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
54	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
54	7.2	Historical Flood Events	0	0	0	-	-
54	7.3	Flood Defences	0	0	0	-	-
55	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
55	7.5	Flood Storage Areas	0	0	0	-	-
56	7.6	Flood Zone 2	None (within 50m)				
56	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
57 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
59 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
60 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	1	0	0	5
61	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
61 >	10.3 >	Special Areas of Conservation (SAC) >	0	0	0	2	0
62	10.4	Special Protection Areas (SPA)	0	0	0	0	0
62	10.5	National Nature Reserves (NNR)	0	0	0	0	0
62	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
62	10.7	Designated Ancient Woodland	0	0	0	0	0
62	10.8	Biosphere Reserves	0	0	0	0	0
63	10.9	Forest Parks	0	0	0	0	0
63	10.10	Marine Conservation Zones	0	0	0	0	0
63	10.11	Green Belt	0	0	0	0	0
63	10.12	Proposed Ramsar sites	0	0	0	0	0



63	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
64	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
64	10.15	Nitrate Sensitive Areas	0	0	0	0	0
64	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
65 >	10.17 >	SSSI Impact Risk Zones >	2	-	-	-	-
66 >	10.18 >	SSSI Units >	0	1	1	0	7
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
72 >	11.1 >	World Heritage Sites >	1	0	0	-	-
73 >	11.2 >	Area of Outstanding Natural Beauty >	1	0	0	-	-
73	11.3	National Parks	0	0	0	-	-
73 >	11.4 >	Listed Buildings >	0	0	4	-	-
74 >	11.5 >	Conservation Areas >	0	0	1	-	-
74 >	11.6 >	Scheduled Ancient Monuments >	0	0	1	-	-
75	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
76 >	12.1 >	Agricultural Land Classification >	Non Agricultural (within 250m)				
77 >	12.2 >	Open Access Land >	0	1	0	-	-
77	12.3	Tree Felling Licences	0	0	0	-	-
77 >	12.4 >	Environmental Stewardship Schemes >	0	2	3	-	-
78 >	12.5 >	Countryside Stewardship Schemes >	0	0	2	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
79 >	13.1 >	Priority Habitat Inventory >	0	1	20	-	-
80 >	13.2 >	Habitat Networks >	1	1	0	-	-
81 >	13.3 >	Open Mosaic Habitat >	0	1	0	-	-
81	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
82 >	14.1 >	10k Availability >	Identified (within 500m)				
83	14.2	Artificial and made ground (10k)	0	0	0	0	-
84	14.3	Superficial geology (10k)	0	0	0	0	-

84	14.4	Landslip (10k)	0	0	0	0	-
85	14.5	Bedrock geology (10k)	0	0	0	0	-
85	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
86 >	15.1 >	50k Availability >	Identified (within 500m)				
87	15.2	Artificial and made ground (50k)	0	0	0	0	-
87	15.3	Artificial ground permeability (50k)	0	0	-	-	-
88	15.4	Superficial geology (50k)	0	0	0	0	-
88	15.5	Superficial permeability (50k)	None (within 50m)				
88	15.6	Landslip (50k)	0	0	0	0	-
88	15.7	Landslip permeability (50k)	None (within 50m)				
89 >	15.8 >	Bedrock geology (50k) >	1	0	5	3	-
90 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
90 >	15.10 >	Bedrock faults and other linear features (50k) >	1	2	4	6	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
92	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
93 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
94 >	17.2 >	Running sands >	Negligible (within 50m)				
95 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
96 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
97 >	17.5 >	Landslides >	Negligible (within 50m)				
98 >	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
100 >	18.1 >	BritPits >	0	0	2	7	-
102 >	18.2 >	Surface ground workings >	1	7	15	-	-
103 >	18.3 >	Underground workings >	3	12	20	34	121
110	18.4	Underground mining extents	0	0	0	0	-
111 >	18.5 >	Historical Mineral Planning Areas >	0	0	0	3	-

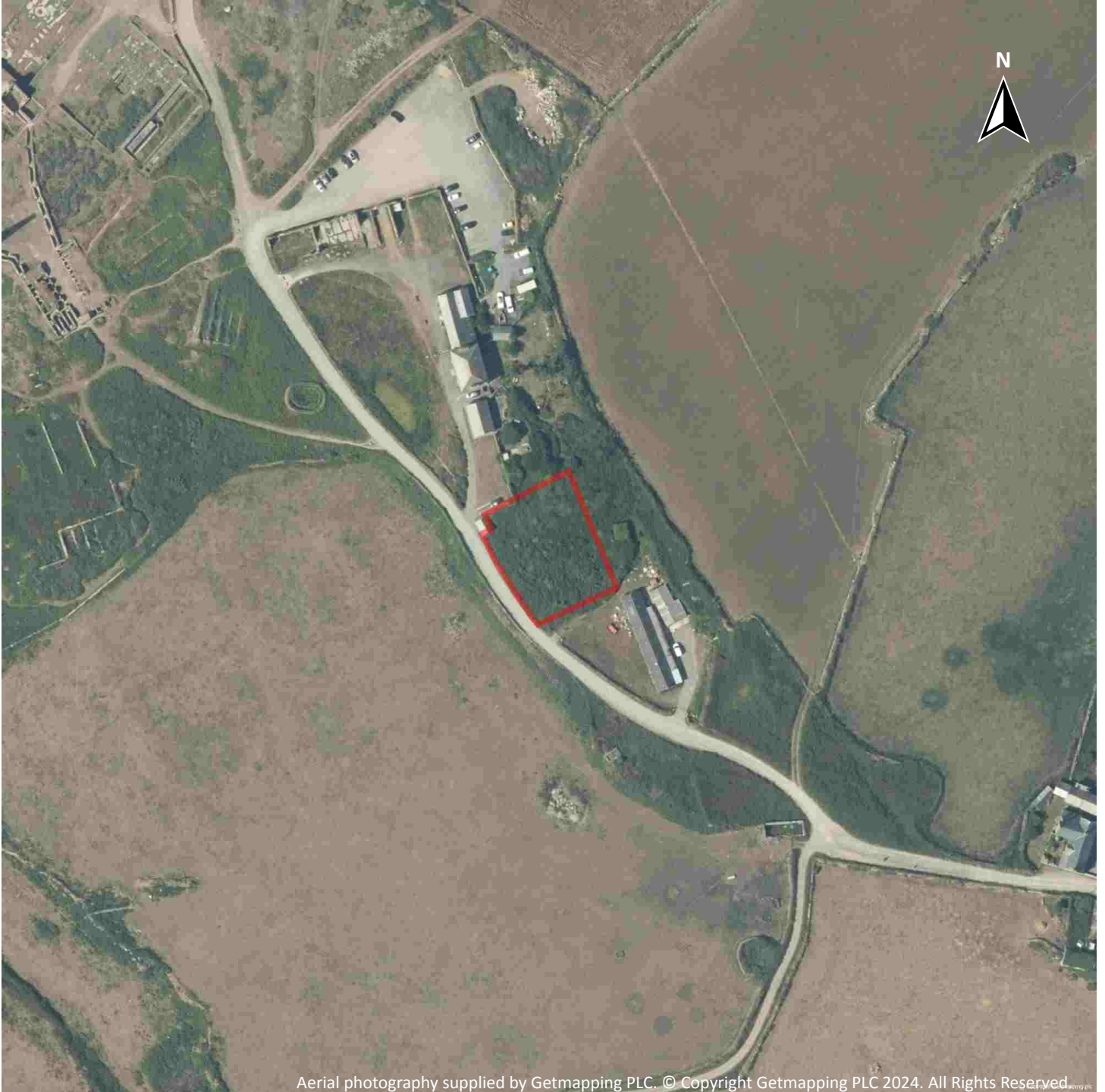


111 >	18.6 >	Non-coal mining >	1	0	2	3	5
112	18.7	JPB mining areas	None (within 0m)				
113	18.8	The Coal Authority non-coal mining	0	0	0	0	-
113	18.9	Researched mining	0	0	0	0	-
113 >	18.10 >	Mining record office plans >	7	2	4	18	-
115 >	18.11 >	BGS mine plans >	1	0	0	0	-
115	18.12	Coal mining	None (within 0m)				
115	18.13	Brine areas	None (within 0m)				
115	18.14	Gypsum areas	None (within 0m)				
115 >	18.15 >	Tin mining >	Identified (within 0m)				
116 >	18.16 >	Clay mining >	Identified (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
117	19.1	Natural cavities	0	0	0	0	-
118 >	19.2 >	Mining cavities >	0	0	5	4	17
120	19.3	Reported recent incidents	0	0	0	0	-
120	19.4	Historical incidents	0	0	0	0	-
120	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
121 >	20.1 >	Radon >	Greater than 30% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
123 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
123	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
123	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
124	22.1	Underground railways (London)	0	0	0	-	-
124	22.2	Underground railways (Non-London)	0	0	0	-	-
125	22.3	Railway tunnels	0	0	0	-	-
125 >	22.4 >	Historical railway and tunnel features >	0	1	0	-	-
125	22.5	Royal Mail tunnels	0	0	0	-	-



125	22.6	Historical railways	0	0	0	-	-
126	22.7	Railways	0	0	0	-	-
126	22.8	Crossrail 1	0	0	0	0	-
126	22.9	Crossrail 2	0	0	0	0	-
126	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 06/08/2022

Site Area: 0.12ha



Recent site history - 2019 aerial photograph



Capture Date: 04/07/2019

Site Area: 0.12ha



Recent site history - 2013 aerial photograph



Capture Date: 10/07/2013

Site Area: 0.12ha



Recent site history - 2005 aerial photograph

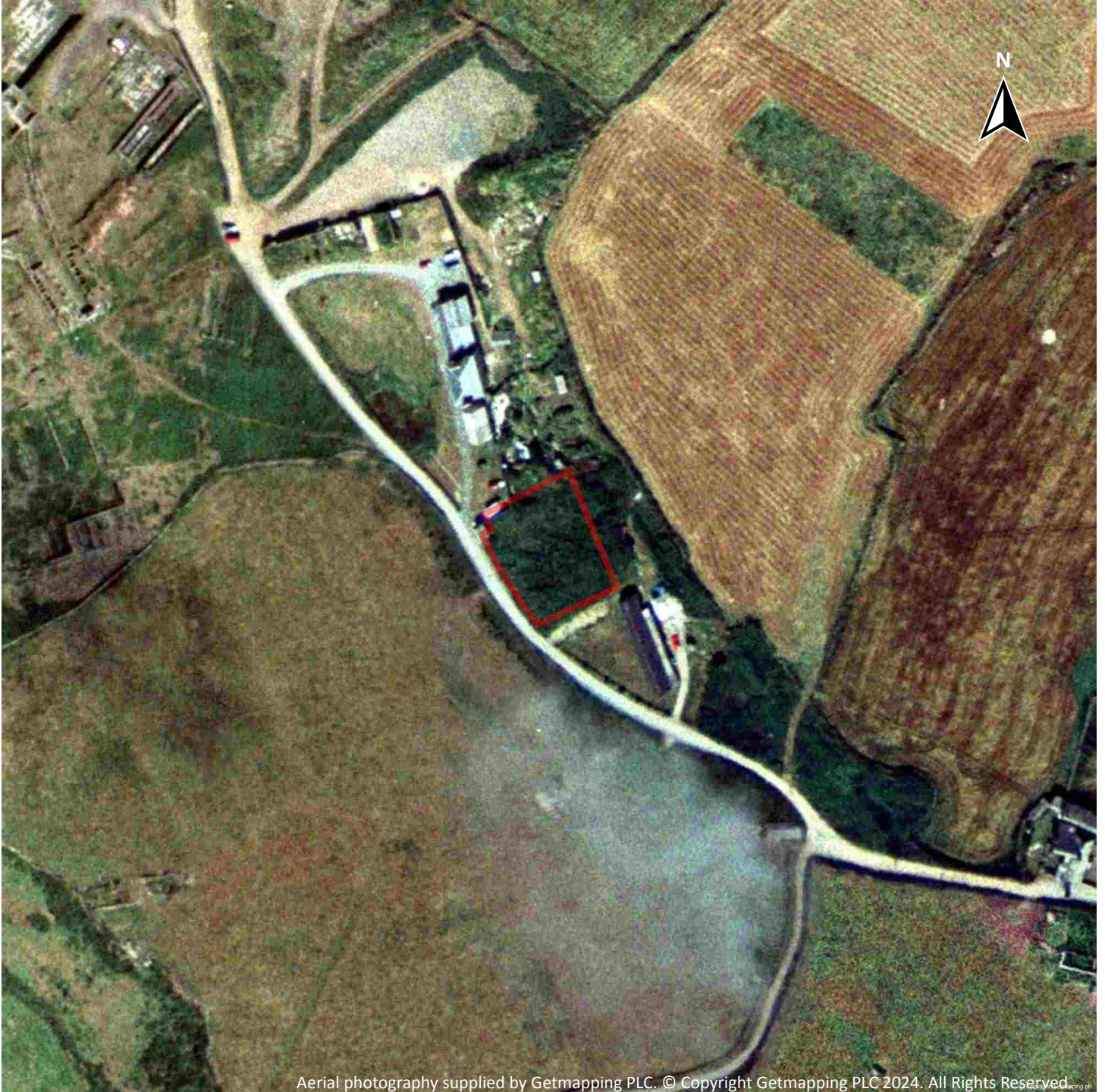


Capture Date: 09/08/2005

Site Area: 0.12ha



Recent site history - 1999 aerial photograph

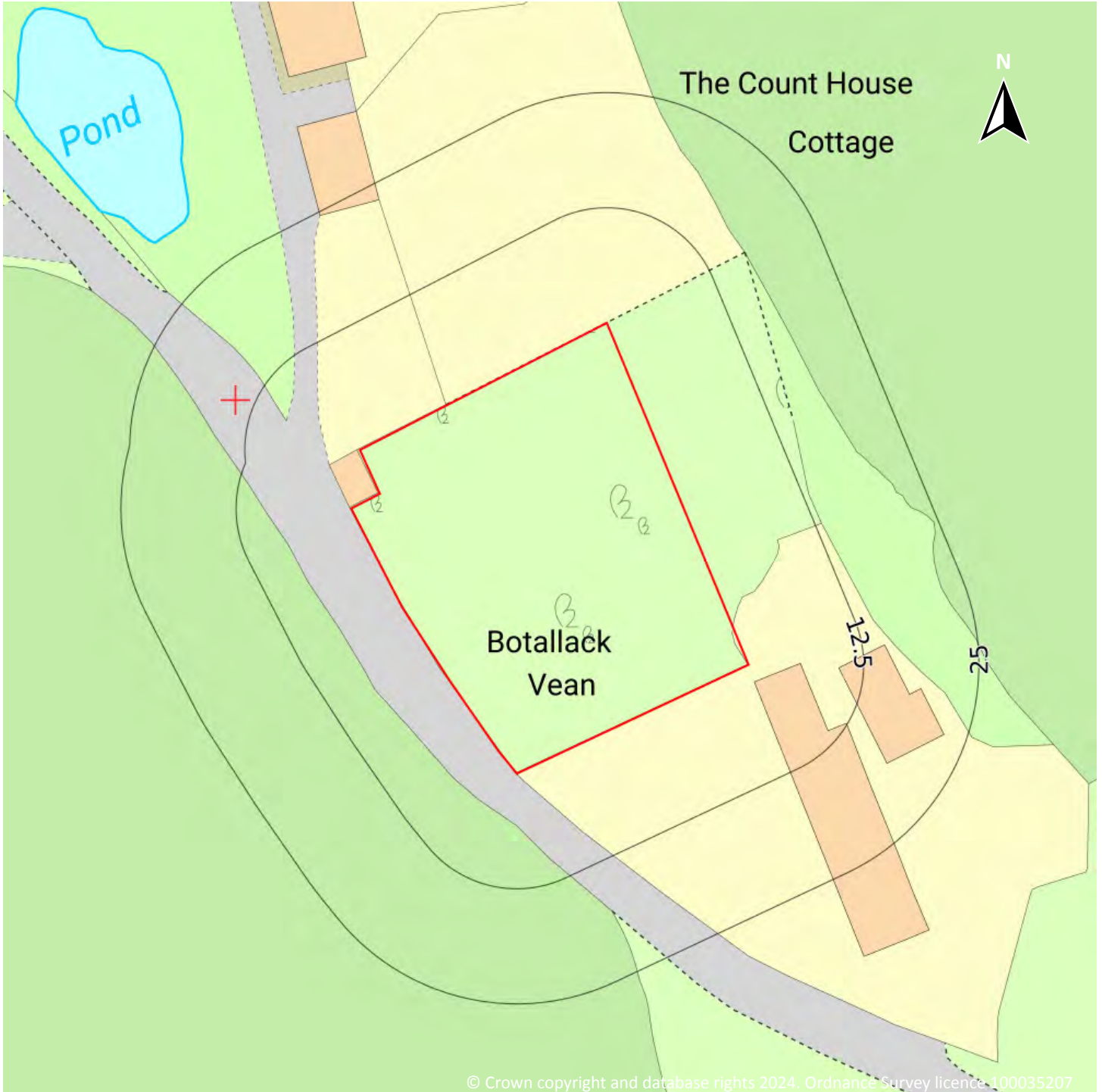


Capture Date: 25/07/1999

Site Area: 0.12ha



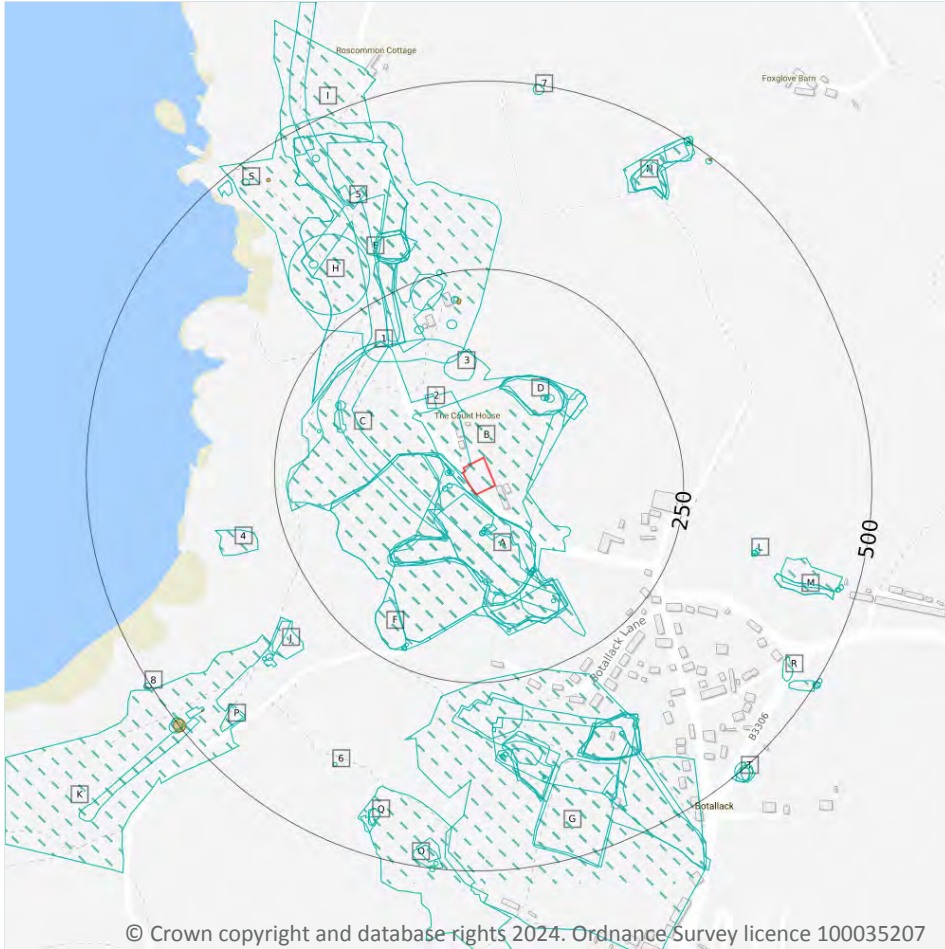
OS MasterMap site plan



Site Area: 0.12ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m **154**

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	On site	Unspecified Disused Tip	1979	22654

ID	Location	Land use	Dates present	Group ID
A	On site	Tin and Copper Mine	1876	29972
B	On site	Disused Tin and Copper Mine	1906	56824
C	On site	Unspecified Disused Mine	1979	60416
A	3m S	Refuse Heap	1906	39486
A	5m S	Unspecified Disused Mine	1958	38051
A	5m S	Unspecified Disused Mine	1979	52413
A	9m S	Refuse Heap	1958	46323
B	12m W	Unspecified Old Shaft	1906	53030
B	15m W	Unspecified Shaft	1876	25937
B	15m W	Unspecified Old Shaft	1906	53334
B	16m W	Unspecified Old Shaft	1958	47109
B	20m W	Unspecified Disused Shaft	1979	30364
B	27m W	Unspecified Shaft	1876	25936
A	43m S	Engine House	1876	30941
A	45m S	Unspecified Shaft	1906	44770
A	48m S	Unspecified Shaft	1876	57694
1	48m SW	Railway Sidings	1876	36671
A	49m S	Unspecified Disused Shaft	1979	30347
A	49m S	Unspecified Shaft	1958	44184
A	68m SW	Unspecified Heap	1876	34870
D	84m NE	Refuse Heap	1958	51606
2	87m NW	Smithy	1876	24709
D	88m NE	Unspecified Heap	1876	34866
D	88m NE	Refuse Heap	1906	37443
D	88m NE	Unspecified Disused Tip	1979	22663
3	105m N	Unspecified Disused Tip	1979	22657
D	109m NE	Unspecified Old Shaft	1958	46392
D	112m NE	Refuse Heap	1876	21360



ID	Location	Land use	Dates present	Group ID
D	112m NE	Unspecified Shaft	1876	25893
D	112m NE	Unspecified Old Shaft	1906	41062
D	113m NE	Unspecified Disused Shaft	1979	30346
A	119m SE	Unspecified Old Shaft	1906	58234
A	121m SE	Unspecified Old Shaft	1906	60351
A	121m SE	Magazine	1876	31908
A	122m SE	Unspecified Disused Shaft	1979	30348
A	122m SE	Unspecified Old Shaft	1958	39808
A	126m SE	Shale Tip	1906	28278
A	131m S	Unspecified Shaft	1876	25895
A	134m S	Engine House	1876	30942
E	134m N	Unspecified Disused Mine	1958 - 1979	40893
A	146m SE	Refuse Heap	1906	58040
C	164m W	Engine House	1876	30940
A	169m SE	Unspecified Shaft	1876	25897
E	173m NW	Unspecified Disused Tip	1979	22656
E	176m N	Chimney	1979	24972
C	177m NW	Chimney	1979	24973
F	181m SW	Unspecified Heap	1876	34869
A	183m S	Unspecified Shaft	1876	25896
E	184m NW	Disused Copper and Tin Mine	1906	28295
E	184m NW	Tin and Copper Mine	1876	29973
E	185m N	Unspecified Disused Shaft	1979	30365
E	190m NW	Unspecified Heap	1958	34871
C	196m W	Unspecified Shaft	1876	25940
E	208m N	Unspecified Tank	1958	23079
E	210m N	Magazine	1876	31910
E	211m N	Unspecified Heap	1958	34872



ID	Location	Land use	Dates present	Group ID
F	218m SW	Unspecified Old Shaft	1906	32809
F	222m SW	Unspecified Shaft	1876	25935
F	222m SW	Unspecified Old Shaft	1906	53349
F	224m SW	Unspecified Old Shaft	1958	57675
G	244m S	Unspecified Disused Mine	1979	55587
E	249m N	Unspecified Shaft	1876	25938
H	259m NW	Unspecified Shaft	1876	25939
G	264m S	Disused Tin Mine	1906	42300
G	271m S	Unspecified Disused Tip	1979	22662
E	281m N	Unspecified Pit	1876	44378
E	281m N	Unspecified Pit	1906	59950
E	285m N	Unspecified Pit	1958	37724
E	285m N	Unspecified Pit	1906	43336
I	285m N	Disused Tin and Copper Mine	1906	32052
4	287m W	Unspecified Pit	1979	33829
J	296m SW	Unspecified Disused Tip	1979	22653
G	297m S	Engine House	1876	30932
G	297m S	Tin Mine	1876	32495
J	298m SW	Refuse Heap	1906	21359
G	310m S	Unspecified Shaft	1876	25894
G	319m S	Refuse Heap	1906	60981
G	324m S	Refuse Heap	1958	55932
H	330m NW	Unspecified Disused Shaft	1979	38150
G	332m S	Unspecified Pit	1979	33826
K	336m SW	Disused Tin and Copper Wheal	1906	47115
G	337m SE	Refuse Heap	1906	45060
G	341m SE	Refuse Heap	1958	53154
G	341m S	Refuse Heap	1906	51037



ID	Location	Land use	Dates present	Group ID
G	343m SE	Refuse Heap	1906	39244
G	344m S	Unspecified Old Shaft	1906	60046
J	345m SW	Unspecified Disused Shaft	1979	30363
G	346m SE	Unspecified Heap	1876	34868
G	346m S	Unspecified Shaft	1876	25915
G	346m S	Unspecified Old Shaft	1906	58507
G	346m SE	Unspecified Disused Tip	1979	22648
G	348m S	Unspecified Old Shaft	1958	48475
J	348m SW	Engine House	1876	30935
L	352m E	Unspecified Disused Shaft	1979	30349
L	352m E	Unspecified Old Shaft	1958	32810
L	353m E	Unspecified Old Shafts	1906	23848
L	353m E	Unspecified Shaft	1876	25898
J	353m SW	Unspecified Shaft	1876	25942
L	356m E	Unspecified Old Shafts	1906	23849
G	367m SE	Unspecified Shaft	1876	25914
G	372m S	Unspecified Disused Mine	1958	37843
5	373m NW	Unspecified Disused Tip	1979	22655
G	383m SE	Tramway Sidings	1876	36900
G	384m S	Unspecified Disused Shaft	1876	54234
G	385m S	Unspecified Disused Shaft	1979	58194
M	390m E	Unspecified Ground Workings	1876	52076
M	390m E	Unspecified Ground Workings	1906	54194
M	396m E	Unspecified Disused Tip	1979	22681
N	401m NE	Refuse Heap	1958	42924
6	402m SW	Unspecified Shaft	1876	25929
O	407m S	Disused Tin Wheal	1906	19410
N	407m NE	Unspecified Disused Tip	1979	22661



ID	Location	Land use	Dates present	Group ID
N	408m NE	Refuse Heaps	1906	36984
N	409m NE	Refuse Heap	1906	40084
G	416m SE	Engine House	1876	30931
P	428m SW	Refuse Heap	1906	21358
Q	438m S	Unspecified Quarry	1906	44878
Q	439m S	Unspecified Quarry	1906	58523
R	448m SE	Unspecified Old Quarry	1906	47360
Q	450m S	Unspecified Quarry	1958	49065
I	451m NW	Chimney	1979	24976
O	460m S	Refuse Heap	1906	60348
P	460m SW	Engine House	1876	30934
N	461m NE	Shale Tip	1906	28281
I	467m NW	Engine House	1876	30936
O	470m S	Refuse Heap	1958	59336
R	470m SE	Unspecified Heap	1876	34867
S	471m NW	Engine Houses	1876	22447
M	472m E	Unspecified Disused Shaft	1979	30350
M	472m E	Unspecified Old Shaft	1958	32812
K	475m SW	Railway Sidings	1876	36670
M	475m E	Unspecified Old Shafts	1906	53414
S	477m NW	Engine Houses	1876	22446
7	487m N	Unspecified Heap	1876	34874
O	490m S	Unspecified Old Shaft	1906	50397
N	490m NE	Chimney	1979	24974
T	491m SE	Refuse Heap	1906	42646
P	492m SW	Unspecified Tank	1876	47687
P	492m SW	Unspecified Tank	1906	50608
N	495m NE	Unspecified Shaft	1906	50553



ID	Location	Land use	Dates present	Group ID
N	495m NE	Unspecified Shaft	1876	60432
T	496m SE	Unspecified Heap	1979	56105
T	496m SE	Refuse Heap	1958	39427
N	496m NE	Unspecified Disused Shafts	1979	29545
N	496m NE	Unspecified Shaft	1958	54209
P	497m SW	Unspecified Tank	1958	61187
R	497m SE	Unspecified Disused Shaft	1979	30351
R	497m SE	Unspecified Old Shaft	1958	44752
O	498m S	Unspecified Old Shaft	1958	32808
R	499m SE	Unspecified Shaft	1876	25899
T	499m SE	Unspecified Heap	1876	59374
8	500m SW	Unspecified Disused Shaft	1979	30356
R	500m SE	Unspecified Old Shaft	1906	45351

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

5

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
E	206m N	Unspecified Tank	1908 - 1976	5719
S	460m NW	Unspecified Tank	1976	3448
P	462m SW	Unspecified Tank	1975	3441
P	491m SW	Unspecified Tank	1908	3442
N	495m NE	Unspecified Tank	1908	3447



This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

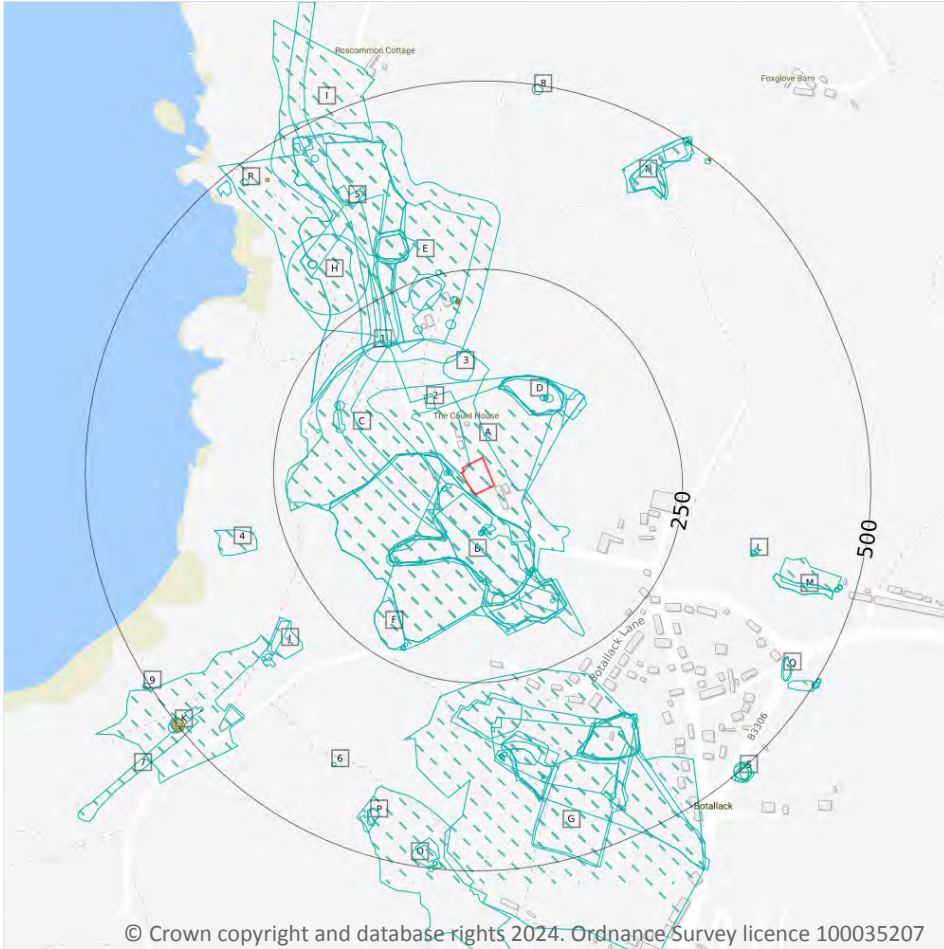
0

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

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



2 Past land use - un-grouped



2.1 Historical industrial land uses

Records within 500m

168

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 23](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Disused Tin and Copper Mine	1906	56824
A	On site	Disused Tin and Copper Mine	1906	56824
B	On site	Tin and Copper Mine	1876	29972

ID	Location	Land Use	Date	Group ID
B	On site	Unspecified Disused Tip	1979	22654
C	On site	Unspecified Disused Mine	1979	60416
B	3m S	Refuse Heap	1906	39486
B	5m S	Unspecified Disused Mine	1979	52413
B	5m S	Unspecified Disused Mine	1979	52413
B	5m S	Unspecified Disused Mine	1958	38051
B	9m S	Refuse Heap	1958	46323
A	12m W	Unspecified Old Shaft	1906	53030
A	15m W	Unspecified Old Shaft	1906	53334
A	15m W	Unspecified Shaft	1876	25937
A	16m W	Unspecified Old Shaft	1958	47109
A	20m W	Unspecified Disused Shaft	1979	30364
A	27m W	Unspecified Shaft	1876	25936
B	43m S	Engine House	1876	30941
B	45m S	Unspecified Shaft	1906	44770
B	48m S	Unspecified Shaft	1906	44770
B	48m S	Unspecified Shaft	1876	57694
1	48m SW	Railway Sidings	1876	36671
B	49m S	Unspecified Disused Shaft	1979	30347
B	49m S	Unspecified Shaft	1958	44184
B	68m SW	Unspecified Heap	1876	34870
D	84m NE	Refuse Heap	1958	51606
2	87m NW	Smithy	1876	24709
D	88m NE	Refuse Heap	1906	37443
D	88m NE	Unspecified Heap	1876	34866
D	88m NE	Unspecified Disused Tip	1979	22663
D	89m NE	Refuse Heap	1906	37443
3	105m N	Unspecified Disused Tip	1979	22657



ID	Location	Land Use	Date	Group ID
D	109m NE	Unspecified Old Shaft	1958	46392
D	112m NE	Refuse Heap	1876	21360
D	112m NE	Unspecified Old Shaft	1906	41062
D	112m NE	Unspecified Shaft	1876	25893
D	113m NE	Unspecified Disused Shaft	1979	30346
D	114m NE	Unspecified Old Shaft	1906	41062
B	119m SE	Unspecified Old Shaft	1906	58234
B	121m SE	Unspecified Old Shaft	1906	60351
B	121m SE	Magazine	1876	31908
B	122m SE	Unspecified Disused Shaft	1979	30348
B	122m SE	Unspecified Old Shaft	1958	39808
B	126m SE	Shale Tip	1906	28278
B	131m S	Unspecified Shaft	1876	25895
B	134m S	Engine House	1876	30942
E	134m N	Unspecified Disused Mine	1958	40893
B	146m SE	Refuse Heap	1906	58040
E	159m N	Unspecified Disused Mine	1979	40893
C	164m W	Engine House	1876	30940
B	169m SE	Unspecified Shaft	1876	25897
E	173m NW	Unspecified Disused Tip	1979	22656
E	176m N	Chimney	1979	24972
C	177m NW	Chimney	1979	24973
F	181m SW	Unspecified Heap	1876	34869
B	183m S	Unspecified Shaft	1876	25896
E	184m NW	Disused Copper and Tin Mine	1906	28295
E	184m NW	Tin and Copper Mine	1876	29973
E	185m N	Unspecified Disused Shaft	1979	30365
E	190m NW	Unspecified Heap	1958	34871



ID	Location	Land Use	Date	Group ID
C	196m W	Unspecified Shaft	1876	25940
E	208m N	Unspecified Tank	1958	23079
E	210m N	Magazine	1876	31910
E	211m N	Unspecified Heap	1958	34872
F	218m SW	Unspecified Old Shaft	1906	32809
F	222m SW	Unspecified Old Shaft	1906	53349
F	222m SW	Unspecified Shaft	1876	25935
F	224m SW	Unspecified Old Shaft	1958	57675
G	244m S	Unspecified Disused Mine	1979	55587
E	249m N	Unspecified Shaft	1876	25938
H	259m NW	Unspecified Shaft	1876	25939
G	264m S	Disused Tin Mine	1906	42300
G	271m S	Unspecified Disused Tip	1979	22662
E	281m N	Unspecified Pit	1906	59950
E	281m N	Unspecified Pit	1876	44378
E	285m N	Unspecified Pit	1958	37724
E	285m N	Unspecified Pit	1906	43336
I	285m N	Disused Tin and Copper Mine	1906	32052
4	287m W	Unspecified Pit	1979	33829
J	296m SW	Unspecified Disused Tip	1979	22653
G	297m S	Engine House	1876	30932
G	297m S	Tin Mine	1876	32495
J	298m SW	Refuse Heap	1906	21359
G	310m S	Unspecified Shaft	1876	25894
G	319m S	Refuse Heap	1906	60981
G	324m S	Refuse Heap	1958	55932
H	330m NW	Unspecified Disused Shaft	1979	38150
H	330m NW	Unspecified Disused Shaft	1979	38150



ID	Location	Land Use	Date	Group ID
H	330m NW	Unspecified Disused Shaft	1979	38150
G	332m S	Unspecified Pit	1979	33826
K	336m SW	Disused Tin and Copper Wheal	1906	47115
G	337m SE	Refuse Heap	1906	45060
G	341m SE	Refuse Heap	1958	53154
G	341m S	Refuse Heap	1906	51037
G	341m S	Disused Tin Mine	1906	42300
G	343m SE	Refuse Heap	1906	39244
G	344m S	Unspecified Old Shaft	1906	60046
J	345m SW	Unspecified Disused Shaft	1979	30363
G	346m SE	Unspecified Heap	1876	34868
G	346m S	Unspecified Old Shaft	1906	58507
G	346m S	Unspecified Shaft	1876	25915
G	346m SE	Unspecified Disused Tip	1979	22648
G	348m S	Unspecified Old Shaft	1958	48475
J	348m SW	Engine House	1876	30935
L	352m E	Unspecified Disused Shaft	1979	30349
L	352m E	Unspecified Old Shaft	1958	32810
L	353m E	Unspecified Old Shafts	1906	23848
L	353m E	Unspecified Shaft	1876	25898
J	353m SW	Unspecified Shaft	1876	25942
L	356m E	Unspecified Old Shafts	1906	23849
G	367m SE	Unspecified Shaft	1876	25914
G	372m S	Unspecified Disused Mine	1958	37843
5	373m NW	Unspecified Disused Tip	1979	22655
G	383m SE	Tramway Sidings	1876	36900
G	384m S	Unspecified Disused Shaft	1876	54234
G	385m S	Unspecified Disused Shaft	1979	58194



ID	Location	Land Use	Date	Group ID
M	390m E	Unspecified Ground Workings	1906	54194
M	390m E	Unspecified Ground Workings	1876	52076
M	396m E	Unspecified Disused Tip	1979	22681
N	401m NE	Refuse Heap	1958	42924
6	402m SW	Unspecified Shaft	1876	25929
O	407m S	Disused Tin Wheal	1906	19410
N	407m NE	Unspecified Disused Tip	1979	22661
N	408m NE	Refuse Heaps	1906	36984
N	409m NE	Refuse Heap	1906	40084
G	416m SE	Engine House	1876	30931
K	428m SW	Refuse Heap	1906	21358
P	438m S	Unspecified Quarry	1906	44878
P	439m S	Unspecified Quarry	1906	58523
Q	448m SE	Unspecified Old Quarry	1906	47360
P	450m S	Unspecified Quarry	1958	49065
I	451m NW	Chimney	1979	24976
Q	451m SE	Unspecified Old Quarry	1906	47360
O	460m S	Refuse Heap	1906	60348
K	460m SW	Engine House	1876	30934
N	461m NE	Shale Tip	1906	28281
I	467m NW	Engine House	1876	30936
O	470m S	Refuse Heap	1958	59336
Q	470m SE	Unspecified Heap	1876	34867
R	471m NW	Engine Houses	1876	22447
M	472m E	Unspecified Disused Shaft	1979	30350
M	472m E	Unspecified Old Shaft	1958	32812
7	475m SW	Railway Sidings	1876	36670
M	475m E	Unspecified Old Shafts	1906	53414



ID	Location	Land Use	Date	Group ID
M	476m E	Unspecified Old Shafts	1906	53414
R	477m NW	Engine Houses	1876	22446
8	487m N	Unspecified Heap	1876	34874
O	490m S	Unspecified Old Shaft	1906	50397
O	490m S	Unspecified Old Shaft	1906	50397
N	490m NE	Chimney	1979	24974
S	491m SE	Refuse Heap	1906	42646
S	492m SE	Refuse Heap	1906	42646
K	492m SW	Unspecified Tank	1906	50608
K	492m SW	Unspecified Tank	1876	47687
N	495m NE	Unspecified Shaft	1906	50553
N	495m NE	Unspecified Shaft	1876	60432
S	496m SE	Unspecified Heap	1979	56105
S	496m SE	Refuse Heap	1958	39427
N	496m NE	Unspecified Disused Shafts	1979	29545
N	496m NE	Unspecified Shaft	1958	54209
K	497m SW	Unspecified Tank	1958	61187
Q	497m SE	Unspecified Disused Shaft	1979	30351
Q	497m SE	Unspecified Old Shaft	1958	44752
O	498m S	Unspecified Old Shaft	1958	32808
Q	499m SE	Unspecified Shaft	1876	25899
S	499m SE	Unspecified Heap	1876	59374
9	500m SW	Unspecified Disused Shaft	1979	30356
Q	500m SE	Unspecified Old Shaft	1906	45351
Q	500m SE	Unspecified Old Shaft	1906	45351

This data is sourced from Ordnance Survey / Groundsure.



2.2 Historical tanks

Records within 500m

6

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. 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 23 >](#)

ID	Location	Land Use	Date	Group ID
E	206m N	Unspecified Tank	1908	5719
E	208m N	Unspecified Tank	1976	5719
R	460m NW	Unspecified Tank	1976	3448
K	462m SW	Unspecified Tank	1975	3441
K	491m SW	Unspecified Tank	1908	3442
N	495m NE	Unspecified Tank	1908	3447

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



2.5 Historical garages

Records within 500m

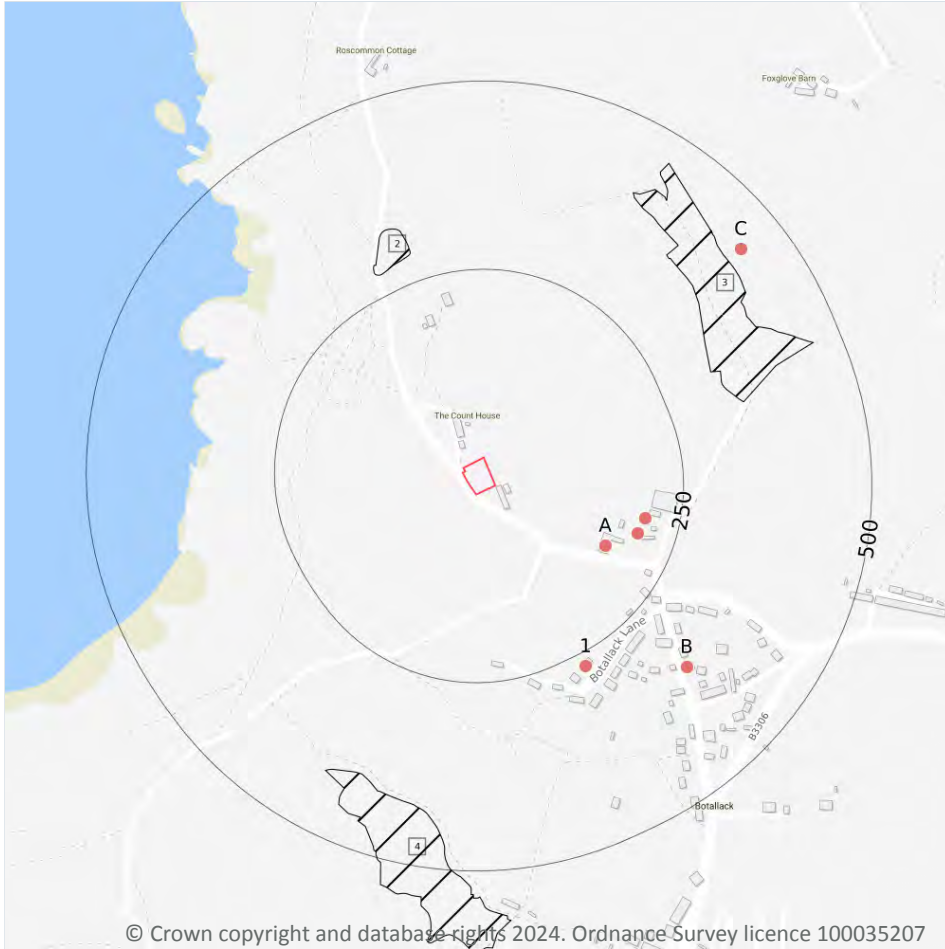
0

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

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



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

3

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

Features are displayed on the Waste and landfill map on [page 32 >](#)

ID	Location	Details		
2	278m NW	Site Address: Botallack, Botallack, St Just, Penzance Licence Holder Address: -	Waste Licence: - Site Reference: WM9/5/1/27, 1/28A Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded - Last Recorded: -
3	322m NE	Site Address: Carnyorth, Nineveh Farm, Carnyorth, Trwellard Licence Holder Address: -	Waste Licence: - Site Reference: WM9/5/1/64, 1/64 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: St Just Urban District Council Licence Holder: - First Recorded - Last Recorded: -
4	401m S	Site Address: Wheal Owles, Wheal Owles, Botallack, St Just, Penzance Licence Holder Address: -	Waste Licence: - Site Reference: WM9/5/1/49 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: St Just Urban District Council Licence Holder: - First Recorded - Last Recorded: -

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



3.5 Historical waste sites

Records within 500m

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

30

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 32 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Using waste exemption	On a farm	Use of waste in construction
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Using waste exemption	On a farm	Use of waste for a specified purpose
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Storing waste exemption	On a farm	Storage of waste in secure containers
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Storing waste exemption	On a farm	Storage of waste in a secure place
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Using waste exemption	On a farm	Use of depolluted end-of-life vehicles for vehicle parts



ID	Location	Site	Reference	Category	Sub-Category	Description
A	166m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX335423	Disposing of waste exemption	On a farm	Burning waste in the open
A	200m E	Manor Farm Botallack PENZANCE Cornwall TR19 7QG	EPR/AH0875N K/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
A	200m E	Manor Farm Botallack PENZANCE Cornwall TR19 7QG	EPR/AH0875N K/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
A	200m E	Manor Farm Botallack PENZANCE Cornwall TR19 7QG	EPR/AH0875N K/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	204m E	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX057058	Using waste exemption	On a farm	Use of waste in construction
A	204m E	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX057058	Disposing of waste exemption	On a farm	Burning waste in the open
A	204m E	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX057058	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
1	268m SE	-	WEX364817	Using waste exemption	Not on a farm	Use of waste in construction
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Storing waste exemption	On a Farm	Storage of waste in a secure place
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Storing waste exemption	On a Farm	Storage of waste in secure containers
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Using waste exemption	On a Farm	Use of waste for a specified purpose
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Using waste exemption	On a Farm	Use of waste in construction
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Disposing of waste exemption	On a Farm	Burning waste in the open
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Using waste exemption	On a Farm	Use of depolluted end-of-life vehicles for vehicle parts

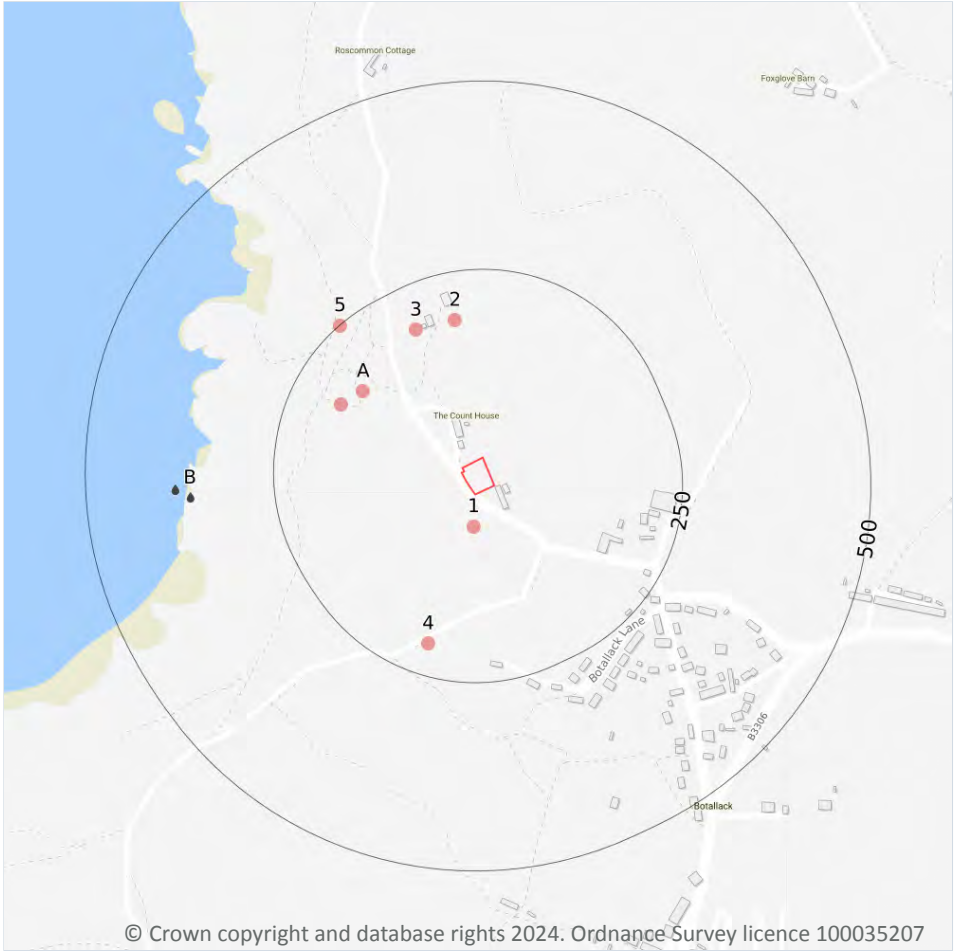


ID	Location	Site	Reference	Category	Sub-Category	Description
B	350m SE	MANOR FARM, BOTALLACK, ST. JUST, PENZANCE, TR19 7QG	WEX211306	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Treating waste exemption	Agricultural Waste Only	Cleaning, washing, spraying or coating relevant waste
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Treating waste exemption	Agricultural Waste Only	Aerobic composting and associated prior treatment
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Using waste exemption	Agricultural Waste Only	Burning of waste as a fuel in a small appliance
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Using waste exemption	Both agricultural and non- agricultural waste	Use of waste in construction
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
C	439m NE	LAND AT CARN YORTH	EPR/SE5047M T/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit

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



4 Current industrial land use



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

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4.1 Recent industrial land uses

Records within 250m 7

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 37](#) >

ID	Location	Company	Address	Activity	Category
1	42m S	Shaft	Cornwall, TR19	Unspecified Quarries Or Mines	Extractive Industries
A	167m NW	Botallack Mine (Disused)	Cornwall, TR19	Unspecified Quarries Or Mines	Extractive Industries
A	183m NW	Chimney	Cornwall, TR19	Chimneys	Industrial Features

ID	Location	Company	Address	Activity	Category
2	186m N	Chimney	Cornwall, TR19	Chimneys	Industrial Features
3	192m NW	Pylon	Cornwall, TR19	Electrical Features	Infrastructure and Facilities
4	208m S	Pumping Station	Cornwall, TR19	Water Pumping Stations	Industrial Features
5	250m NW	Adit	Cornwall, TR19	Unspecified Quarries Or Mines	Extractive Industries

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

5

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 37 >](#)

ID	Location	Address	Details	
B	362m W	BOTALLACK, ST JUST IN PENWITH, CORNWALL	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 2894/95 Permit Version: 1 Receiving Water: ATLANTIC OCEAN	Status: REVOKED - UNSPECIFIED Issue date: 15/10/1987 Effective Date: 15/10/1987 Revocation Date: 30/12/2005
B	381m W	BOTALLACK PUMPING STATION, BOTALLACK, ST JUST, PENZANCE, CORNWALL, TR19 7QH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 303093 Permit Version: 1 Receiving Water: ATLANTIC OCEAN(C)	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/05/2005 Effective Date: 31/12/2005 Revocation Date: 28/03/2019
B	381m W	BOTALLACK PUMPING STATION, BOTALLACK, ST JUST, PENZANCE, CORNWALL, TR19 7QH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 303093 Permit Version: 2 Receiving Water: ATLANTIC OCEAN (C)	Status: VARIED UNDER EPR 2010 Issue date: 29/03/2019 Effective Date: 29/03/2019 Revocation Date: 30/03/2019

ID	Location	Address	Details	
B	381m W	BOTALLACK PUMPING STATION, BOTALLACK, ST JUST, PENZANCE, CORNWALL, TR19 7QH	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 303093 Permit Version: 3 Receiving Water: ATLANTIC OCEAN (C)	Status: VARIED UNDER EPR 2010 Issue date: 29/03/2019 Effective Date: 31/03/2019 Revocation Date: -
B	381m W	BOTALLACK PUMPING STATION, BOTALLACK, ST JUST, PENZANCE, CORNWALL, TR19 7QH	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 303093 Permit Version: 3 Receiving Water: ATLANTIC OCEAN (C)	Status: VARIED UNDER EPR 2010 Issue date: 29/03/2019 Effective Date: 31/03/2019 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

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

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



4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

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

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

4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m

0

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

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



5 Hydrogeology - Superficial aquifer

5.1 Superficial aquifer

Records within 500m

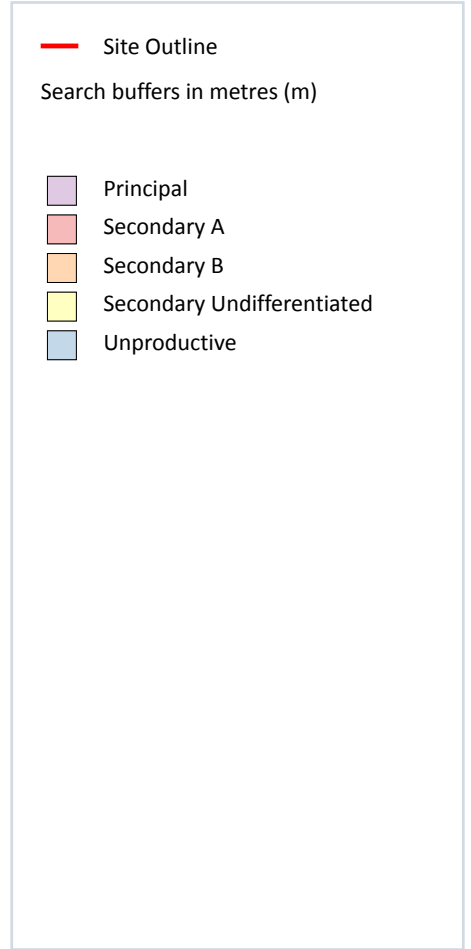
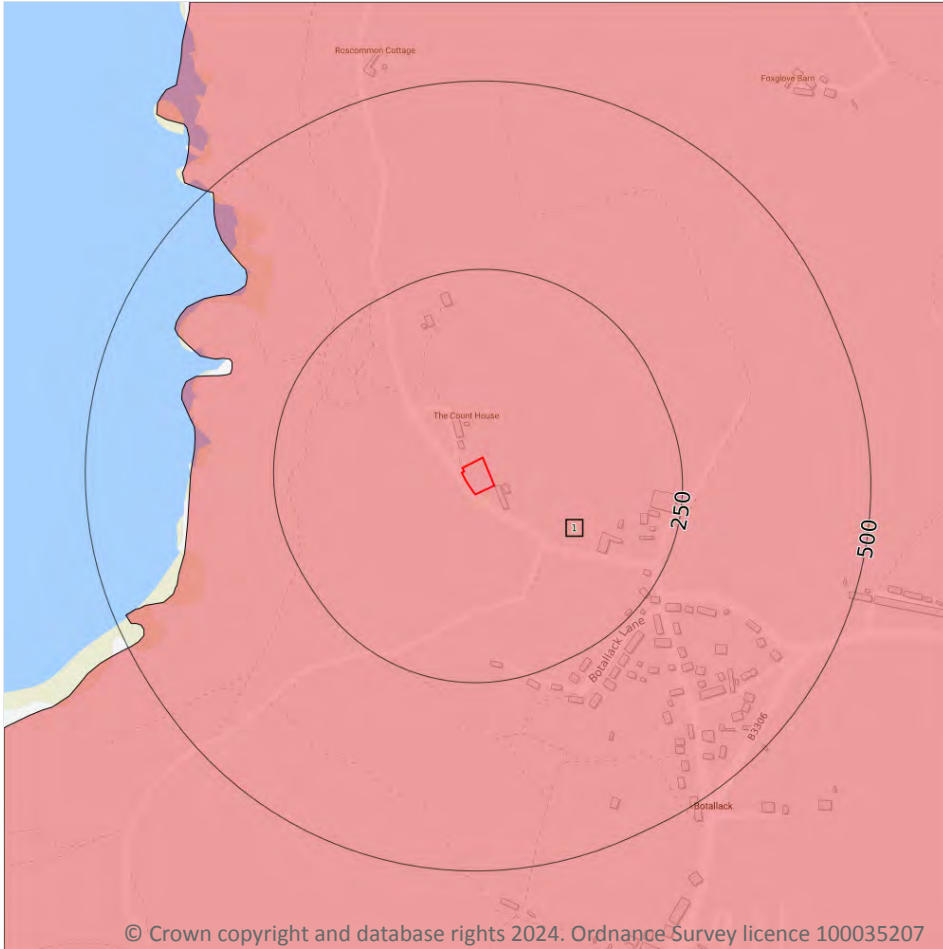
0

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

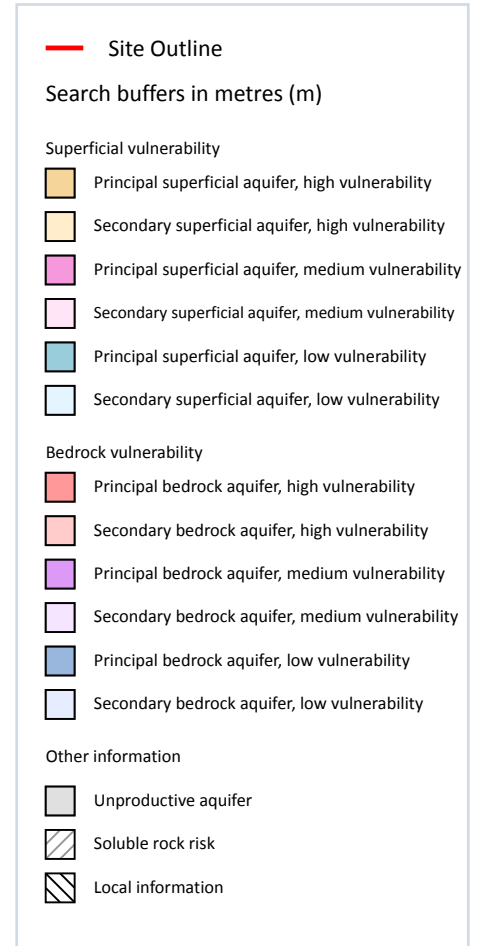
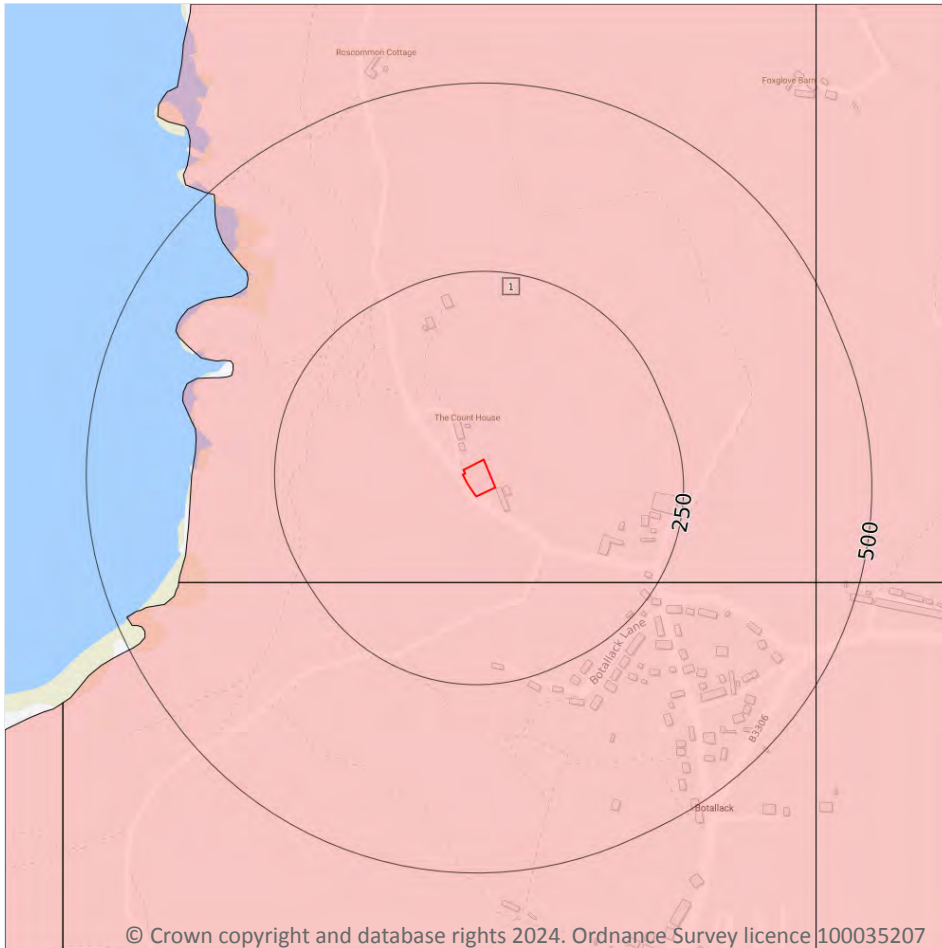
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 44](#) >

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

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

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 45 >](#)

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary 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

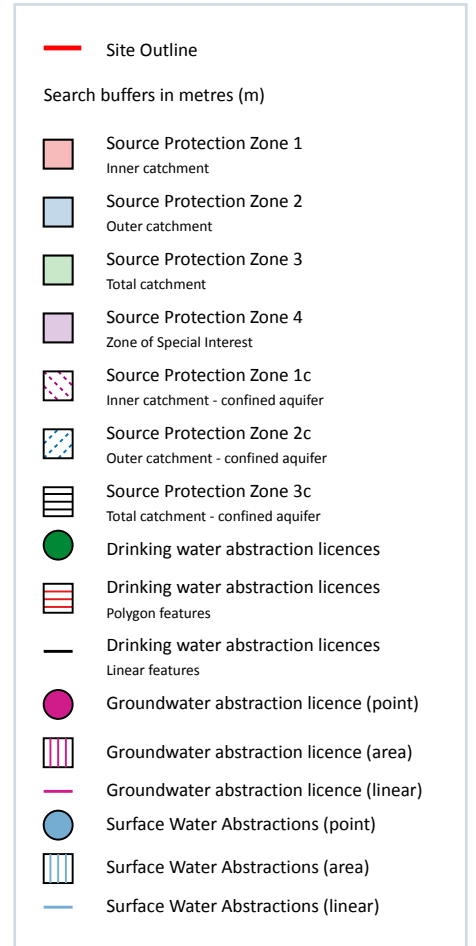
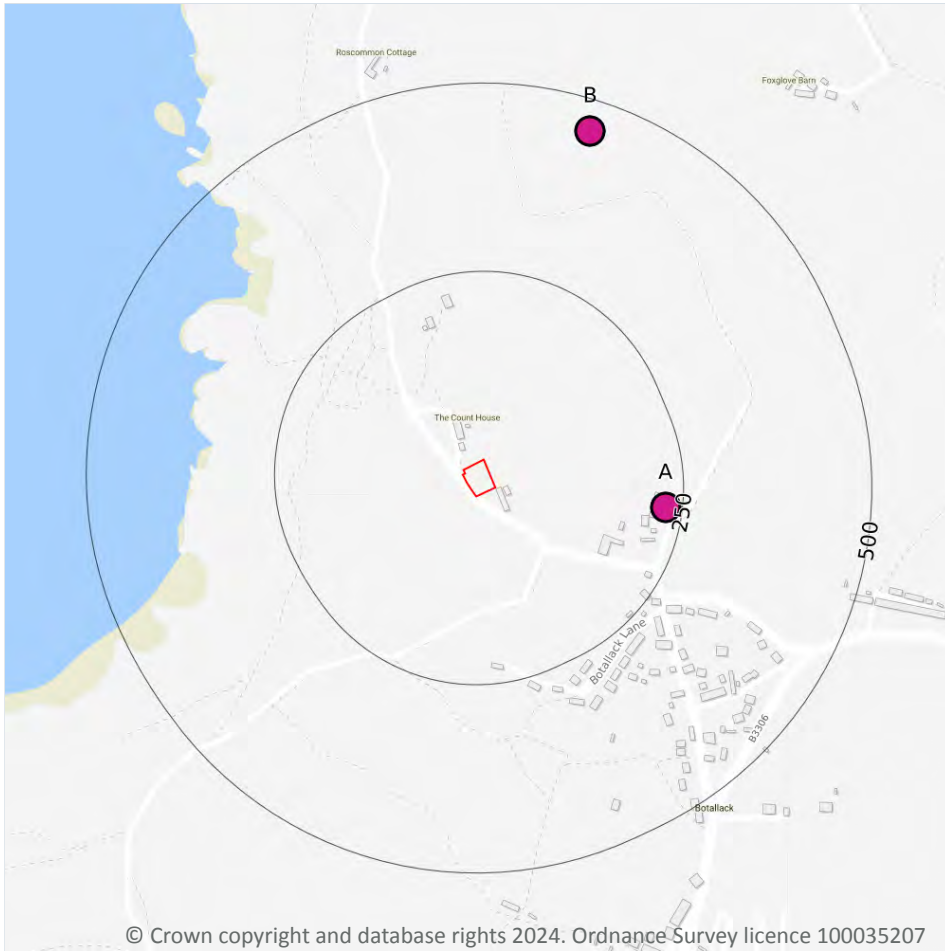
Records on site

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

6

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 47](#) >

ID	Location	Details	
A	227m E	Status: Historical Licence No: 15/49/251/G/010 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "BOTALLACK FARM, ST JUST - WELL" Data Type: Point Name: Cargeeg Easting: 136800 Northing: 33100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/09/1989 Version End Date: -
A	227m E	Status: Historical Licence No: 15/49/251/G/010 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: BOTALLACK FARM, ST JUST - WELL Data Type: Point Name: Cargeeg Easting: 136800 Northing: 33100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/09/1989 Version End Date: -
B	459m N	Status: Historical Licence No: 15/49/251/G/028 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "ROSCOMMON FARM, BOTALLACK - WELL" Data Type: Point Name: Cargeeg Easting: 136700 Northing: 33600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/09/1989 Version End Date: -
B	459m N	Status: Historical Licence No: 15/49/251/G/028 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: ROSCOMMON FARM, BOTALLACK - WELL Data Type: Point Name: Cargeeg Easting: 136700 Northing: 33600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/09/1989 Version End Date: -
-	1424m SE	Status: Historical Licence No: 15/49/251/G/020 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "HIGHFIELD FARM, NANCHERROW - WELL" Data Type: Point Name: Warren Easting: 137300 Northing: 31900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date: -



ID	Location	Details	
-	1424m SE	Status: Historical Licence No: 15/49/251/G/020 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: HIGHFIELD FARM, NANCHERROW - WELL Data Type: Point Name: Warren Easting: 137300 Northing: 31900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

1

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 47 >](#)

ID	Location	Details	
-	1735m SE	Status: Historical Licence No: 15/49/251/S/018 Details: Spray Irrigation - Storage Direct Source: Surface Water - Fresh Point: BOSVARGUS FARM,ST JUST Data Type: Point Name: Grose Easting: 137400 Northing: 31600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/01/1980 Expiry Date: - Issue No: 100 Version Start Date: 02/01/1980 Version End Date: -

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)

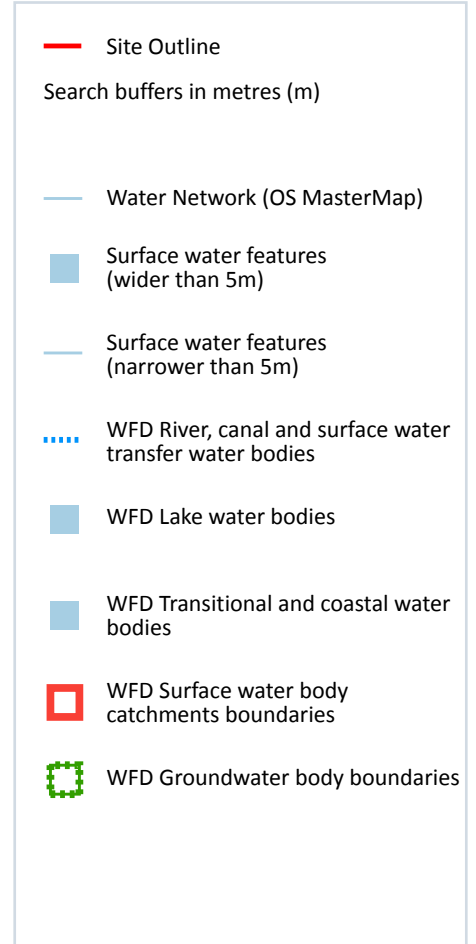
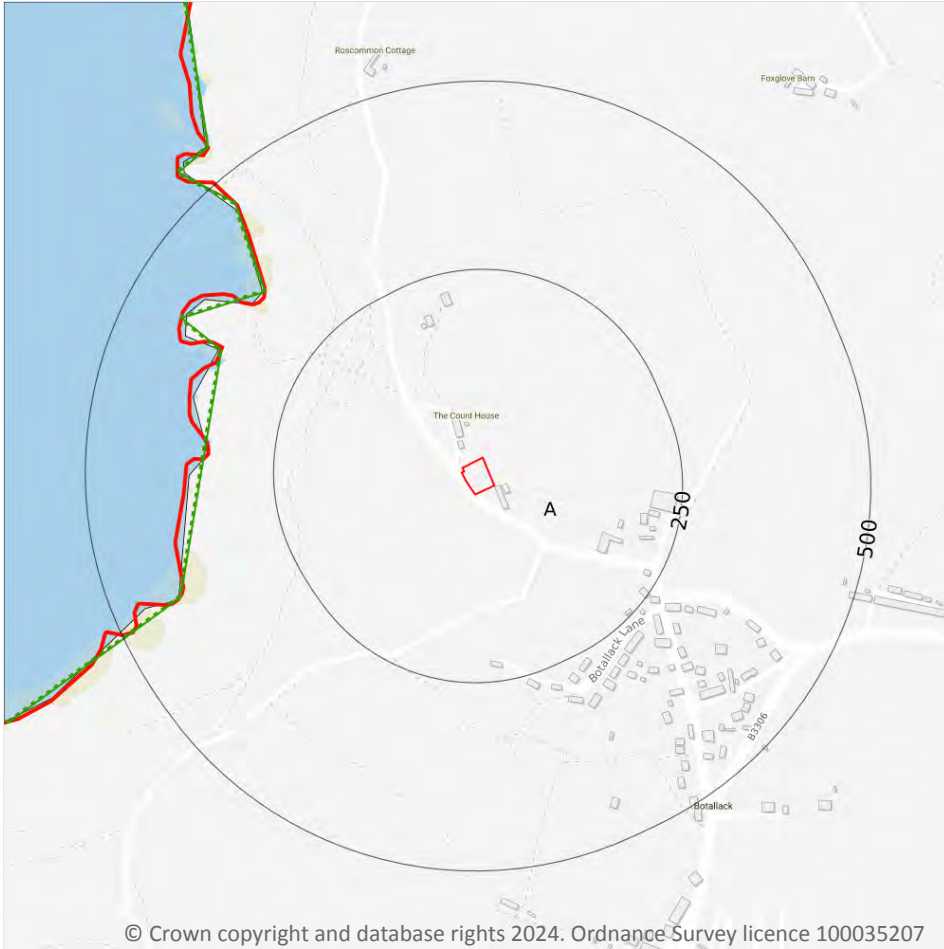
Records within 500m

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



6.1 Water Network (OS MasterMap)

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

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.

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 51](#) >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	Coastal Catchment	Not part of a river WB catchment	230	Penwith Peninsula	West Cornwall and the Fal

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

6.4 WFD Surface water bodies

Records identified

0

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.

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

6.5 WFD Groundwater bodies

Records on site

1

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.

Features are displayed on the Hydrology map on [page 51](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	West Cornwall	GB40802G800100 ↗	Poor	Poor	Good	2019



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

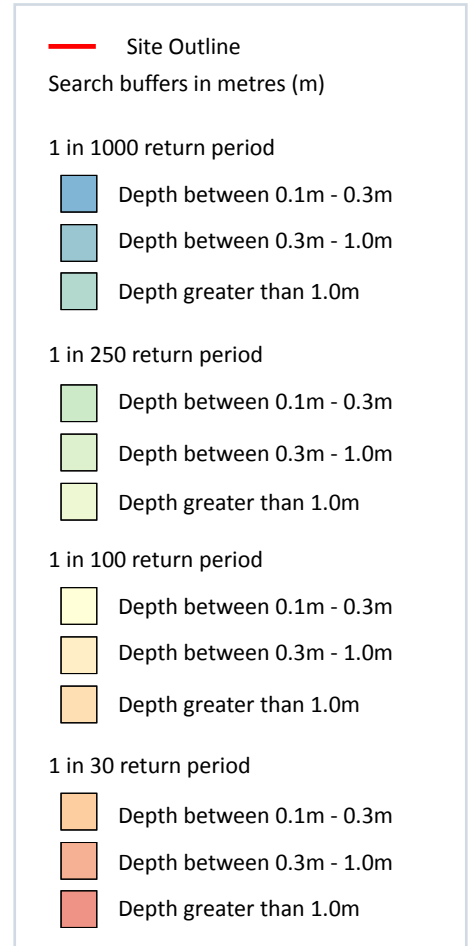
0

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

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on [page 57 >](#)

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



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

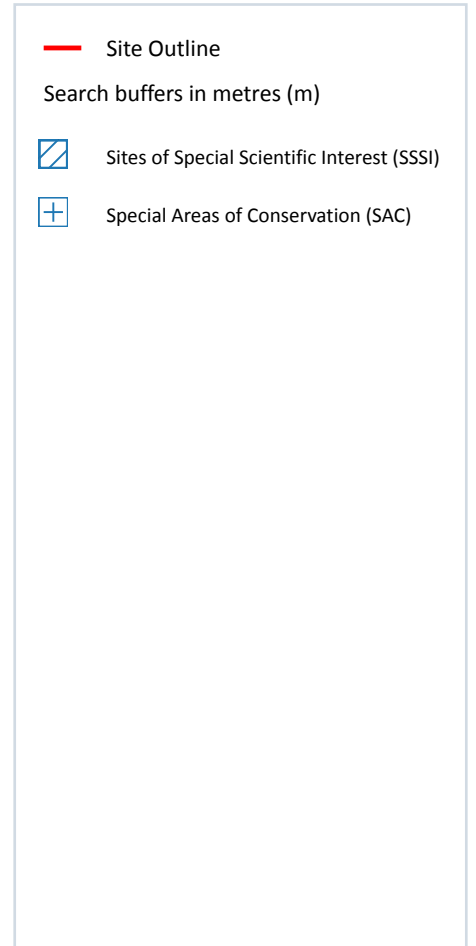
Negligible

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 59 >](#)

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

6

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 60](#) >

ID	Location	Name	Data source
1	26m NW	Aire Point to Carrick Du	Natural England

ID	Location	Name	Data source
4	992m SW	Aire Point to Carrick Du	Natural England
5	1330m SW	Aire Point to Carrick Du	Natural England
-	1383m E	West Penwith Moors and Downs	Natural England
-	1421m E	West Penwith Moors and Downs	Natural England
-	1425m E	West Penwith Moors and Downs	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

2

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.

Features are displayed on the Environmental designations map on [page 60 >](#)

ID	Location	Name	Features of interest	Habitat description	Data source
2	334m W	Lands End and Cape Bank	Reefs.	Marine areas, Sea inlets	Natural England
3	337m NW	Lands End and Cape Bank	Reefs.	Marine areas, Sea inlets	Natural England

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

0

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.

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

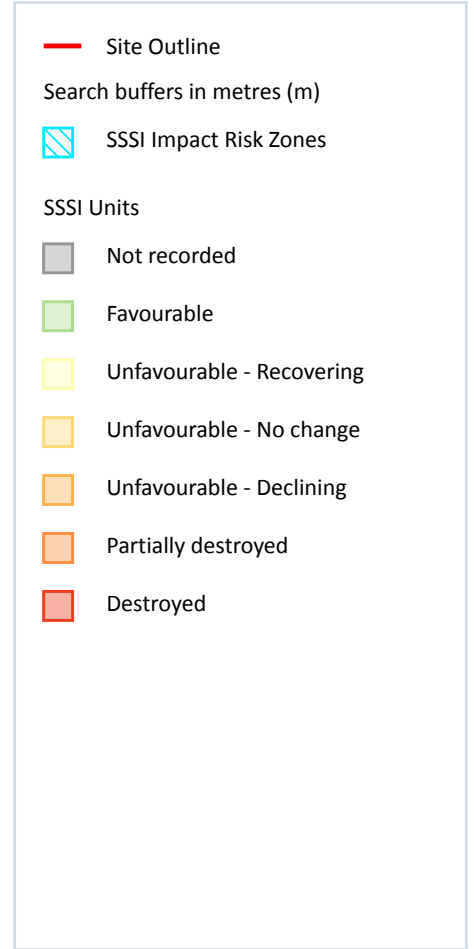
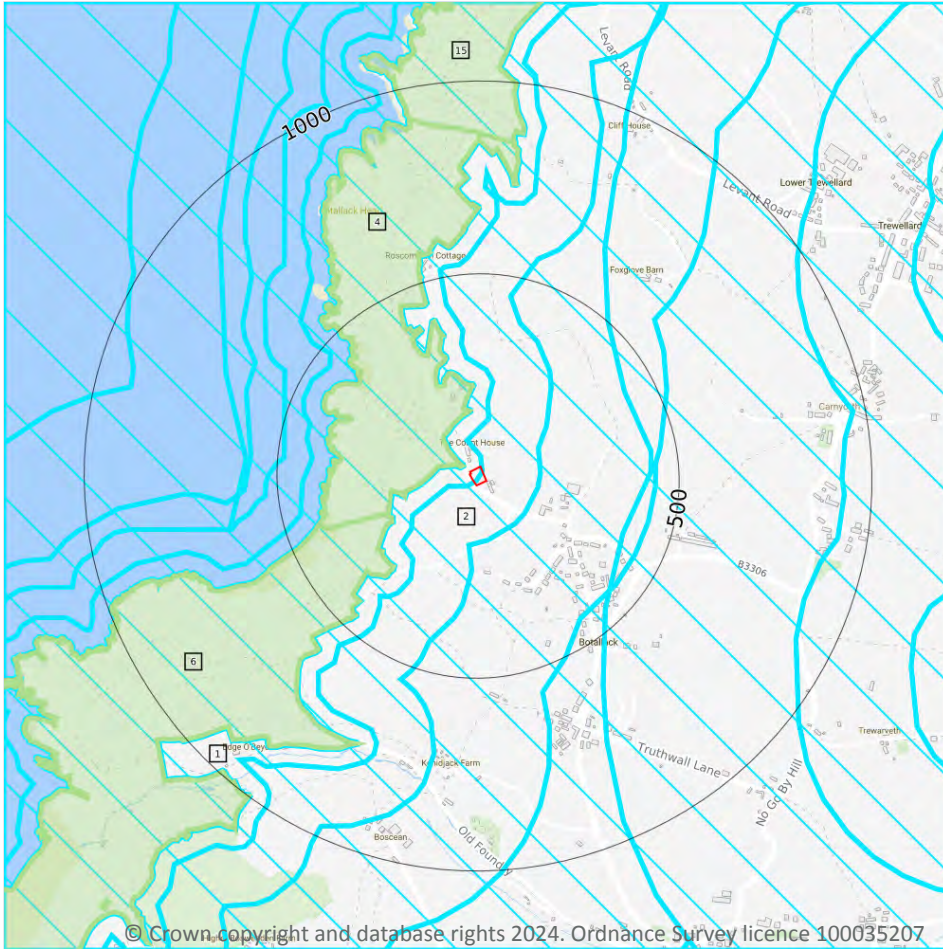
Records within 2000m

0

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.

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

SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site

2

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 65](#) >

ID	Location	Type of developments requiring consultation
1	On site	All applications - ALL PLANNING APPLICATIONS - EXCEPT HOUSEHOLDER APPLICATIONS.

ID	Location	Type of developments requiring consultation
2	On site	<p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.</p> <p>Residential - Residential development of 50 units or more.</p> <p>Rural residential - Any residential development of 10 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).</p> <p>Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.</p> <p>Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .</p>

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

9

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on [page 65 >](#)

ID: 4
 Location: 26m NW
 SSSI name: Aire Point to Carrick Du
 Unit name: 4
 Broad habitat: Supralittoral Rock
 Condition: Favourable
 Reportable features:



Feature name	Feature condition	Date of assessment
Bryophyte assemblage	Favourable	03/02/2017
EC - South-West England Igneous	Favourable	17/01/2020
FD - Mineralogy	Favourable	10/11/2021
FM - Mineralogy	Favourable	10/11/2021
Hard maritime cliff and slope	Favourable	20/10/2017
Invert. assemblage F001 scrub edge	Favourable	13/10/2017
Invert. assemblage F003 scrub-heath & moorland	Favourable	13/10/2017
Invert. assemblage F111 bare sand & chalk	Favourable	13/11/2017
Invert. assemblage F112 open short sward	Favourable	13/11/2017
Lowland dry heath	Favourable	13/10/2017
Vascular plant assemblage	Favourable	13/10/2017

ID: 6
Location: 231m SW
SSSI name: Aire Point to Carrick Du
Unit name: 3
Broad habitat: Supralittoral Rock
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Bryophyte assemblage	Favourable	03/02/2017
EC - Mineralogy	Favourable	17/01/2020
EC - Quaternary of South-West England	Favourable	17/01/2020
EC - South-West England Igneous	Favourable	10/11/2021
FD - Mineralogy	Favourable	10/11/2021
Hard maritime cliff and slope	Favourable	20/10/2017
IS - Quaternary of South-West England	Favourable	10/11/2021
Invert. assemblage F001 scrub edge	Favourable	13/10/2017
Invert. assemblage F003 scrub-heath & moorland	Favourable	13/10/2017
Invert. assemblage F111 bare sand & chalk	Favourable	13/11/2017



Feature name	Feature condition	Date of assessment
Invert. assemblage F112 open short sward	Favourable	13/11/2017
Lowland dry heath	Favourable	13/10/2017
Vascular plant assemblage	Favourable	13/10/2017

ID: 15
 Location: 844m N
 SSSI name: Aire Point to Carrick Du
 Unit name: 5
 Broad habitat: Supralittoral Rock
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Bryophyte assemblage	Favourable	03/02/2017
FD - Mineralogy	Favourable	10/11/2021
Hard maritime cliff and slope	Favourable	20/10/2017
Invert. assemblage F001 scrub edge	Favourable	13/10/2017
Invert. assemblage F003 scrub-heath & moorland	Favourable	13/10/2017
Invert. assemblage F111 bare sand & chalk	Favourable	13/11/2017
Invert. assemblage F112 open short sward	Favourable	13/11/2017
Lowland dry heath	Favourable	13/10/2017

ID: -
 Location: 1276m N
 SSSI name: Aire Point to Carrick Du
 Unit name: 6
 Broad habitat: Supralittoral Rock
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Bryophyte assemblage	Favourable	03/02/2017
Hard maritime cliff and slope	Favourable	20/10/2017
Invert. assemblage F111 bare sand & chalk	Favourable	13/11/2017



Feature name	Feature condition	Date of assessment
Invert. assemblage F112 open short sward	Favourable	13/11/2017

ID: -
 Location: 1383m E
 SSSI name: Penwith Moors
 Unit name: Nanquidno
 Broad habitat: Dwarf Shrub Heath - Lowland
 Condition: Not Recorded
 Reportable features:

Feature name	Feature condition	Date of assessment
Invert. assemblage F003 scrub-heath & moorland	-	-
Lowland dry acid grassland (U4)	-	-
Lowland fens, including basin, flood-plain, open water transition and valley fens	-	-
Lowland wet heath	-	-
Nationally scarce plant - Viola lactea, Pale Dog-violet	-	-

ID: -
 Location: 1421m E
 SSSI name: Penwith Moors
 Unit name: Nanquidno
 Broad habitat: Dwarf Shrub Heath - Lowland
 Condition: Not Recorded
 Reportable features:

Feature name	Feature condition	Date of assessment
Invert. assemblage F003 scrub-heath & moorland	-	-
Lowland dry acid grassland (U4)	-	-
Lowland fens, including basin, flood-plain, open water transition and valley fens	-	-
Lowland wet heath	-	-
Nationally scarce plant - Viola lactea, Pale Dog-violet	-	-

ID: -
 Location: 1425m E
 SSSI name: Penwith Moors
 Unit name: Nanquidno
 Broad habitat: Dwarf Shrub Heath - Lowland
 Condition: Not Recorded
 Reportable features:

Feature name	Feature condition	Date of assessment
Invert. assemblage F003 scrub-heath & moorland	-	-
Lowland dry acid grassland (U4)	-	-
Lowland fens, including basin, flood-plain, open water transition and valley fens	-	-
Lowland wet heath	-	-
Nationally scarce plant - Viola lactea, Pale Dog-violet	-	-

ID: -
 Location: 1481m N
 SSSI name: Aire Point to Carrick Du
 Unit name: 7
 Broad habitat: Supralittoral Rock
 Condition: Favourable
 Reportable features:

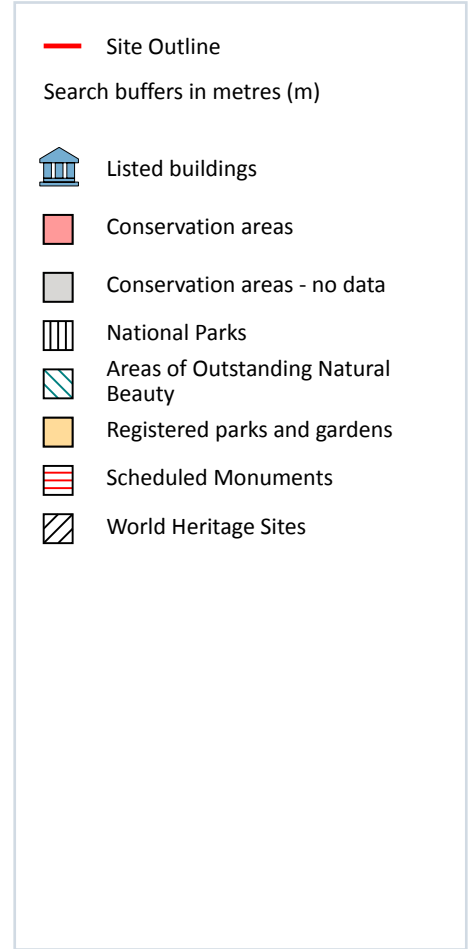
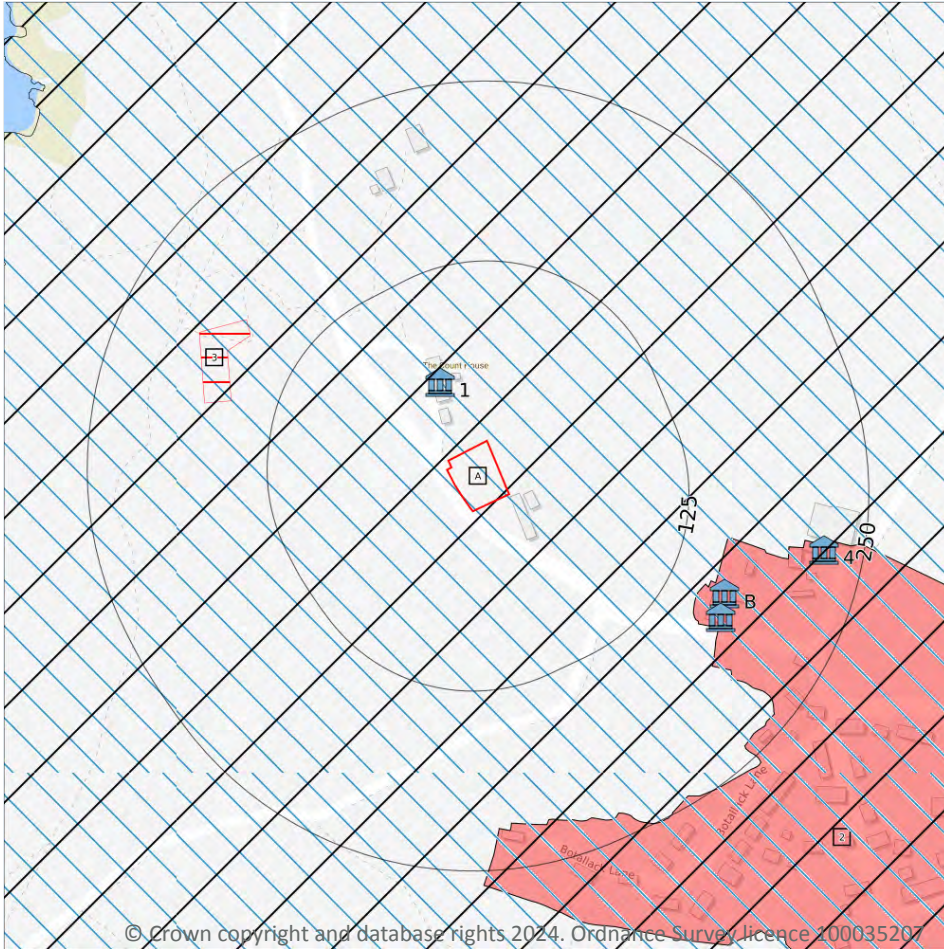
Feature name	Feature condition	Date of assessment
Bryophyte assemblage	Favourable	03/02/2017
Hard maritime cliff and slope	Favourable	20/10/2017
Invert. assemblage F001 scrub edge	Favourable	13/10/2017
Invert. assemblage F003 scrub-heath & moorland	Favourable	13/10/2017
Invert. assemblage F111 bare sand & chalk	Favourable	13/11/2017
Invert. assemblage F112 open short sward	Favourable	13/11/2017
Lowland dry heath	Favourable	13/10/2017

ID: -
Location: 1845m N
SSSI name: Aire Point to Carrick Du
Unit name: 8
Broad habitat: Supralittoral Rock
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
Bryophyte assemblage	Favourable	03/02/2017
Hard maritime cliff and slope	Favourable	20/10/2017
Invert. assemblage F001 scrub edge	Unfavourable - No change	13/10/2017
Invert. assemblage F003 scrub-heath & moorland	Unfavourable - No change	13/10/2017
Invert. assemblage F111 bare sand & chalk	Favourable	13/11/2017
Invert. assemblage F112 open short sward	Favourable	13/11/2017
Lowland dry heath	Favourable	13/10/2017
Lowland mire grassland and rush pasture	Favourable	13/10/2017

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

11 Visual and cultural designations



11.1 World Heritage Sites

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 72 >](#)

ID	Location	Name	Data Source
A	On site	Cornwall and West Devon Mining Landscape	Historic England

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 72 >](#)

ID	Location	NAME	Data Source
A	On site	Cornwall	Natural England

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

4

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.

Features are displayed on the Visual and cultural designations map on [page 72 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
1	51m N	The Count House, Botallack Mine North West Of Botallack	II	1159591	21/09/1973
B	165m SE	Outbuildings Immediately North Of Botallack Manor House	II	1159587	21/09/1973

ID	Location	Name	Grade	Reference Number	Listed date
B	170m SE	Botallack Manor House	II*	1143288	26/04/1950
4	222m E	Barn Approximately 100 Yards North East Of Botallack Manor House	II	1143289	21/09/1973

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 72 >](#)

ID	Location	Name	District	Date of designation
2	148m SE	Botallack and Truthwall	Cornwall	26/06/2002

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 72 >](#)

ID	Location	Ancient monument name	Reference number
3	157m W	Tin mine calciner at Botallack Mine	1004280

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



11.7 Registered Parks and Gardens

Records within 250m

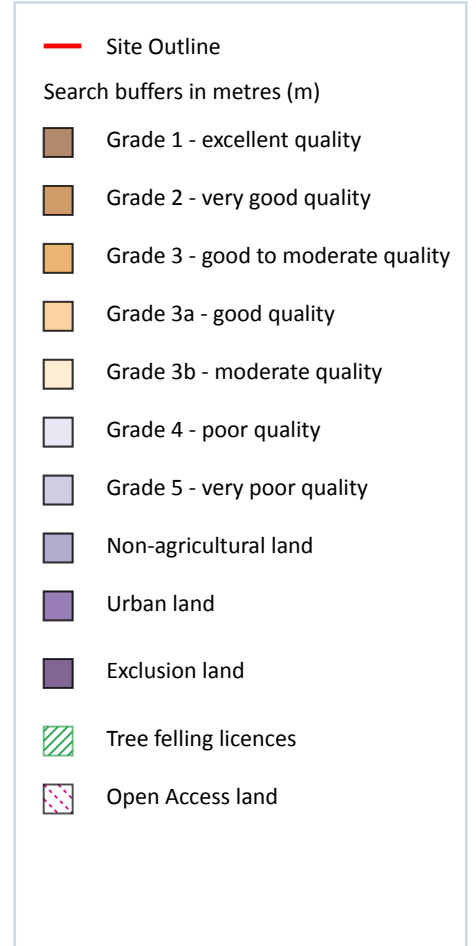
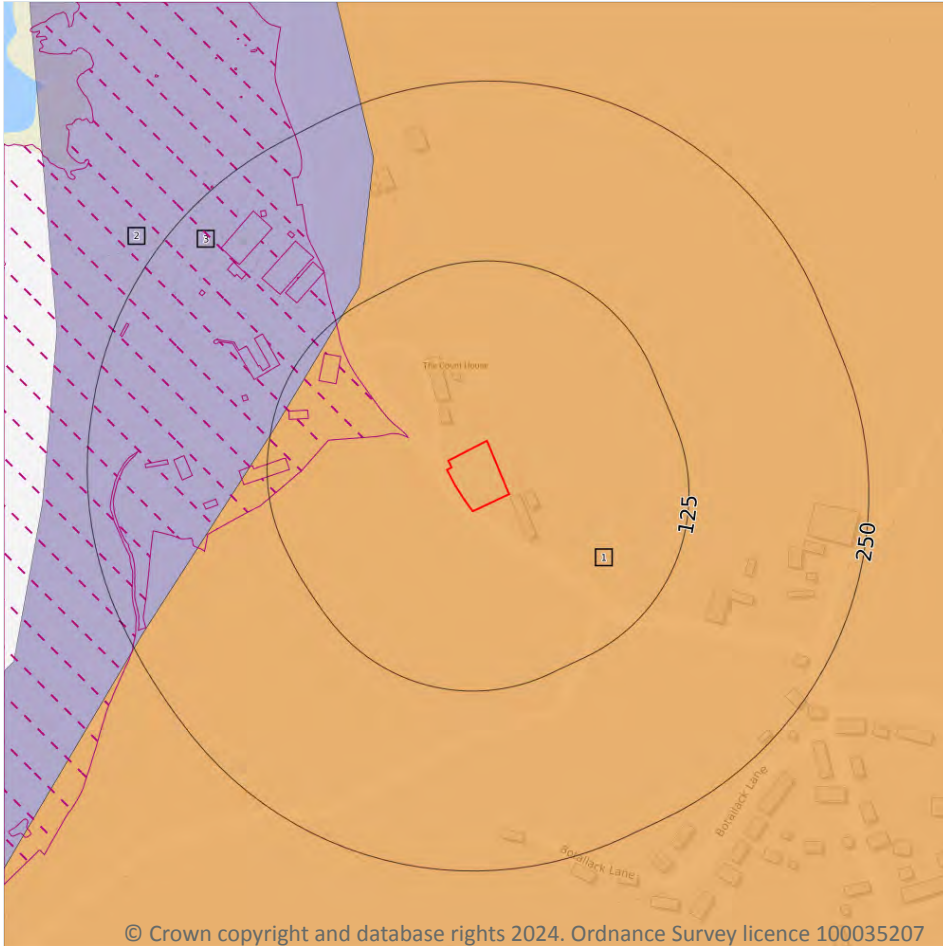
0

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



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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 76](#) >

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

ID	Location	Classification	Description
3	115m NW	Non Agricultural	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

1

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.

Features are displayed on the Agricultural designations map on [page 76 >](#)

ID	Location	Name	Classification	Other relevant legislation
2	32m NW	-	Section 4 Conclusive Open Country	-

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

5

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.

Location	Reference	Scheme	Start Date	End date
5m S	AG00301351	Entry Level plus Higher Level Stewardship	01/01/2010	31/12/2021
17m NE	AG00301351	Entry Level plus Higher Level Stewardship	01/01/2010	31/12/2021



Location	Reference	Scheme	Start Date	End date
105m SE	AG00301351	Entry Level plus Higher Level Stewardship	01/01/2010	31/12/2021
162m SW	AG00250448	Entry Level plus Higher Level Stewardship	01/05/2008	30/04/2018
202m S	AG00250448	Entry Level plus Higher Level Stewardship	01/05/2008	30/04/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

2

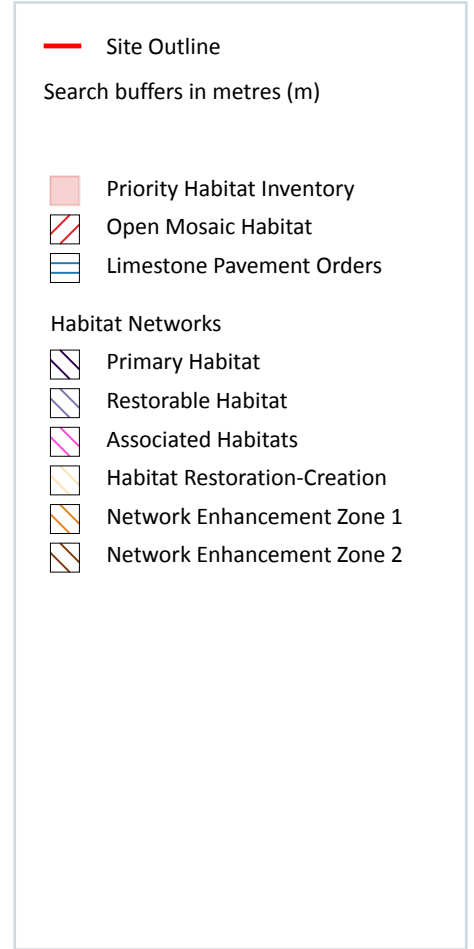
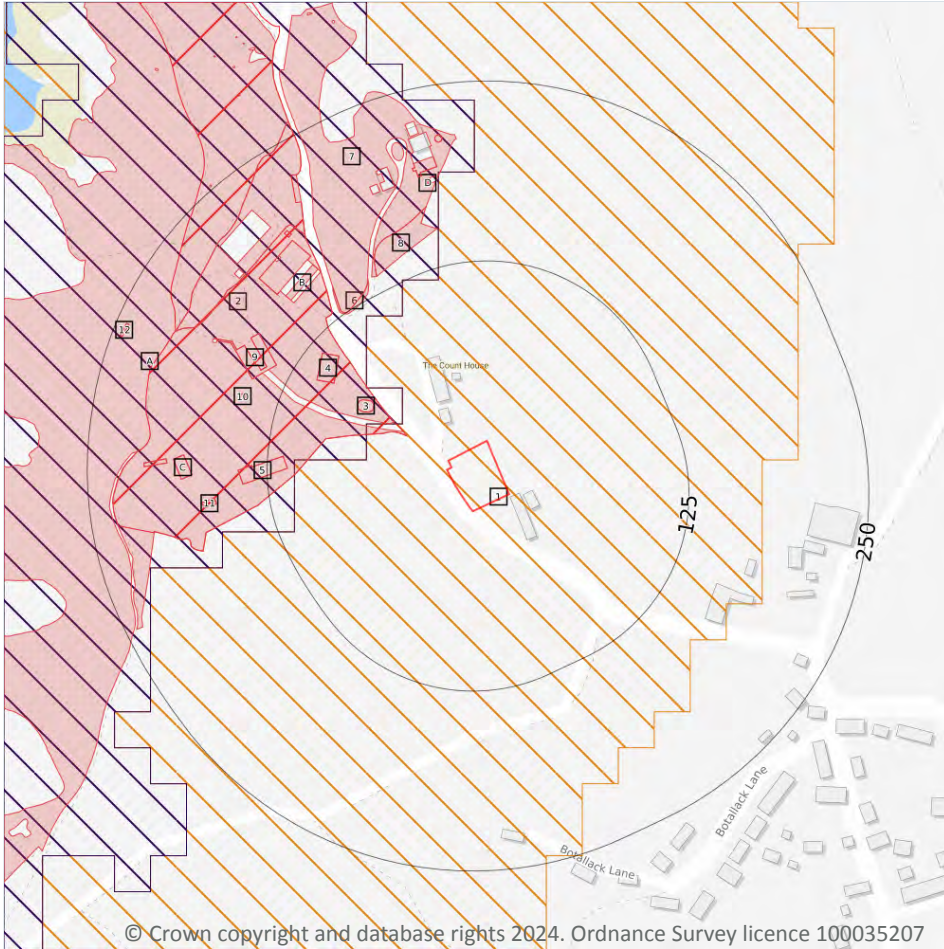
Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
162m SW	625278	Countryside Stewardship (Higher Tier)	01/01/2019	31/12/2028
203m SW	989078	Countryside Stewardship (Higher Tier)	01/01/2021	31/12/2030

This data is sourced from Natural England.



13 Habitat designations



13.1 Priority Habitat Inventory

Records within 250m

21

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 79 >](#)

ID	Location	Main Habitat	Other habitats
A	34m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
3	63m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
4	96m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
5	111m W	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)

ID	Location	Main Habitat	Other habitats
6	124m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
7	125m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
8	137m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
9	137m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
10	147m W	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
B	156m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
11	162m W	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
B	166m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
C	177m W	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
D	183m N	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
B	186m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
D	189m N	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
B	191m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
C	195m W	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
D	204m N	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
D	210m N	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)
12	241m NW	Maritime cliff and slope	Main habitat: MCSLP (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

2

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

Features are displayed on the Habitat designations map on [page 79](#) >

ID	Location	Type	Habitat
1	On site	Network Enhancement Zone 1	Not specified
A	41m NW	Primary Habitat	Maritime cliff and slope

This data is sourced from Natural England.



13.3 Open Mosaic Habitat

Records within 250m

1

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

Features are displayed on the Habitat designations map on [page 79 >](#)

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
2	34m NW	BRITPITS ref: 81616	Low	British Geological Survey BRITPITS database	UK Perspectives Aerial Photography	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

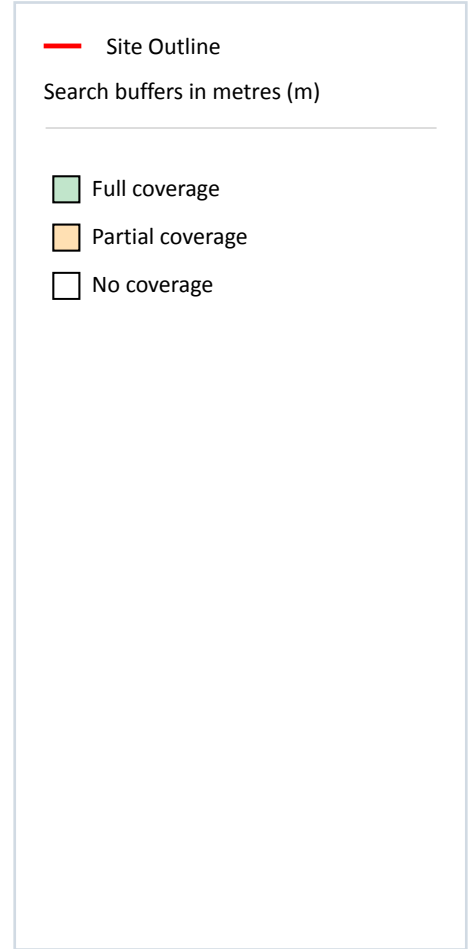
Records within 250m

0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



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 82](#) >

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

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

14.5 Bedrock geology (10k)

Records within 500m

0

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.

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 86](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW351_358_penzance_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

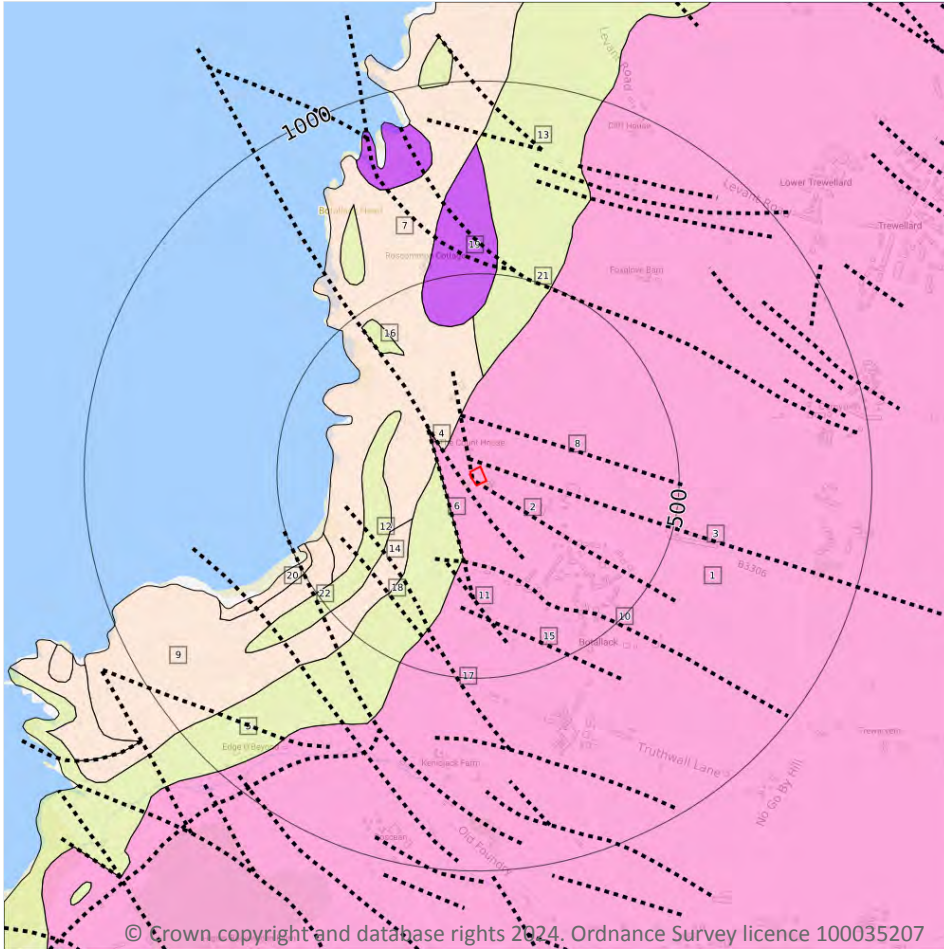
0

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

9

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 89](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LEIN-GN	LAND'S END INTRUSION - GRANITE	-
5	72m W	MRS�-HSSL	MYLOR SLATE FORMATION - HORNFELED SLATE AND HORNFELED SILTSTONE	FRASNIAN
7	88m NW	MRS�-MBA	MYLOR SLATE FORMATION - METABASALT	FRASNIAN

ID	Location	LEX Code	Description	Rock age
9	186m SW	MRSL-MBAR	MYLOR SLATE FORMATION - METABASALTIC-ROCK	FRASNIAN
12	217m W	MRSL-HSSL	MYLOR SLATE FORMATION - HORNFELSED SLATE AND HORNFELSED SILTSTONE	FRASNIAN
13	233m N	MRSL-HSSL	MYLOR SLATE FORMATION - HORNFELSED SLATE AND HORNFELSED SILTSTONE	FRASNIAN
16	348m NW	MRSL-HSSL	MYLOR SLATE FORMATION - HORNFELSED SLATE AND HORNFELSED SILTSTONE	FRASNIAN
19	371m N	UIID-MGMD	UNNAMED IGNEOUS INTRUSION, DEVONIAN - METAGABBRO AND METAMICROGABBRO	-
20	462m SW	MRSL-MBA	MYLOR SLATE FORMATION - METABASALT	FRASNIAN

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	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

13

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.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 89](#) >

ID	Location	Category	Description
2	On site	MINERAL_VEIN	Mineral vein, inferred
3	9m N	MINERAL_VEIN	Mineral vein, inferred
4	24m SW	FAULT	Fault, inferred, displacement unknown



ID	Location	Category	Description
6	72m W	FAULT	Fault, inferred, displacement unknown
8	112m N	MINERAL_VEIN	Mineral vein, inferred
10	200m S	MINERAL_VEIN	Mineral vein, inferred
11	210m S	MINERAL_VEIN	Mineral vein, inferred
14	296m SW	MINERAL_VEIN	Mineral vein, inferred
15	318m S	MINERAL_VEIN	Mineral vein, inferred
17	352m SW	MINERAL_VEIN	Mineral vein, inferred
18	353m SW	MINERAL_VEIN	Mineral vein, inferred
21	496m N	MINERAL_VEIN	Mineral vein, inferred
22	499m SW	MINERAL_VEIN	Mineral vein, inferred

This data is sourced from the British Geological Survey.



16 Boreholes

16.1 BGS Boreholes

Records within 250m

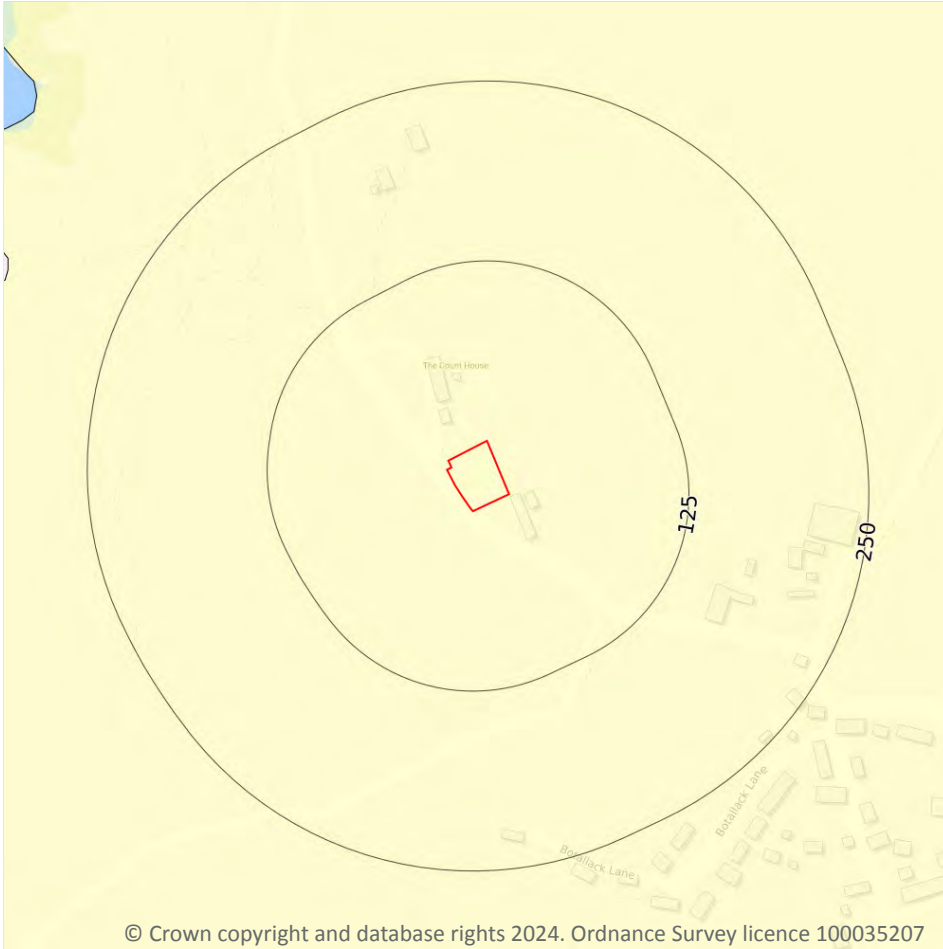
0

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

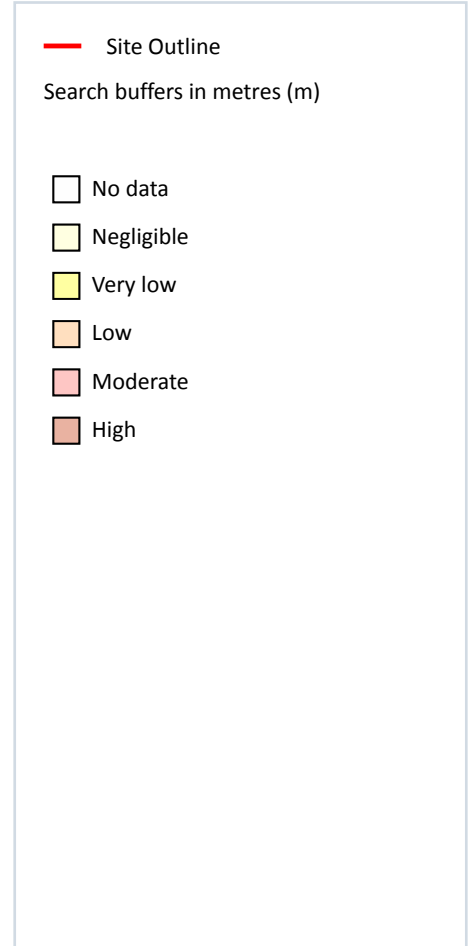
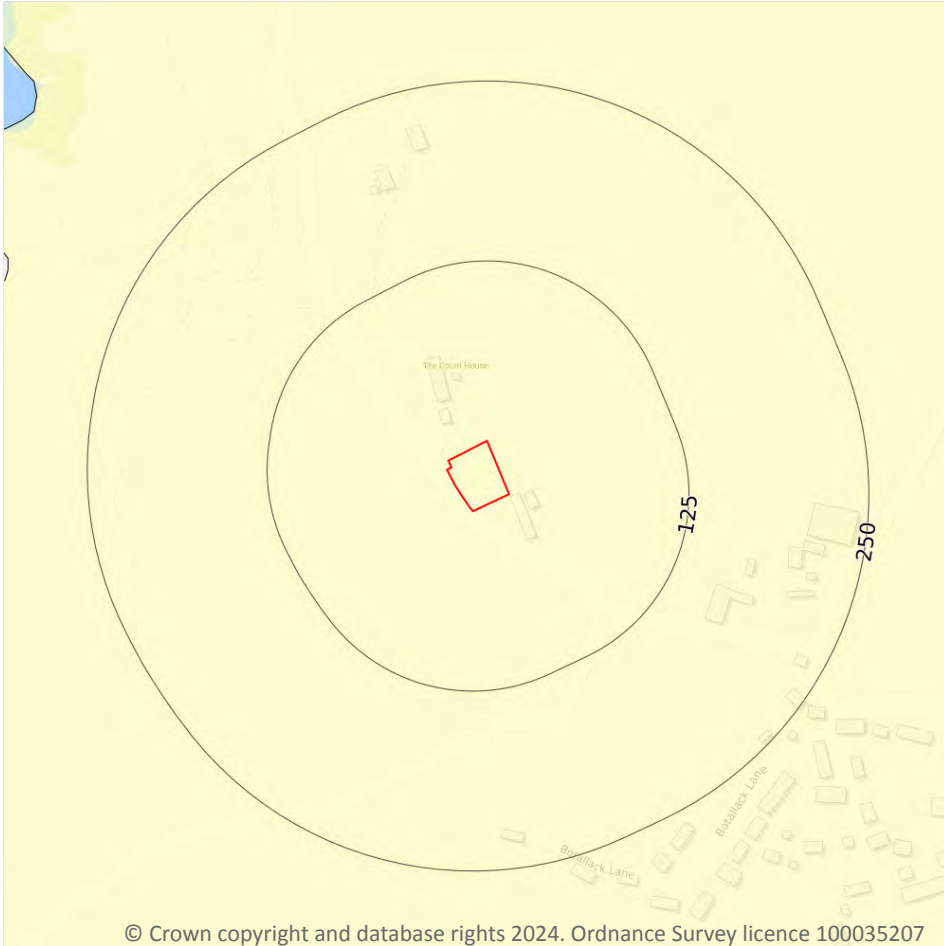
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 93](#) >

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

1

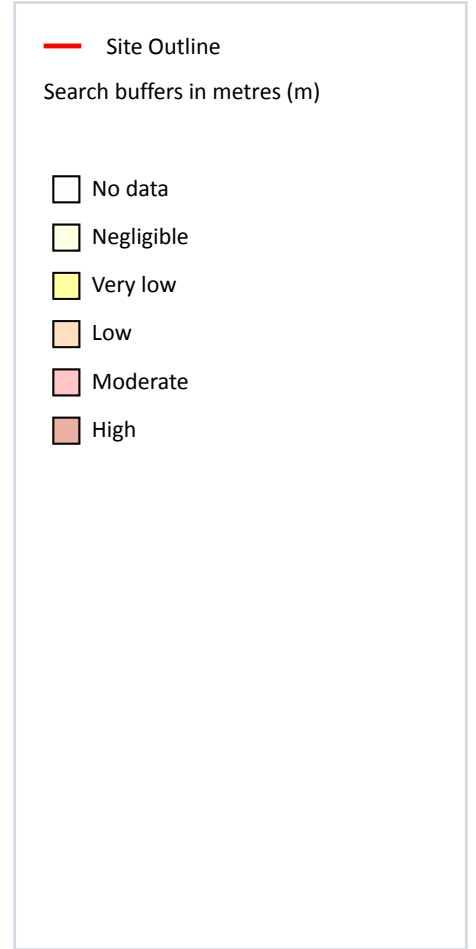
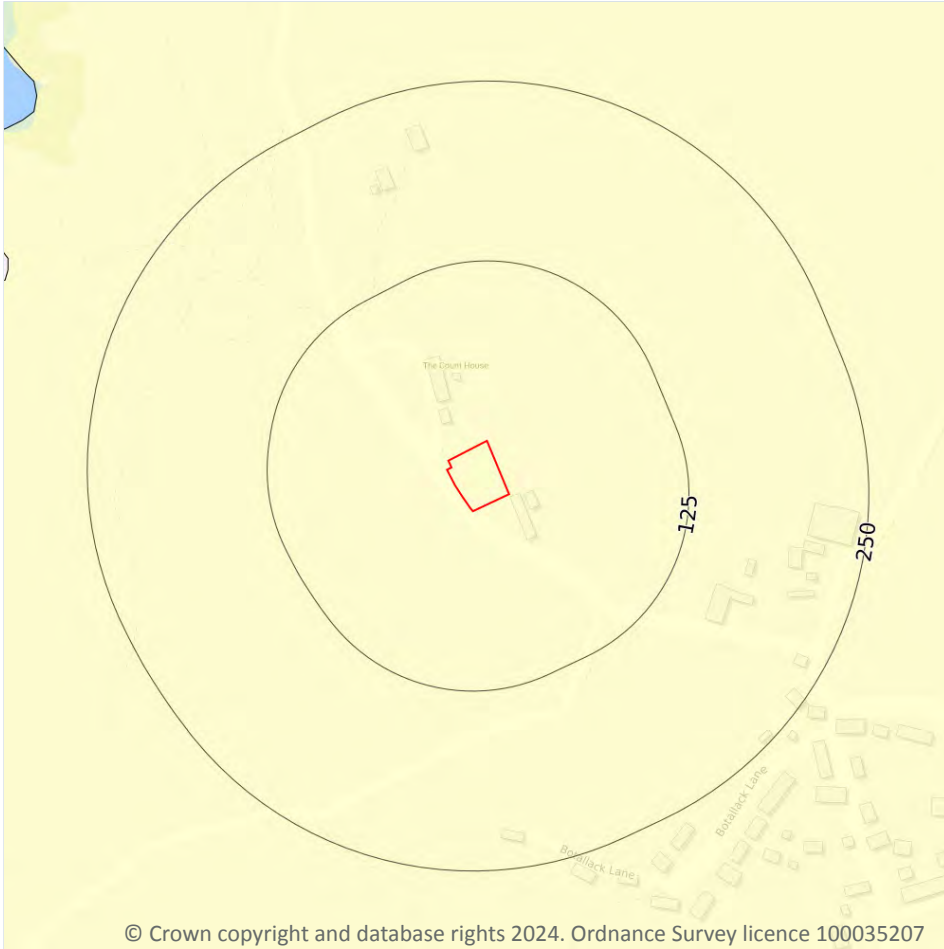
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

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

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



17.3 Compressible deposits

Records within 50m

1

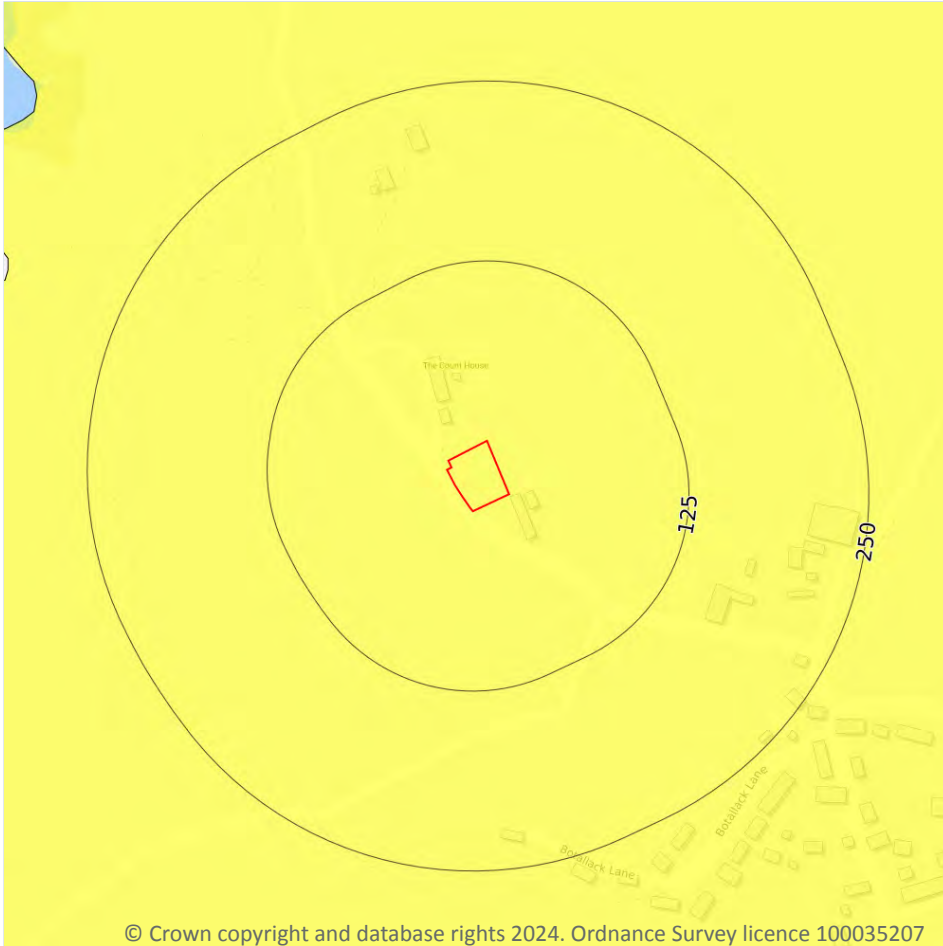
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

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

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

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17.4 Collapsible deposits

Records within 50m

1

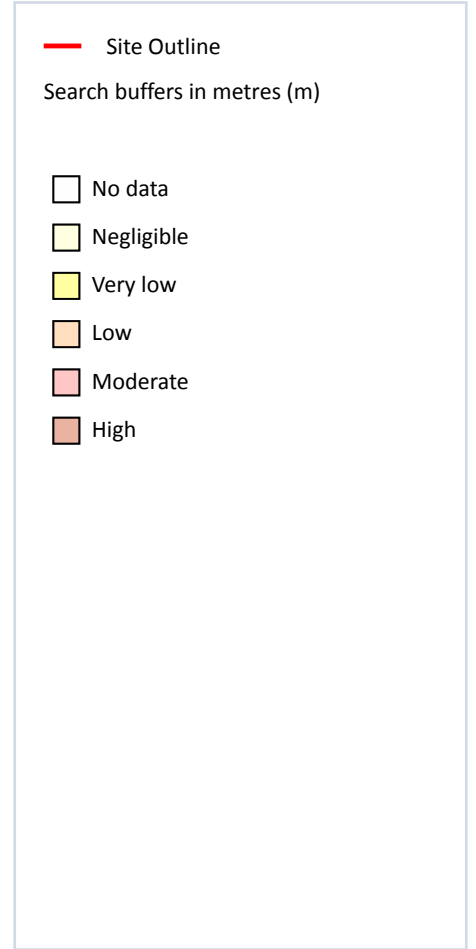
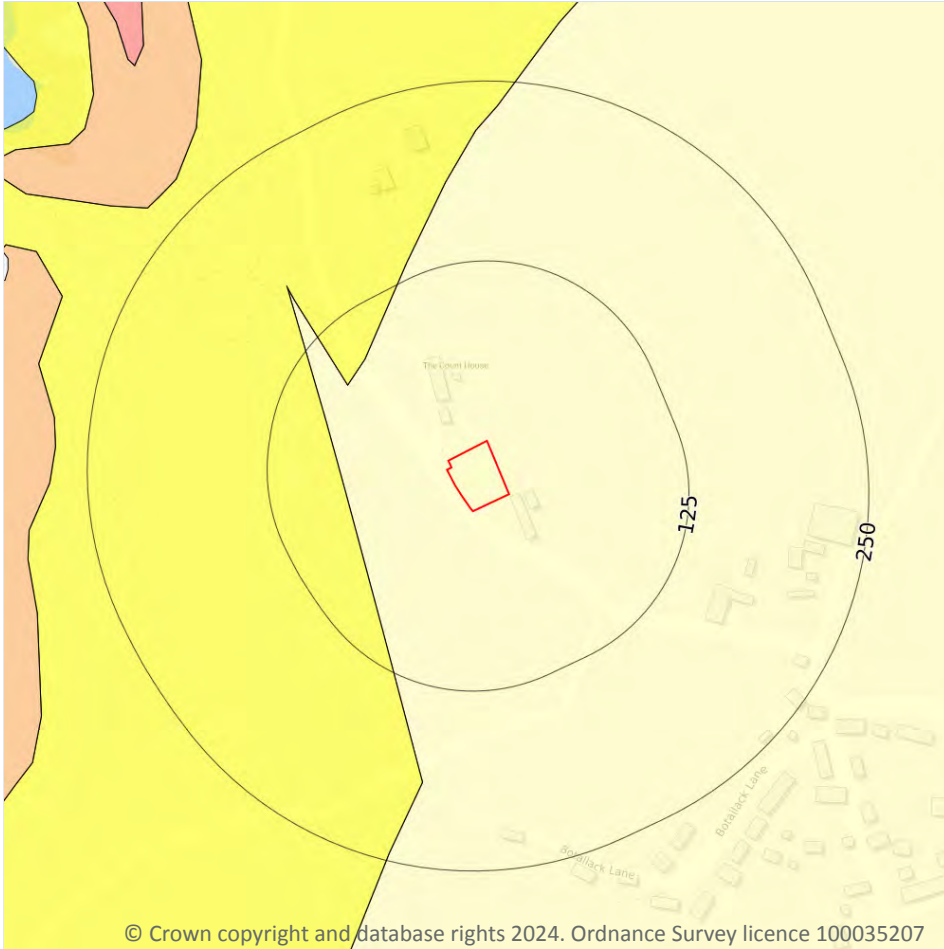
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 96 >](#)

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

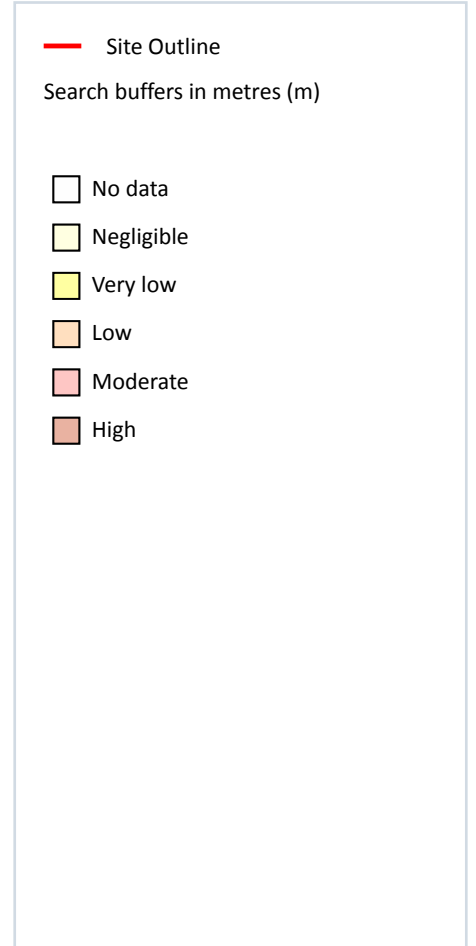
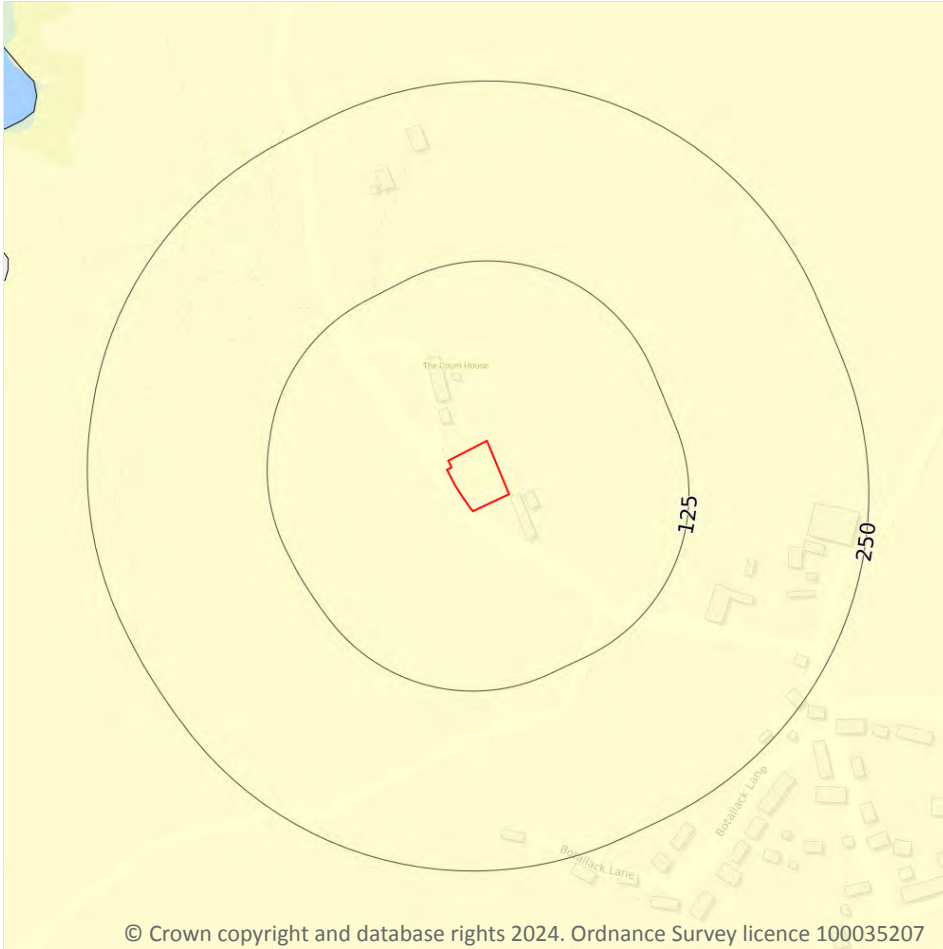
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on [page 97](#) >

Location	Hazard rating	Details
On site	Negligible	Slope instability problems are not thought 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



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 98](#)

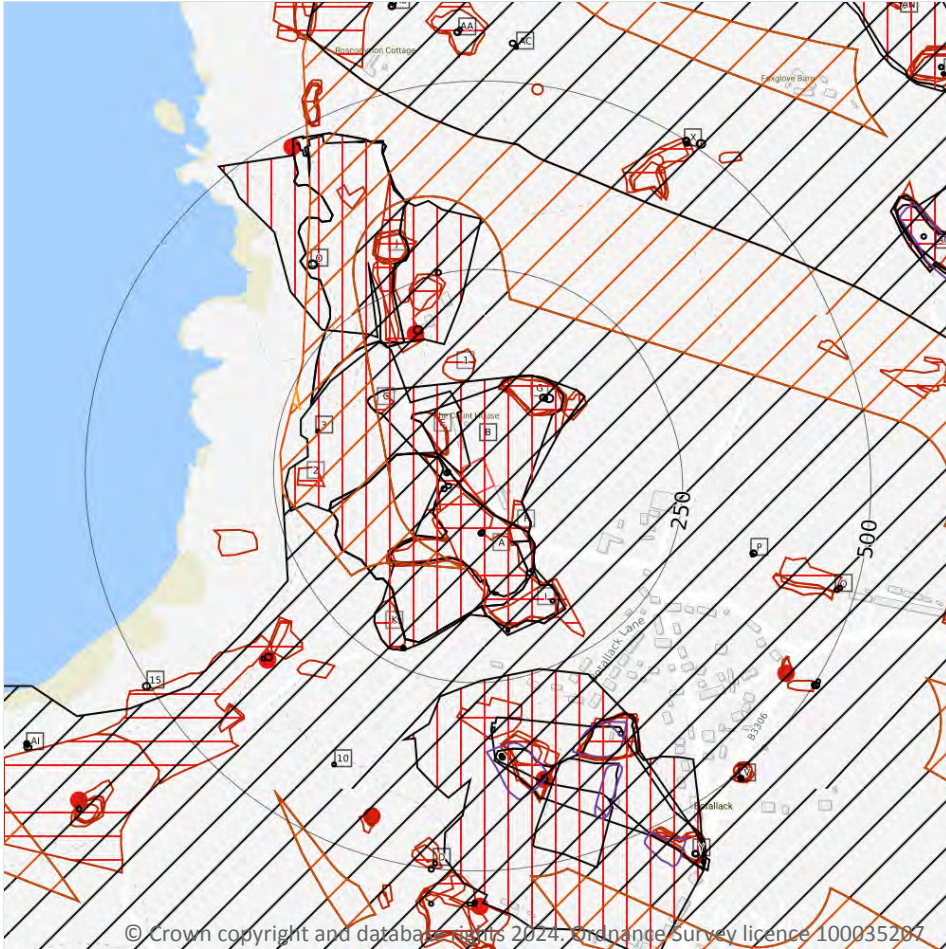
>

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

9

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

Features are displayed on the Mining and ground workings map on [page 100](#) >

ID	Location	Details	Description
L	187m NW	Name: Botallack Mine, Allen's Shaft Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Tin Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
L	187m NW	Name: Botallack Mine, Allen's Shaft Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Copper Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
N	352m SW	Name: West Wheal Owles Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Tin Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
N	352m SW	Name: West Wheal Owles Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Copper Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
M	389m S	Name: Parknoweth Mine Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Tin Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
S	448m S	Name: Botallack Quarry Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Igneous & Metamorphic Rock Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
U	461m SE	Name: Botallack Quarry Address: Botallack, St Just, PENZANCE, Cornwall Commodity: Igneous & Metamorphic Rock Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
T	482m NW	Name: Crowns Mine Address: Trewellard, St Just, PENZANCE, Cornwall Commodity: Tin Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
T	482m NW	Name: Crowns Mine Address: Trewellard, St Just, PENZANCE, Cornwall Commodity: Copper Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

23

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 100 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Disused Tip	1979	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
A	3m S	Refuse Heap	1906	1:10560
A	9m S	Refuse Heap	1958	1:10560
E	27m NW	Pond	1906	1:10560
E	28m NW	Pond	1906	1:10560
E	28m NW	Pond	1876	1:10560
F	33m SE	Ponds	1906	1:10560
F	33m SE	Ponds	1876	1:10560
A	68m SW	Unspecified Heap	1876	1:10560
G	84m NE	Refuse Heap	1958	1:10560
G	88m NE	Refuse Heap	1906	1:10560
G	88m NE	Unspecified Heap	1876	1:10560
G	88m NE	Unspecified Disused Tip	1979	1:10000
G	89m NE	Refuse Heap	1906	1:10560
1	105m N	Unspecified Disused Tip	1979	1:10000
G	112m NE	Refuse Heap	1876	1:10560
C	127m NW	Ponds	1906	1:10560
I	146m SE	Refuse Heap	1906	1:10560
J	173m NW	Unspecified Disused Tip	1979	1:10000
K	181m SW	Unspecified Heap	1876	1:10560
2	183m W	Pond	1876	1:10560
J	190m NW	Unspecified Heap	1958	1:10560
J	211m N	Unspecified Heap	1958	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

190

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 100 >](#)



ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Tin and Copper Mine	1876	1:10560
B	On site	Disused Tin and Copper Mine	1906	1:10560
C	On site	Unspecified Disused Mine	1979	1:10000
A	5m S	Unspecified Disused Mine	1979	1:10000
A	5m S	Unspecified Disused Mine	1979	1:10000
A	5m S	Unspecified Disused Mine	1958	1:10560
B	15m W	Unspecified Old Shaft	1906	1:10560
B	15m W	Unspecified Shaft	1876	1:10560
B	16m W	Unspecified Old Shaft	1958	1:10560
B	20m W	Unspecified Disused Shaft	1979	1:10000
B	27m W	Unspecified Shaft	1876	1:10560
A	48m S	Unspecified Shaft	1906	1:10560
A	48m S	Unspecified Shaft	1876	1:10560
A	49m S	Unspecified Disused Shaft	1979	1:10000
A	49m S	Unspecified Shaft	1958	1:10560
G	109m NE	Unspecified Old Shaft	1958	1:10560
G	112m NE	Unspecified Old Shaft	1906	1:10560
G	112m NE	Unspecified Shaft	1876	1:10560
G	113m NE	Unspecified Disused Shaft	1979	1:10000
I	121m SE	Unspecified Old Shaft	1906	1:10560
I	122m SE	Unspecified Disused Shaft	1979	1:10000
I	122m SE	Unspecified Old Shaft	1958	1:10560
A	131m S	Unspecified Shaft	1876	1:10560
J	159m N	Unspecified Disused Mine	1979	1:10000
I	169m SE	Unspecified Shaft	1876	1:10560
I	183m S	Unspecified Shaft	1876	1:10560
J	184m NW	Disused Copper and Tin Mine	1906	1:10560
J	184m NW	Tin and Copper Mine	1876	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
L	185m N	Unspecified Disused Shaft	1979	1:10000
3	196m W	Unspecified Shaft	1876	1:10560
K	222m SW	Unspecified Old Shaft	1906	1:10560
K	222m SW	Unspecified Shaft	1876	1:10560
K	224m SW	Unspecified Old Shaft	1958	1:10560
M	244m S	Unspecified Disused Mine	1979	1:10000
J	249m N	Unspecified Shaft	1876	1:10560
M	297m S	Tin Mine	1876	1:10560
M	310m S	Unspecified Shaft	1876	1:10560
O	330m NW	Unspecified Disused Shaft	1979	1:10000
O	330m NW	Unspecified Disused Shaft	1979	1:10000
O	330m NW	Unspecified Disused Shaft	1979	1:10000
M	341m S	Disused Tin Mine	1906	1:10560
N	345m SW	Unspecified Disused Shaft	1979	1:10000
M	346m S	Unspecified Old Shaft	1906	1:10560
M	346m S	Unspecified Shaft	1876	1:10560
M	348m S	Unspecified Old Shaft	1958	1:10560
P	352m E	Unspecified Disused Shaft	1979	1:10000
P	352m E	Unspecified Old Shaft	1958	1:10560
P	353m E	Unspecified Old Shafts	1906	1:10560
P	353m E	Unspecified Shaft	1876	1:10560
N	353m SW	Unspecified Shaft	1876	1:10560
M	367m SE	Unspecified Shaft	1876	1:10560
M	372m S	Unspecified Disused Mine	1958	1:10560
M	384m S	Unspecified Disused Shaft	1876	1:10560
M	385m S	Unspecified Disused Shaft	1979	1:10000
10	402m SW	Unspecified Shaft	1876	1:10560
Q	472m E	Unspecified Disused Shaft	1979	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
Q	472m E	Unspecified Old Shaft	1958	1:10560
Q	475m E	Unspecified Old Shafts	1906	1:10560
D	490m S	Unspecified Old Shaft	1906	1:10560
X	495m NE	Unspecified Shaft	1906	1:10560
X	495m NE	Unspecified Shaft	1876	1:10560
X	496m NE	Unspecified Disused Shafts	1979	1:10000
X	496m NE	Unspecified Shaft	1958	1:10560
U	497m SE	Unspecified Disused Shaft	1979	1:10000
U	497m SE	Unspecified Old Shaft	1958	1:10560
D	498m S	Unspecified Old Shaft	1958	1:10560
U	499m SE	Unspecified Shaft	1876	1:10560
15	500m SW	Unspecified Disused Shaft	1979	1:10000
U	500m SE	Unspecified Old Shaft	1906	1:10560
X	502m NE	Unspecified Disused Shafts	1979	1:10000
V	505m SE	Unspecified Old Shaft	1906	1:10560
V	505m SE	Unspecified Shaft	1876	1:10560
V	506m SE	Unspecified Old Shaft	1958	1:10560
D	539m S	Unspecified Old Shaft	1906	1:10560
D	542m S	Unspecified Shaft	1876	1:10560
D	544m S	Unspecified Old Shaft	1958	1:10560
AC	544m N	Unspecified Shaft	1876	1:10560
AC	548m N	Unspecified Old Shafts	1958	1:10560
Y	553m SE	Unspecified Disused Shaft	1979	1:10000
Y	553m SE	Unspecified Old Shaft	1958	1:10560
AA	562m N	Unspecified Disused Shaft	1979	1:10000
AA	562m N	Unspecified Old Shafts	1958	1:10560
AA	566m N	Unspecified Old Shafts	1906	1:10560
Y	569m SE	Unspecified Old Shaft	1906	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
Y	569m SE	Unspecified Shaft	1876	1:10560
AE	607m N	Unspecified Disused Shafts	1979	1:10000
AE	607m N	Unspecified Old Shafts	1958	1:10560
AE	612m N	Unspecified Old Shafts	1906	1:10560
-	625m S	Unspecified Old Shaft	1906	1:10560
-	625m S	Unspecified Shaft	1876	1:10560
-	628m S	Unspecified Disused Shaft	1979	1:10000
-	628m S	Unspecified Old Shafts	1958	1:10560
AH	631m NE	Unspecified Disused Mine	1958	1:10560
17	635m NE	Tin Mine	1876	1:10560
AG	637m NE	Disused Tin Mine	1906	1:10560
AG	652m NE	Unspecified Shaft	1876	1:10560
AD	669m SW	Unspecified Shaft	1876	1:10560
AI	676m SW	Unspecified Disused Shaft	1979	1:10000
AI	676m SW	Unspecified Old Shaft	1906	1:10560
AI	676m SW	Unspecified Shaft	1876	1:10560
AI	677m SW	Unspecified Old Shaft	1958	1:10560
-	682m N	Unspecified Old Shaft	1958	1:10560
-	686m N	Unspecified Old Shaft	1906	1:10560
-	702m S	Unspecified Old Shafts	1906	1:10560
-	708m S	Unspecified Old Shafts	1958	1:10560
-	711m S	Unspecified Old Shaft	1906	1:10560
-	711m S	Unspecified Shaft	1876	1:10560
-	712m S	Unspecified Old Shaft	1958	1:10560
-	719m N	Unspecified Shaft	1876	1:10560
-	719m N	Unspecified Disused Shaft	1979	1:10000
-	744m N	Tin and Copper Mine	1876	1:10560
-	748m N	Unspecified Disused Mine	1958	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	749m N	Unspecified Disused Shaft	1979	1:10000
-	752m S	Disused Tin Mine	1906	1:10560
AN	752m NE	Disused Tin Mine	1876	1:10560
-	755m E	Unspecified Old Shafts	1958	1:10560
AN	757m NE	Disused Tin Mine	1906	1:10560
-	764m S	Unspecified Shaft	1876	1:10560
-	773m N	Disused Copper and Tin Mine	1906	1:10560
-	776m E	Unspecified Disused Shafts	1979	1:10000
-	782m E	Unspecified Disused Shafts	1979	1:10000
-	782m E	Unspecified Disused Shafts	1979	1:10000
-	783m N	Unspecified Shaft	1876	1:10560
-	783m N	Unspecified Shaft	1876	1:10560
-	785m N	Unspecified Old Shaft	1958	1:10560
-	786m S	Unspecified Shaft	1876	1:10560
-	788m NE	Unspecified Shaft	1876	1:10560
-	789m N	Unspecified Old Shaft	1906	1:10560
-	791m E	Unspecified Disused Shafts	1979	1:10000
-	793m NE	Unspecified Old Shafts	1906	1:10560
-	793m NE	Unspecified Old Shaft	1876	1:10560
AO	794m NE	Unspecified Old Shaft	1906	1:10560
AO	794m NE	Unspecified Shaft	1876	1:10560
AO	797m NE	Unspecified Disused Shafts	1979	1:10000
AO	797m NE	Unspecified Old Shaft	1958	1:10560
-	801m NE	Unspecified Disused Shafts	1979	1:10000
-	829m NE	Unspecified Old Shafts	1958	1:10560
-	830m SW	Unspecified Old Shaft	1906	1:10560
-	834m NE	Unspecified Old Shafts	1906	1:10560
-	835m SW	Unspecified Disused Shaft	1979	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
-	835m SW	Unspecified Old Shaft	1958	1:10560
-	836m NE	Unspecified Disused Shafts	1979	1:10000
-	840m NE	Unspecified Shaft	1876	1:10560
-	841m E	Unspecified Old Shafts	1958	1:10560
-	844m S	Unspecified Shaft	1876	1:10560
-	845m E	Unspecified Old Shafts	1906	1:10560
-	846m N	Unspecified Old Shaft	1958	1:10560
-	851m NE	Unspecified Disused Shafts	1979	1:10000
-	851m N	Unspecified Old Shaft	1906	1:10560
-	861m S	Disused Tin Mine	1876	1:10560
-	871m NE	Unspecified Disused Shafts	1979	1:10000
-	874m E	Unspecified Old Shafts	1958	1:10560
-	876m E	Unspecified Old Shafts	1958	1:10560
-	877m E	Unspecified Disused Shafts	1979	1:10000
-	878m NE	Unspecified Disused Mine	1958	1:10560
-	879m E	Unspecified Old Shafts	1906	1:10560
-	879m E	Unspecified Old Shafts	1906	1:10560
-	881m NE	Unspecified Shaft	1876	1:10560
-	912m S	Unspecified Old Shafts	1958	1:10560
-	921m N	Unspecified Disused Shaft	1979	1:10000
-	939m NE	Unspecified Mine	1958	1:10560
-	949m NE	Unspecified Disused Mine	1979	1:10000
-	951m S	Unspecified Old Shaft	1906	1:10560
-	951m S	Unspecified Shaft	1876	1:10560
-	952m NE	Tin Mine	1906	1:10560
-	953m S	Unspecified Old Shaft	1958	1:10560
-	954m S	Unspecified Old Shafts	1958	1:10560
-	965m E	Unspecified Old Shafts	1958	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	968m E	Unspecified Old Shafts	1958	1:10560
-	969m E	Unspecified Shaft	1876	1:10560
-	970m E	Unspecified Old Shafts	1906	1:10560
-	970m E	Unspecified Shaft	1876	1:10560
-	970m E	Unspecified Disused Shafts	1979	1:10000
-	971m NE	Unspecified Disused Shafts	1979	1:10000
-	971m NE	Unspecified Old Shafts	1958	1:10560
-	972m NE	Unspecified Old Shafts	1906	1:10560
-	972m NE	Unspecified Old Shaft	1876	1:10560
-	973m NE	Unspecified Shaft	1906	1:10560
-	974m E	Unspecified Disused Shafts	1979	1:10000
-	974m E	Unspecified Old Shafts	1906	1:10560
-	974m S	Unspecified Old Shafts	1906	1:10560
-	978m S	Unspecified Old Shafts	1958	1:10560
-	979m S	Unspecified Old Shafts	1906	1:10560
-	979m NE	Unspecified Shaft	1876	1:10560
-	980m NE	Unspecified Disused Shafts	1979	1:10000
-	980m NE	Unspecified Old Shafts	1958	1:10560
-	983m NE	Unspecified Disused Shafts	1979	1:10000
-	983m NE	Unspecified Shaft	1958	1:10560
-	984m NE	Unspecified Old Shafts	1906	1:10560
-	984m NE	Unspecified Shaft	1876	1:10560

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

3

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 100](#) >

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
M	334m S	Parknoweth	Tin	Surface mineral working	Valid	4/3/1981
M	345m SE	Parknoweth	Tin	Surface mineral working	Valid	4/3/1981
M	402m SE	Parknoweth	Tin	Surface mineral working	Valid	4/3/1981

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

11

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 100](#) >

ID	Location	Name	Commodity	Class	Likelihood
D	On site	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.
H	93m SW	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.
4	230m W	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.



ID	Location	Name	Commodity	Class	Likelihood
9	396m N	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.
T	441m NW	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.
13	477m SW	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.
16	596m N	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.
18	744m SW	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.
-	868m S	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.
-	992m SW	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.
-	994m E	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.

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

31

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	Tin
On site	Copper
On site	Copper
On site	Copper
On site	Copper
On site	Copper
On site	Copper
29m SE	Copper



Location	Mineral
39m S	Copper
101m W	Copper
171m NW	Copper
191m S	Tin
195m S	Tin
278m NE	Copper
302m NE	Copper
312m SE	Tin
331m SW	Tin
346m SE	Copper
353m N	Copper
364m N	Copper
374m SW	Tin
406m NE	Copper
428m NE	Copper
432m NE	Tin
435m N	Tin
437m NE	Tin
439m NE	Tin
445m NW	Copper
448m NE	Tin
448m N	Copper
478m SE	Copper

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	Copper

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

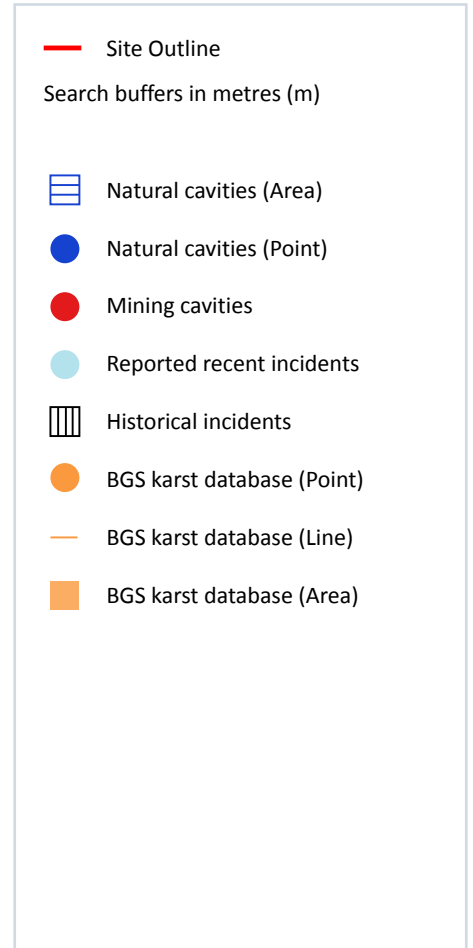
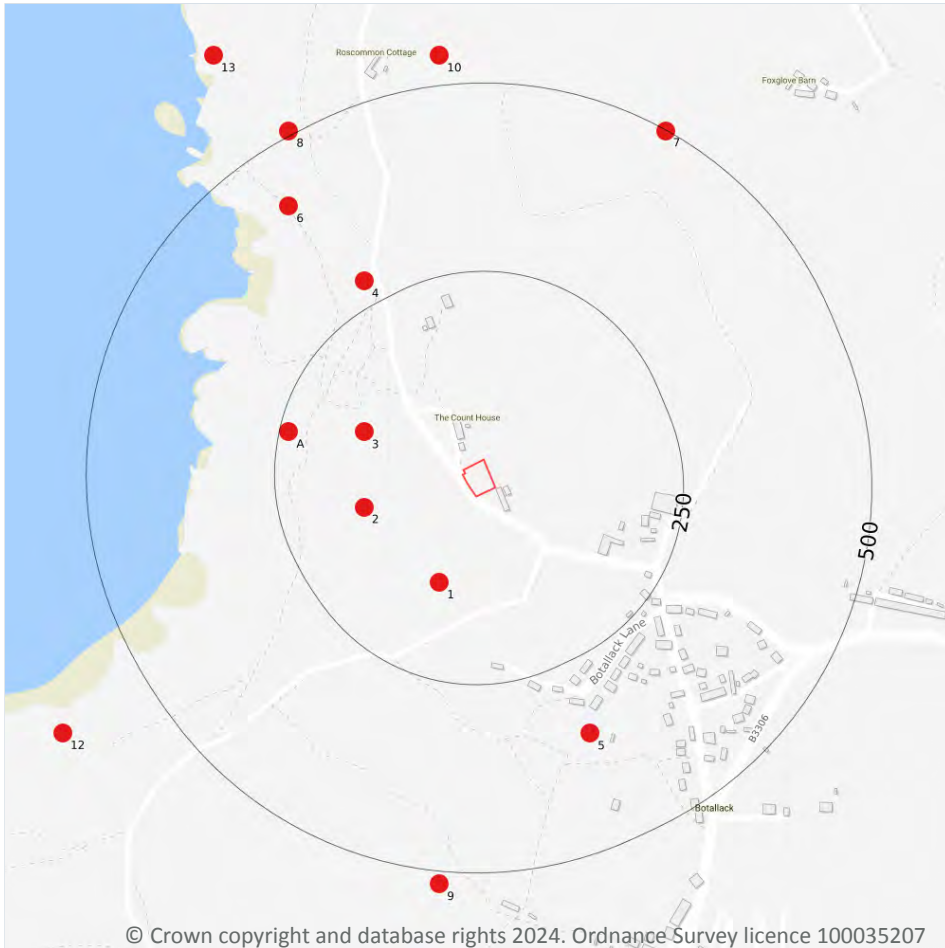
Records on site	1
-----------------	---

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

Location	Details
On site	For further information regarding Clay Mining Groundsure recommends obtaining a Clay Mining report. This can be ordered at http://www.kabca.org/ or by writing to Kaolin and Ball Clay Association, Tehidy Centre, Burn Gallow Lane, High Street, St Austell, Cornwall, PL26 7TQ. Tel: 01726 811311

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

26

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 117](#) >

ID	Location	Mine Address	Mineral	Data source	Publisher
1	124m S	Botallack Mines Ltd., Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
2	138m W	Botallack, Botallack, Cornwall	-	'Mining Sites in Cornwall and South West Devon	Dyllansow Turan
3	141m W	Bal(ball), Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
A	237m W	Cargodna, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
A	237m W	West Wheal Owles, Botallack, Cornwall	Cassiterite, Tin, Tinstone	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
4	283m NW	Grylls Bunny, Botallack, Cornwall	Cassiterite, Tin, Tinstone	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
5	349m SE	Parknoweth, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
6	420m NW	Crowns Mine, Botallack, Cornwall	-	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
7	499m NE	Nineveh, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
8	507m NW	Boscawen Diagonal Shaft, Botallack, Cornwall	Unknown	-	-
9	517m S	Truthwall, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
10	540m N	Hen, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	617m S	Wheal Owles, Botallack, Cornwall	Cassiterite, Tin, Tinstone	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER



ID	Location	Mine Address	Mineral	Data source	Publisher
12	631m SW	Wheal Edward, Botallack, Cornwall	Cassiterite, Tin, Tinstone	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
13	643m NW	Button, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	683m E	Carnyforth, Carnyorth, Cornwall	Cassiterite, Tin, Tinstone	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	687m N	Wheal Cock, Botallack, Cornwall	-	'Mining Sites in Cornwall and South West Devon	Dyllansow Turan
-	716m S	Drea, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	739m N	Tolvan, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	761m SW	Yankee Boy Mine, Botallack, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	775m N	Spearne Moor, Botallack, Cornwall	Cassiterite, Tin, Tinstone	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	776m E	Hazard, Carnyorth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	836m NE	Spearne Consols, Botallack, Cornwall	Cassiterite, Tin, Tinstone	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	852m S	Boscean, lower, St Just, Cornwall	Cassiterite, Tin, Tinstone	'Mining Sites in Cornwall and South West Devon	Dyllansow Turan
-	916m S	Drea Tregaseal, Botallack, Cornwall	Cassiterite, Tin, Tinstone	PLANNING PERMISSION APPLICATIONS (MINERALS)	DOE
-	948m S	Boys, St Just, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.

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.

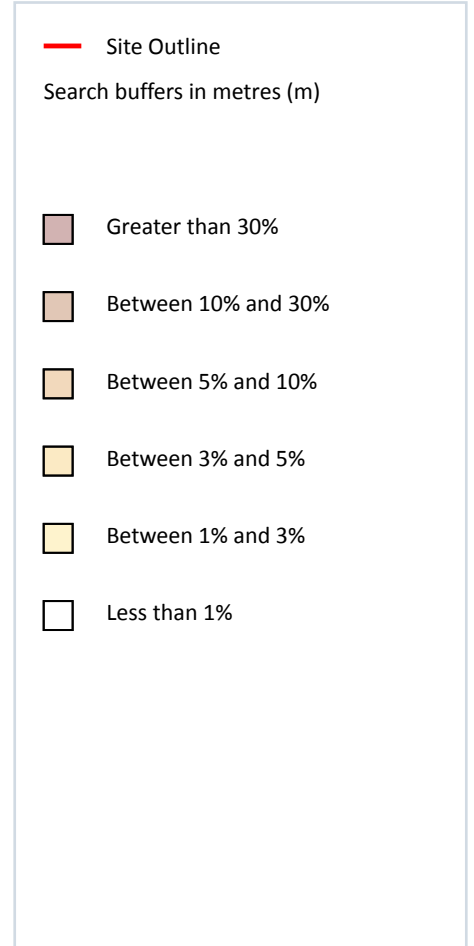
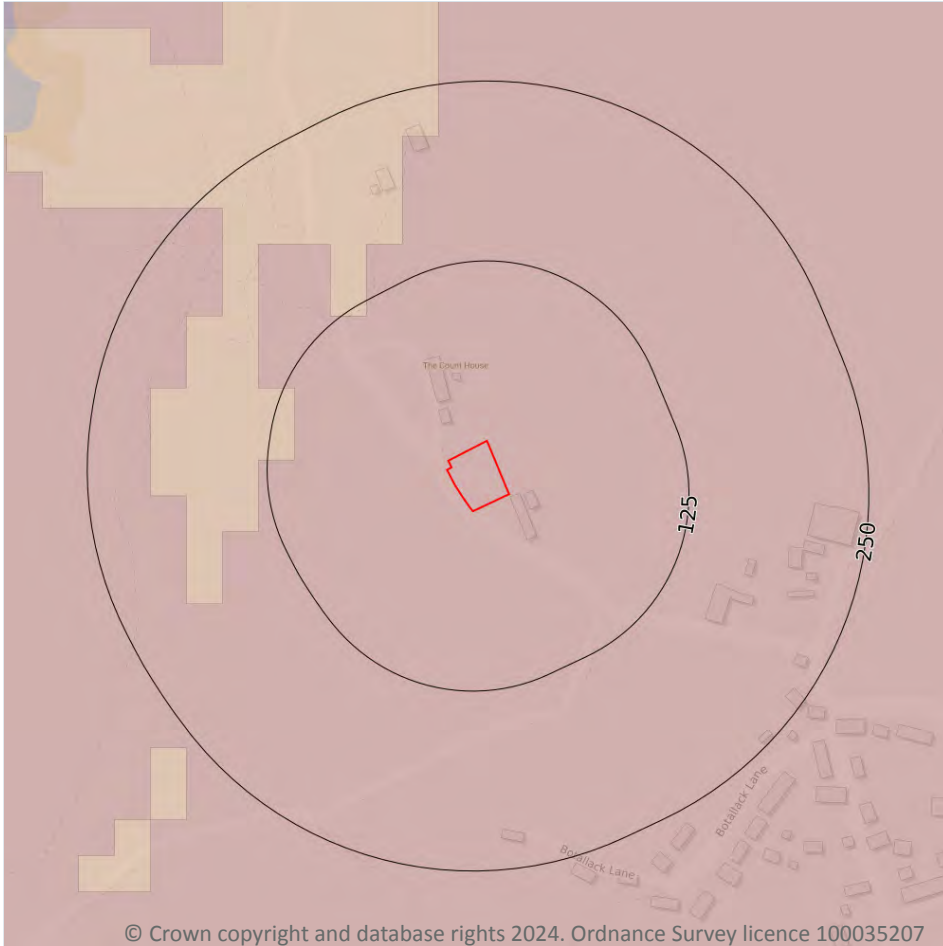
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over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



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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 121](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Greater than 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	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
31m W	35 - 45 mg/kg	5 - 7 mg/kg	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 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

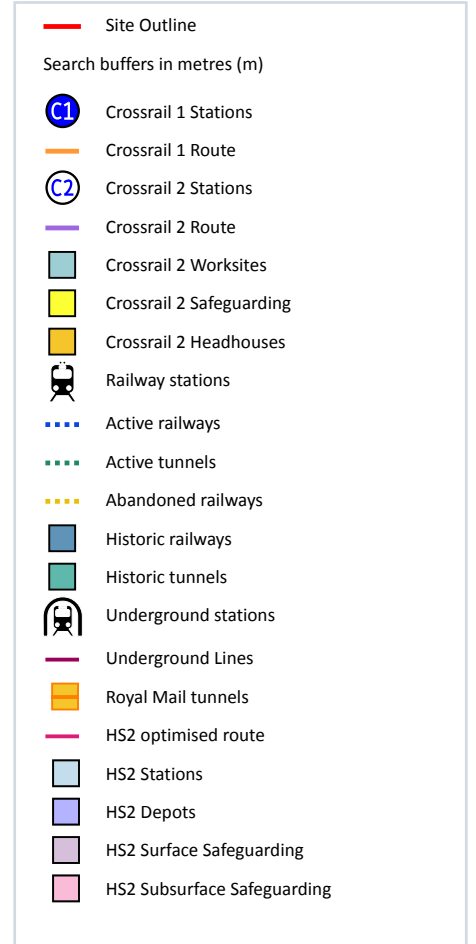
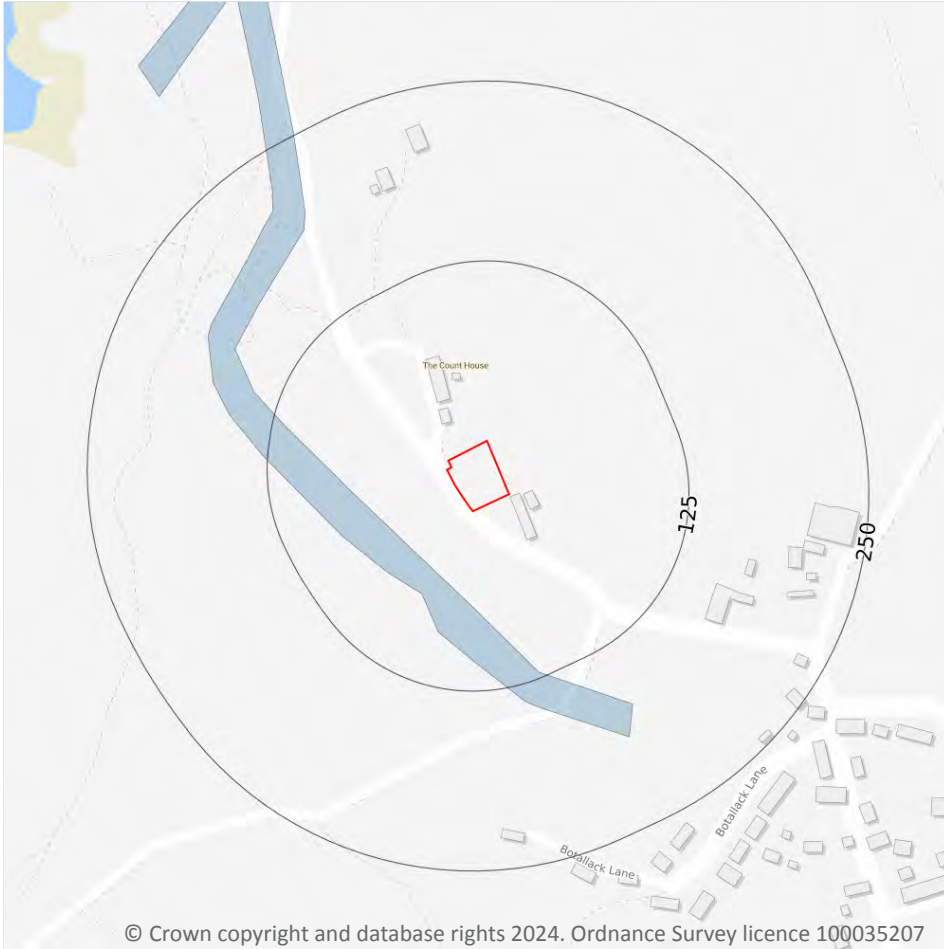
0

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

1

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.

Features are displayed on the Railway infrastructure and projects map on [page 124 >](#)

Location	Land Use	Year of mapping	Mapping scale
48m SW	Railway Sidings	1876	10560

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



You are here: [Home](#) > > > Historic England research records Result

Start new search
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Cookies

Historic England research records



Historic England Research Records

Botallack Calciner

Hob Uid: 1456745

Location :

Cornwall
St. Just

Grid Ref : SW3638033280

Summary : A Brunton calciner situated to the southwest of Allen's Shaft at Botallack Mine. It was constructed in 1906 and in operation until closure of the mine in 1914. The calciner was used to extract arsenic from mined ores by controlled heating. By heating the ore under oxidising conditions the arsenic content could be sublimed off as a vapour, which cooled and condensed to form a white 'soot' or powder. The refined arsenic had a variety of uses such as: metal alloy, clarifying glass, medicinal purposes and to create pigment in paint. A Brunton calciner included a circular hearth that was slowly rotated by steam or water power. Surveys of the site conducted between 1992 and 1994 found the site well-preserved, comprising a calciner, labyrinth and stack. All its machinery had been stripped out following closure of the mine. The labyrinth is thought to be the best surviving example of its type in Britain. It is U-shaped on plan, with 15 interconnecting chambers on each side which comprise ten chambers aligned northeast-southwest and five northwest-southeast. The two halves of the labyrinth are connected by a flue running through a concrete bridge over the main entrance to the yard inside.

More information : Botallack Calciner was a 19th century Brunton Calciner located at Botallack Mine. It was used to extract arsenic from copper ore. The Botallack Mine dates from around the late 16th century but later included several outlying smaller mines. It produced copper, tin and arsenic. It closed in 1895 but was reworked between 1906 and 1914. [1]

Calciners were structures used to extract arsenic from mined ores by controlled heating. By heating the ore under oxidising conditions the arsenic content could be sublimed off as a vapour, which cooled and condensed to form a white 'soot' or powder. The refined arsenic had a variety of uses such as: metal alloy, clarifying glass, medicinal purposes and to create pigment in paint. A Brunton Calciner included a circular hearth that was slowly rotated by steam or water power. [2]

In 1994, the Botallack Calciner was well-preserved and included a furnace, a long flue, the chambers, and a further massive and long flue to a chimney stack. There was also a machine bed, the base where a machine (often an engine and therefore called the engine bed) was mounted to power the process. There were some signs of crumbling and the power vault of the calciner had been modified by conversion to a 'summer house'. It probably dates to about 1860. [1-3]

The calciner is located at SW 36383328 and has the labyrinth centred at SW 36403322 and stack at SW 36373324, it was constructed in 1906. A field survey by Cornwall Archaeological Unit in 1992 found the stonework of the structure well-preserved, even though the machinery was been stripped out following closure of the mine. The labyrinth is thought to be the best surviving example of its type in Britain. It is U-shaped on plan, with 15 interconnecting chambers on each side which comprise ten chambers aligned northeast-southwest and five northwest-southeast. The two halves of the labyrinth are connected by a flue running through a concrete bridge over the main entrance to the yard inside. (4-6)

Sources :

Source Number : 1

Source :

Source details : Cranstone, D and Hedley, I. 1995: The Arsenic Industry, Cornwall, Site Assessment Number 3

Page(s) :

Figs. :

Plates :

Vol(s) : 3

Source Number : 2

Source :

Source details : Cranstone, for the Monuments Protection Programme 1993: The Arsenic Industry.

Page(s) : 13-14

Figs. :
Plates :
Vol(s) :
Source Number : 3
Source :
Source details : 1:2500, 2007
Page(s) :

Figs. :
Plates :
Vol(s) :

Source Number : 4
Source :
Source details : [Accessed 06-MAR-2008]
Page(s) :
Figs. :
Plates :
Vol(s) :

Source Number : 5
Source :
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Page(s) :
Figs. :
Plates :
Vol(s) :

Source Number : 6
Source :
Source details :
Page(s) : 112-113
Figs. :
Plates :
Vol(s) : 2

Monument Types:

Monument Period Name : Early 20th Century
Display Date : Built in 1906
Monument End Date : 1906
Monument Start Date : 1906
Monument Type : Brunton Calciner, Chimney, Flue, Furnace, Condensing Flue, Machine Bed, Condenser
Evidence : Extant Building, Structure

Components and Objects:

Related Records from other datasets:

External Cross Reference Source : Scheduled Monument Legacy (County No.)
External Cross Reference Number : CO739
External Cross Reference Notes :
External Cross Reference Source : ViewFinder
External Cross Reference Number : AA98/10383
External Cross Reference Notes :
External Cross Reference Source : ViewFinder
External Cross Reference Number : OP01069
External Cross Reference Notes :
External Cross Reference Source : ViewFinder
External Cross Reference Number : AA98/10384
External Cross Reference Notes :
External Cross Reference Source : National Monuments Record Number
External Cross Reference Number : SW 33 SE 157
External Cross Reference Notes :

Related Warden Records :

Associated Monuments :
Relationship type : General association

Related Activities :

Associated Activities :
Activity type : MANAGEMENT SURVEY
Start Date : 2013-01-01
End Date : 2014-12-31

▼ Appendix C Historical Maps

Plan may be provided by a third party

Site Details:

BOTALLACK VEAN, ACCESS TO ROSCOMMON COTTAGE AND FARMHOUSE, BOTALLACK, ST JUST, CORNWALL, TR19 7QQ

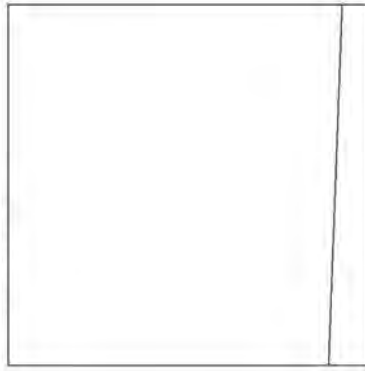
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Grid Ref: 136552, 33138

Map Name: County Series

Map date: 1878-1880

Scale: 1:2,500

Printed at: 1:2,500

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

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

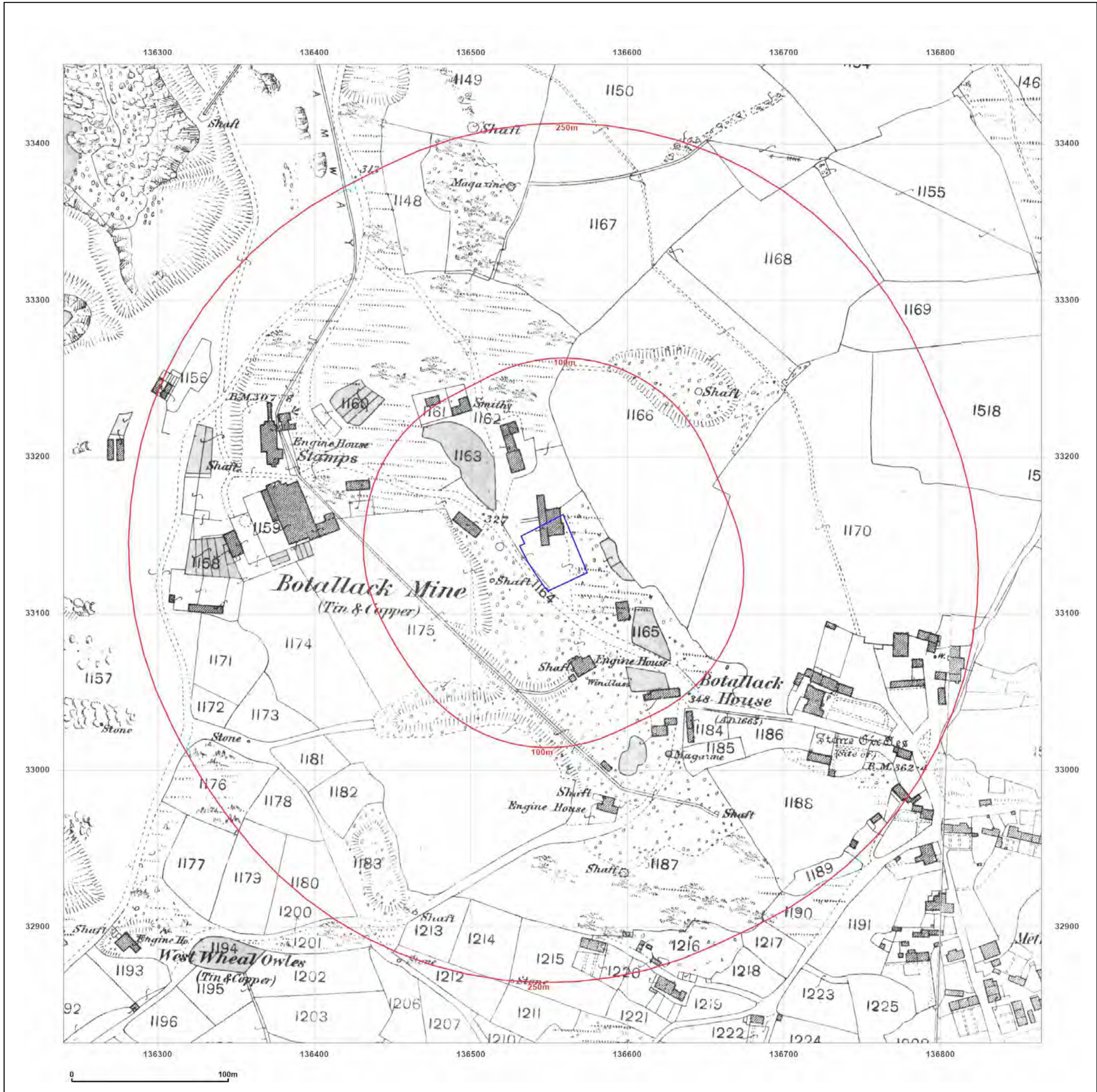


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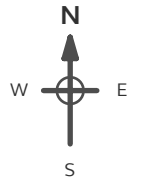
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Grid Ref: 136552, 33138

Map Name: County Series
Map date: 1908
Scale: 1:2,500
Printed at: 1:2,500



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

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

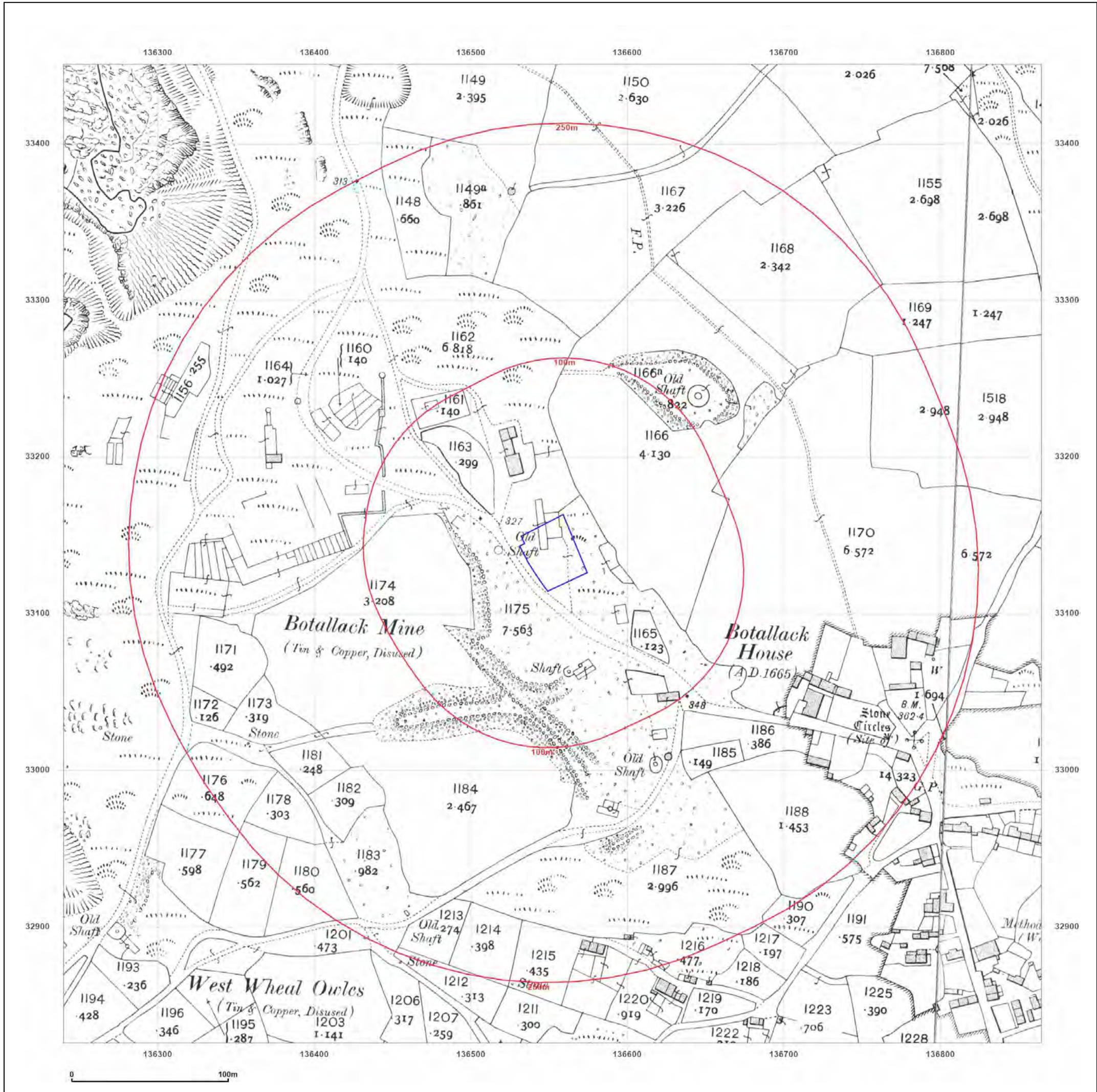
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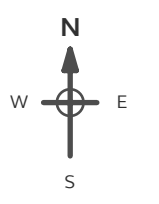


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Grid Ref: 136552, 33138

Map Name: National Grid
Map date: 1976
Scale: 1:2,500
Printed at: 1:2,500



Surveyed 1976
Revised 1976
Edition N/A
Copyright 1978
Levelled 1972

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

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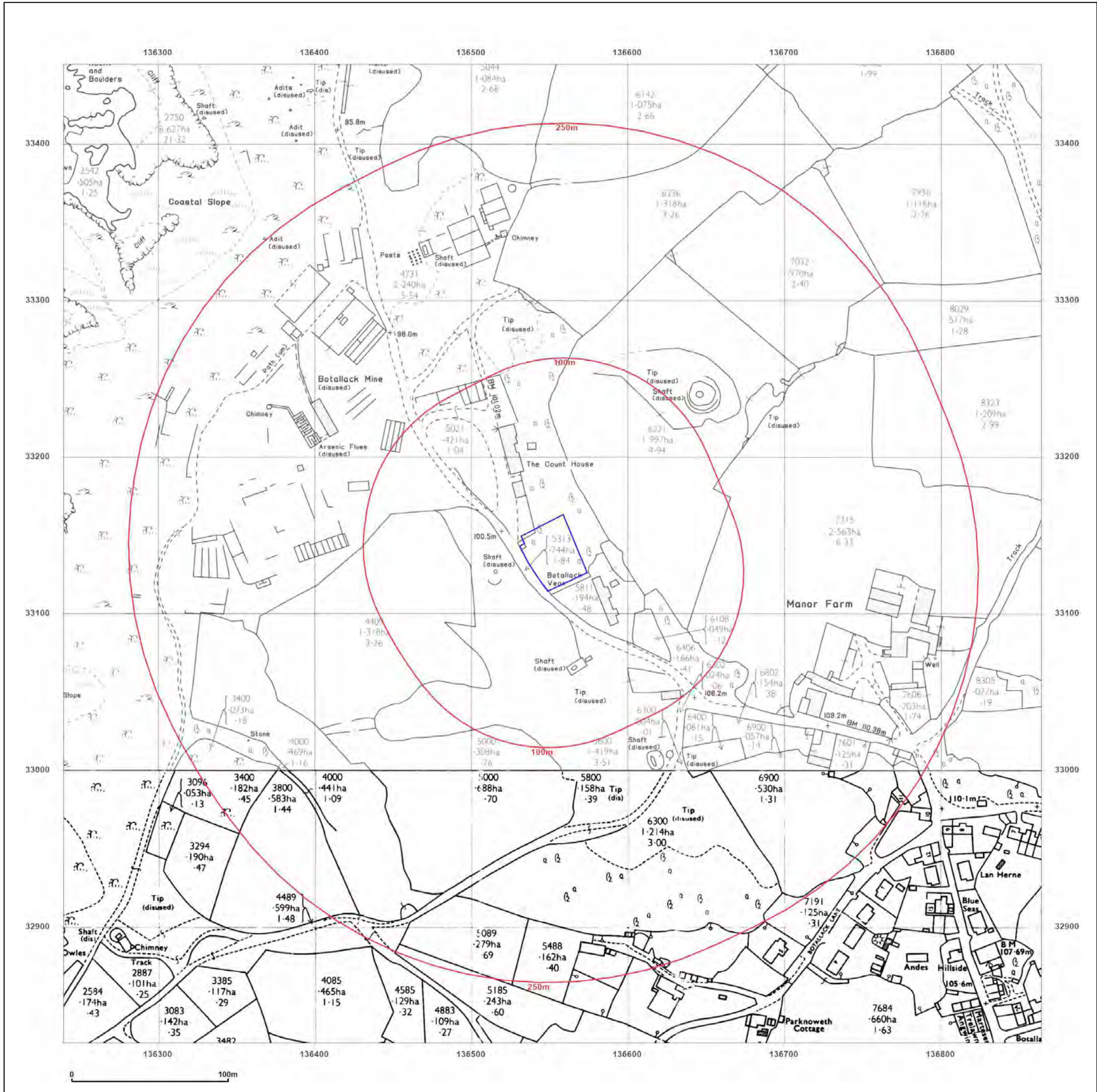


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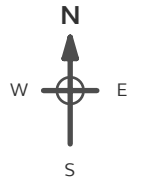


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Map date: 1975-1978
Scale: 1:2,500
Printed at: 1:2,500



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

Surveyed 1975
 Revised 1975
 Edition N/A
 Copyright 1976
 Levelled 1972

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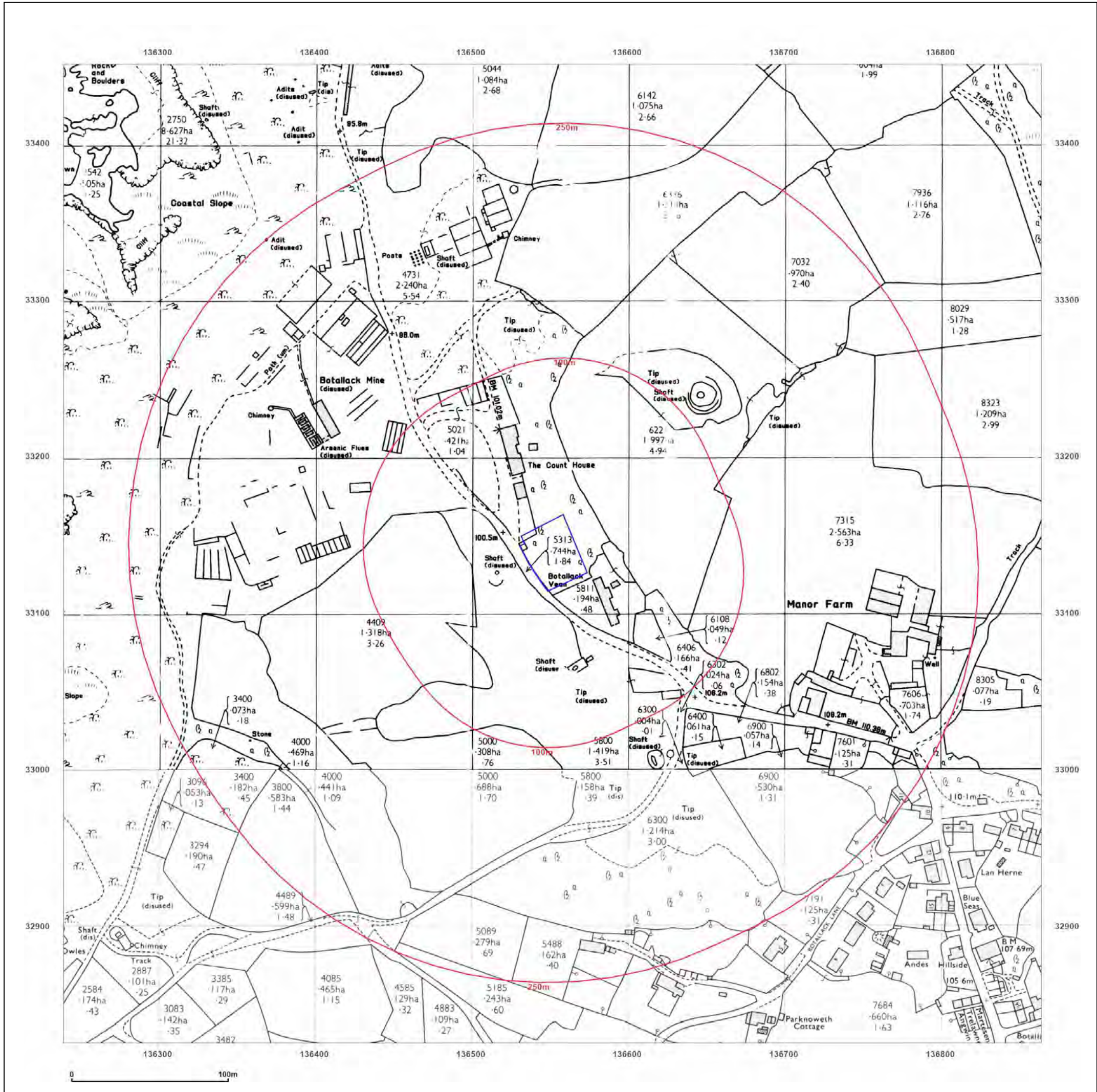


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Grid Ref: 136552, 33138

Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



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

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

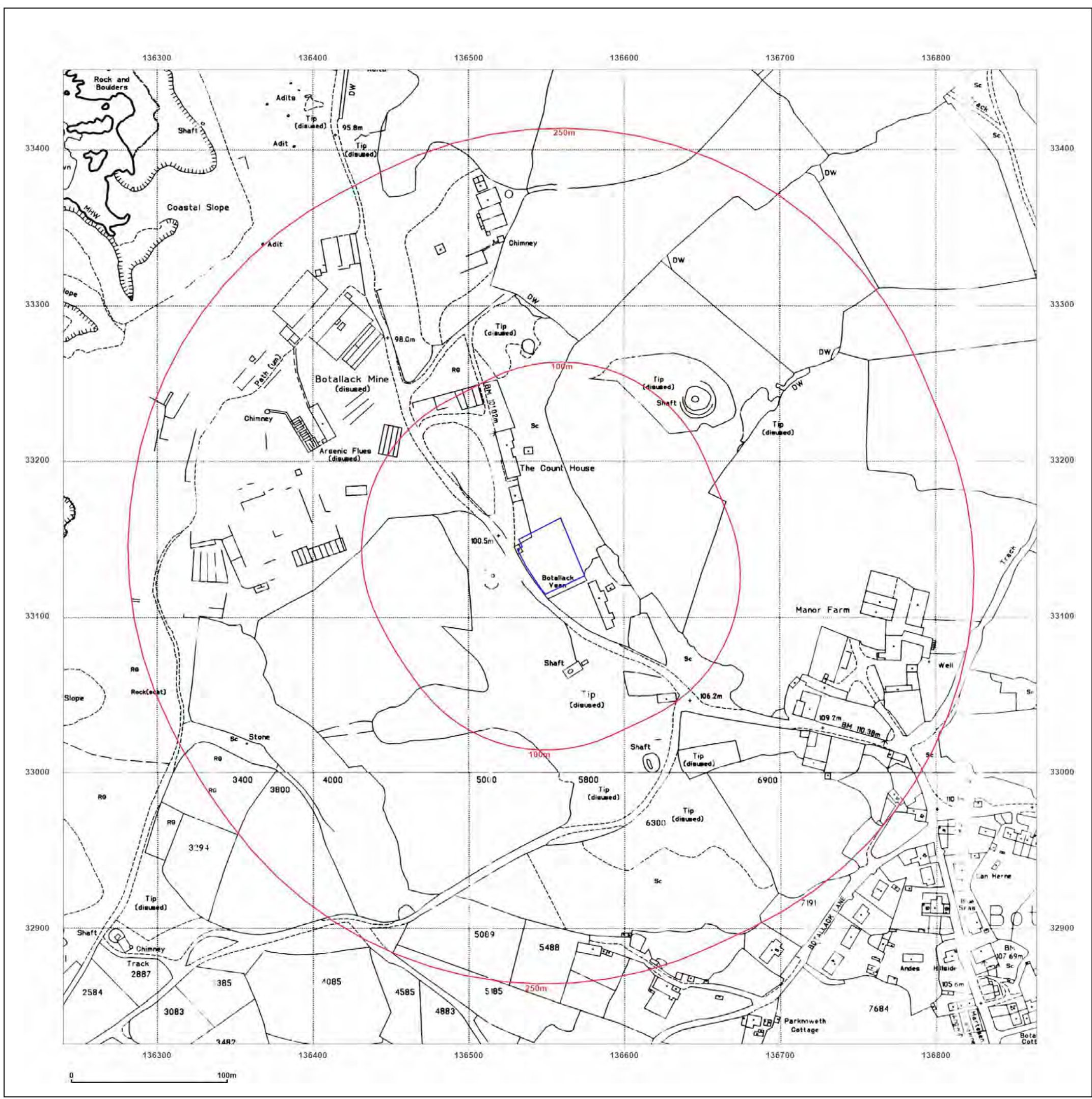


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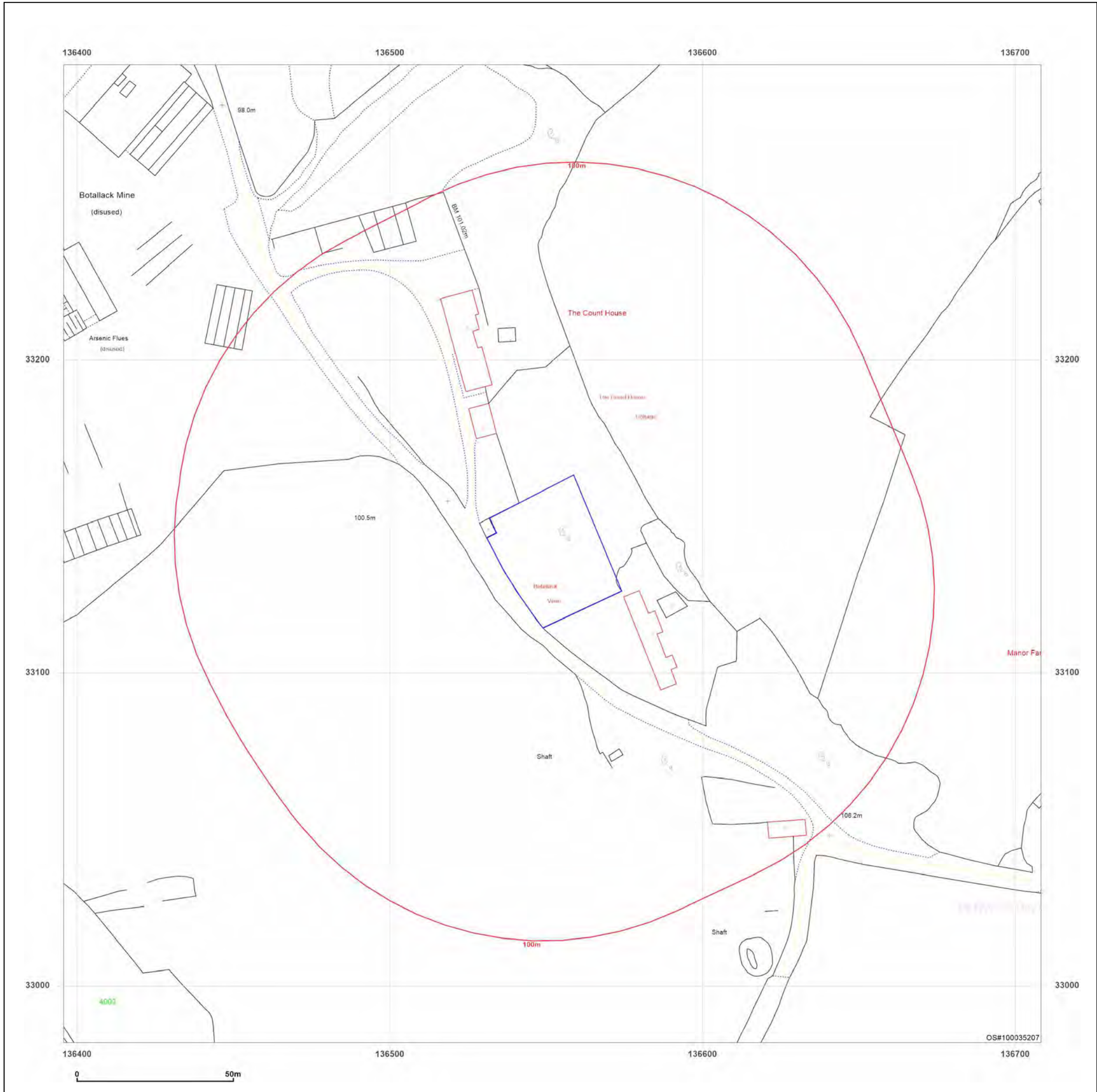
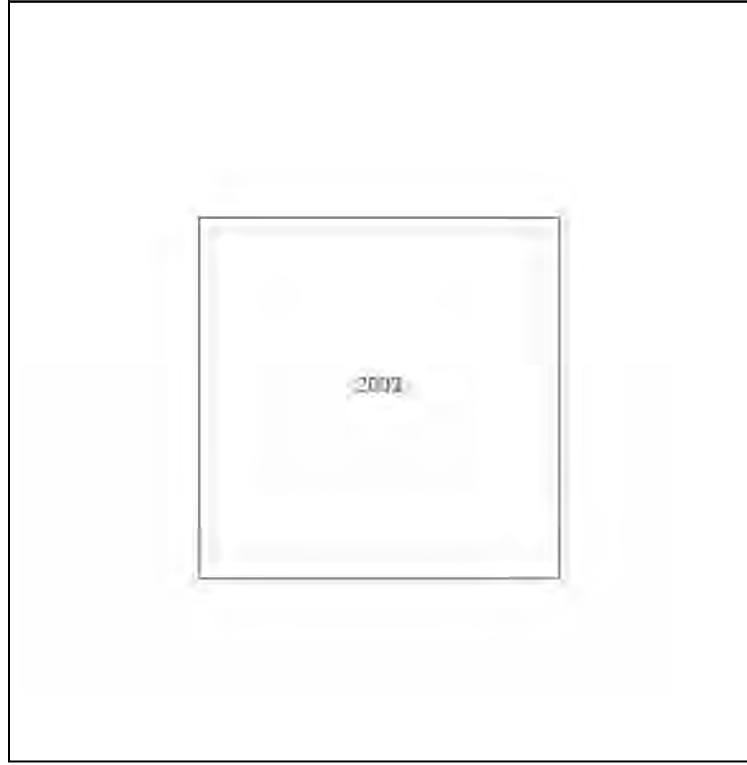
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Grid Ref: 136552, 33138

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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JUST, CORNWALL, TR19 7QQ

Client Ref: 24659
Report Ref: GS-6Z6-G7S-9OR-V94
Grid Ref: 136552, 33138

Map Name: County Series

Map date: 1883-1888

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1876
Revised N/A
Edition 1883
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Levelled N/A

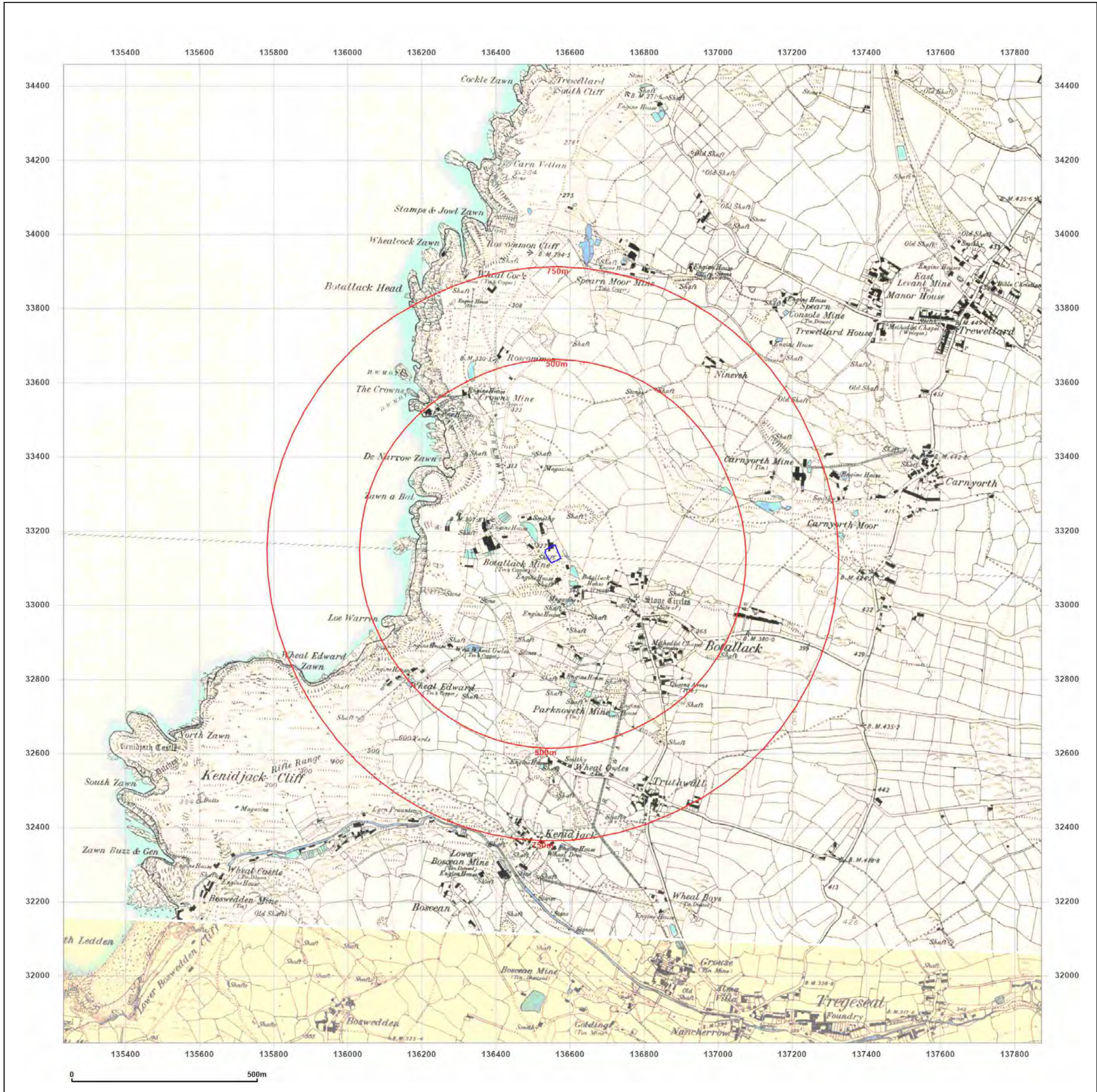


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JUST, CORNWALL, TR19 7QQ

Client Ref: 24659
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Grid Ref: 136552, 33138

Map Name: County Series

Map date: 1906

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1906
Edition N/A
Copyright N/A
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Surveyed 1875
Revised 1906
Edition N/A
Copyright N/A
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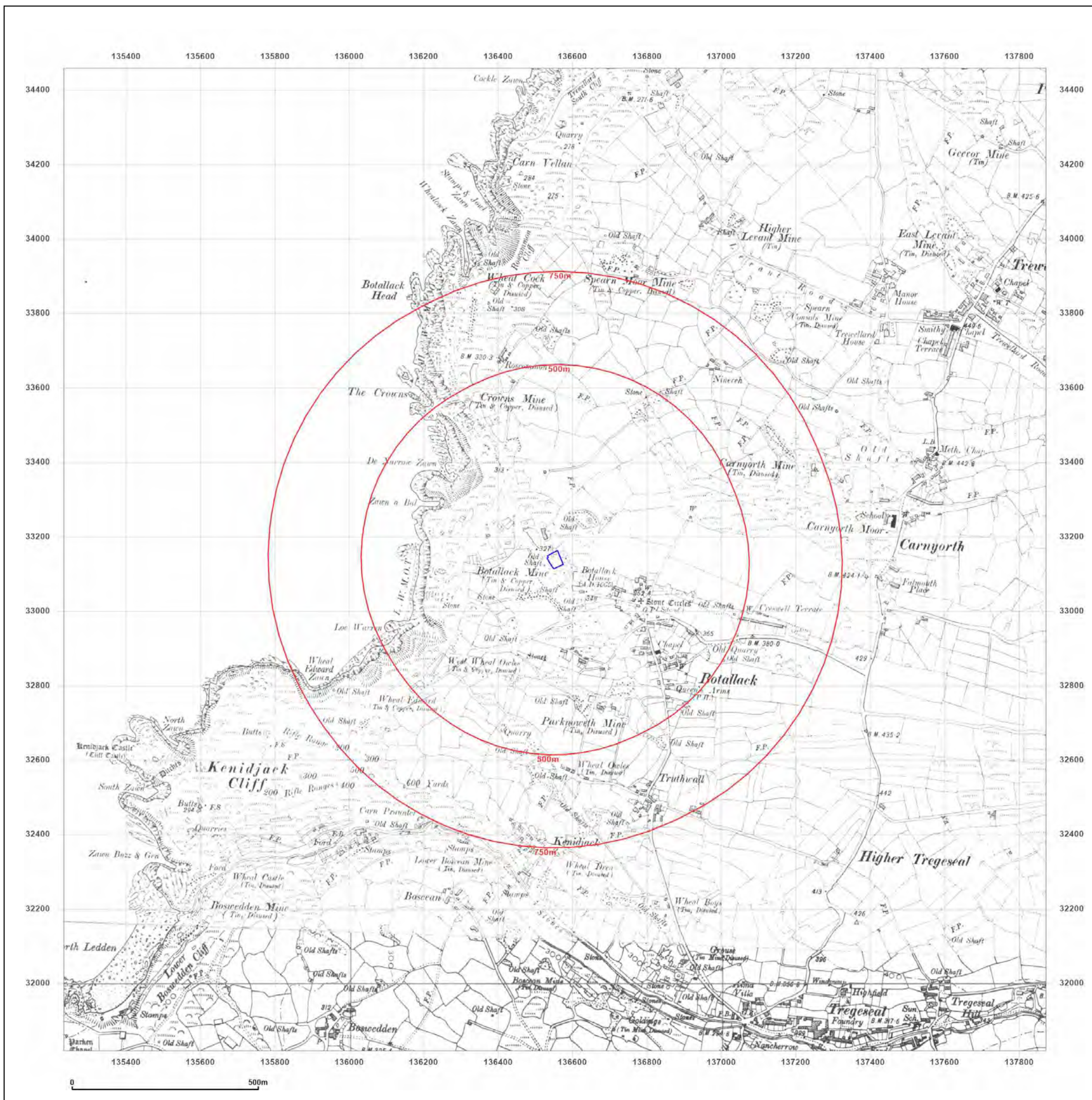


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JUST, CORNWALL, TR19 7QQ

Client Ref: 24659
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Grid Ref: 136552, 33138

Map Name: County Series

Map date: 1906-1907

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

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

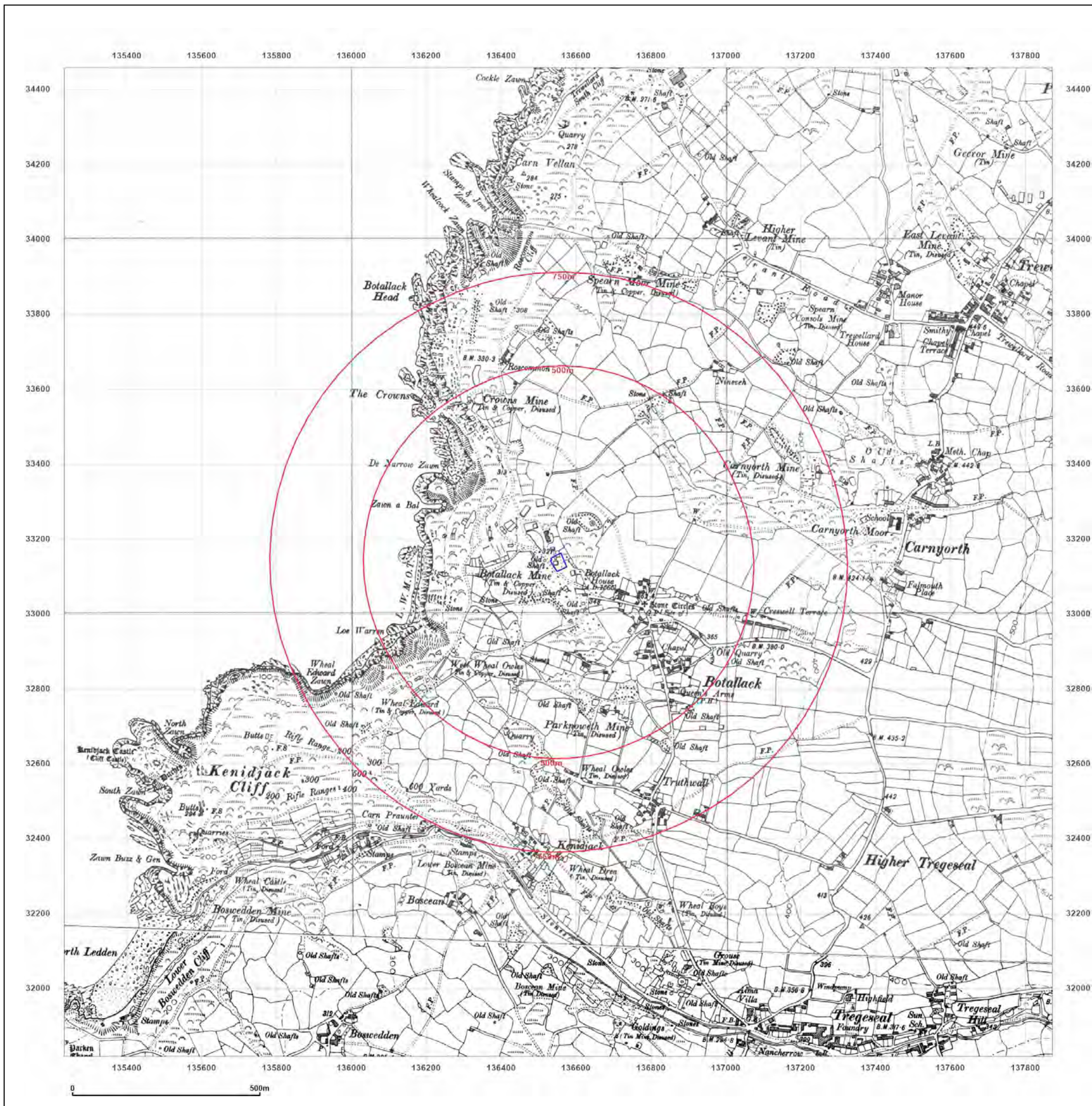


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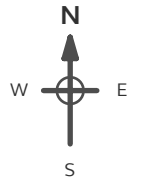


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Grid Ref: 136552, 33138

Map Name: County Series
Map date: 1938
Scale: 1:10,560
Printed at: 1:10,560



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

Surveyed N/A
 Revised N/A
 Edition N/A
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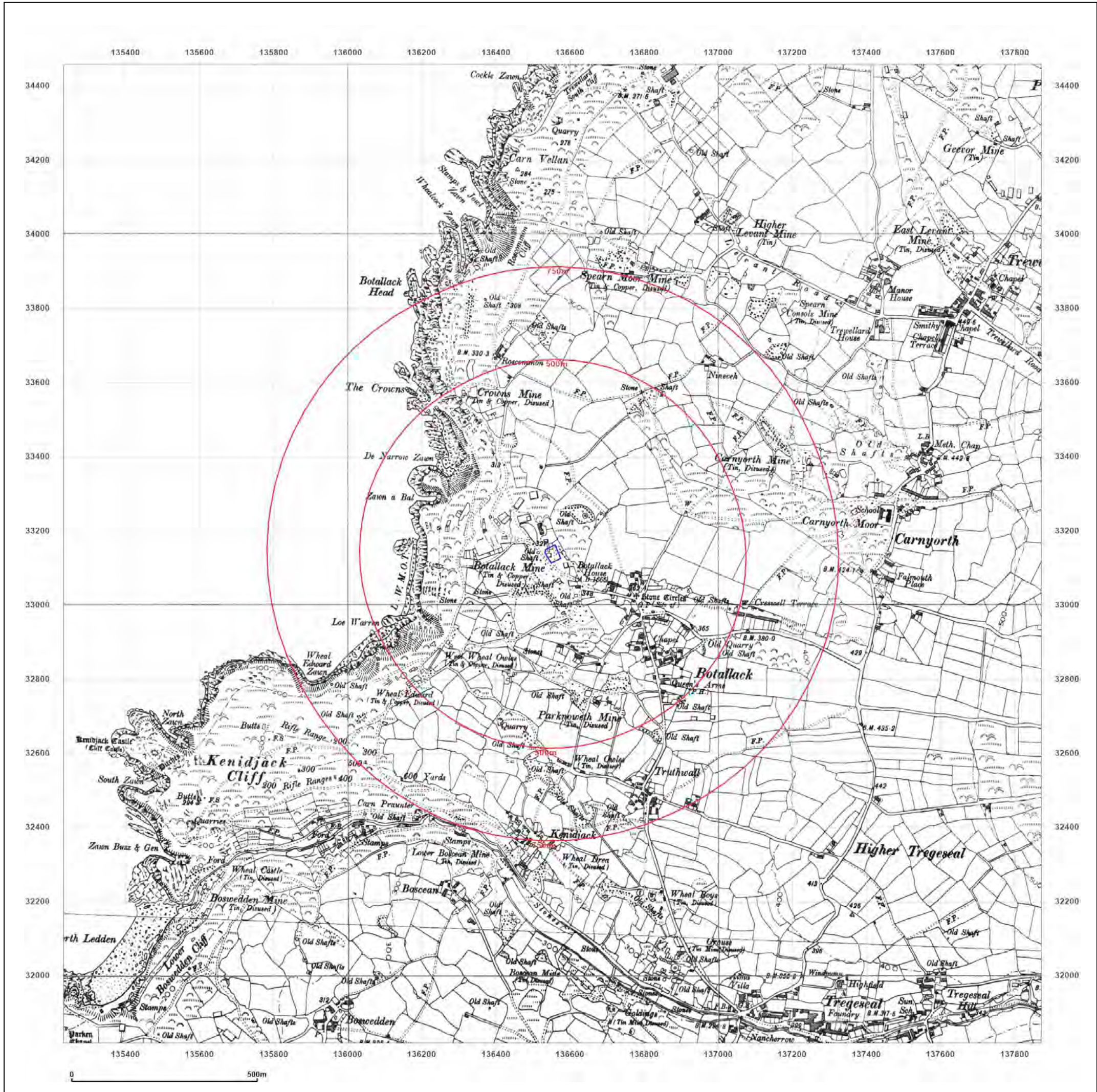


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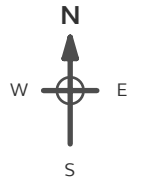


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Client Ref: 24659
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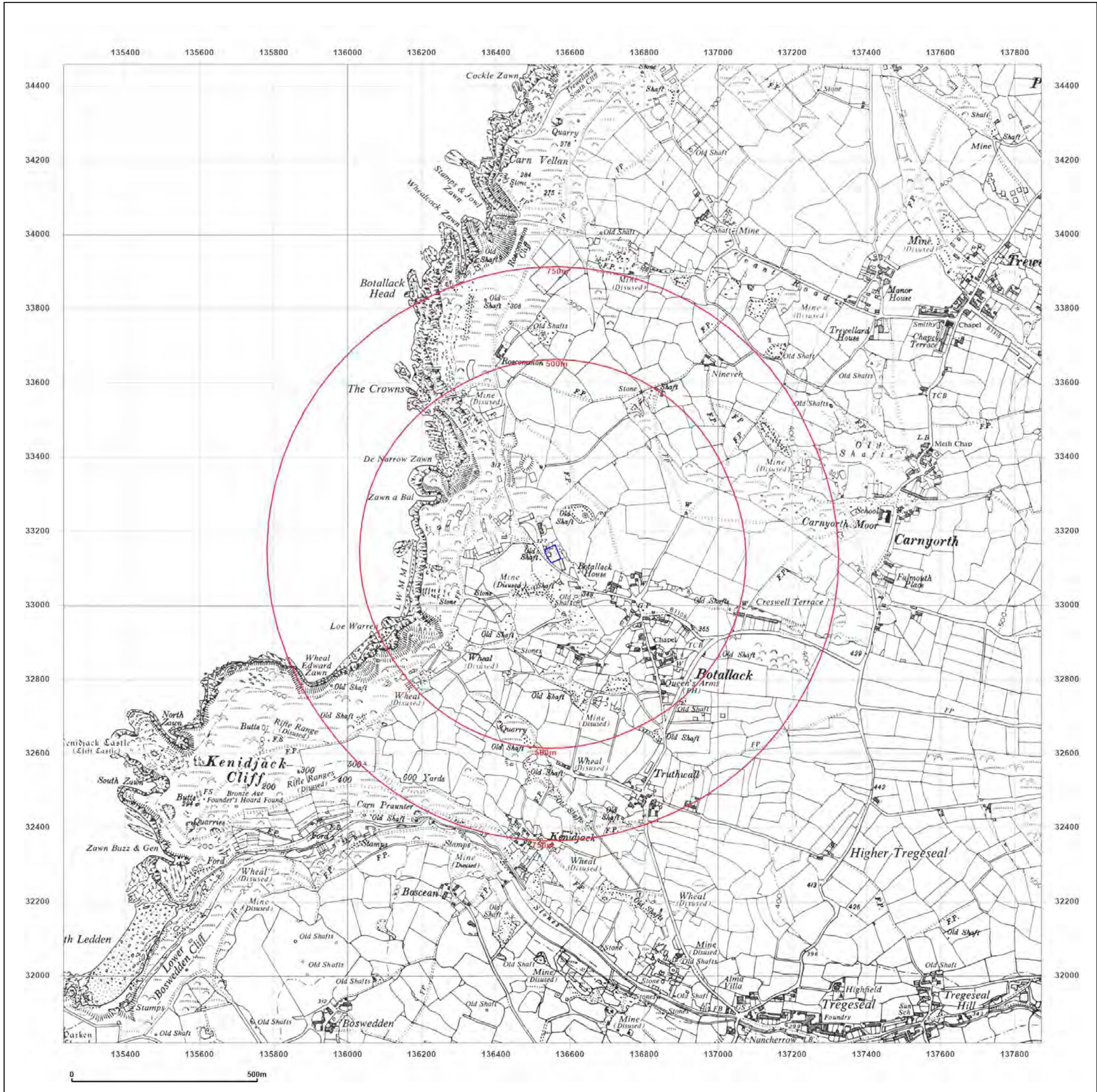
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 Revised 1958
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Client Ref: 24659
Report Ref: GS-6Z6-G7S-9OR-V94
Grid Ref: 136552, 33138

Map Name: National Grid

Map date: 1981

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Printed at: 1:10,000



Surveyed 1976
Revised 1981
Edition N/A
Copyright 1981
Levelled N/A

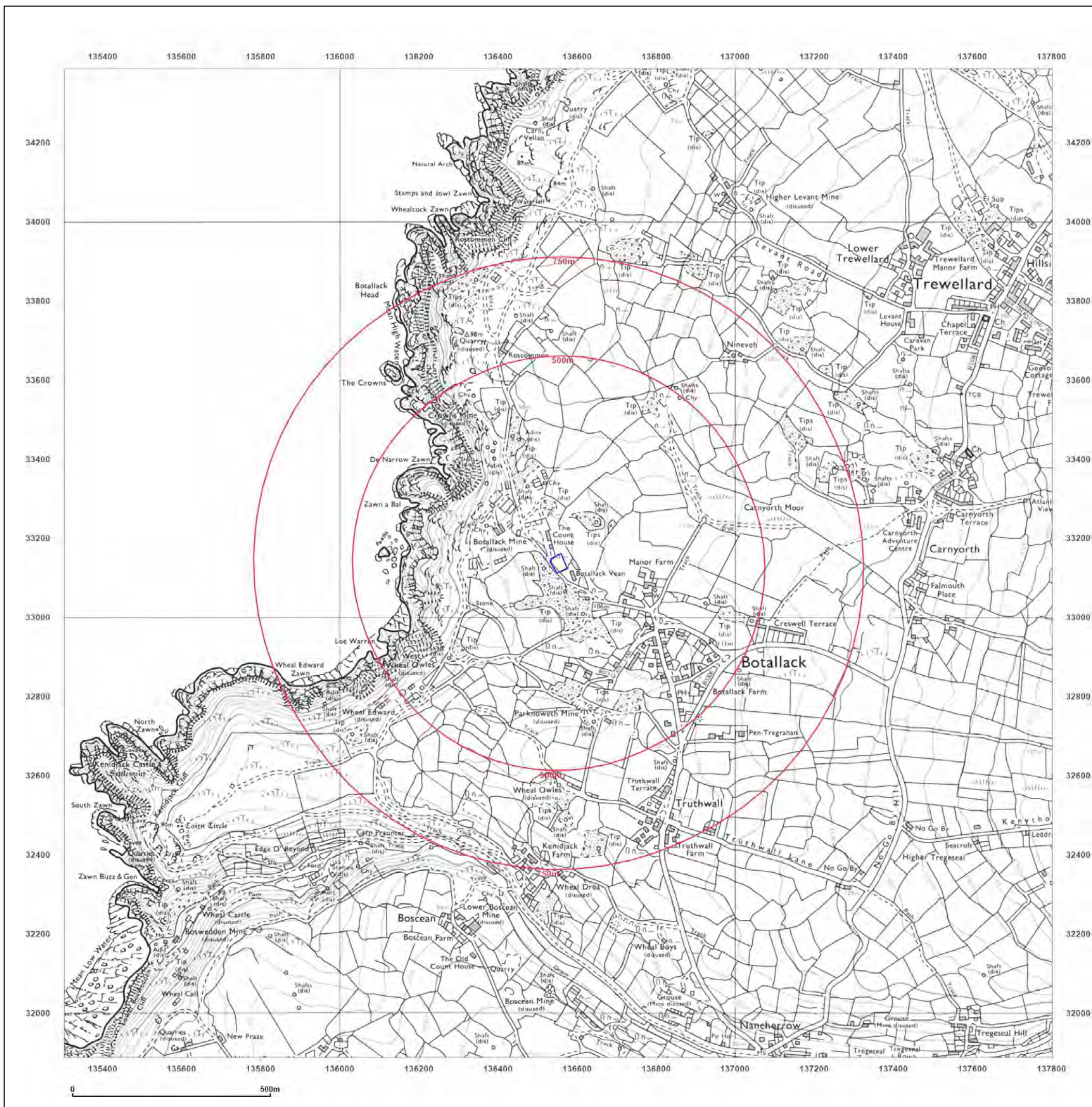


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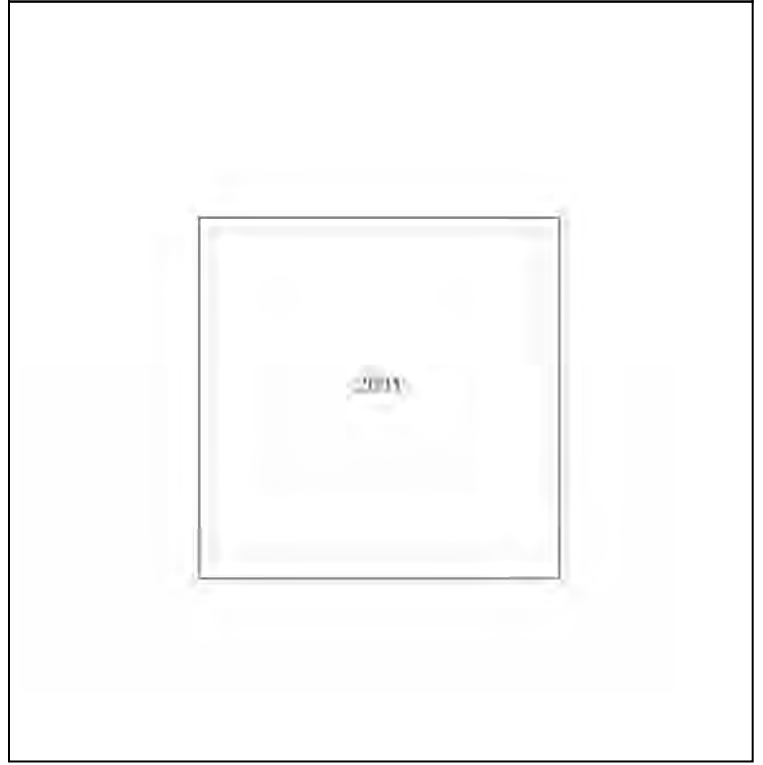
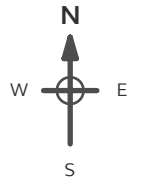
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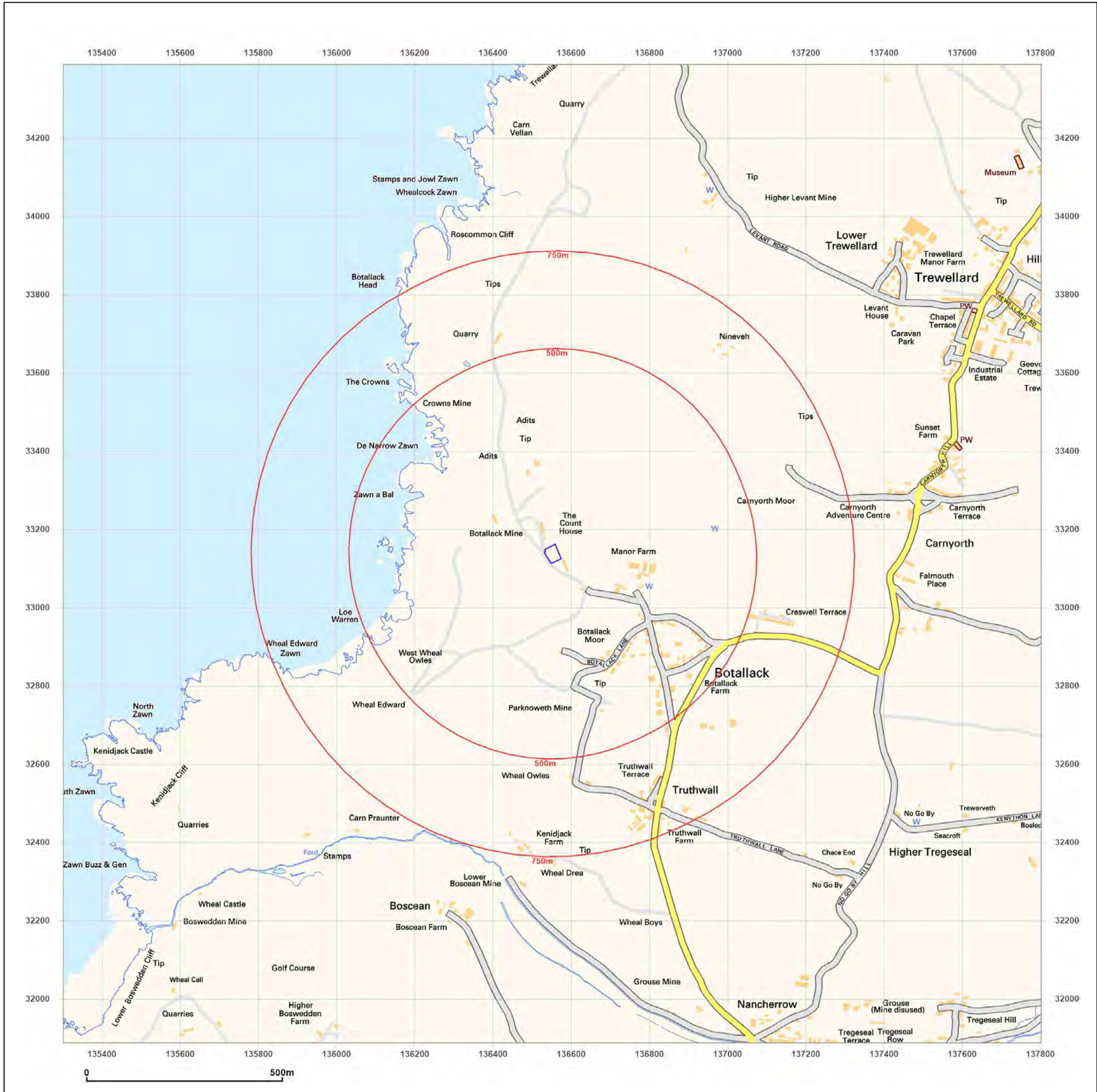


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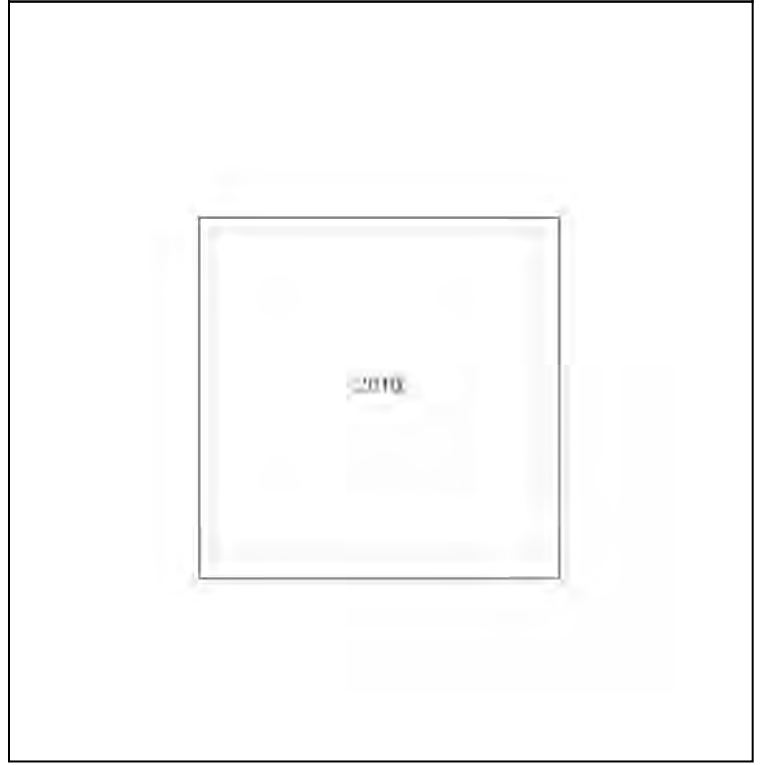
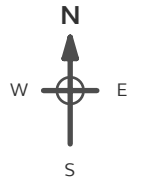
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Site Details:
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Client Ref: 24659
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Grid Ref: 136552, 33138

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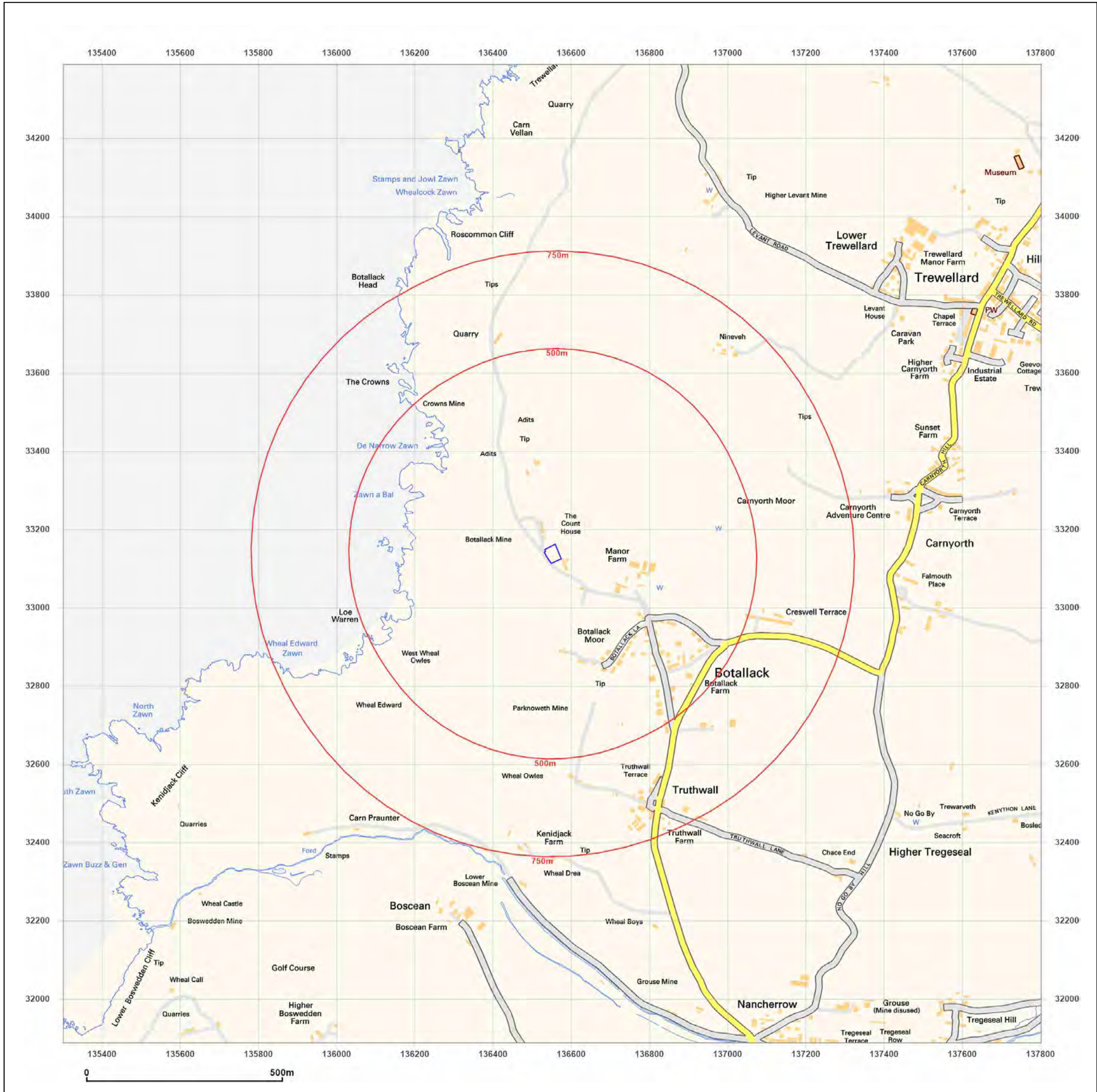


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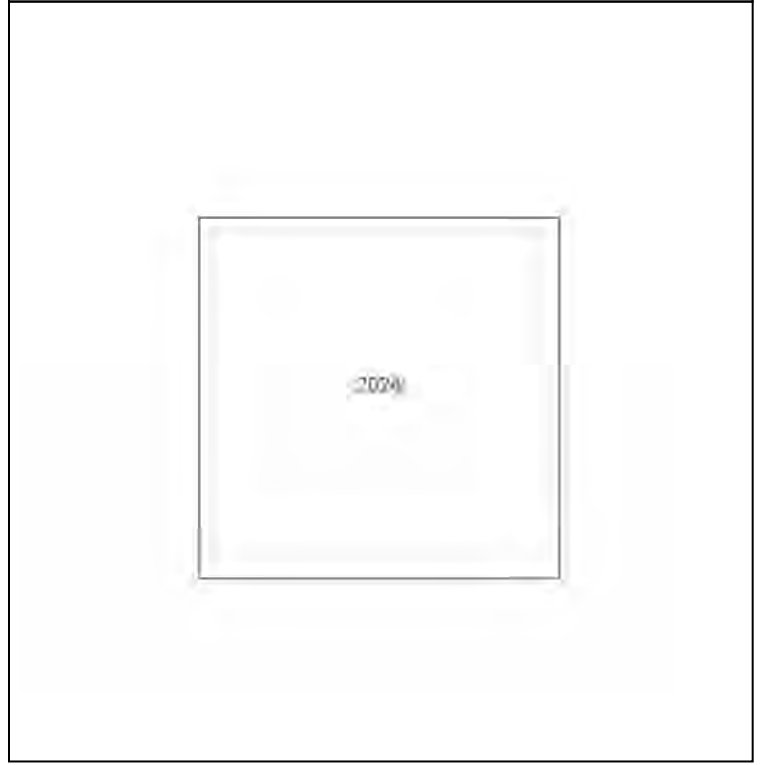
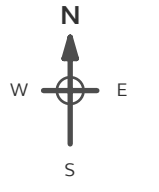
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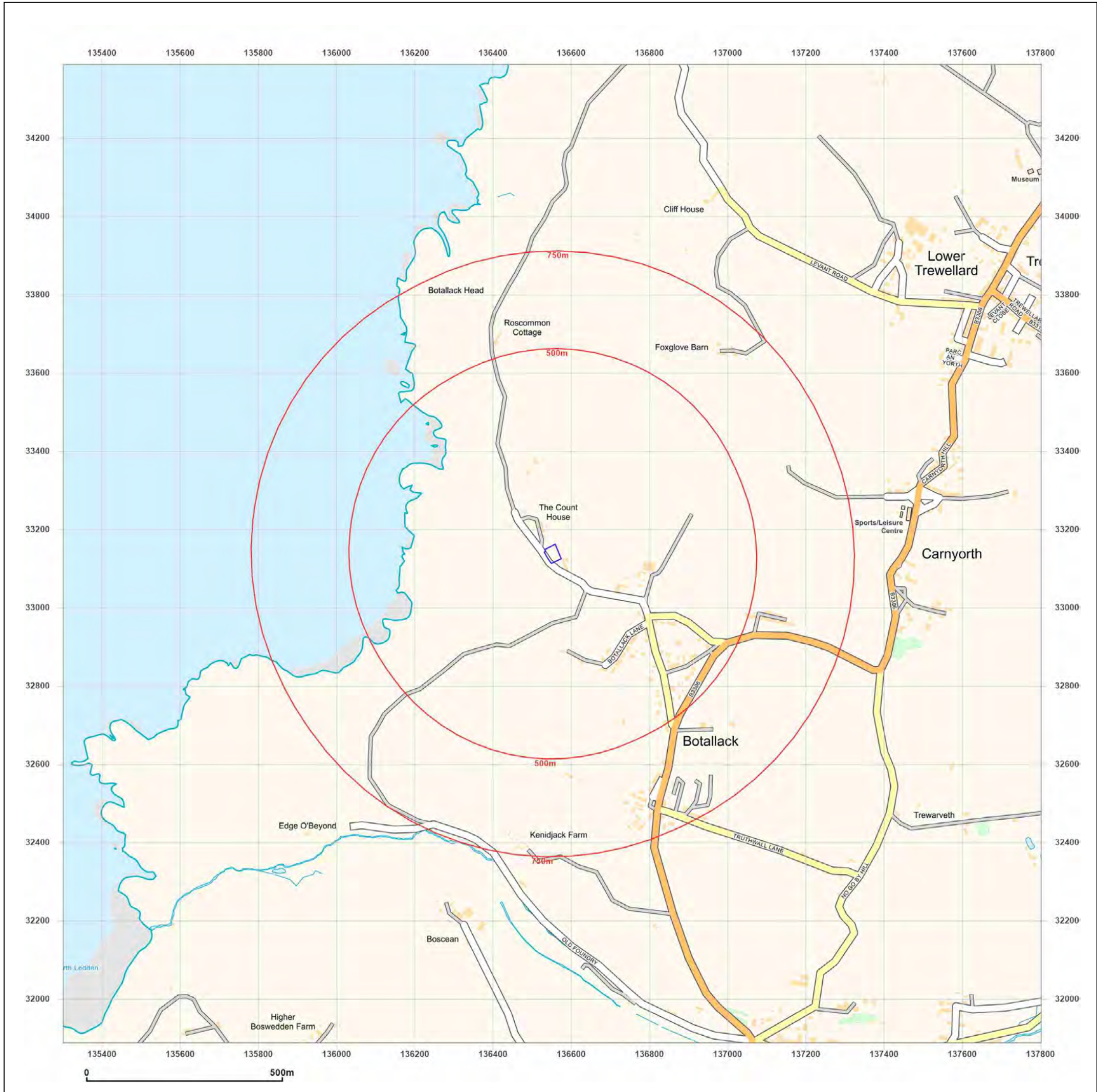


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▼ Appendix D UXO Report

Plan may be provided by a third party

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Location: TR19 7QQ,
Map Centre: 136524,33205



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

LEGEND

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



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

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

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

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

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

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

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

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

If I have any questions, who do I contact?

tel: [+44 \(0\) 1993 886682](tel:+441993886682) email: uxo@zetica.com web: www.zeticauxo.com

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

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