

PHASE 1 PRELIMINARY RISK ASSESSMENT (PRA)

**Collins Arms Pub, 18 Higher Fore Street, Redruth,
Cornwall**

TR15 2AP

For Collins Arms Development

Our Ref: GCL23528_P1

02 November 2023



Project

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Report Type

Phase 1 Preliminary Risk Assessment (PRA)

Client

Collins Arms Development

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Date

02 November 2023

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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 Collins Arms Development to undertake a Phase I Preliminary Risk Assessment at the site known as 'Collins Arms Pub, 18 Higher Fore Street, Redruth, Cornwall, TR15 2AP'. GCL were formally instructed to proceed via email on the 7th October 2023.												
Development Proposals	It is proposed to retain the existing building and convert it into two dwellings. Amenity space is to be provided in an area of the dwelling earmarked for demolition. It is understood that all amenity space is to be formed of continuous hardstanding.												
Site History	<p>On Site: The site has remained congruent to its original layout, with Collins Arms Pub located on site since the production of the earliest maps.</p> <p>Off Site: The Pedn-an-drea Mine was operational to the north and southwest up until late 19th century. Further shafts and quarries were worked in the surrounding area and several tips were deposited. The Great Western Railway runs approximately 83m west of the site. Multiple garages were also located within 100m of the site.</p>												
Geology	<p>The geological map shows no superficial deposits to be present on site.</p> <p>The geological map indicates that the site is underlain by the Mylor Slate Formation of Devonian age formed between 382.7 and 358.9 million years ago. The BGS describes this unit as "Dark grey, locally green-grey slates, interbedded with thin bands and laminae of sandstone, graded and locally cross-bedded siltstone, basic lavas and sedimentary breccias...".</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: Heavy Metals</td> <td style="background-color: #ffd966; text-align: center;">Moderate / Low</td> </tr> <tr> <td>Off Site: Historic Mining / Mine Waste</td> <td style="background-color: #c6e0b4; text-align: center;">Low</td> </tr> <tr> <td>Off Site: Historic Garages</td> <td style="background-color: #c6e0b4; text-align: center;">Low</td> </tr> <tr> <td>Off Site: Railway</td> <td style="background-color: #c6e0b4; text-align: center;">Low</td> </tr> </tbody> </table>	Source	Risk Rating	On Site: Radon Gas	High	On Site: Heavy Metals	Moderate / Low	Off Site: Historic Mining / Mine Waste	Low	Off Site: Historic Garages	Low	Off Site: Railway	Low
Source	Risk Rating												
On Site: Radon Gas	High												
On Site: Heavy Metals	Moderate / Low												
Off Site: Historic Mining / Mine Waste	Low												
Off Site: Historic Garages	Low												
Off Site: Railway	Low												
Recommendations	<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 Collins Arms Development to undertake a Phase I Preliminary Risk Assessment at the site known as 'Collins Arms Pub, 18 Higher Fore Street, Redruth, Cornwall, TR15 2AP'. GCL were formally instructed to proceed via email on the 7th October 2023.

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

A Landmark Sitecheck Report has been conducted for the site in June 2022 under report reference 297387475. A Groundsure GeoRisk report has also been conducted for the site in June 2022 under reference FCORN-8852201.

A mining investigation was completed on site in 2021, and is discussed in further detail in section 4.5.

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, and the comments and recommendations given, are based on the information obtained from the desk assessment and the site walkover survey. No intrusive investigations have been undertaken to confirm the actual ground conditions and hence the environmental status of the site.

Should additional information become available which may influence the report conclusions, GCL reserves the right to review such information and, if warranted, to alter the opinions accordingly.

The conclusions and recommendations of this report are valid for a period of 12 months from the date of issue. Outside of this time frame the report will require reviewing by a suitably qualified geoenvironmental engineer / environmental scientist, to ensure that the report complies with any changes to industry standards, policies and/or guidelines.

It is recommended that a copy of this report be submitted to the local authority for approval, prior to commissioning any further work which may be required.

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)

✓ Groundsure GeoRisk Report

1.6 Proposed Development

It is proposed to retain the existing building and convert it into two dwellings. Amenity space is to be provided in an area of the dwelling earmarked for demolition. It is understood that all amenity space is to be formed of continuous hardstanding.

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

2 SITE LOCATION AND DESCRIPTION

2.1 Site Location and Layout

The site is located adjacent to the junction of Higher Fore Street, East End and St. Day Road, in the town of Redruth. The site is approximately centred on National Grid Reference SW 70240 42163.

The site is roughly rectangular in shape and covers an area of 0.02ha.

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	Residential
East	Residential
South	Residential / Commercial
West	Residential / Commercial

2.3 Site Walkover Survey

GCL conducted a site walkover survey on 16th October 2023. Photographs from the walkover survey are provided in Appendix A.

The site is currently a disused Public House [Plate 1].

The building spans across the majority of the site and is situated with a terraced row. The lower half of the building appears to have been constructed using granite stones and the upper half rendered blockwork [Plate 1]. The building was also noted to have a pitched slate roof.

Access to the site was gained via an alleyway along the eastern boundary of the site, with the Client present to provide access inside.

The building appears to split across two levels, with the pub and associated dining and kitchen areas on the ground floor, and accommodation above. A bar, chairs, tables, kitchen, toilets and beer line area was noted to occupy the ground floor area [Plates 2 – 6]. A combination of vinyl / laminate flooring, carpet and wood was noted across the ground floor, all appearing to be in moderate to good condition.

Upstairs, were a number of bedrooms and a bathroom and living area [Plate 7].

Topographically speaking, the site slopes in a westerly direction, with changes in elevation of approximately <0.5m across the site. The eastern corner of the building appears to be slightly cut into the slope [Plate 1].

Buildings bound the site to the north, east and west, with Higher Fore Street located along the southern boundary.

2.4 Ecological Observations

No invasive species were noted in or around the immediate surroundings of the site during the site walkover. However, it should be noted that conducting an extensive survey to conclusively determine the presence or absence of invasive species falls beyond the scope of this investigation. Therefore, it is advisable to consider engaging a specialist surveyor, if needed, to thoroughly assess this matter.

2.5 Anecdotal Information

None.

3 SITE HISTORY

3.1 Historical Map Review

Using historical Ordnance Survey mapping and recent aerial photography provided by Groundsure, 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
Collins Arms Public House is present on site.	<p>Terraced housing neighbours the site to the northeast and west.</p> <p>East End Street runs adjacent to the south of the site.</p> <p>Pedn-an-drea Mine lies approximately 90m north of the site. Associated shafts surround the mine, with the closest being ~50m northeast of the proposed development (Jack's Shaft).</p> <p>A Smithy is noted ~60m southwest of the site, beyond which lies multiple engine houses and shafts.</p> <p>A railway appears to lie approximately 91m west of the proposed area.</p> <p>A Coal yard is situated ~110m southeast of the site.</p>	<p>1879</p> <p>County Series Town Plan</p> <p>1:500</p>
No Significant Changes.	<p>Pedn-an-drea Mine also lies between ~100 and 250m southwest of the site. Numerous shafts and heaps are noted within 250m of the proposed development.</p> <p>Crucible works are noted ~190m south of the site, beyond which lies a smithy.</p> <p>An old quarry and boot and shoe manufactory are located ~250m north of the site.</p> <p>The Railway station appears to be ~250m southwest of the site.</p>	<p>1880</p> <p>County Series</p> <p>1:2,500</p>
No Significant Changes.	Stream Works are located ~490m southwest of the site.	<p>1888</p> <p>County Series</p>

	A Magazine is noted ~500m southeast of the site. Multiple industrial areas lie between 500m and 750m northwest of the site, including a foundry.	1:10,560
No Significant Changes.	A Cemetery is noted ~325m east of the site. A Reservoir and Quarry are located approximately ~400m southeast of the proposed development.	1906 County Series 1:10,560
No Significant Changes.	No Significant Changes.	1908 County Series 1:2,500
No Significant Changes.	No Significant Changes.	1938 County Series 1:10,560
No Significant Changes.	No Significant Changes.	1958 – 1963 Provisional 1:10,560
No Significant Changes.	Garages lie approximately 48m southwest and 70m south of the proposed site. An electricity substation is noted 123m east of the site. A builders' merchant and yard are located ~120m southeast of the site. A playing field lies approximately 200m north of the site.	1967 – 1968 National Grid 1:1,250
No Significant Changes.	No Significant Changes.	1966 – 1970 National Grid 1:2,500
No Significant Changes.	No Significant Changes.	1974 – 1979 National Grid 1:10,000

No Significant Changes.	No Significant Changes (Far west of map missing).	1980 National Grid 1:10,000
No Significant Changes.	The 100m of land surrounding the site has been developed, predominantly with residential properties.	1986 – 1989 National Grid 1:1,250
No Significant Changes.	No Significant Changes.	1990 – 1992 National Grid 1:10,000
No Significant Changes.	No Significant Changes.	1989 – 1994 National Grid 1:1,250
No Significant Changes.	No Significant Changes.	1994 National Grid 1:1,250
No Significant Changes.	No Significant Changes.	1999 Aerial Photograph
No Significant Changes.	No Significant Changes.	2001 National Grid 1:10,000
No Significant Changes.	No Significant Changes.	2003 Landline 1:1,250
No Significant Changes.	No Significant Changes.	2005 Aerial Photograph
No Significant Changes.	No Significant Changes.	2010 National Grid 1:10,000
No Significant Changes.	No Significant Changes.	2013 Aerial Photograph
No Significant Changes.	A square area of land to the north of the site appears to be undergoing construction work.	2019

		Aerial Photograph
No Significant Changes.	Three (3 No.) new structures appear to have been erected in the land north of the site.	2022 Aerial Photograph
No Significant Changes.	A petrol station is located ~240m west of the proposed site.	2023 National Grid 1:10,000

3.2 Site History Summary

On Site: The site has remained congruent to its original layout, with Collins Arms Pub located on site since the production of the earliest maps.

Off Site: The Pedn-an-drea Mine was operational to the north and southwest up until late 19th century. Further shafts and quarries were worked in the surrounding area and several tips were deposited. The Great Western Railway runs approximately 83m west of the site. Multiple garages were also located within 100m of the site.

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

The following pertinent planning applications have been identified in the Cornwall Council online planning register.

Table 3.2: Nearby Pertinent Planning Applications

Distance (m) / Direction	Planning Application Reference	Pertinent Information
~50m southeast	PA13/01160 / PA16/03437	<p>The application covered a site at 44 St Day Road. At the time of writing, the Phase 1 Desk Study was not available on the planning portal.</p> <p>A Phase 2 Site Investigation was completed by Your Environmental Solutions in March 2016 under reference YES 487a. The report summarises the Phase 1 Desk Study, completed prior to the site investigation, as follows; A potential for heavy metals and mine waste to be present on site is considered likely, with soil sampling and chemical analysis required.</p> <p>The Phase 2 investigation involved three exploratory hole locations up to 0.40mBGL. Soil samples retrieved indicated high concentrations of arsenic were present on site, up to 2930 mg/kg. Elevated levels of lead were also noted. A remediation scheme was suggested.</p> <p>A Phase 3 Remediation Scheme was compiled by YES in April 2016 under reference YES 487b. A membrane overlain with 600mm of clean topsoil was suggested within the soft landscaped areas on site.</p>

A Remediation Verification Letter Report was completed by YES in June 2016, confirming a membrane and clean topsoil had been laid in soft landscaped areas.

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.

The geological map indicates that the site is underlain by the Mylor Slate Formation of Devonian age formed between 382.7 and 358.9 million years ago. The BGS describes this unit as “Dark grey, locally green-grey slates, interbedded with thin bands and laminae of sandstone, graded and locally cross-bedded siltstone, basic lavas and sedimentary breccias. Sedimentary breccias are particularly significant in the upper 500 m of the formation where derived sandstone detritus occurs as constituent grains in coarse sandstone, as clasts in breccias (both matrix and clast-supported) with grey slate matrix and as large blocks of interbedded sandstone and mudstone up to several tens of metres across.”.

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 and nearby site investigation reports, 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 / Mine Waste	Reworked natural material with potential anthropogenic components	0 - 1	Unsuitable for conventional drainage	Around and beneath existing structures
Topsoil	Brown friable clay or silt	0.3 – 0.5	Unsuitable for conventional drainage	Across the site
Weathered Mylor Slate Formation	Sandy gravel of mudstone	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 lands 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	Very Low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
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

The site is within an area of former mining activity, with Jack's Mine shaft being located approximately 50m northeast and Tregay's Shaft ~100m northwest, with many others within 250m of the site. Underground mining features were noted on the historical maps and in the Groundsure Data (Appendix B). A Groundsure GeoRisk Report has also been completed for this site in June 2022 under reference FCORN-8852201. The document is contained as Appendix E, and may be summarised as follows;

The report identified a number of mining related features, with the nearest shaft noted 19m northwest and a mine waste tip 23m west of the site. Multiple other features were located within 100m of the site, including cavities and mineral veins. The report recommended further action was carried out in the form of a site investigation.

A mining investigation was completed on site by Westcountry Mines and Property Surveys in 2021. The investigation "confirmed the presence of undisturbed in-situ weathered and fresher metamorphic bedrock within the investigated area and we believe that the subject property (area covered by the boreholes) is not at any risk of subsidence or settlement related to extractive historic metalliferous mining activity (shafts or workings)." The report is contained as Appendix F.

4.6 Groundwater

It is unlikely that groundwater will be shallow in this area. It is anticipated that groundwater will flow to the northwest.

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 Mylor Slate Formation 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	There are no 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 watercourse features within 250m of the site.
Water Framework Directive (WFD) Surface Water Body Catchments	The site is within the Portreath Stream surface water body catchment. The Portreath Stream is 466m southwest of the site.
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	>120
Cadmium	<1.8
Chromium	90 - 120
Lead	<100
Nickel	15 – 30

Levels of arsenic are predicted to significantly exceed the relevant generic assessment criteria of 37mg/kg. Soil sampling will be required to further quantify the risk.

Sensitive Land Uses

Sensitive Land Use	Within pertinent radius of site? (250m)*		Distance & Direction (Comments if applicable)
	Yes	No	
Site of Special Scientific Interest	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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

Environmental Source	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

*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	

	Yes	No	
Historical Industrial Land Uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> ➔ 12m S: Tin & Copper Mine ➔ 64m NW: Tin & Copper Mine / Unspecified Heap ➔ 83m W: Railway Sidings ➔ 83m S: Railway Sidings ➔ 101m NW: Unspecified Disused Shaft
Historical Tanks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	➔ 116m W: Tank / Trough
Historical Energy Features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	➔ 123m E: Electricity Substation
Historical Petrol Stations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Historical Garages	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> ➔ 48m SW: Garage ➔ 70m S: Garage
Historical Military Land	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Recent Industrial Land Uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	➔ 69m SW: Vehicle Repair, Testing & Servicing
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
Historic Mining / Mine Waste	Heavy Metals, TPH, PAH
Historic Garages	TPH and PAH
Railway	TPH, PAH, SVOCs, VOCs and Asbestos

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: Heavy Metals	Dermal contact Soil and dust ingestion and inhalation	Future site users Site workers Site flora and fauna	Low Likelihood	Medium	Moderate - Low Risk – Levels of arsenic are predicted to significantly exceed the relevant generic assessment criteria of 37mg/kg. However, Since the small amount of proposed amenity space is to be surfaced with continuous hardstanding, it is unlikely that contaminants would reach end users. The risk to site workers can be mitigated with the use of appropriate PPE.
Off Site: Historic Mining Activity / Mine Waste – Heavy Metals, TPH, PAH	Dermal contact Soil and dust ingestion and inhalation	Future site users Site workers Site flora and fauna	Unlikely	Medium	Low Risk – Heavy metals are likely to be artificially elevated within mine waste, along with the potential inclusion of organic contaminants such as PAH and TPH. Since the small amount of proposed amenity space is to be surfaced with continuous hardstanding, it is unlikely that contaminants would reach end users. The risk is therefore considered to be low.
Off Site: Historic Garages – TPH and PAH	Dermal contact Soil and dust ingestion and inhalation Ground & surface waters	Future site users Site workers Site flora and fauna	Unlikely	Medium	Low Risk – The nearest garage is located ~48m downgradient of the site and the other ~70m upgradient. Due to the distance, subsequent development near the site and presence of hardstanding in this area it is unlikely that a contamination pathway is present. Furthermore, the prolonged existence of the Pub on site and presence of hardstanding across the site renders the chance of a viable contamination pathway low.
Off Site: Railway - TPH, PAH, SVOCs, VOCs, Asbestos	Dermal contact Soil and dust ingestion and inhalation	Future site users Site workers Site flora and fauna	Unlikely	Medium	Low Risk - The Railway lies ~91m west of the site. Due to the topography, distance and level of development within the area, it is unlikely that a contamination pathway is present.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

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

Levels of arsenic are predicted to significantly exceed the relevant generic assessment criteria of 37mg/kg. Soil sampling will be required to further quantify the risk.

Heavy metals are likely to be artificially elevated within mine waste, along with the potential inclusion of organic contaminants such as PAH and TPH. Given the pertinent distance of nearby mines and the residential end use of the site, it is considered likely that a viable contamination pathway is present.

The nearest garage is located ~48m downgradient of the site and the other ~70m upgradient. Due to the distance, subsequent development near the site and presence of hardstanding in this area it is unlikely that a contamination pathway is present. Furthermore, the prolonged existence of the Pub on site and presence of hardstanding across the site renders the chance of a viable contamination pathway low.

The Railway lies ~91m west of the site. Due to the topography, distance and level of development within the area, it is unlikely that a contamination pathway is present.

In the absence of a significant source of contamination, the site is considered to be suitable for the proposed end use and no further work is required.

7.2 Recommendations

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
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- Great Britain. Environmental Protection Act (1990). London, The Stationery Office
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- 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
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Figure 2.1

Site Location Plan

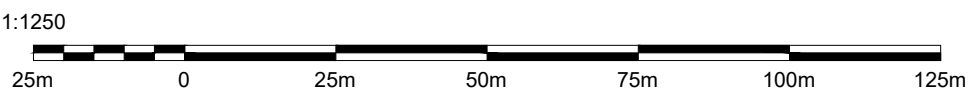




1:500 Block Plan



1:1250 Location Plan



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Stage	Planning
Client	Collins Arms Development
Project	Collins Arms, Redruth
Title	Location and Block Plan

Revisions	Scale/s	1:500/1250@A3
No.	Date	Sept 2023
Date	Drawn	WW
Initial	Checked	RLT

Project No. 2022/2653	Drawing No. 2022/2653/PL01	Rev.
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Figure 2.2

Site Layout

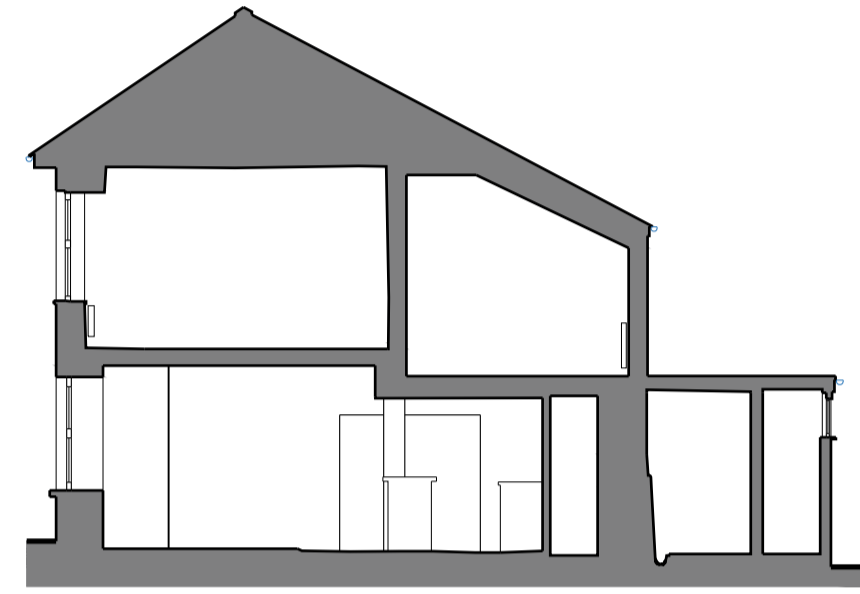




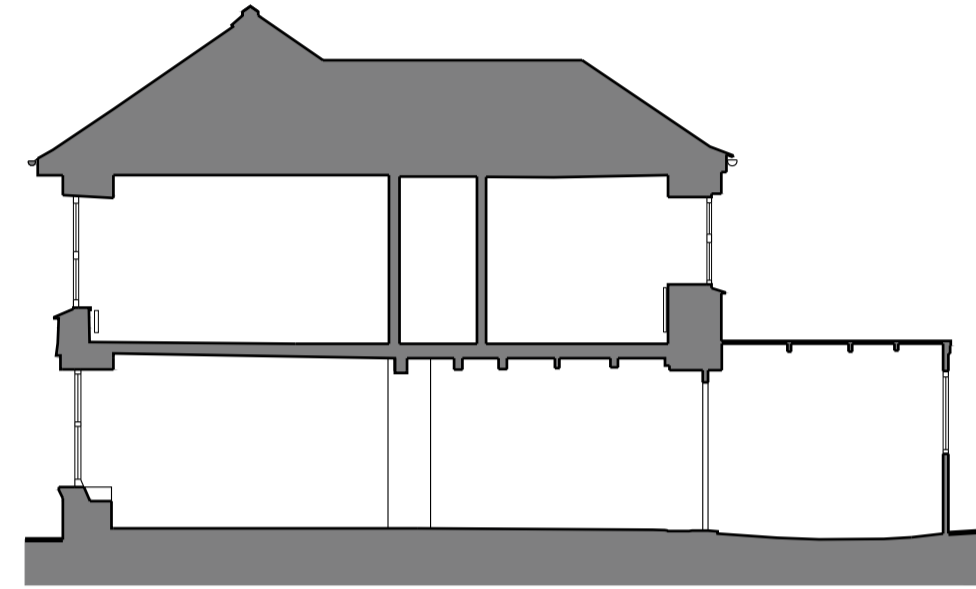
South Elevation



North Elevation



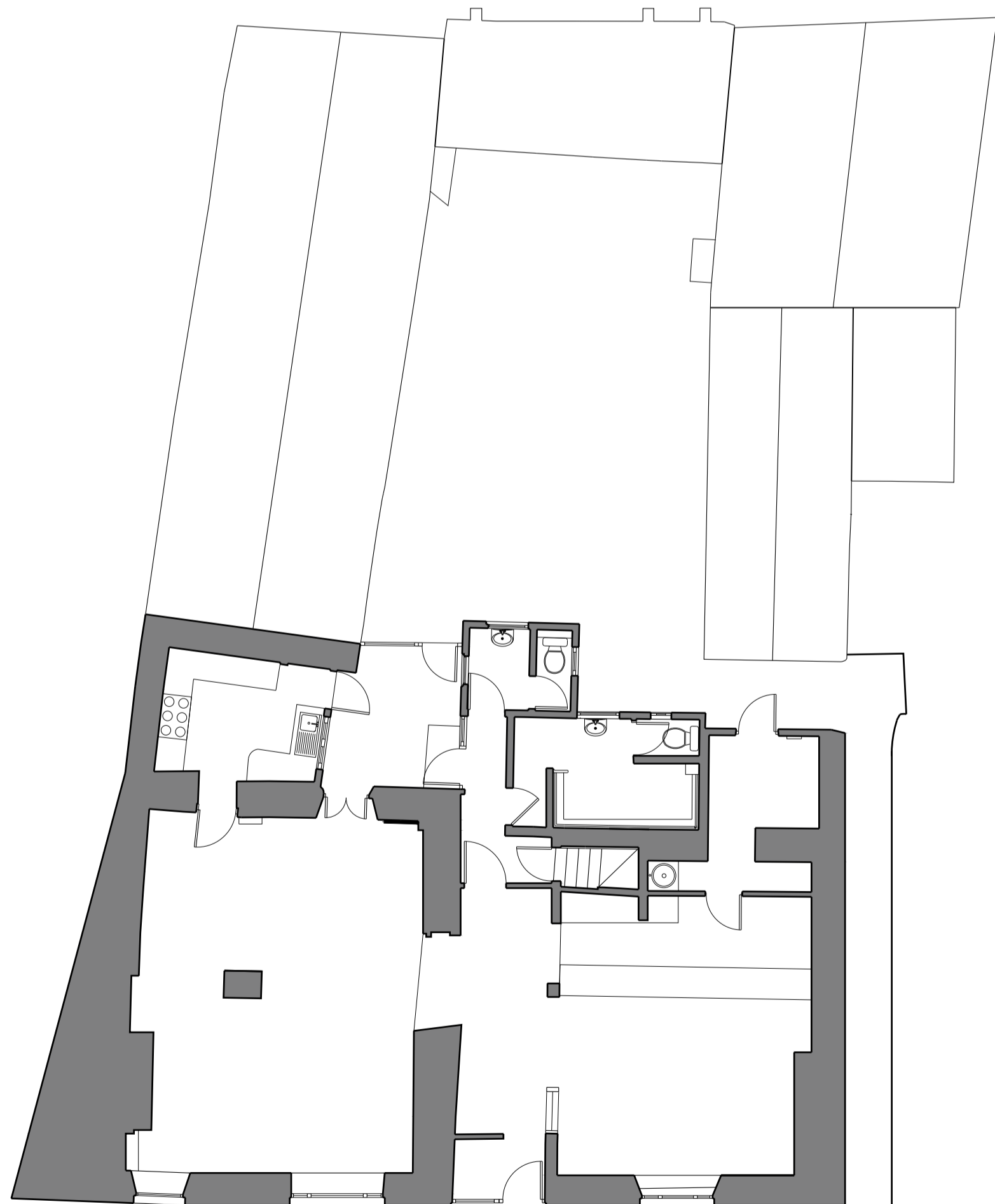
Section A - A



Section B - B



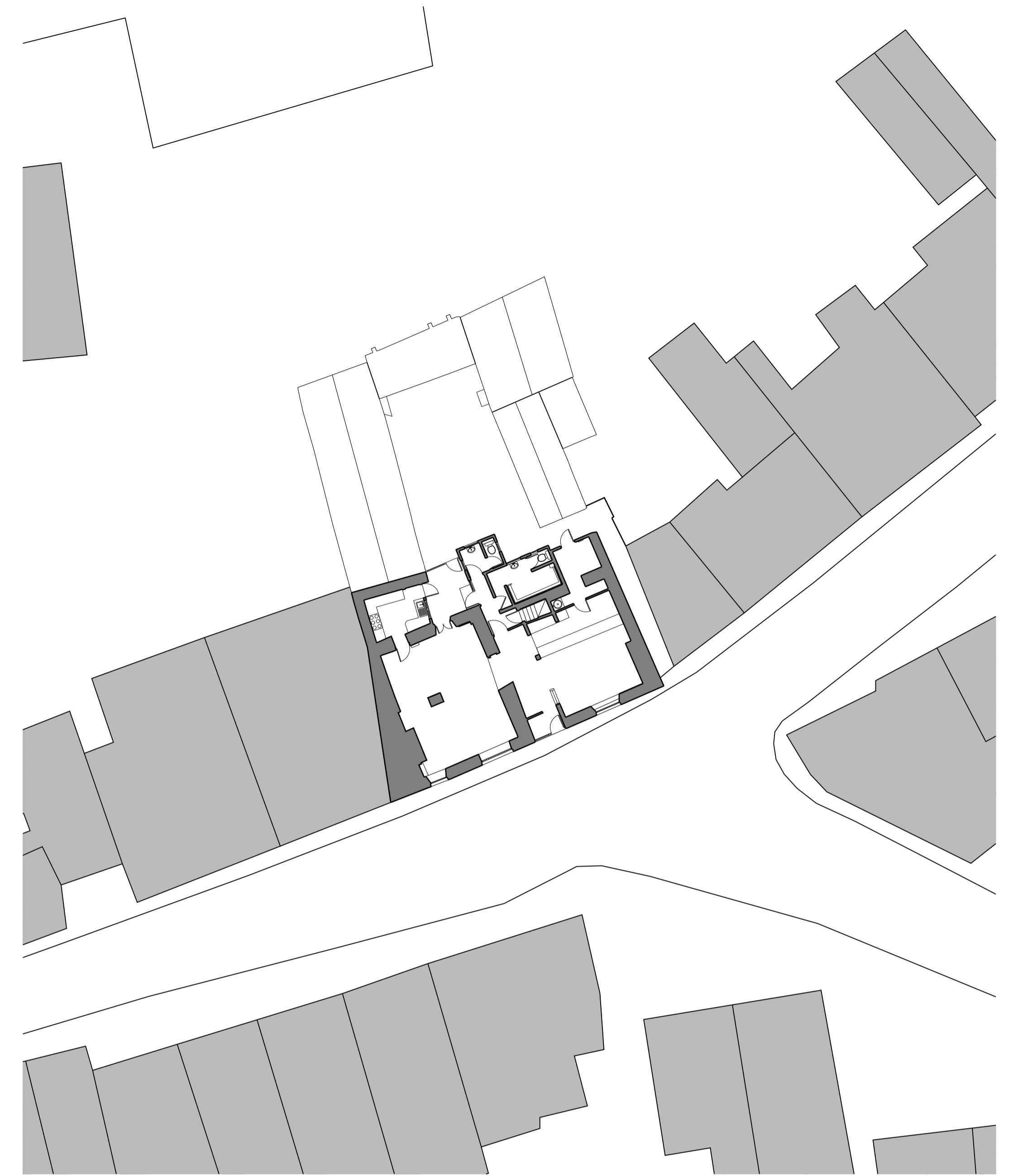
Section C - C



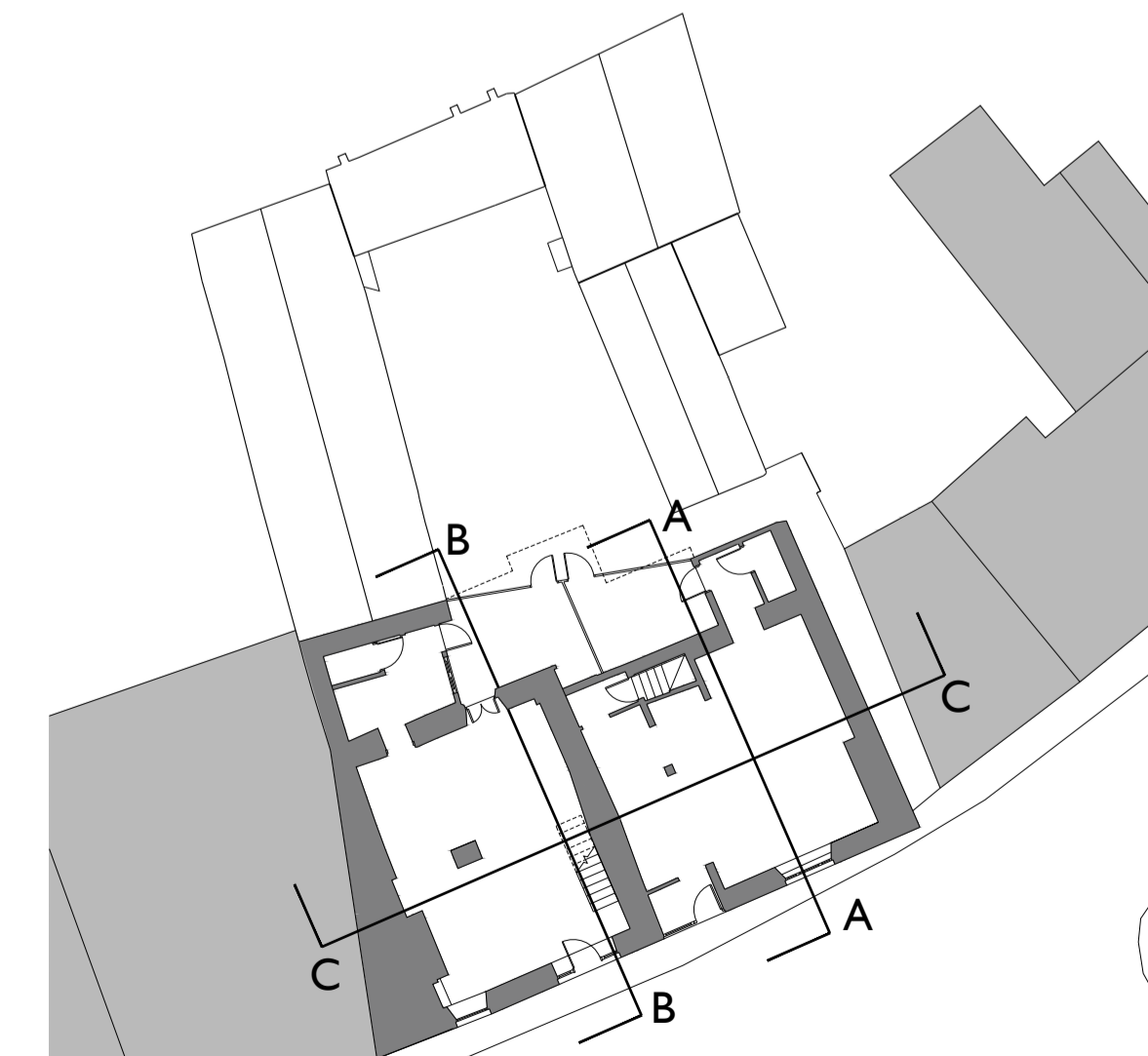
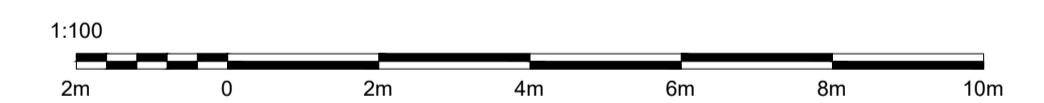
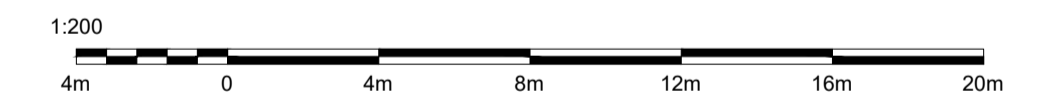
Existing Ground Floor Plan



Existing First Floor Plan



Existing Site Plan



Section Key

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Stage	Planning	
Client	Collins Arms Development	
Project	Collins Arms, Redruth	
Title	Existing Plans, Elevations and Sections	
Revisions	Scale/s	1:100/200@A1
No.	Date	Sept 2023
Date	Drawn	WW
Initial	Checked	RLT
Project No. 2022/2653	Drawing No. 2022/2653/PL02	Rev.

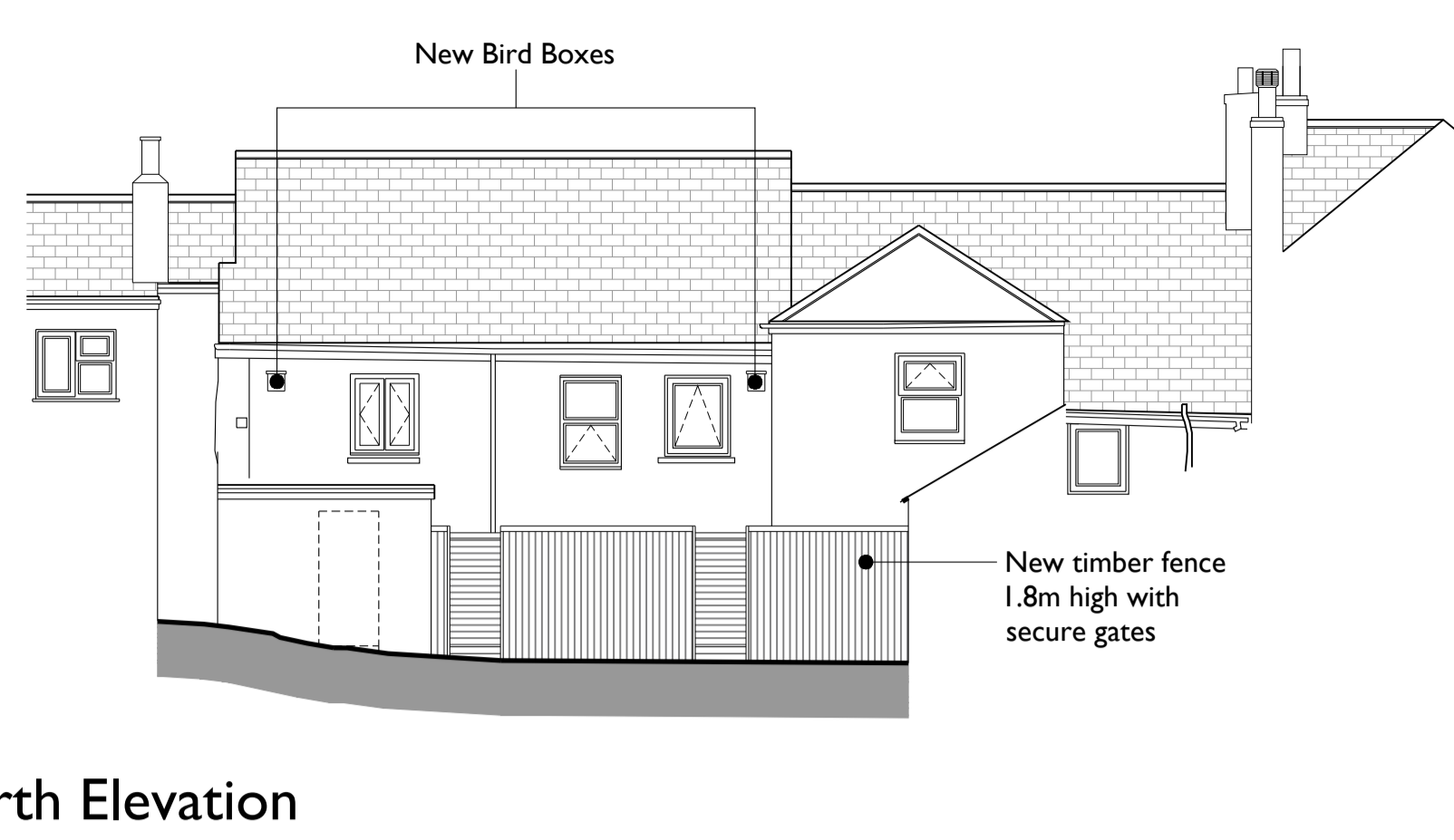
Figure 2.3

Proposed Site Plan

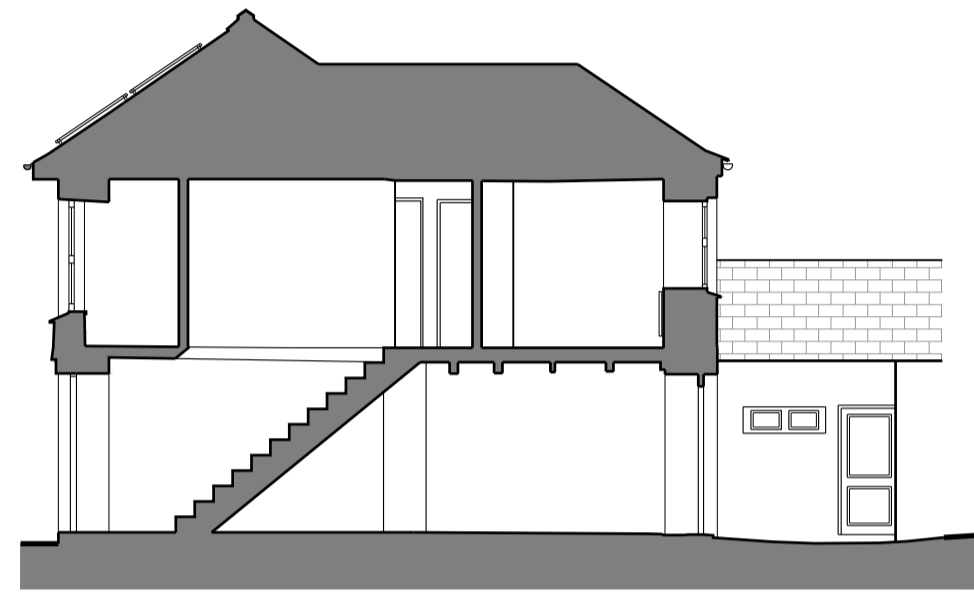




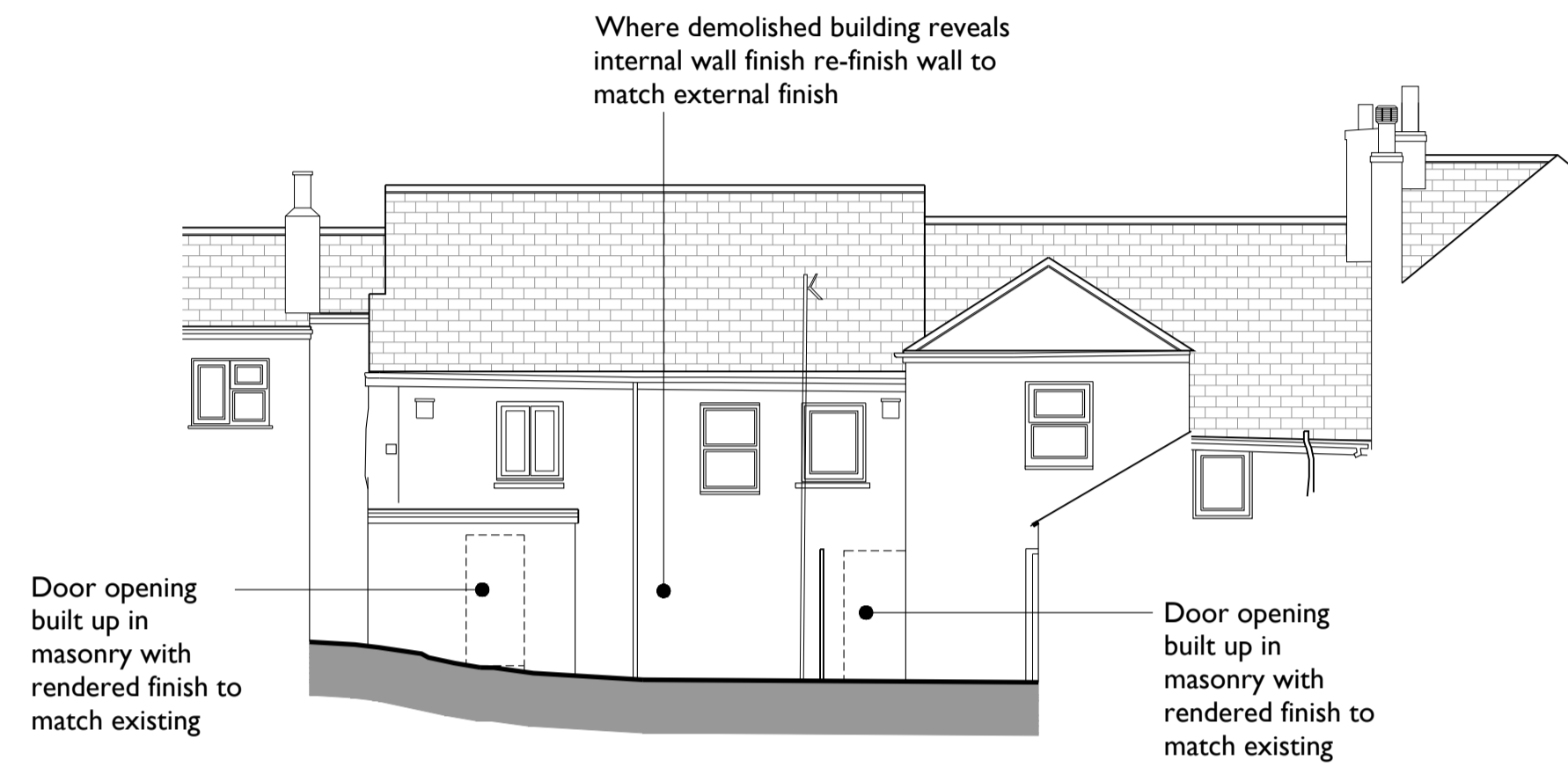
South Elevation



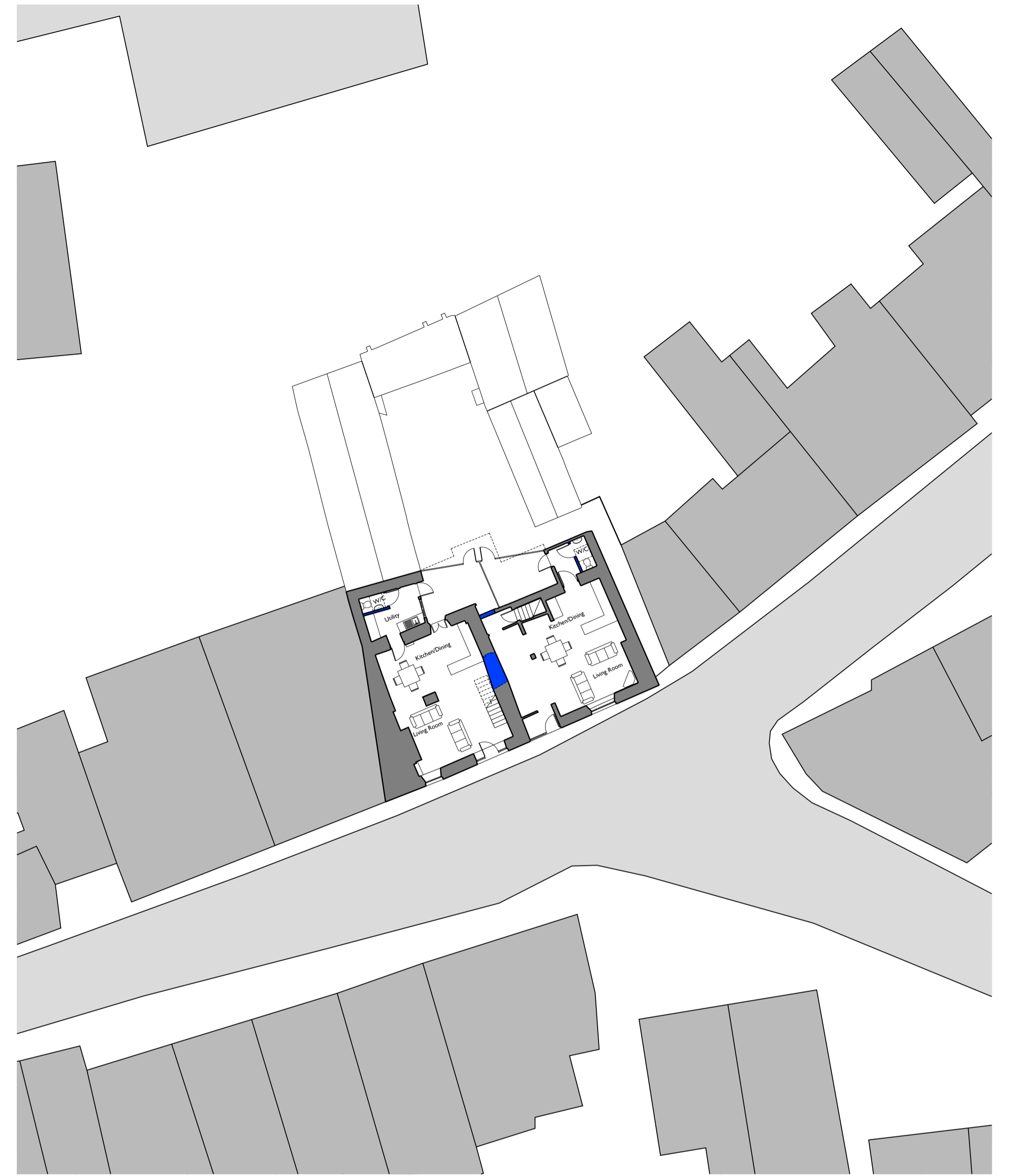
North Elevation



Section B - B



North Elevation (without Fence)



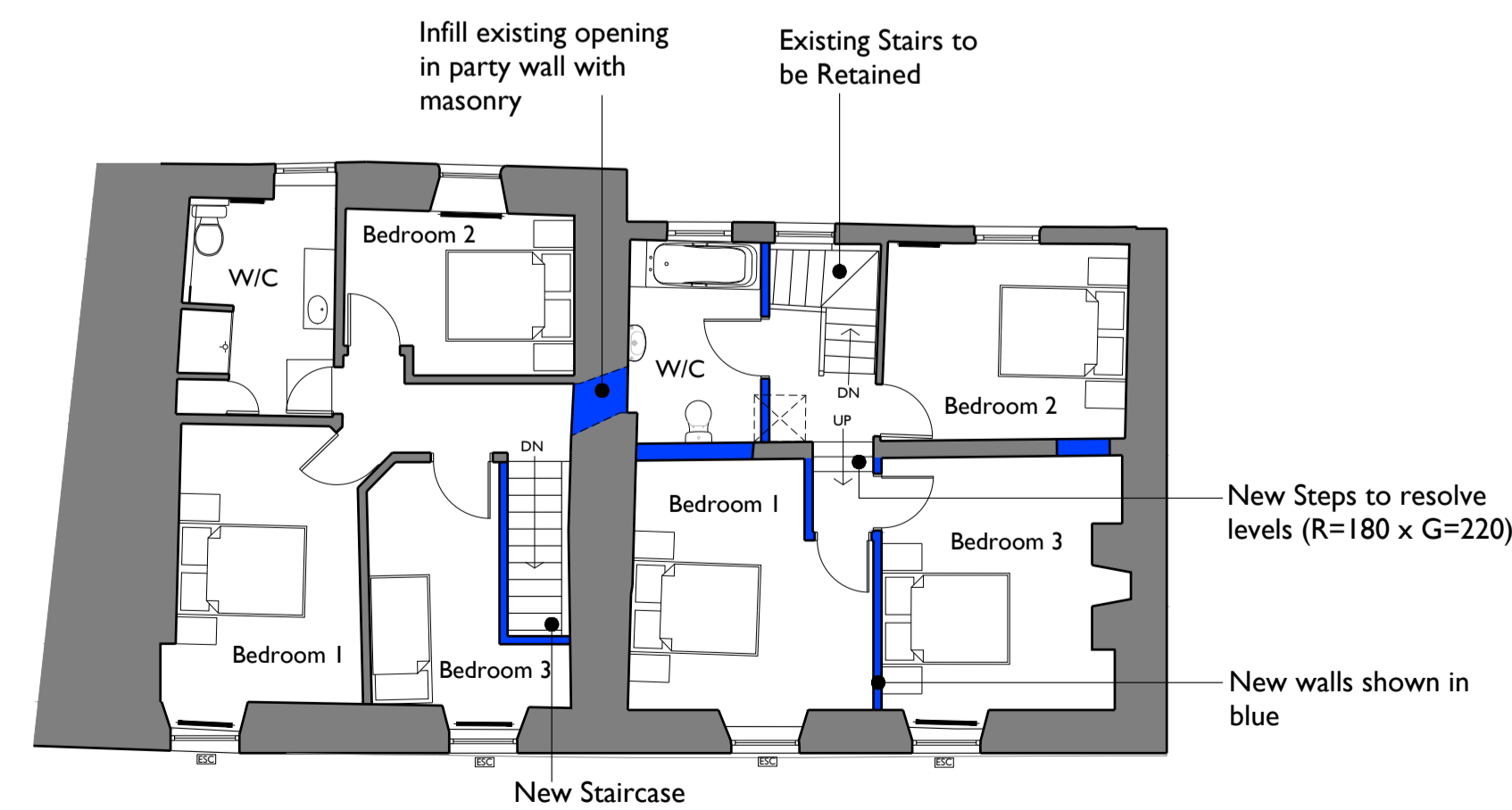
Proposed Site Plan



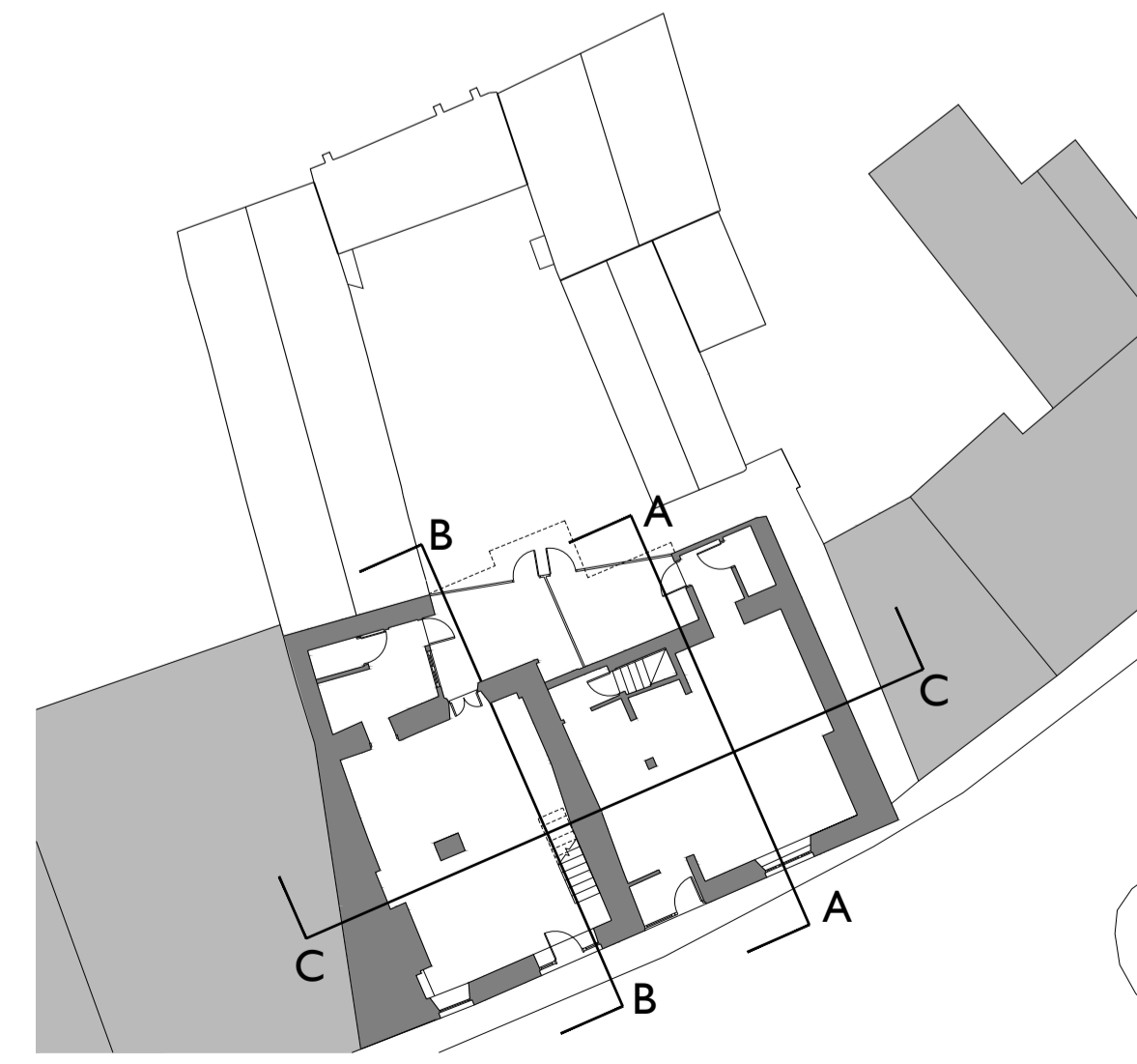
Proposed Ground Floor Plan



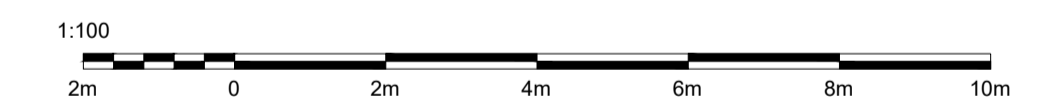
Section C - C



Proposed First Floor Plan



Section Key



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Stage	Planning	
Client	Collins Arms Development	
Project	Collins Arms, Redruth	
Title	Proposed Plans, Elevations and Sections	
Revisions	Scale/s	1:100/200@A1
No.	Date	Sept 2023
Date	Drawn	WW
Initial	Checked	RLT
Project No. 2022/2653	Drawing No. 2022/2653/PL03	Rev.

Appendix A

Site Photographs



SITE PHOTOGRAPHS



PLATE 1



PLATE 2

SITE:	Collins Arms Pub, 18 Higher Fore Street, Redruth, Cornwall, TR15 2AP
REF:	GCL23528_P1
CLIENT:	Collins Arms Development

SITE PHOTOGRAPHS



PLATE 3



PLATE 4

SITE:	Collins Arms Pub, 18 Higher Fore Street, Redruth, Cornwall, TR15 2AP
REF:	GCL23528_P1
CLIENT:	Collins Arms Development

SITE PHOTOGRAPHS



PLATE 5



PLATE 6

SITE:	Collins Arms Pub, 18 Higher Fore Street, Redruth, Cornwall, TR15 2AP
REF:	GCL23528_P1
CLIENT:	Collins Arms Development

SITE PHOTOGRAPHS



PLATE 7

SITE: Collins Arms Pub, 18 Higher Fore Street, Redruth, Cornwall, TR15 2AP

REF: GCL23528_P1

CLIENT: Collins Arms Development

Appendix B

Environmental Data & Maps



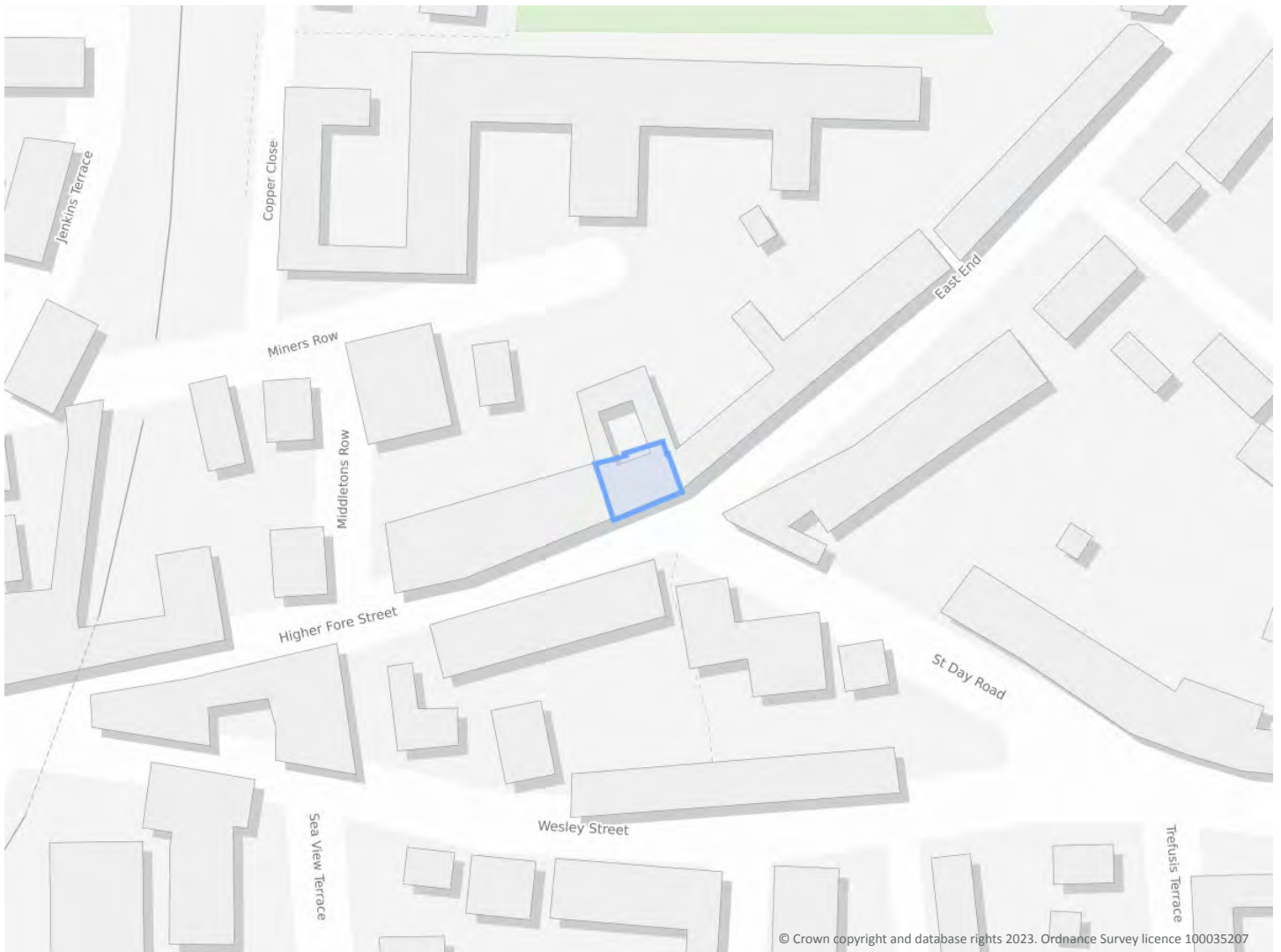
COLLINS ARMS, 18 THE COLLINS ARMS, HIGHER FORE STREET, REDRUTH, TR15 2AP

Order Details

Date: 09/10/2023
Your ref: 23528
Our Ref: GCL-UEP-MXG-4AP-XMR

Site Details

Location: 170237 042164
Area: 0.02 ha
Authority: [Cornwall Council \(Unitary\)](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#)

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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 >	0	1	44	58	-
19 >	1.2 >	Historical tanks >	0	0	4	17	-
20 >	1.3 >	Historical energy features >	0	0	3	17	-
21	1.4	Historical petrol stations	0	0	0	0	-
22 >	1.5 >	Historical garages >	0	1	7	3	-
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 >	0	1	55	73	-
28 >	2.2 >	Historical tanks >	0	0	4	26	-
30 >	2.3 >	Historical energy features >	0	0	10	30	-
31	2.4	Historical petrol stations	0	0	0	0	-
32 >	2.5 >	Historical garages >	0	1	9	4	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
33	3.1	Active or recent landfill	0	0	0	0	-
33	3.2	Historical landfill (BGS records)	0	0	0	0	-
34	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
34	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
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	1	13	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
36 >	4.1 >	Recent industrial land uses >	0	0	8	-	-
37	4.2	Current or recent petrol stations	0	0	0	0	-
37	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
38	4.5	Sites determined as Contaminated Land	0	0	0	0	-



38	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-	
38	4.7	Regulated explosive sites	0	0	0	0	-	
38	4.8	Hazardous substance storage/usage	0	0	0	0	-	
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-	
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-	
39	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-	
39	4.12	Radioactive Substance Authorisations	0	0	0	0	-	
39	4.13	Licensed Discharges to controlled waters	0	0	0	0	-	
39	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-	
40	4.15	Pollutant release to public sewer	0	0	0	0	-	
40	4.16	List 1 Dangerous Substances	0	0	0	0	-	
40	4.17	List 2 Dangerous Substances	0	0	0	0	-	
40 >	4.18 >	<u>Pollution Incidents (EA/NRW) ></u>	0	0	0	1	-	
41	4.19	Pollution inventory substances	0	0	0	0	-	
41	4.20	Pollution inventory waste transfers	0	0	0	0	-	
41	4.21	Pollution inventory radioactive waste	0	0	0	0	-	
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m	
42	5.1	Superficial aquifer	None (within 500m)					
43 >	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	0	0	25	
53 >	5.7 >	<u>Surface water abstractions ></u>	0	0	0	0	2	
54	5.8	Potable abstractions	0	0	0	0	0	
54	5.9	Source Protection Zones	0	0	0	0	-	
54	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-	
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m	
55	6.1	Water Network (OS MasterMap)	0	0	0	-	-	



55	6.2	Surface water features	0	0	0	-	-
56 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
56 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
57 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
58	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
58	7.2	Historical Flood Events	0	0	0	-	-
58	7.3	Flood Defences	0	0	0	-	-
59	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
59	7.5	Flood Storage Areas	0	0	0	-	-
60	7.6	Flood Zone 2	None (within 50m)				
60	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
61	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
62 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
63	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
63	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
63	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
63	10.4	Special Protection Areas (SPA)	0	0	0	0	0
64	10.5	National Nature Reserves (NNR)	0	0	0	0	0
64	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
64	10.7	Designated Ancient Woodland	0	0	0	0	0
64	10.8	Biosphere Reserves	0	0	0	0	0
65	10.9	Forest Parks	0	0	0	0	0
65	10.10	Marine Conservation Zones	0	0	0	0	0
65	10.11	Green Belt	0	0	0	0	0
65	10.12	Proposed Ramsar sites	0	0	0	0	0



65	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
66	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
66	10.15	Nitrate Sensitive Areas	0	0	0	0	0
66 >	10.16 >	<u>Nitrate Vulnerable Zones ></u>	0	0	0	0	1
67 >	10.17 >	<u>SSSI Impact Risk Zones ></u>	1	-	-	-	-
68	10.18	SSSI Units	0	0	0	0	0
Page	Section	<u>Visual and cultural designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
69 >	11.1 >	<u>World Heritage Sites ></u>	1	0	0	-	-
70	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
70	11.3	National Parks	0	0	0	-	-
70 >	11.4 >	<u>Listed Buildings ></u>	0	0	8	-	-
71 >	11.5 >	<u>Conservation Areas ></u>	0	0	1	-	-
71	11.6	Scheduled Ancient Monuments	0	0	0	-	-
71	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	<u>Agricultural designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
73 >	12.1 >	<u>Agricultural Land Classification ></u>	Urban (within 250m)				
74	12.2	Open Access Land	0	0	0	-	-
74	12.3	Tree Felling Licences	0	0	0	-	-
74	12.4	Environmental Stewardship Schemes	0	0	0	-	-
74	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	<u>Habitat designations</u>	On site	0-50m	50-250m	250-500m	500-2000m
75	13.1	Priority Habitat Inventory	0	0	0	-	-
75	13.2	Habitat Networks	0	0	0	-	-
75	13.3	Open Mosaic Habitat	0	0	0	-	-
75	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	<u>Geology 1:10,000 scale ></u>	On site	0-50m	50-250m	250-500m	500-2000m
76 >	14.1 >	<u>10k Availability ></u>	Identified (within 500m)				
77	14.2	Artificial and made ground (10k)	0	0	0	0	-
78	14.3	Superficial geology (10k)	0	0	0	0	-

78	14.4	Landslip (10k)	0	0	0	0	-
79	14.5	Bedrock geology (10k)	0	0	0	0	-
79	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
80 >	15.1 >	50k Availability >	Identified (within 500m)				
81	15.2	Artificial and made ground (50k)	0	0	0	0	-
81	15.3	Artificial ground permeability (50k)	0	0	-	-	-
82	15.4	Superficial geology (50k)	0	0	0	0	-
82	15.5	Superficial permeability (50k)	None (within 50m)				
82	15.6	Landslip (50k)	0	0	0	0	-
82	15.7	Landslip permeability (50k)	None (within 50m)				
83 >	15.8 >	Bedrock geology (50k) >	1	0	0	3	-
84 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
84 >	15.10 >	Bedrock faults and other linear features (50k) >	0	1	1	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
85	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
86 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
87 >	17.2 >	Running sands >	Negligible (within 50m)				
88 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
89 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
90 >	17.5 >	Landslides >	Very low (within 50m)				
91 >	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
93 >	18.1 >	BritPits >	0	0	9	2	-
96 >	18.2 >	Surface ground workings >	0	0	9	-	-
96 >	18.3 >	Underground workings >	0	0	16	14	65
100	18.4	Underground mining extents	0	0	0	0	-
100	18.5	Historical Mineral Planning Areas	0	0	0	0	-

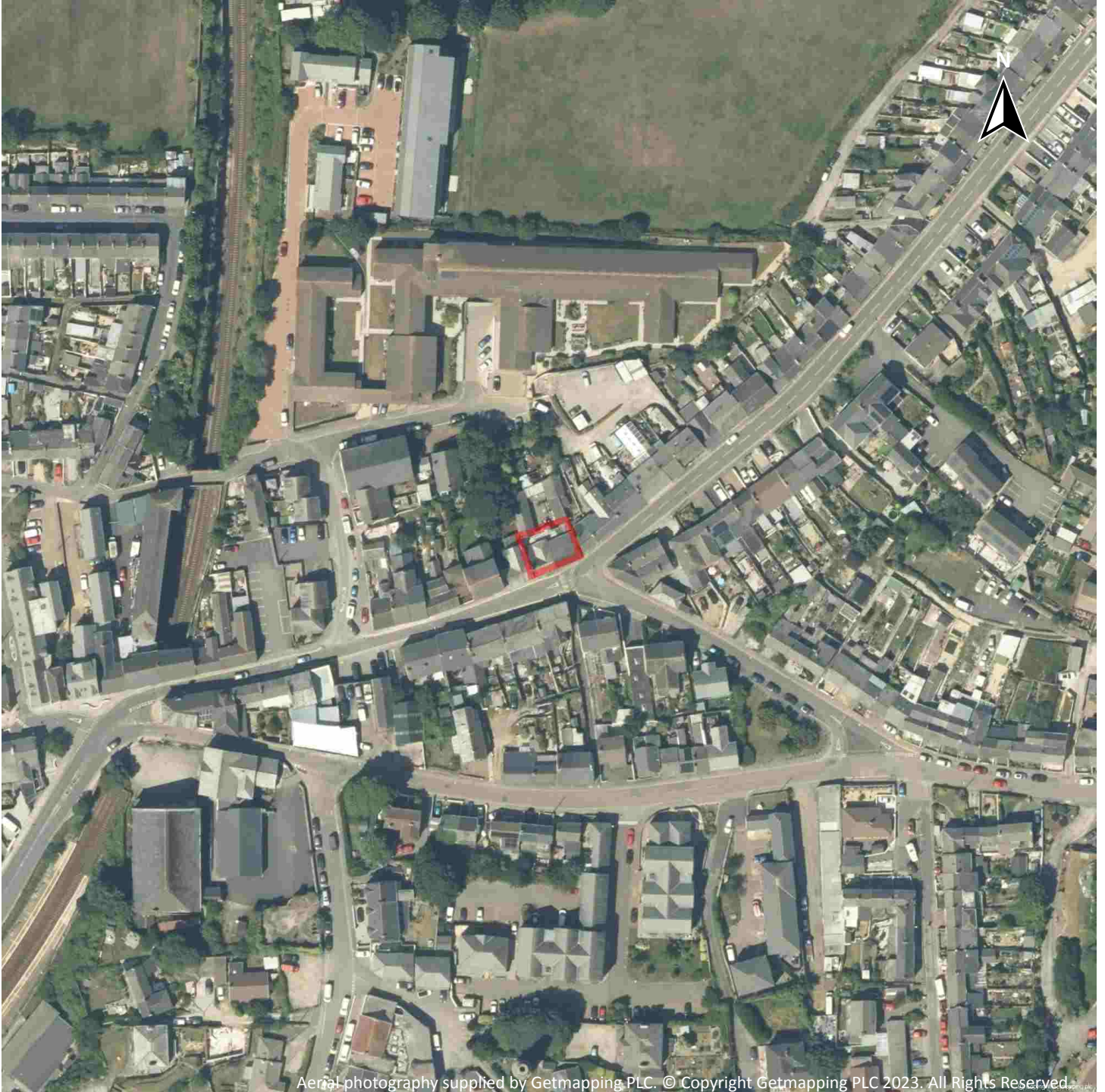


101 >	18.6 >	Non-coal mining >	1	0	5	9	8
103	18.7	JPB mining areas	None (within 0m)				
103	18.8	The Coal Authority non-coal mining	0	0	0	0	-
104	18.9	Researched mining	0	0	0	0	-
104 >	18.10 >	Mining record office plans >	9	5	15	7	-
105 >	18.11 >	BGS mine plans >	1	0	1	0	-
106	18.12	Coal mining	None (within 0m)				
106	18.13	Brine areas	None (within 0m)				
106	18.14	Gypsum areas	None (within 0m)				
106 >	18.15 >	Tin mining >	Identified (within 0m)				
107	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
108	19.1	Natural cavities	0	0	0	0	-
109 >	19.2 >	Mining cavities >	0	0	4	6	14
111	19.3	Reported recent incidents	0	0	0	0	-
111	19.4	Historical incidents	0	0	0	0	-
112	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
113 >	20.1 >	Radon >	Greater than 30% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
115 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	0	-	-	-
115	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
115	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
116	22.1	Underground railways (London)	0	0	0	-	-
116	22.2	Underground railways (Non-London)	0	0	0	-	-
117 >	22.3 >	Railway tunnels >	0	0	1	-	-
117 >	22.4 >	Historical railway and tunnel features >	0	0	26	-	-
118	22.5	Royal Mail tunnels	0	0	0	-	-



118	22.6	Historical railways	0	0	0	-	-
119 >	22.7 >	Railways >	0	0	16	-	-
119	22.8	Crossrail 1	0	0	0	0	-
120	22.9	Crossrail 2	0	0	0	0	-
120	22.10	HS2	0	0	0	0	-

Recent aerial photograph



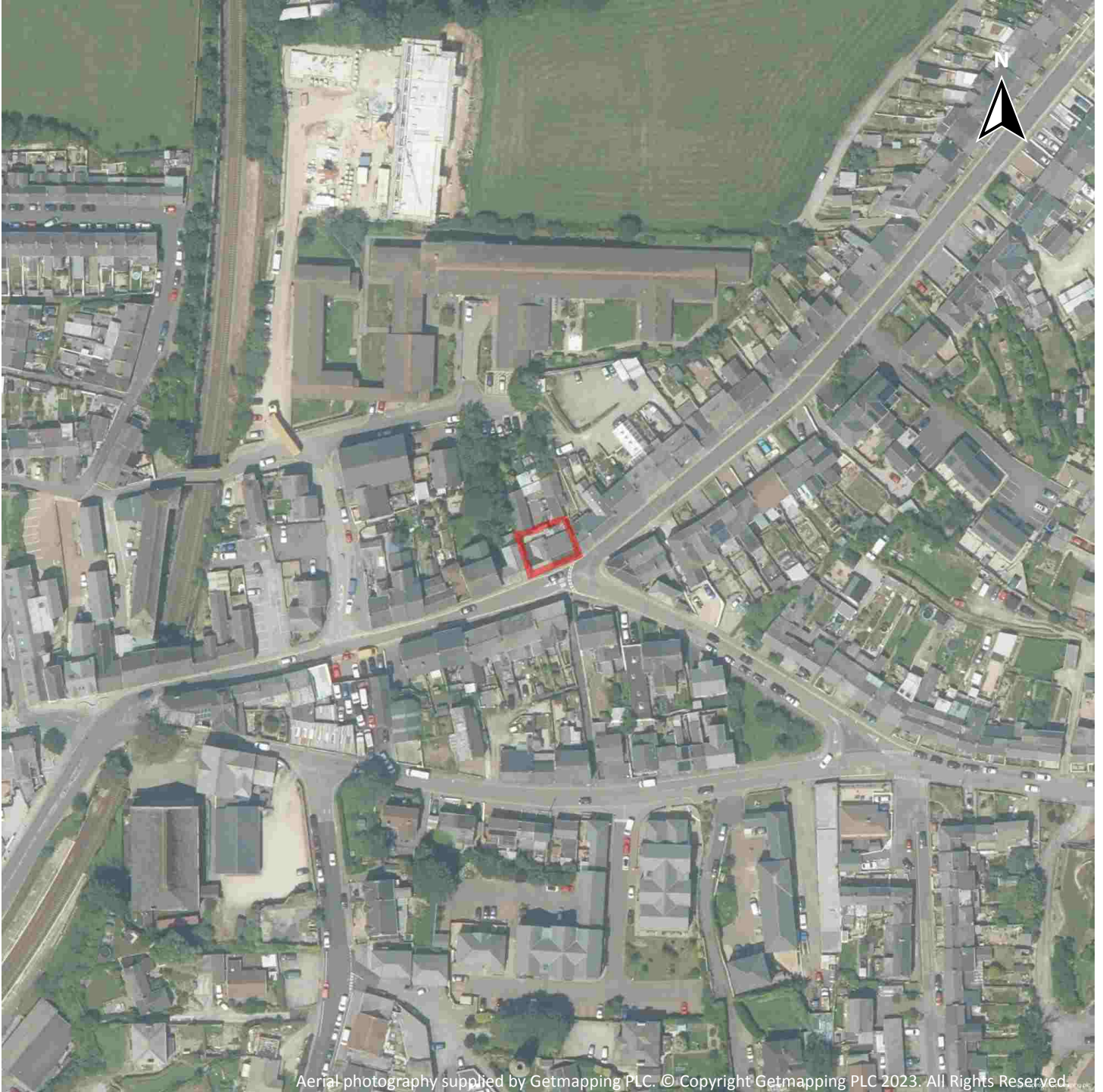
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Capture Date: 06/08/2022

Site Area: 0.02ha



Recent site history - 2019 aerial photograph

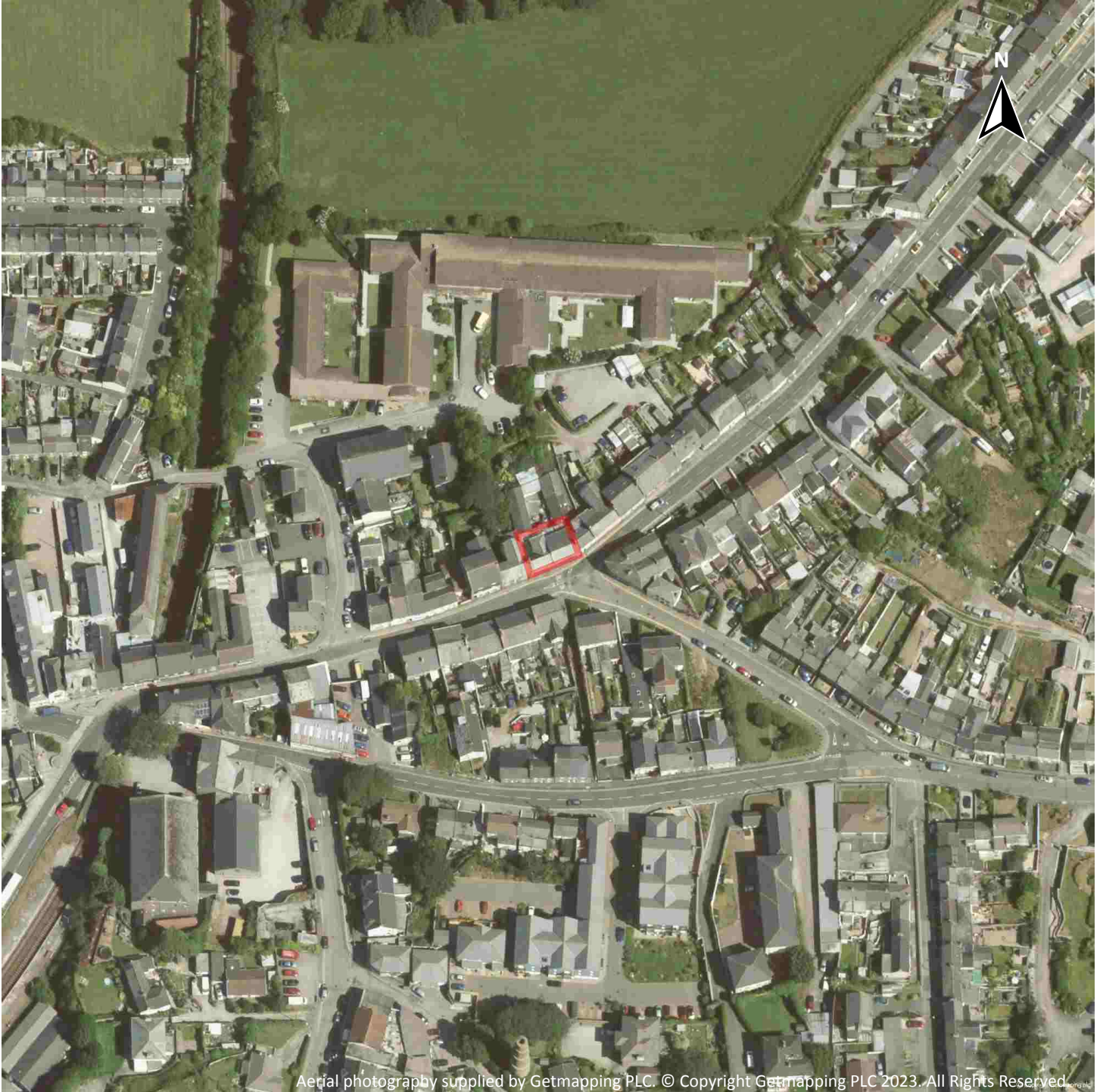


Capture Date: 27/06/2019

Site Area: 0.02ha



Recent site history - 2013 aerial photograph

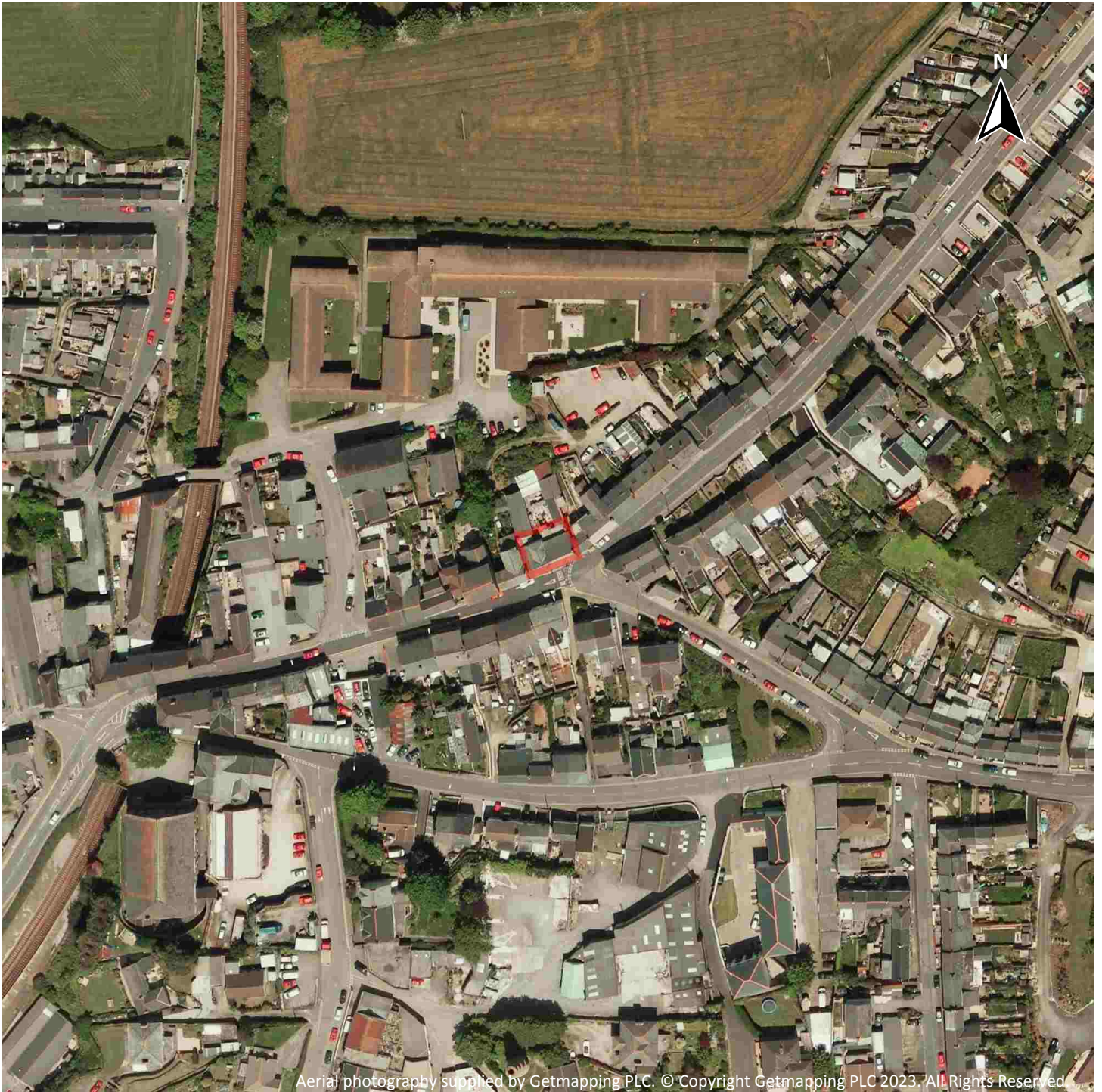


Capture Date: 10/07/2013

Site Area: 0.02ha



Recent site history - 2005 aerial photograph



Capture Date: 09/06/2005

Site Area: 0.02ha



Recent site history - 1999 aerial photograph



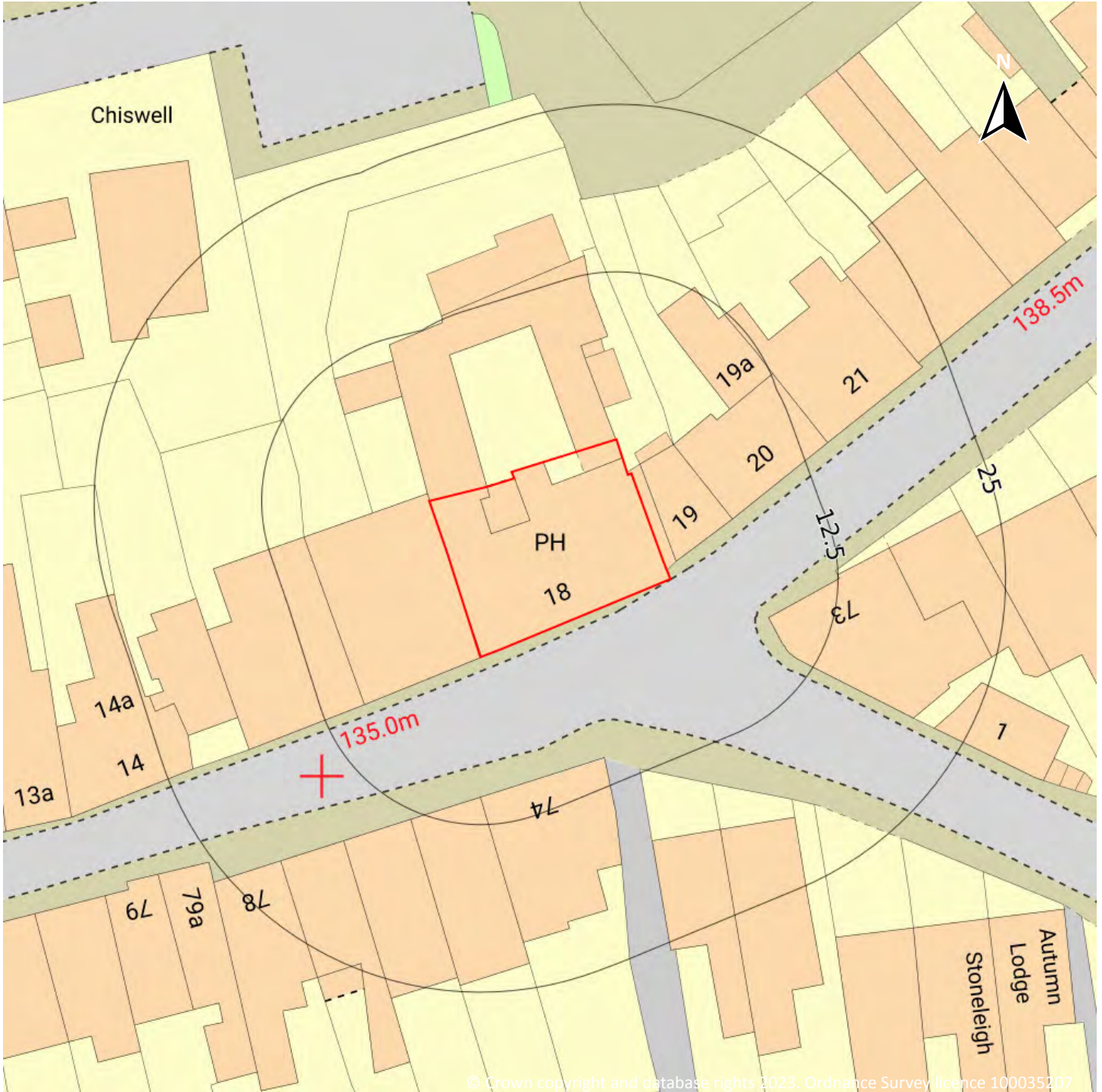
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Capture Date: 02/09/1999

Site Area: 0.02ha



OS MasterMap site plan

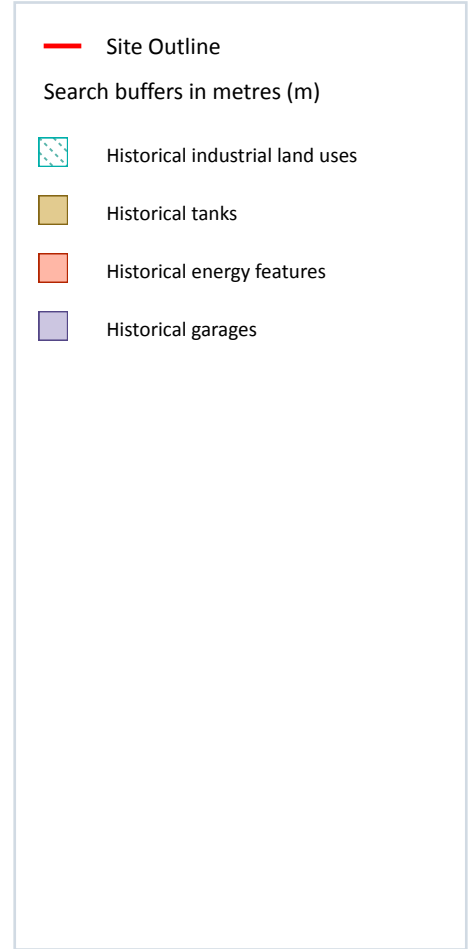
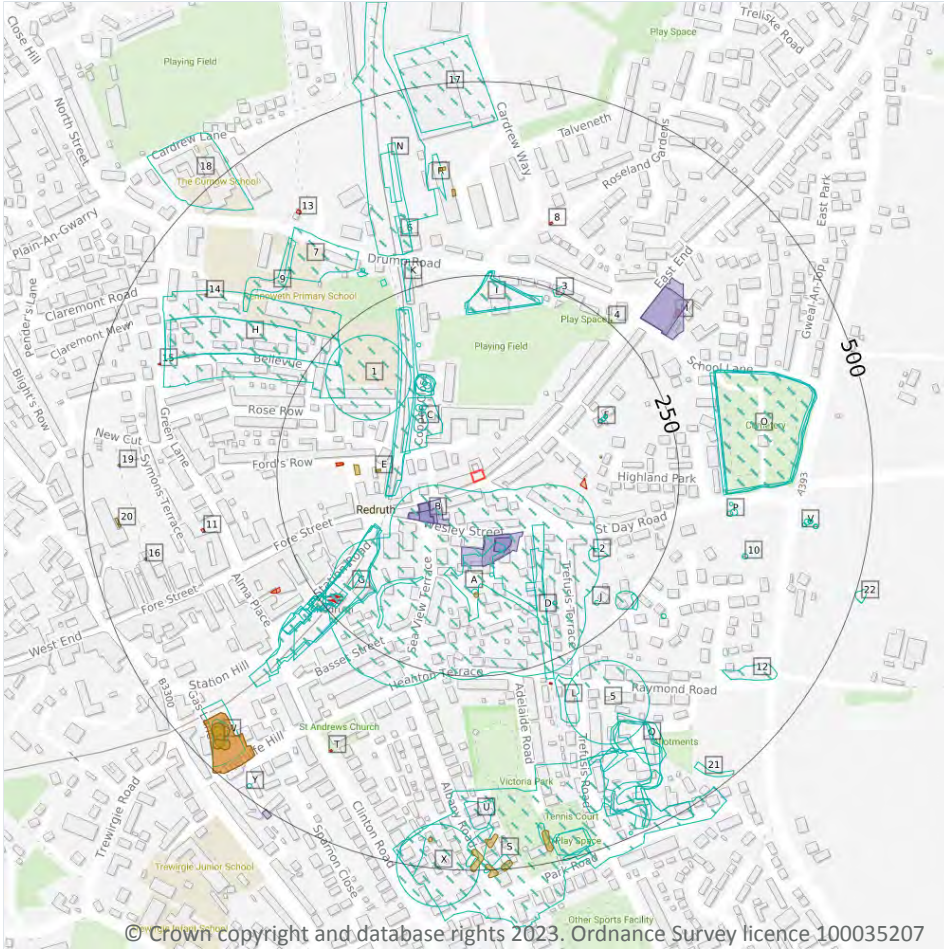


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Site Area: 0.02ha



1 Past land use



1.1 Historical industrial land uses

Records within 500m

103

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	12m S	Tin and Copper Mine	1879	29989

ID	Location	Land use	Dates present	Group ID
C	64m NW	Tin and Copper Mine	1879	29983
C	82m NW	Unspecified Heap	1879	36245
C	83m W	Railway Sidings	1906	48720
A	83m S	Railway Sidings	1879	57195
C	88m W	Railway Sidings	1958	46063
C	101m NW	Unspecified Disused Shaft	1974 - 1980	42816
C	103m NW	Unspecified Shaft	1906 - 1938	47564
D	109m SE	Railway Sidings	1906 - 1938	51207
C	112m NW	Unspecified Heap	1938	50660
C	114m NW	Unspecified Shaft	1958	38274
C	117m NW	Unspecified Heap	1906	45368
C	117m NW	Unspecified Heap	1879	50715
A	119m S	Unspecified Shaft	1879	27301
C	122m NW	Unspecified Disused Shaft	1974 - 1992	44387
1	126m NW	Tunnel	1879	32387
C	127m NW	Unspecified Shaft	1879	54417
G	134m SW	Railway Sidings	1906 - 1938	38337
G	134m SW	Railway Sidings	1879	56428
A	138m S	Chimney	1974 - 1992	42671
G	138m SW	Railway Sidings	1958	42103
G	139m SW	Unspecified Ground Workings	1879	20573
F	163m NE	Unspecified Old Shaft	1958	59516
2	164m SE	Unspecified Heap	1879	36243
F	167m NE	Unspecified Old Shaft	1938	46092
F	171m NE	Unspecified Old Shaft	1906	48684
F	171m NE	Unspecified Old Shaft	1879	58677
C	176m NW	Unspecified Shaft	1879	27295
D	182m SE	Unspecified Shaft	1879	27302



ID	Location	Land use	Dates present	Group ID
G	186m SW	Railway Building	1958	28487
H	189m NW	Nursery	1879	46108
I	201m N	Unspecified Works	1958	23422
I	203m N	Boat Works	1938	32000
I	203m N	Boot Works	1906	28376
J	213m SE	Unspecified Shaft	1879	27300
G	217m SW	Railway Station	1974 - 1992	49016
H	220m NW	Nursery	1906 - 1938	55958
G	224m SW	Railway Station	1906	49135
G	225m SW	Railway Station	1958	59171
J	227m SE	Unspecified Ground Workings	1879	58753
K	236m N	Boot and Shoe Manufactory	1879	19398
G	239m SW	Railway Station	1879	47543
J	242m SE	Unspecified Ground Workings	1906	54950
3	242m NE	Unspecified Old Quarry	1879	28744
G	244m SW	Railway Station	1938	43207
K	266m NW	Unspecified Old Shaft	1958	33449
G	269m SW	Goods Shed	1879	25212
H	269m NW	Nursery	1958	39340
L	271m S	Unspecified Quarry	1879	19784
G	272m SW	Railway Building	1906	28488
5	275m SE	Magazine	1879	31973
J	288m SE	Unspecified Shaft	1879	27303
K	289m NW	Unspecified Old Shaft	1906 - 1938	43050
K	294m NW	Unspecified Old Shaft	1879	48889
6	295m N	Railway Buildings	1958	38891
N	295m N	Railway Sidings	1958 - 1992	55844
7	302m NW	Nursery	1879	23597



ID	Location	Land use	Dates present	Group ID
O	303m E	Cemetery	1958	61106
O	307m E	Cemetery	1938	59213
O	309m E	Cemetery	1906	57289
O	309m E	Cemetery	1974 - 1992	61169
P	315m E	Unspecified Old Shafts	1958	40016
P	317m E	Unspecified Shaft	1879	27298
N	318m N	Railway Buildings	1974 - 1992	43531
P	319m E	Unspecified Old Shafts	1906 - 1938	47899
9	339m NW	Unspecified Ground Workings	1976	20569
10	346m E	Unspecified Old Shafts	1958	24495
Q	348m SE	Unspecified Disused Quarry	1974 - 1992	56229
R	351m N	Railway Buildings	1958	28346
Q	358m SE	Unspecified Quarry	1958	38480
Q	359m SE	Unspecified Quarry	1938	46617
Q	360m SE	Unspecified Quarry	1906	50817
N	361m N	Railway Building	1958	28469
S	373m S	Tin Stream Works	1879	30916
Q	384m S	Unspecified Quarry	1879	51258
Q	385m SE	Unspecified Heap	1938	36234
12	393m SE	Unspecified Pit	1879	34038
U	408m S	Unspecified Heap	1879	36233
V	413m E	Unspecified Old Shafts	1958	42644
V	415m E	Unspecified Old Shafts	1938	59112
V	420m E	Unspecified Shafts	1879	18547
V	420m E	Unspecified Old Shafts	1906	41779
V	428m E	Unspecified Shafts	1879	18548
V	428m E	Unspecified Old Shafts	1906	24491
W	429m SW	Unspecified Commercial/Industrial	1879	30834



ID	Location	Land use	Dates present	Group ID
Q	432m SE	Unspecified Ground Workings	1938	20570
17	441m N	Unspecified Warehouse	1974 - 1980	48428
18	441m NW	Nursery	1879	23594
X	443m S	Unspecified Shaft	1879	27415
U	445m S	Unspecified Tanks	1879	27917
W	446m SW	Unspecified Tanks	1958	41928
W	446m SW	Unspecified Tanks	1976	58100
S	447m S	Unspecified Tanks	1879	27919
W	448m SW	Unspecified Tanks	1879	40942
W	448m SW	Unspecified Tanks	1906	59126
21	458m SE	Unspecified Ground Workings	1974 - 1992	55360
X	458m S	Unspecified Heaps	1879	31663
S	466m S	Unspecified Heap	1906 - 1938	59326
S	466m S	Unspecified Pit	1958	34045
Y	484m SW	Unspecified Shaft	1879	27423
S	490m S	Engine House	1879	31300
Q	493m SE	Chimney	1879	25037
22	500m E	Unspecified Pit	1879	34037

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

21

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	116m W	Tank or Trough	1880	4566
A	142m S	Unspecified Tank	1880	3732
E	143m W	Tank or Trough	1880	4562
F	151m E	Unspecified Tank	1908	3737
4	253m NE	Tank or Trough	1880	4565
R	354m N	Unspecified Tank	1968 - 1982	5978
R	389m N	Unspecified Tank	1968 - 1970	5651
14	409m NW	Unspecified Tank	1880	3689
16	432m W	Unspecified Tank	1908	3648
W	438m SW	Gas Works	1880 - 1908	5573
W	448m SW	Gasholder	1880 - 1908	6738
W	450m SW	Gasholders	1966 - 1967	5853
19	452m W	Unspecified Tank	1989	3691
U	454m S	Tanks	1880	5059
20	456m W	Unspecified Tank	1967 - 1989	6412
S	457m S	Tanks	1880	5060
W	459m SW	Gasholder	1880 - 1908	6260
X	461m S	Unspecified Tank	1880	3645
U	473m S	Tanks	1880	5054
U	489m S	Tanks	1880	5061
U	492m S	Tanks	1880	5058

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

20

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



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

ID	Location	Land use	Dates present	Group ID
F	123m E	Electricity Substation	1968 - 1994	2607
E	164m W	Electricity Substation	1968 - 1994	2444
E	165m W	Electricity Substation	1970	1380
L	276m S	Electricity Substation	1994	2289
L	276m S	Electricity Substation	1989	2505
G	285m SW	Electricity Substation	1967	1835
G	290m SW	Electricity Substation	1979 - 1989	1313
M	316m NE	Electricity Substation	1986 - 1994	2207
M	322m NE	Electricity Substation	1968	2067
M	322m NE	Electricity Substation	1970	2610
8	328m N	Gas Governor	1989 - 1994	2629
11	351m W	Electricity Substation	1979 - 1989	2465
T	390m SW	Electricity Substation	1989	2039
T	390m SW	Electricity Substation	1994	1953
13	400m NW	Electricity Substation	1982 - 1997	1839
15	424m W	Electricity Substation	1979 - 1989	2603
W	438m SW	Gas Works	1880 - 1908	1978
W	448m SW	Gasholder	1880 - 1908	2091
W	450m SW	Gasholders	1966 - 1967	1862
W	459m SW	Gasholder	1880 - 1908	2071

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

11

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

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

ID	Location	Land use	Dates present	Group ID
B	48m SW	Garage	1989	562
B	59m SW	Garage	1968	612
B	65m SW	Garage	1970 - 1986	869
B	68m SW	Garage	1994	477
A	70m S	Garage	1989	430
A	71m S	Garage	1968	570
A	77m S	Garage	1986	455
A	77m S	Garage	1970 - 1994	836
M	283m NE	Garage	1968	633
M	283m NE	Garage	1970	543
Y	499m SW	Garage	1966 - 1967	722

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

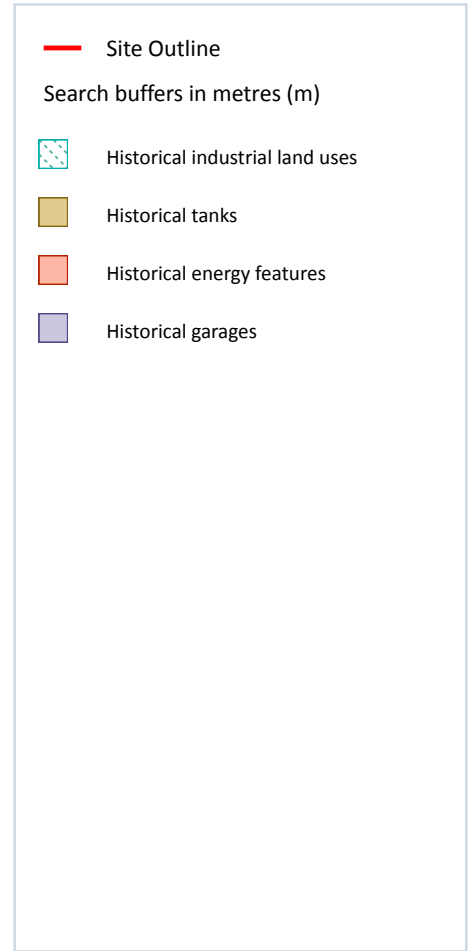
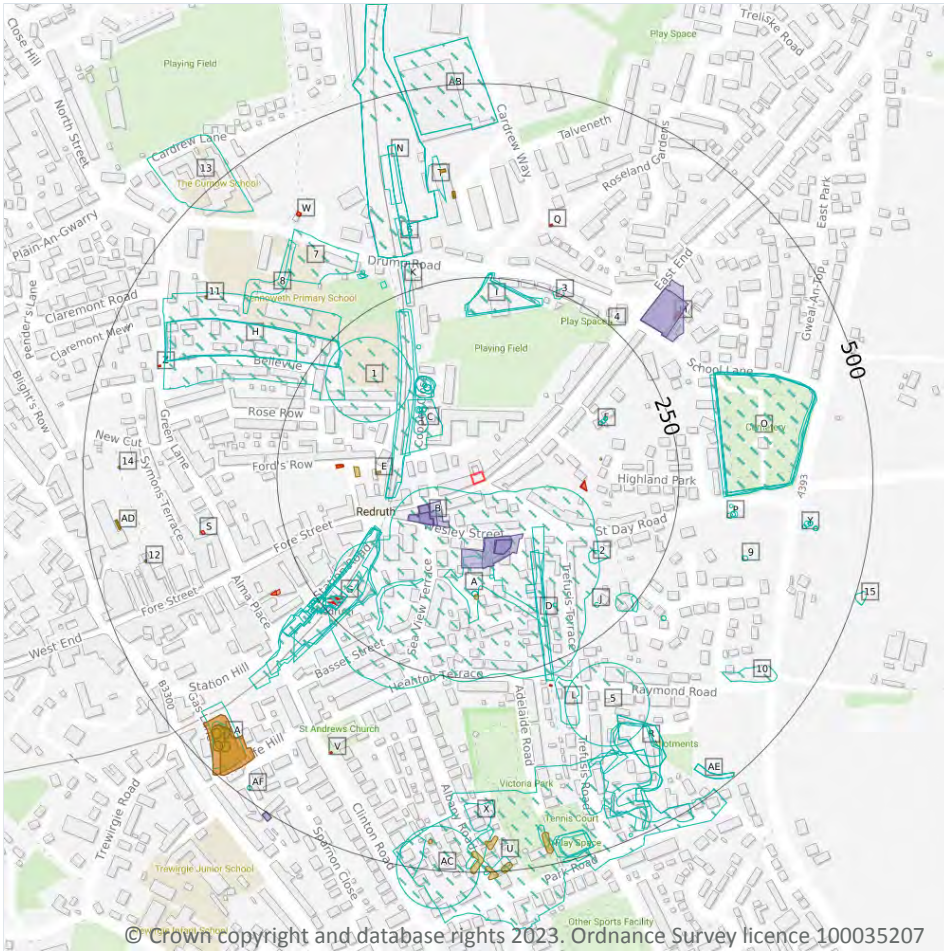
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Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

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

129

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 ungrouped 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	12m S	Tin and Copper Mine	1879	29989
C	64m NW	Tin and Copper Mine	1879	29983
C	82m NW	Unspecified Heap	1879	36245

ID	Location	Land Use	Date	Group ID
C	83m W	Railway Sidings	1906	48720
A	83m S	Railway Sidings	1879	57195
C	88m W	Railway Sidings	1958	46063
C	101m NW	Unspecified Disused Shaft	1980	42816
C	101m NW	Unspecified Disused Shaft	1974	42816
C	103m NW	Unspecified Shaft	1906	47564
C	104m NW	Unspecified Shaft	1938	47564
D	109m SE	Railway Sidings	1906	51207
D	111m SE	Railway Sidings	1938	51207
C	112m NW	Unspecified Heap	1938	50660
C	114m NW	Unspecified Shaft	1958	38274
C	117m NW	Unspecified Heap	1906	45368
C	117m NW	Unspecified Heap	1879	50715
A	119m S	Unspecified Shaft	1879	27301
C	122m NW	Unspecified Disused Shaft	1992	44387
C	122m NW	Unspecified Disused Shaft	1980	44387
C	122m NW	Unspecified Disused Shaft	1974	44387
1	126m NW	Tunnel	1879	32387
C	127m NW	Unspecified Shaft	1879	54417
G	134m SW	Railway Sidings	1938	38337
G	134m SW	Railway Sidings	1879	56428
G	135m SW	Railway Sidings	1906	38337
A	138m S	Chimney	1992	42671
A	138m S	Chimney	1980	42671
A	138m S	Chimney	1974	42671
G	138m SW	Railway Sidings	1958	42103
G	139m SW	Unspecified Ground Workings	1879	20573
F	163m NE	Unspecified Old Shaft	1958	59516



ID	Location	Land Use	Date	Group ID
2	164m SE	Unspecified Heap	1879	36243
F	167m NE	Unspecified Old Shaft	1938	46092
F	171m NE	Unspecified Old Shaft	1906	48684
F	171m NE	Unspecified Old Shaft	1879	58677
C	176m NW	Unspecified Shaft	1879	27295
D	182m SE	Unspecified Shaft	1879	27302
G	186m SW	Railway Building	1958	28487
H	189m NW	Nursery	1879	46108
I	201m N	Unspecified Works	1958	23422
I	203m N	Boat Works	1938	32000
I	203m N	Boot Works	1906	28376
J	213m SE	Unspecified Shaft	1879	27300
G	217m SW	Railway Station	1992	49016
G	217m SW	Railway Station	1980	49016
G	217m SW	Railway Station	1974	49016
H	220m NW	Nursery	1906	55958
H	222m NW	Nursery	1938	55958
G	224m SW	Railway Station	1906	49135
G	225m SW	Railway Station	1958	59171
J	227m SE	Unspecified Ground Workings	1879	58753
K	236m N	Boot and Shoe Manufactory	1879	19398
G	239m SW	Railway Station	1879	47543
J	242m SE	Unspecified Ground Workings	1906	54950
3	242m NE	Unspecified Old Quarry	1879	28744
G	244m SW	Railway Station	1938	43207
K	266m NW	Unspecified Old Shaft	1958	33449
G	269m SW	Goods Shed	1879	25212
H	269m NW	Nursery	1958	39340



ID	Location	Land Use	Date	Group ID
L	271m S	Unspecified Quarry	1879	19784
G	272m SW	Railway Building	1906	28488
5	275m SE	Magazine	1879	31973
J	288m SE	Unspecified Shaft	1879	27303
K	289m NW	Unspecified Old Shaft	1906	43050
K	289m NW	Unspecified Old Shaft	1938	43050
K	294m NW	Unspecified Old Shaft	1879	48889
6	295m N	Railway Buildings	1958	38891
N	295m N	Railway Sidings	1992	55844
N	295m N	Railway Sidings	1958	55844
N	295m N	Railway Sidings	1980	55844
N	295m N	Railway Sidings	1974	55844
7	302m NW	Nursery	1879	23597
O	303m E	Cemetery	1958	61106
O	307m E	Cemetery	1938	59213
O	309m E	Cemetery	1906	57289
O	309m E	Cemetery	1992	61169
O	309m E	Cemetery	1980	61169
O	309m E	Cemetery	1974	61169
P	315m E	Unspecified Old Shafts	1958	40016
P	317m E	Unspecified Shaft	1879	27298
N	318m N	Railway Buildings	1992	43531
N	318m N	Railway Buildings	1980	43531
N	318m N	Railway Buildings	1974	43531
P	319m E	Unspecified Old Shafts	1938	47899
P	320m E	Unspecified Old Shafts	1906	47899
8	339m NW	Unspecified Ground Workings	1976	20569
9	346m E	Unspecified Old Shafts	1958	24495



ID	Location	Land Use	Date	Group ID
R	348m SE	Unspecified Disused Quarry	1992	56229
R	348m SE	Unspecified Disused Quarry	1980	56229
R	348m SE	Unspecified Disused Quarry	1974	56229
T	351m N	Railway Buildings	1958	28346
R	358m SE	Unspecified Quarry	1958	38480
R	359m SE	Unspecified Quarry	1938	46617
R	360m SE	Unspecified Quarry	1906	50817
N	361m N	Railway Building	1958	28469
U	373m S	Tin Stream Works	1879	30916
R	384m S	Unspecified Quarry	1879	51258
R	385m SE	Unspecified Heap	1938	36234
10	393m SE	Unspecified Pit	1879	34038
X	408m S	Unspecified Heap	1879	36233
Y	413m E	Unspecified Old Shafts	1958	42644
Y	415m E	Unspecified Old Shafts	1938	59112
Y	420m E	Unspecified Old Shafts	1906	41779
Y	420m E	Unspecified Shafts	1879	18547
Y	428m E	Unspecified Old Shafts	1906	24491
Y	428m E	Unspecified Shafts	1879	18548
AA	429m SW	Unspecified Commercial/Industrial	1879	30834
R	432m SE	Unspecified Ground Workings	1938	20570
AB	441m N	Unspecified Warehouse	1980	48428
AB	441m N	Unspecified Warehouse	1974	48428
13	441m NW	Nursery	1879	23594
AC	443m S	Unspecified Shaft	1879	27415
X	445m S	Unspecified Tanks	1879	27917
AA	446m SW	Unspecified Tanks	1976	58100
AA	446m SW	Unspecified Tanks	1958	41928



ID	Location	Land Use	Date	Group ID
U	447m S	Unspecified Tanks	1879	27919
AA	448m SW	Unspecified Tanks	1906	59126
AA	448m SW	Unspecified Tanks	1879	40942
AE	458m SE	Unspecified Ground Workings	1992	55360
AE	458m SE	Unspecified Ground Workings	1980	55360
AE	458m SE	Unspecified Ground Workings	1974	55360
AC	458m S	Unspecified Heaps	1879	31663
U	466m S	Unspecified Heap	1938	59326
U	466m S	Unspecified Pit	1958	34045
U	469m S	Unspecified Heap	1906	59326
AF	484m SW	Unspecified Shaft	1879	27423
U	490m S	Engine House	1879	31300
R	493m SE	Chimney	1879	25037
15	500m E	Unspecified Pit	1879	34037

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

30

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	116m W	Tank or Trough	1880	4566
A	142m S	Unspecified Tank	1880	3732
E	143m W	Tank or Trough	1880	4562
F	151m E	Unspecified Tank	1908	3737
4	253m NE	Tank or Trough	1880	4565
T	354m N	Unspecified Tank	1968	5978



ID	Location	Land Use	Date	Group ID
T	354m N	Unspecified Tank	1970	5978
T	354m N	Unspecified Tank	1982	5978
T	389m N	Unspecified Tank	1968	5651
T	389m N	Unspecified Tank	1970	5651
11	409m NW	Unspecified Tank	1880	3689
12	432m W	Unspecified Tank	1908	3648
AA	438m SW	Gas Works	1908	5573
AA	440m SW	Gas Works	1880	5573
AA	448m SW	Gasholder	1880	6738
AA	450m SW	Gasholders	1966	5853
AA	451m SW	Gasholders	1967	5853
14	452m W	Unspecified Tank	1989	3691
X	454m S	Tanks	1880	5059
AA	455m SW	Gasholder	1908	6738
AD	456m W	Unspecified Tank	1979	6412
AD	456m W	Unspecified Tank	1989	6412
AD	457m W	Unspecified Tank	1967	6412
U	457m S	Tanks	1880	5060
AA	459m SW	Gasholder	1880	6260
AC	461m S	Unspecified Tank	1880	3645
AA	466m SW	Gasholder	1908	6260
X	473m S	Tanks	1880	5054
X	489m S	Tanks	1880	5061
X	492m S	Tanks	1880	5058

This data is sourced from Ordnance Survey / Groundsure.



2.3 Historical energy features

Records within 500m

40

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

Features are displayed on the Past land use - un-grouped map on [page 23 >](#)

ID	Location	Land Use	Date	Group ID
F	123m E	Electricity Substation	1986	2607
F	123m E	Electricity Substation	1989	2607
F	124m E	Electricity Substation	1994	2607
F	124m E	Electricity Substation	1970	2607
F	125m E	Electricity Substation	1968	2607
E	164m W	Electricity Substation	1968	2444
E	165m W	Electricity Substation	1986	2444
E	165m W	Electricity Substation	1989	2444
E	165m W	Electricity Substation	1970	1380
E	165m W	Electricity Substation	1994	2444
L	276m S	Electricity Substation	1994	2289
L	276m S	Electricity Substation	1989	2505
G	285m SW	Electricity Substation	1967	1835
G	290m SW	Electricity Substation	1979	1313
G	290m SW	Electricity Substation	1989	1313
M	316m NE	Electricity Substation	1994	2207
M	317m NE	Electricity Substation	1986	2207
M	317m NE	Electricity Substation	1989	2207
M	322m NE	Electricity Substation	1968	2067
M	322m NE	Electricity Substation	1970	2610
Q	328m N	Gas Governor	1989	2629
Q	328m N	Gas Governor	1994	2629
S	351m W	Electricity Substation	1979	2465



ID	Location	Land Use	Date	Group ID
S	351m W	Electricity Substation	1989	2465
V	390m SW	Electricity Substation	1989	2039
V	390m SW	Electricity Substation	1994	1953
W	400m NW	Electricity Substation	1982	1839
W	400m NW	Electricity Substation	1988	1839
W	400m NW	Electricity Substation	1997	1839
W	400m NW	Electricity Substation	1988	1839
Z	424m W	Electricity Substation	1979	2603
Z	424m W	Electricity Substation	1989	2603
AA	438m SW	Gas Works	1908	1978
AA	440m SW	Gas Works	1880	1978
AA	448m SW	Gasholder	1880	2091
AA	450m SW	Gasholders	1966	1862
AA	451m SW	Gasholders	1967	1862
AA	455m SW	Gasholder	1908	2091
AA	459m SW	Gasholder	1880	2071
AA	466m SW	Gasholder	1908	2071

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0
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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

14

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

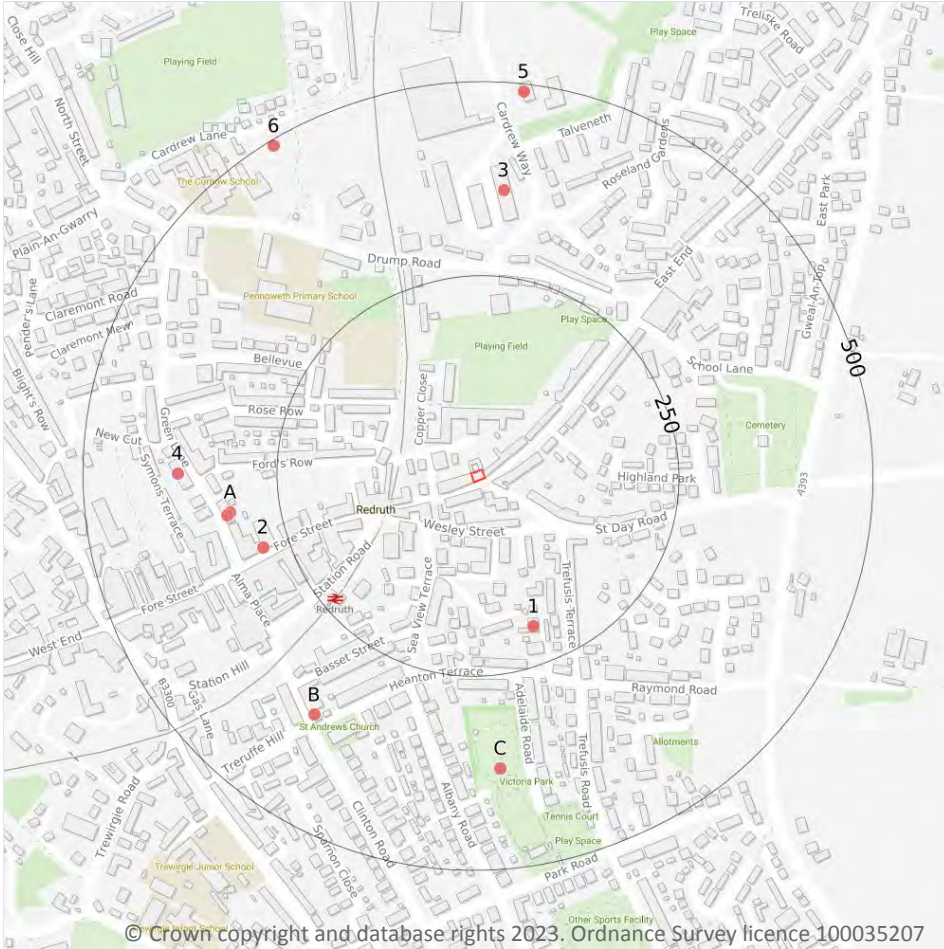
Features are displayed on the Past land use - un-grouped map on [page 23 >](#)

ID	Location	Land Use	Date	Group ID
B	48m SW	Garage	1989	562
B	59m SW	Garage	1968	612
B	65m SW	Garage	1970	869
B	68m SW	Garage	1994	477
B	68m SW	Garage	1986	869
A	70m S	Garage	1989	430
A	71m S	Garage	1968	570
A	77m S	Garage	1986	455
A	77m S	Garage	1994	836
A	78m S	Garage	1970	836
M	283m NE	Garage	1968	633
M	283m NE	Garage	1970	543
AF	499m SW	Garage	1966	722
AF	499m SW	Garage	1967	722

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**0**

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

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

3.5 Historical waste sites

Records within 500m**0**

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

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

3.6 Licensed waste sites

Records within 500m**0**

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

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

3.7 Waste exemptions

Records within 500m**14**

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 33 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
1	201m S	PEDNANDREA BUNGALOW, RAYMOND ROAD, REDRUTH, TR15 2HE	WEX329967	Disposing of waste exemption	Not on a farm	Burning waste in the open

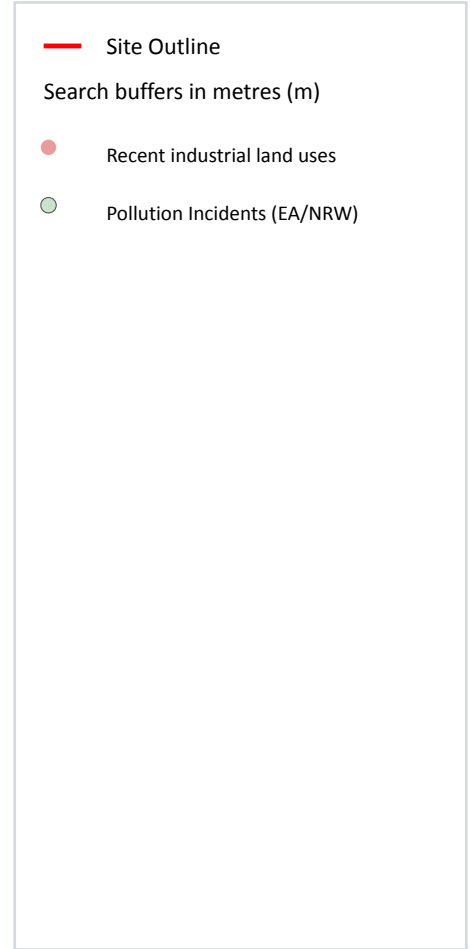
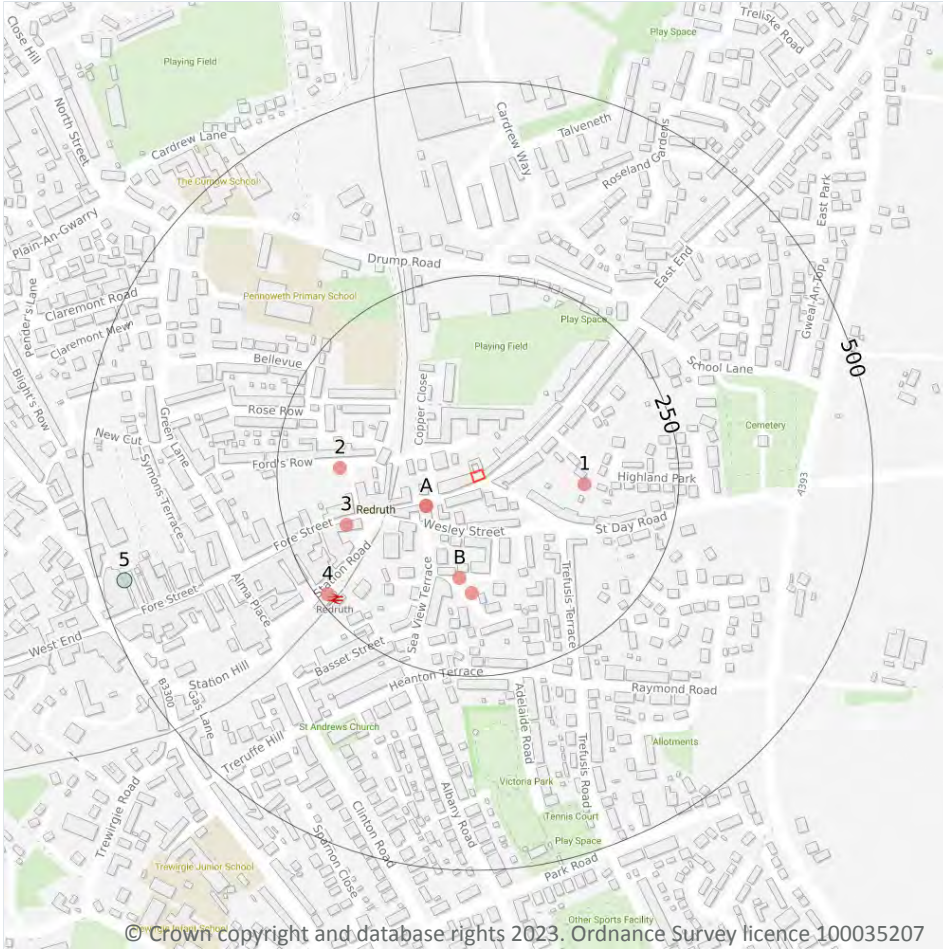


ID	Location	Site	Reference	Category	Sub-Category	Description
2	285m W	34, FORE STREET, REDRUTH, TR15 2AE	WEX360128	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	315m W	12 Green Lane REDRUTH Cornwall TR15 1JT	EPR/LE5047CV /A001	Treating waste exemption	Non- Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
A	319m W	12, GREEN LANE, REDRUTH, TR15 1JT	WEX165888	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
3	361m N	UNIT A3, CARDREW BUSINESS PARK, REDRUTH, TR15 1SQ	WEX257028	Using waste exemption	Not on a farm	Burning of waste as a fuel in a small appliance
B	364m SW	12-12A, BOND STREET, REDRUTH, TR15 2QB	WEX162215	Treating waste exemption	Not on a Farm	Sorting and de-naturing of controlled drugs for disposal
B	364m SW	12-12A, BOND STREET, REDRUTH, TR15 2QB	WEX297147	Treating waste exemption	Not on a Farm	Sorting and de-naturing of controlled drugs for disposal
C	371m S	-	WEX133019	Treating waste exemption	Not on a farm	Aerobic composting and associated prior treatment
C	371m S	-	WEX273800	Treating waste exemption	Not on a farm	Aerobic composting and associated prior treatment
C	371m S	-	WEX273800	Using waste exemption	Not on a farm	Use of mulch
C	371m S	-	WEX273800	Using waste exemption	Not on a farm	Spreading of plant matter to confer benefit
4	379m W	Green Lane Pharmacy, 11 Green Lane, Redruth, TR15 1JY	WEX128486	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
5	489m N	-	WEX296072	Treating waste exemption	Not on a Farm	Sorting and de-naturing of controlled drugs for disposal
6	492m NW	railway line adjacent East to site. site positioned off Lower Cardew lane with residential houses opposite. Drump Lane running to the south of the site.	WEX267263	Using waste exemption	Not on a farm	Use of waste in construction

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



4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m

8

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 36](#) >

ID	Location	Company	Address	Activity	Category
A	69m SW	Autotech	85, Higher Fore Street, Redruth, Cornwall, TR15 2AR	Vehicle Repair, Testing and Servicing	Repair and Servicing
A	69m SW	Clean Automotive Repairs	84, Higher Fore Street, Redruth, Cornwall, TR15 2AR	Vehicle Repair, Testing and Servicing	Repair and Servicing

ID	Location	Company	Address	Activity	Category
B	125m S	Electricity Sub Station	Cornwall, TR15	Electrical Features	Infrastructure and Facilities
1	129m E	Electricity Sub Station	Cornwall, TR15	Electrical Features	Infrastructure and Facilities
B	143m S	Chimney	Cornwall, TR15	Chimneys	Industrial Features
2	169m W	Electricity Sub Station	Cornwall, TR15	Electrical Features	Infrastructure and Facilities
3	173m W	Cornwall House Clearances	52, Fore Street, Redruth, Cornwall, TR15 2AF	Clearance and Salvage Dealers	Recycling Services
4	237m SW	Redruth Rail Station	Cornwall, TR15	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure

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
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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
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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
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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
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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

0

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

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

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

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

4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

1

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

Features are displayed on the Current industrial land use map on [page 36 >](#)

ID	Location	Details	
5	467m W	Incident Date: 02/09/2003 Incident Identification: 186772 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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



4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m

0

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

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

5 Hydrogeology - Superficial aquifer

5.1 Superficial aquifer

Records within 500m

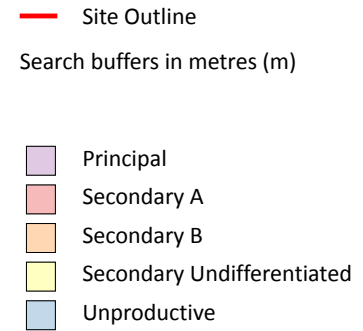
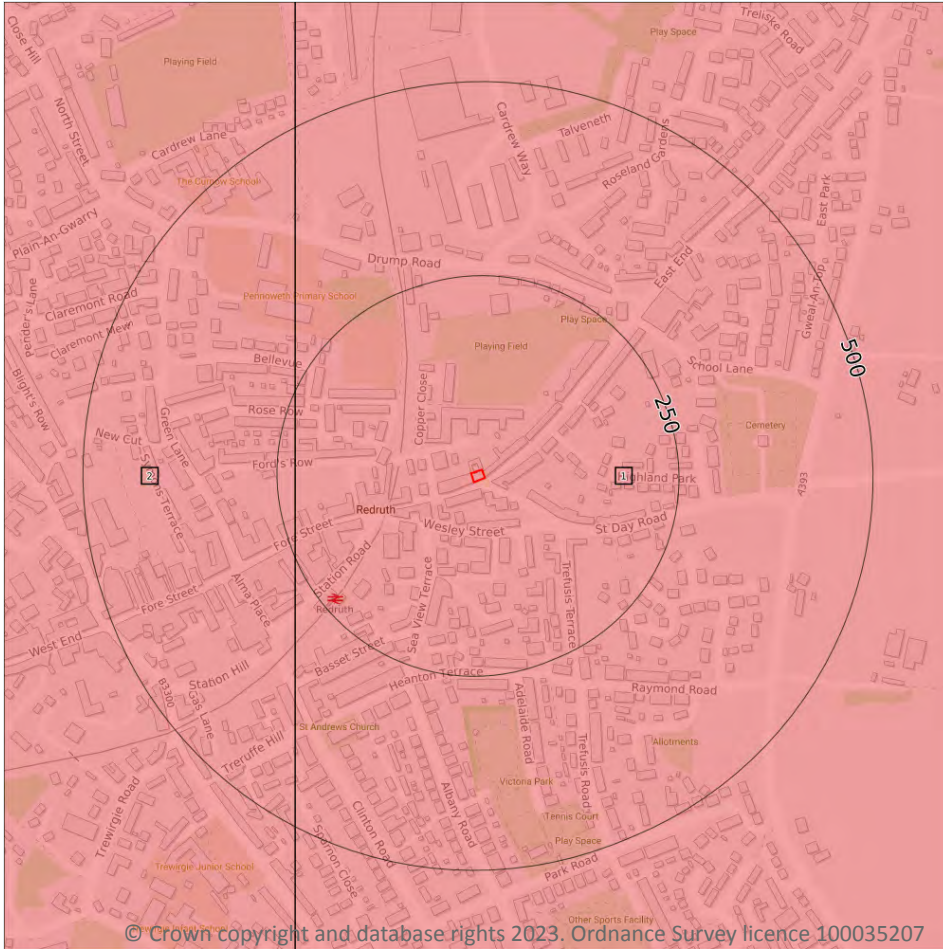
0

Aquifer status of groundwater held within superficial geology.

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



Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 43](#) >

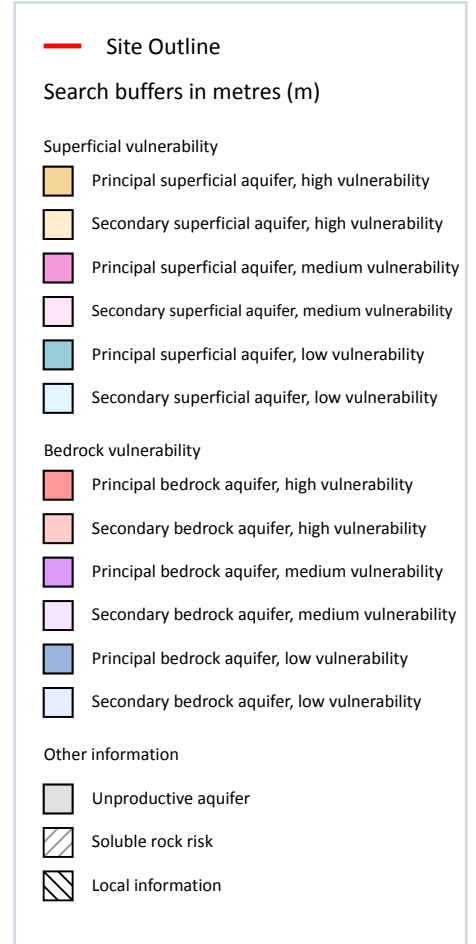
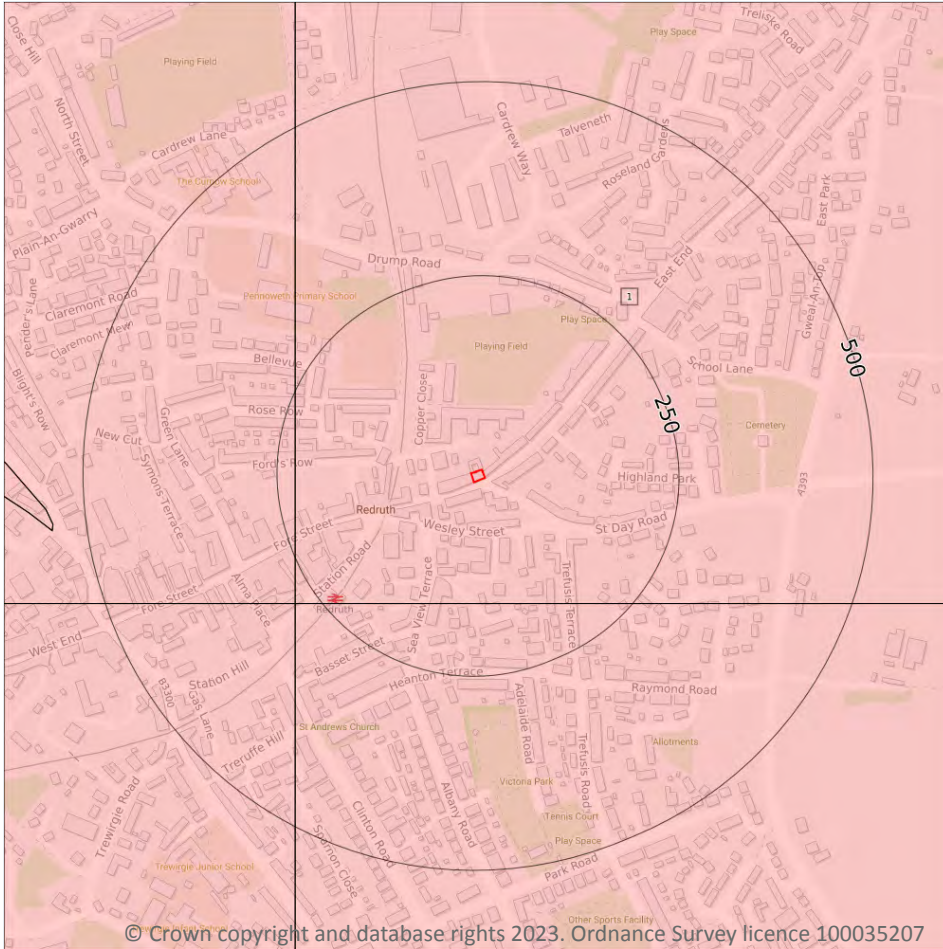
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	227m W	Secondary 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: >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

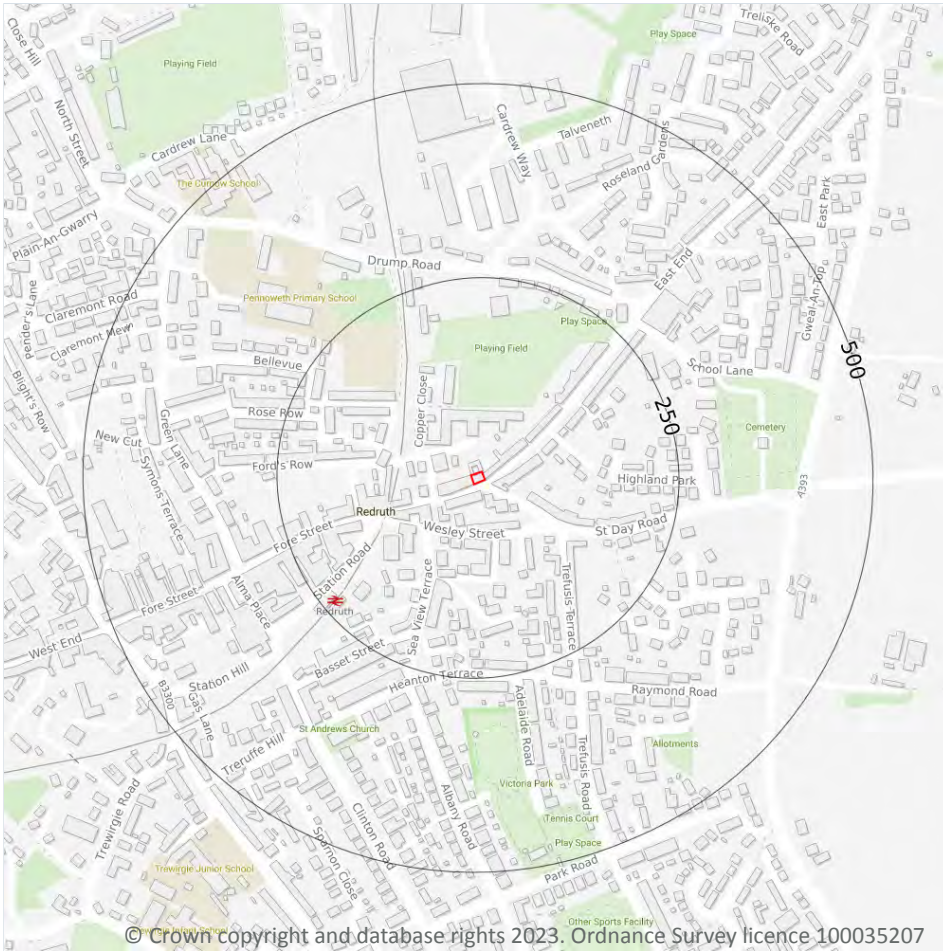
0

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

25

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	
-	686m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: BREWERY, REDRUTH - BOREHOLE B Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169540 Northing: 42180	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	686m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: "BREWERY, REDRUTH - BOREHOLE B" Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169540 Northing: 42180	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	702m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: BREWERY, REDRUTH - BOREHOLE C Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169530 Northing: 42260	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	702m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: "BREWERY, REDRUTH - BOREHOLE C" Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169530 Northing: 42260	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	729m W	Status: Historical Licence No: 15/49/026/G/113 Details: Process water Direct Source: Ground Water - Fresh Point: REDRUTH BREWERY, REDRUTH - EAST CARN BRAE ADIT Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169500 Northing: 42100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/08/1997 Version End Date: -



ID	Location	Details	
-	729m W	Status: Historical Licence No: 15/49/026/G/113 Details: Process water Direct Source: Ground Water - Fresh Point: "REDRUTH BREWERY, REDRUTH - EAST CARN BRAE ADIT" Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169500 Northing: 42100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/08/1997 Version End Date: -
-	747m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: BREWERY, REDRUTH - BOREHOLE D Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169480 Northing: 42140	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	747m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: "BREWERY, REDRUTH - BOREHOLE D" Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169480 Northing: 42140	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	837m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: BREWERY, REDRUTH - BOREHOLE A Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169390 Northing: 42210	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -
-	837m W	Status: Historical Licence No: 15/49/026/G/213 Details: Process water Direct Source: Ground Water - Fresh Point: "BREWERY, REDRUTH - BOREHOLE A" Data Type: Point Name: Redruth Brewery (1742) Ltd Easting: 169390 Northing: 42210	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/03/1998 Expiry Date: - Issue No: 100 Version Start Date: 17/02/2000 Version End Date: -



ID	Location	Details	
-	1577m E	Status: Historical Licence No: 15/48/022/G/127 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "GERDAWOLD FARM, CAMBORNE - REDRUTH" Data Type: Point Name: Peters Easting: 171800 Northing: 41900	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: 01/12/1976 Version End Date: -
-	1577m E	Status: Historical Licence No: 15/48/022/G/127 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: GERDAWOLD FARM, CAMBORNE - REDRUTH Data Type: Point Name: Peters Easting: 171800 Northing: 41900	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: 01/12/1976 Version End Date: -
-	1591m E	Status: Historical Licence No: 15/48/022/G/071 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "TREFULA FARM, REDRUTH - BOREHOLE" Data Type: Point Name: Waters Easting: 171800 Northing: 42500	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: 17/11/1978 Version End Date: -
-	1591m E	Status: Historical Licence No: 15/48/022/G/071 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: TREFULA FARM, REDRUTH - BOREHOLE Data Type: Point Name: Waters Easting: 171800 Northing: 42500	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: 17/11/1978 Version End Date: -
-	1744m NW	Status: Historical Licence No: 15/49/026/G/005 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: DOWNS FARM - WELL A Data Type: Point Name: Richards Easting: 168900 Northing: 43300	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	
-	1780m SE	Status: Historical Licence No: 15/48/022/G/011 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "NORTH CARNMARTH, REDRUTH - WELL" Data Type: Point Name: Cox Easting: 171500 Northing: 40900	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: -
-	1780m SE	Status: Historical Licence No: 15/48/022/G/011 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: NORTH CARNMARTH, REDRUTH - WELL Data Type: Point Name: Cox Easting: 171500 Northing: 40900	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: -
-	1787m E	Status: Historical Licence No: 15/48/022/G/036 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "TREFULA HOUSE, ST DAY - WELL" Data Type: Point Name: Medi-Lease Limited Easting: 172000 Northing: 42500	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: 17/04/1986 Version End Date: -
-	1787m E	Status: Historical Licence No: 15/48/022/G/036 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: TREFULA HOUSE, ST DAY - WELL Data Type: Point Name: Medi-Lease Limited Easting: 172000 Northing: 42500	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: 17/04/1986 Version End Date: -
-	1924m NE	Status: Historical Licence No: 15/48/022/G/191 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: "SCORRIER ESTATE, CAMBORNE-REDRUTH - BOREHOLE" Data Type: Point Name: Williams Easting: 171800 Northing: 43300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/08/1985 Expiry Date: - Issue No: 100 Version Start Date: 19/08/1985 Version End Date: -



ID	Location	Details	
-	1924m NE	Status: Historical Licence No: 15/48/022/G/191 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "SCORRIER ESTATE, CAMBORNE-REDRUTH - BOREHOLE" Data Type: Point Name: Williams Easting: 171800 Northing: 43300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/08/1985 Expiry Date: - Issue No: 100 Version Start Date: 19/08/1985 Version End Date: -
-	1924m NE	Status: Historical Licence No: 15/48/022/G/191 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: "SCORRIER ESTATE, CAMBORNE-REDRUTH - BOREHOLE" Data Type: Point Name: Williams Easting: 171800 Northing: 43300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/08/1985 Expiry Date: - Issue No: 100 Version Start Date: 19/08/1985 Version End Date: -
-	1924m NE	Status: Historical Licence No: 15/48/022/G/191 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: SCORRIER ESTATE, CAMBORNE-REDRUTH - BOREHOLE Data Type: Point Name: Williams Easting: 171800 Northing: 43300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/08/1985 Expiry Date: - Issue No: 100 Version Start Date: 19/08/1985 Version End Date: -
-	1924m NE	Status: Historical Licence No: 15/48/022/G/191 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: SCORRIER ESTATE, CAMBORNE-REDRUTH - BOREHOLE Data Type: Point Name: Williams Easting: 171800 Northing: 43300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/08/1985 Expiry Date: - Issue No: 100 Version Start Date: 19/08/1985 Version End Date: -

ID	Location	Details	
-	1924m NE	Status: Historical Licence No: 15/48/022/G/191 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: SCORRIER ESTATE, CAMBORNE-REDRUTH - BOREHOLE Data Type: Point Name: Williams Easting: 171800 Northing: 43300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 19/08/1985 Expiry Date: - Issue No: 100 Version Start Date: 19/08/1985 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

2

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	
-	1791m SW	Status: Active Licence No: 15/49/026/S/049 Details: Process Water Direct Source: Surface Water - Fresh Point: TESCO LTD., REDRUTH - THE BASSETT ADIT Data Type: Point Name: Tescan Ltd Easting: 169160 Northing: 40720	Annual Volume (m ³): 56818 Max Daily Volume (m ³): 284.1 Original Application No: NPS/WR/004405 Original Start Date: 31/03/1974 Expiry Date: - Issue No: 101 Version Start Date: 16/07/2010 Version End Date: -
-	1791m SW	Status: Historical Licence No: 15/49/026/S/049 Details: Process water Direct Source: Surface Water - Fresh Point: "TESCAN LTD., REDRUTH - THE BASSETT ADIT" Data Type: Point Name: Tescan Ltd Easting: 169160 Northing: 40720	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 31/03/1974 Expiry Date: - Issue No: 100 Version Start Date: 07/04/2000 Version End Date: -

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



5.8 Potable abstractions

Records within 2000m	0
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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
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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)

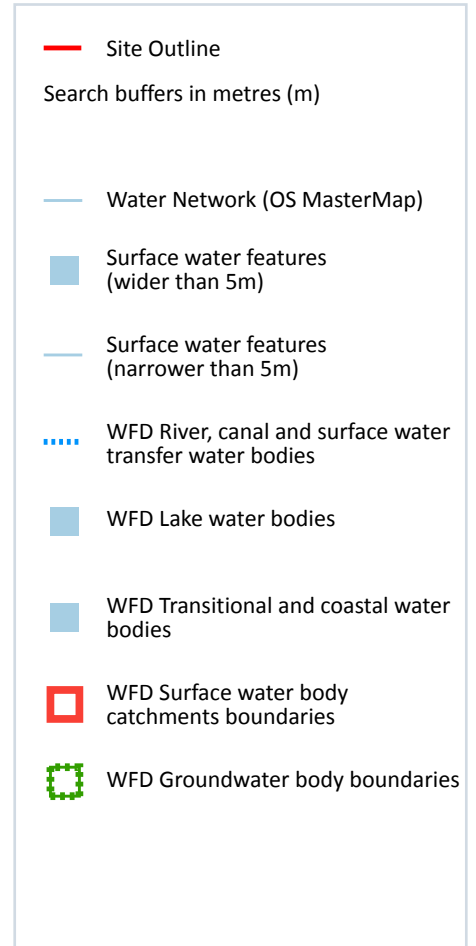
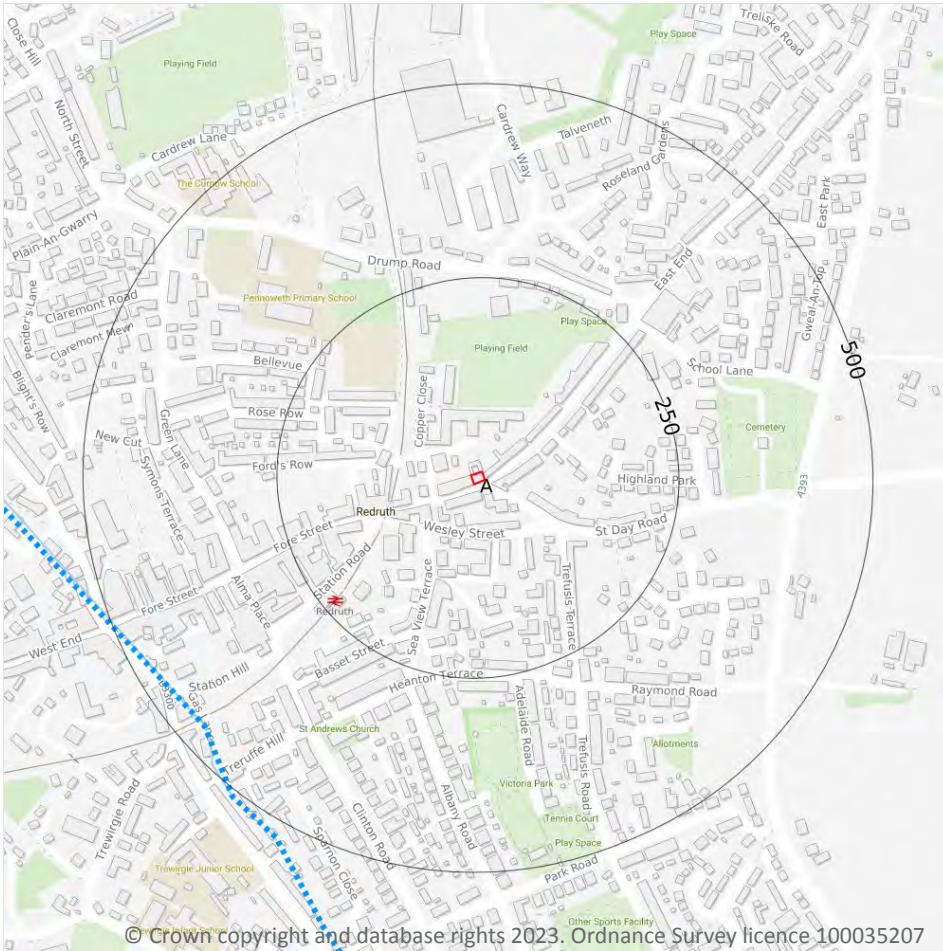
Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only 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 55 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Portreath Stream	GB108049000620	Hayle Red River and Northern Streams	Cornwall West and the Fal

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

6.4 WFD Surface water bodies

Records identified	1
---------------------------	----------

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 55 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
2	466m SW	River	Portreath Stream	GB108049000620 ↗	Moderate	Fail	Moderate	2019

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 55 >](#)

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

Negligible

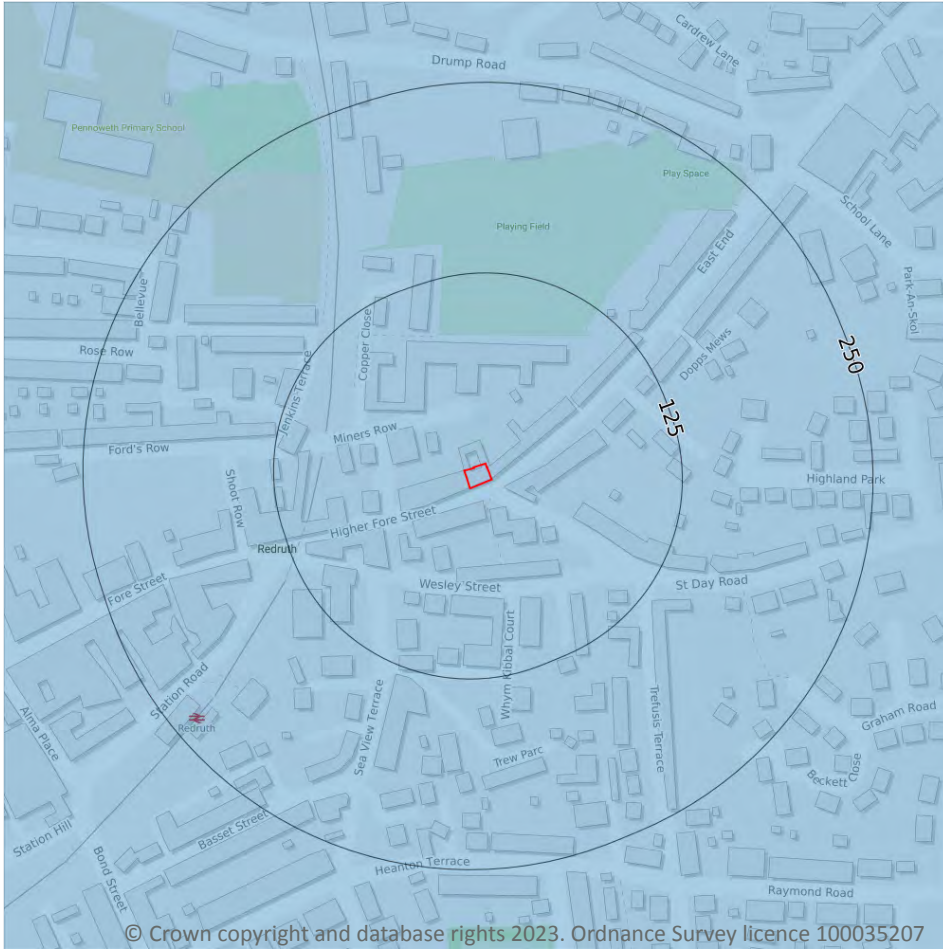
Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year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

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



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 62 >](#)

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

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

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

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



10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

0

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

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

10.7 Designated Ancient Woodland

Records within 2000m

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

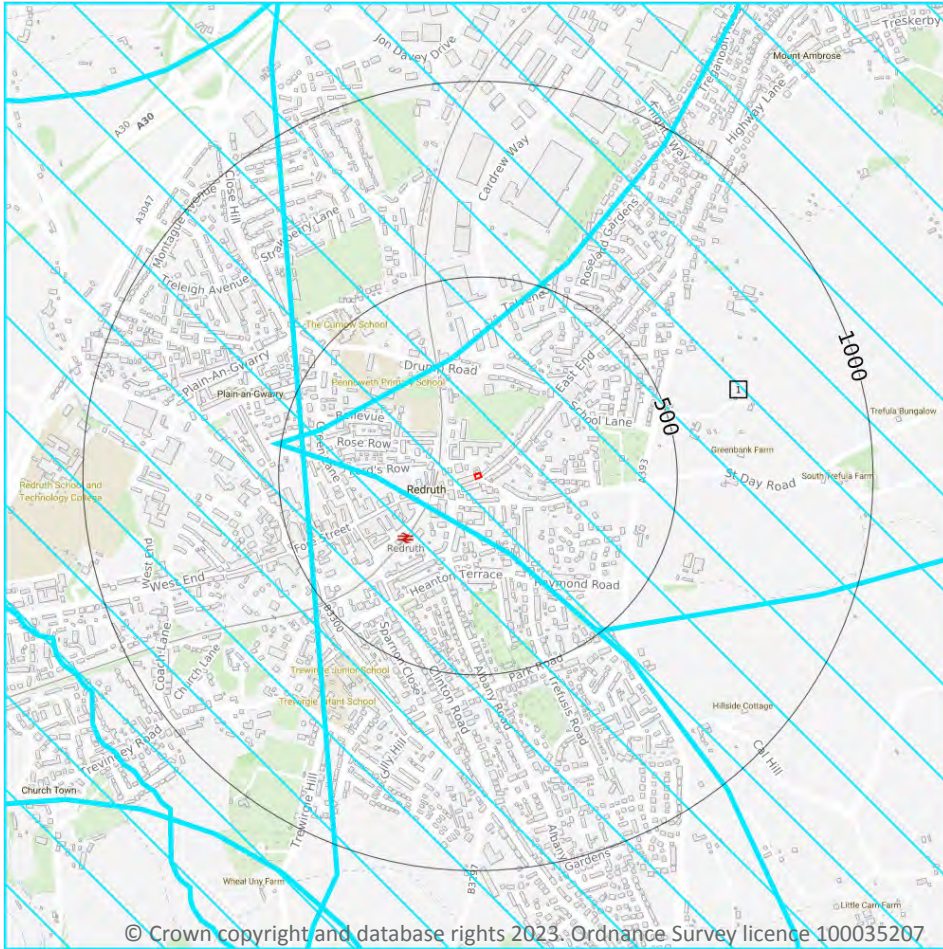
1

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

Location	Name	Type	NVZ ID	Status
682m E	Truro, Tresillian and Falmouth	Eutrophic Water	5	Existing

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

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 67](#) >

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - 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>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t)</p> <p>Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion</p> <p>Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Notes: Strategic solutions for recreational impacts are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.</p>

This data is sourced from Natural England.

10.18 SSSI Units

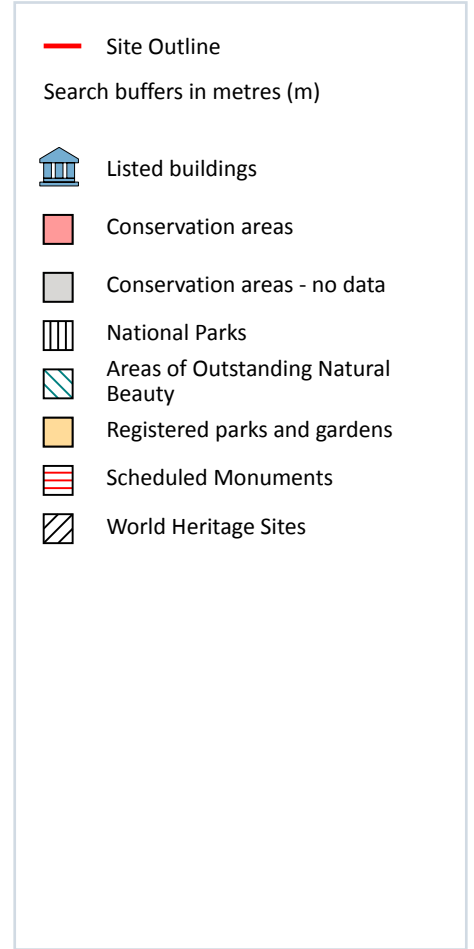
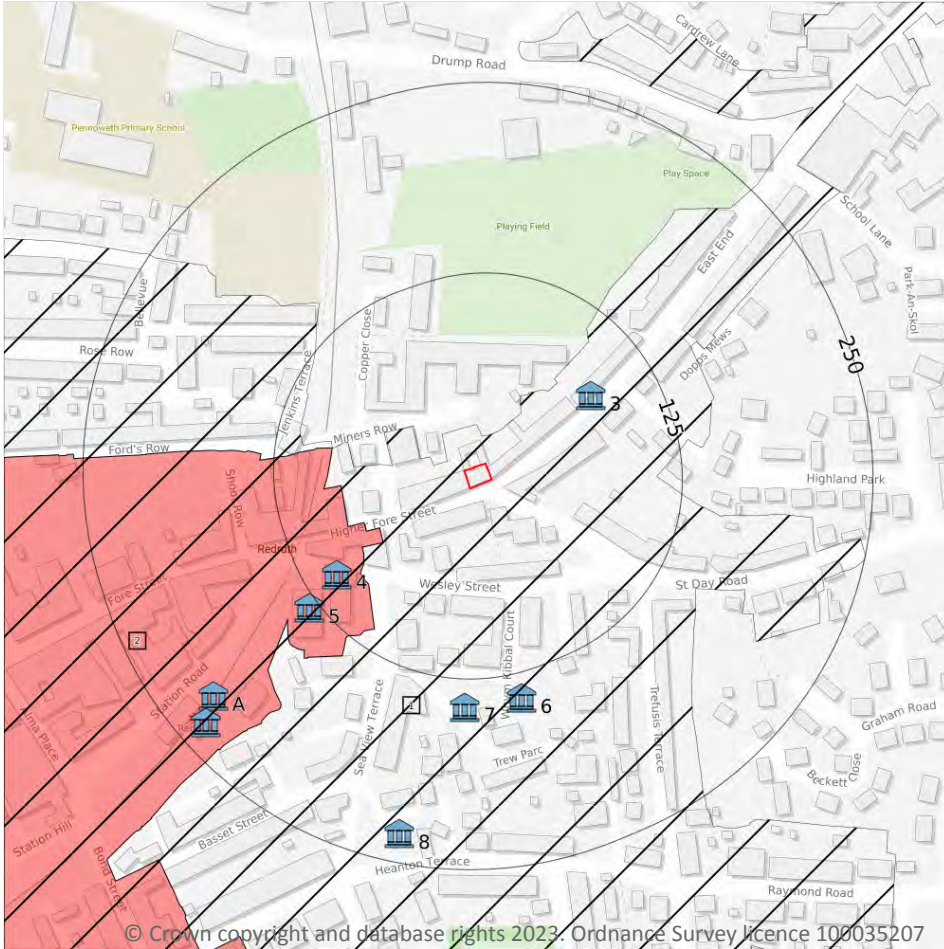
Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

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



11 Visual and cultural designations



11.1 World Heritage Sites

Records within 250m

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 69](#) >

ID	Location	Name	Data Source
1	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

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

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

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

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

11.4 Listed Buildings

Records within 250m

8

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 69 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
3	82m NE	Milepost Attached To Front Wall Of No. 32	II	1142590	12/09/1989
4	104m SW	Wesley Centenary Memorial Hall	II	1328190	12/09/1989
5	131m SW	Redruth Methodist Church	II	1142541	12/09/1989
6	141m S	The Count House	II	1161942	12/09/1989
7	143m S	Pedn-An-Drea Chimney Stack	II	1142563	03/05/1978
A	217m SW	Railway Footbridge, Redruth Station	II	1142569	28/09/1987



ID	Location	Name	Grade	Reference Number	Listed date
8	231m S	Pedn-An-Drea House	II	1328203	14/01/1974
A	231m SW	Waiting Room On Down Platform	II	1162068	28/09/1987

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 69](#) >

ID	Location	Name	District	Date of designation
2	65m SW	Redruth	Cornwall	27/04/1983

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

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

11.7 Registered Parks and Gardens

Records within 250m

0

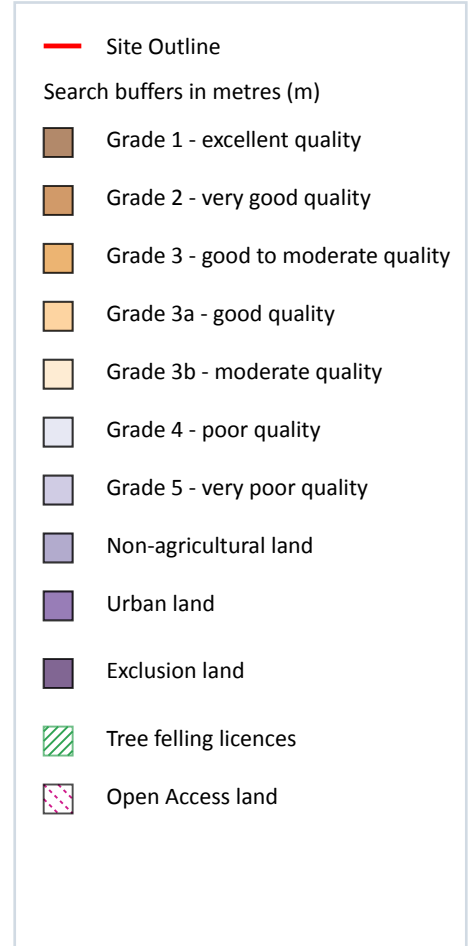
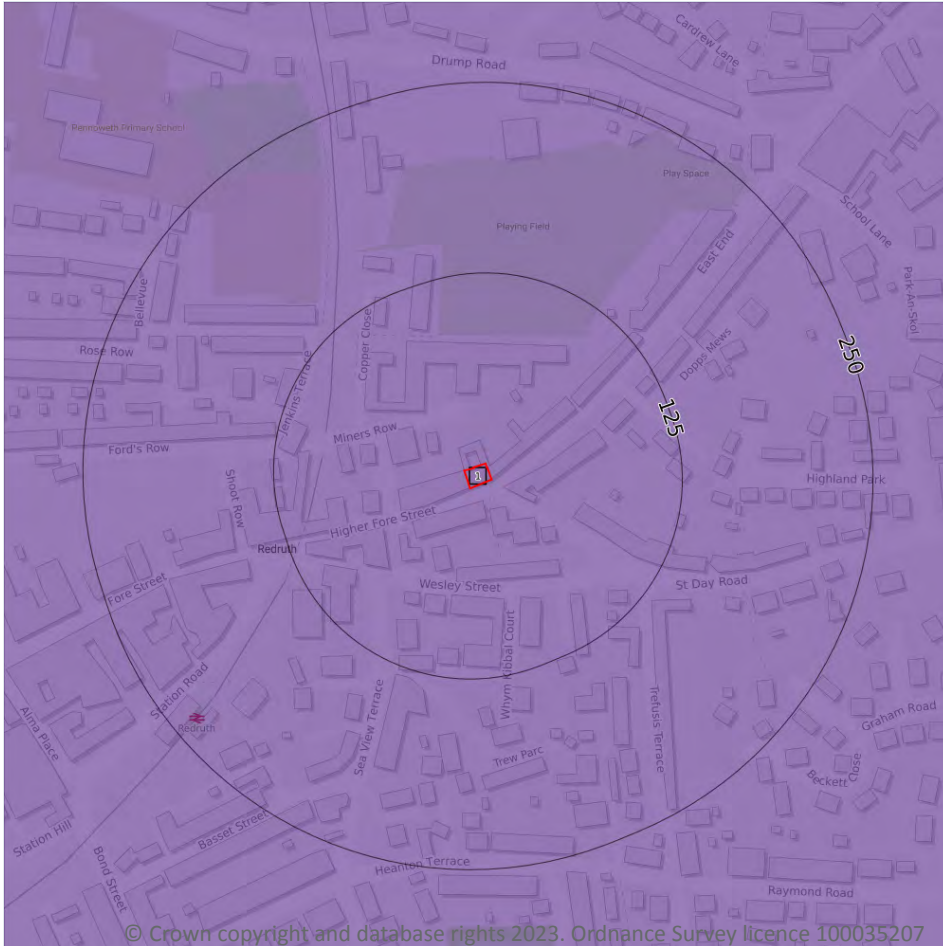
Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.



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



12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m

1

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 73](#) >

ID	Location	Classification	Description
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1	On site	Urban	-
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This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

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

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0
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Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0
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Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0
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Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0
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Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
 Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 76 >](#)

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

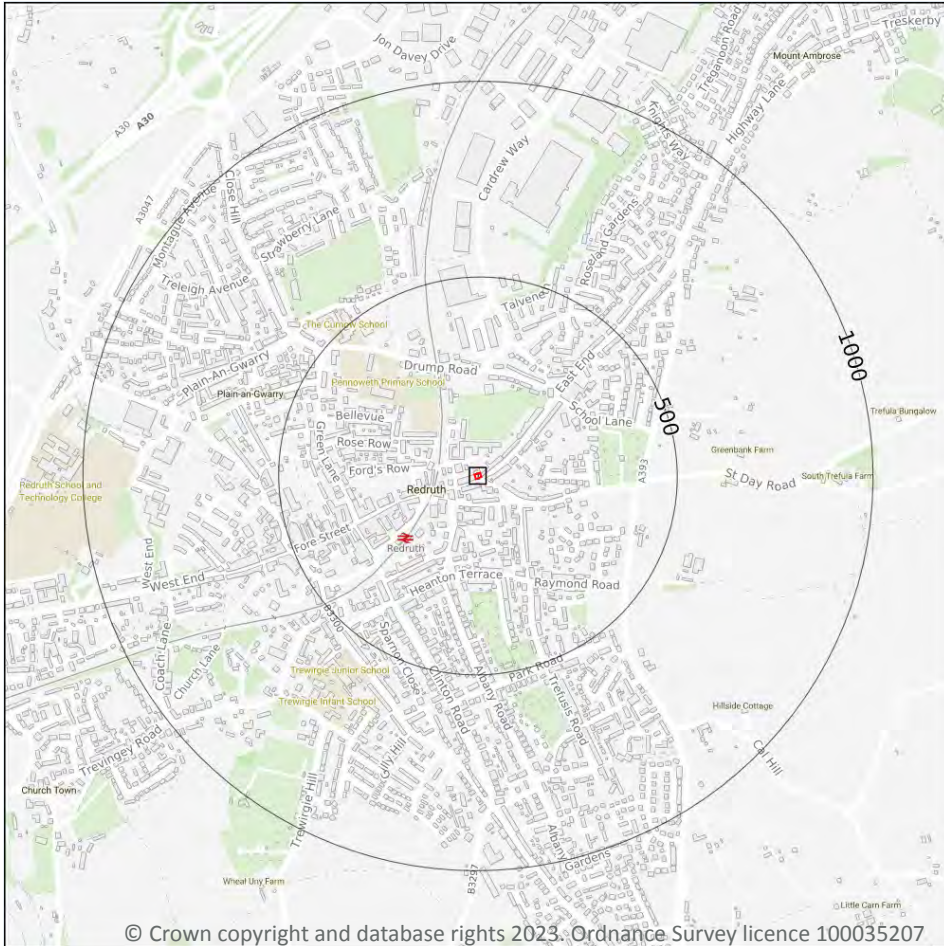
0

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)

Geographical 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 80](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW352_falmouth_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

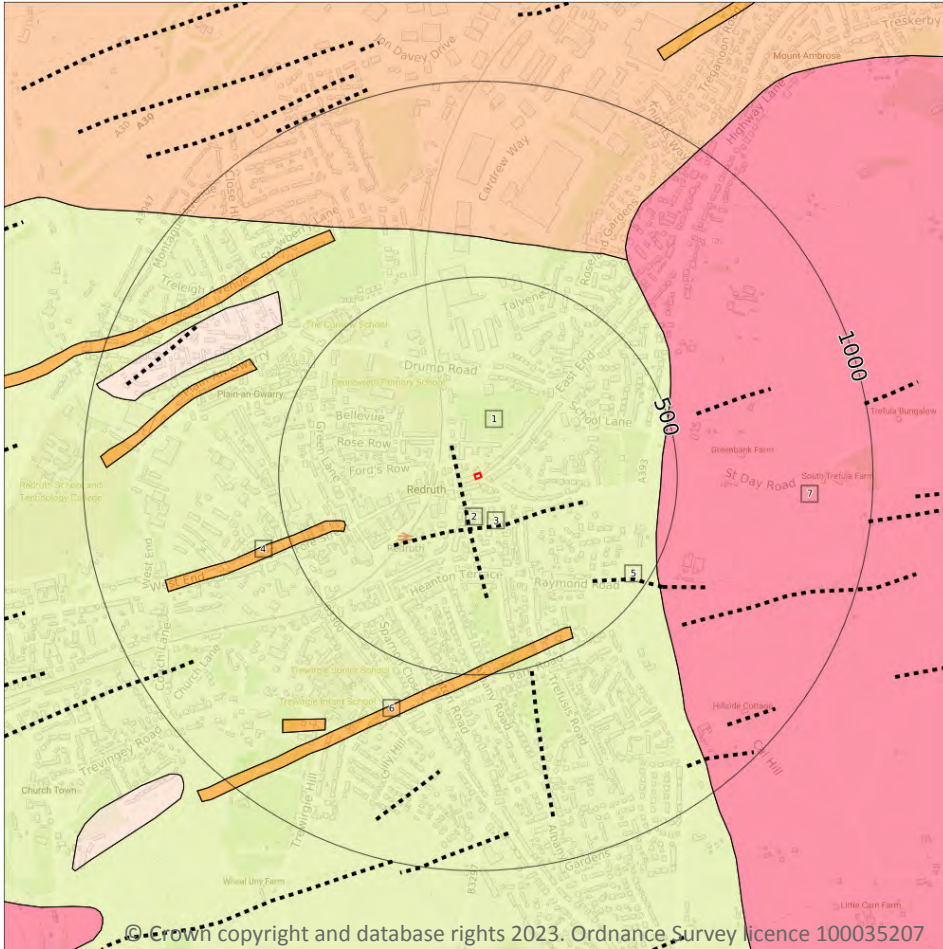
0

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

4

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 83](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	MRSL-HSSL	MYLOR SLATE FORMATION - HORNFELED SLATE AND HORNFELED SILTSTONE	FRASNIAN
4	353m W	UDP-FELS	UNNAMED DYKE, PERMIAN - FELSITE	-
6	439m SE	UDP-FELS	UNNAMED DYKE, PERMIAN - FELSITE	-

ID	Location	LEX Code	Description	Rock age
7	458m E	CAIN-GN	CARNMENELLIS INTRUSION - GRANITE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	3
----------------------------	----------

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 83](#) >

ID	Location	Category	Description
2	41m W	FAULT	Fault, inferred, displacement unknown
3	125m S	MINERAL_VEIN	Mineral vein, inferred
5	387m SE	MINERAL_VEIN	Mineral vein, inferred

This data is sourced from the British Geological Survey.

16 Boreholes

16.1 BGS Boreholes

Records within 250m

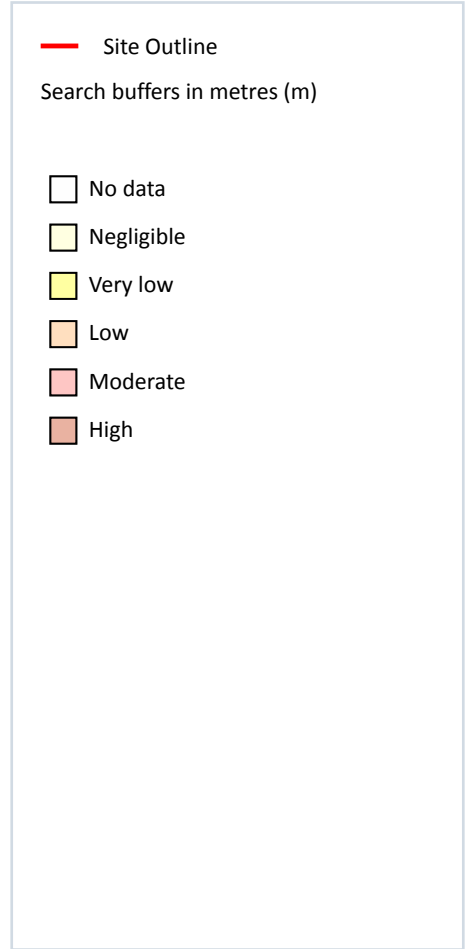
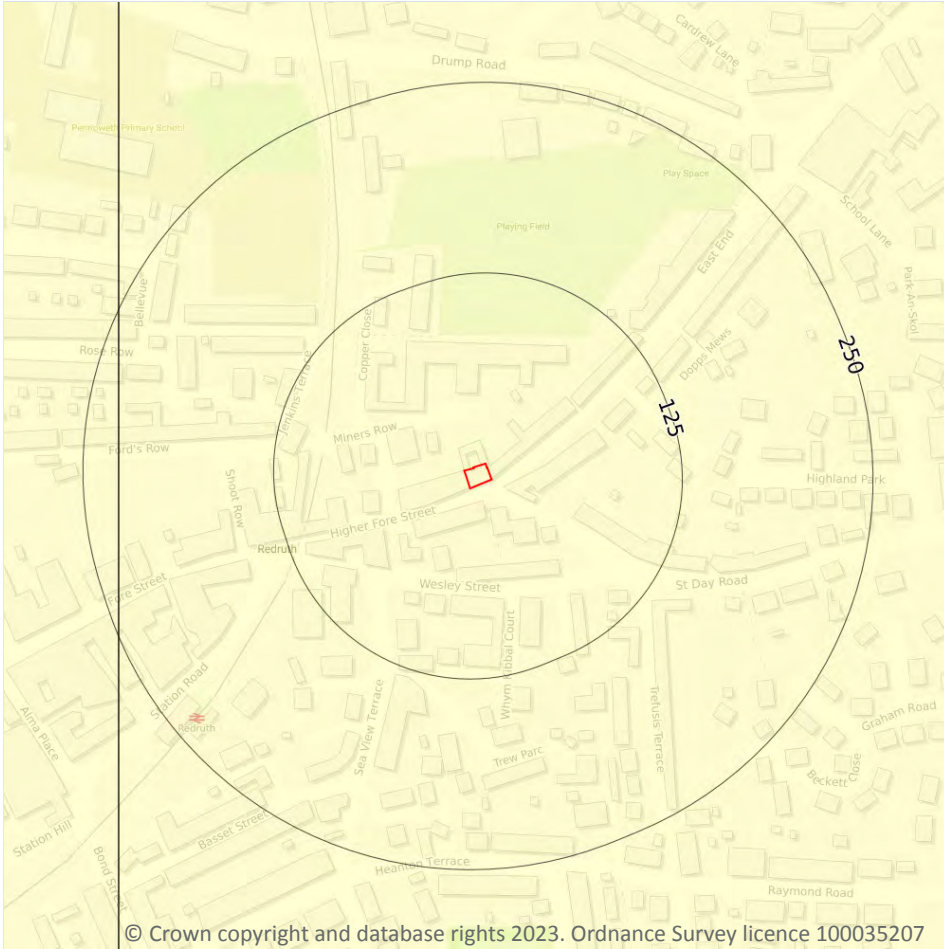
0

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



17.1 Shrink swell clays

Records within 50m

1

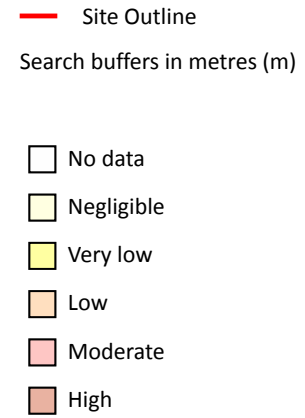
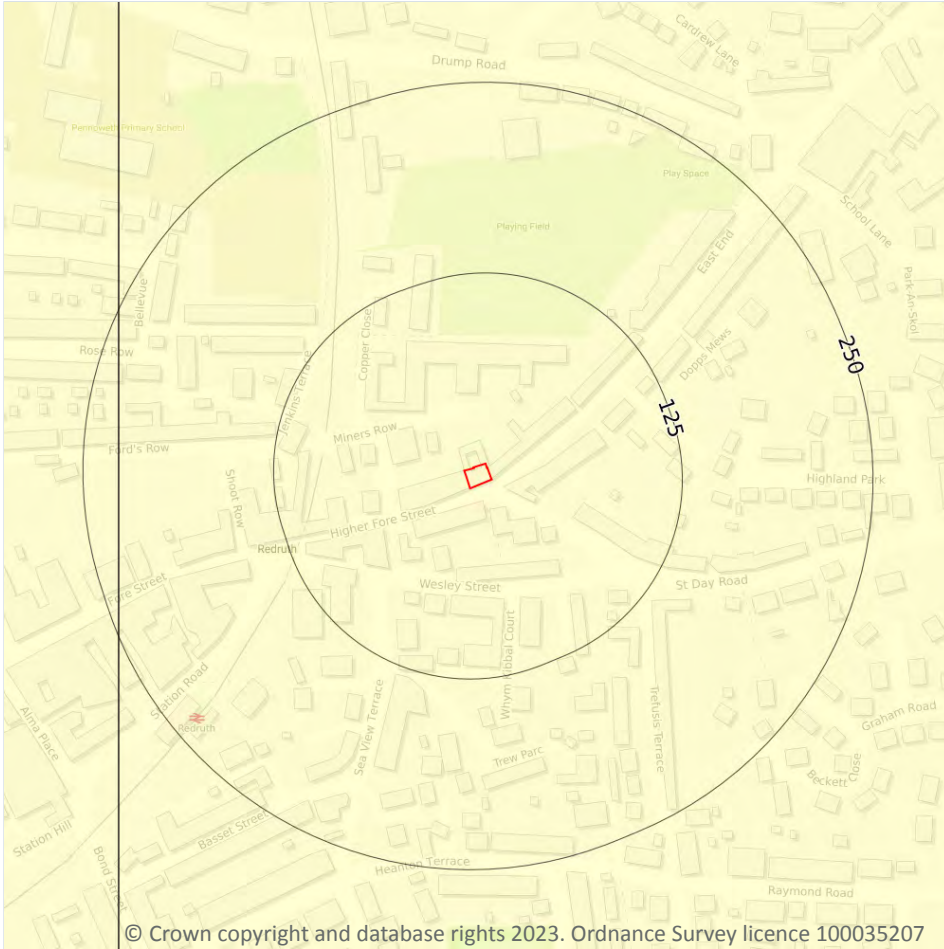
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 86](#) >

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.

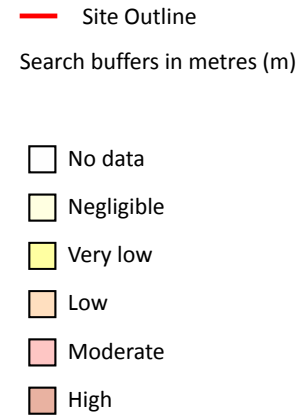
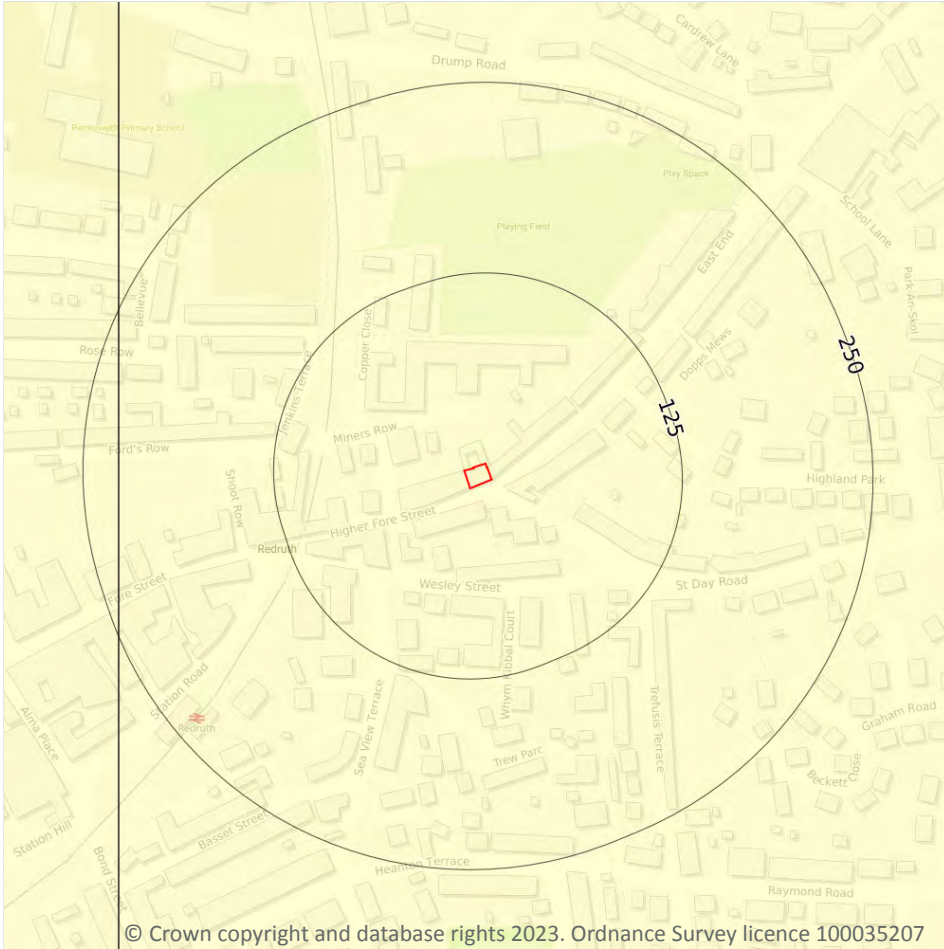
Features are displayed on the Natural ground subsidence - Running sands map on [page 87 >](#)

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

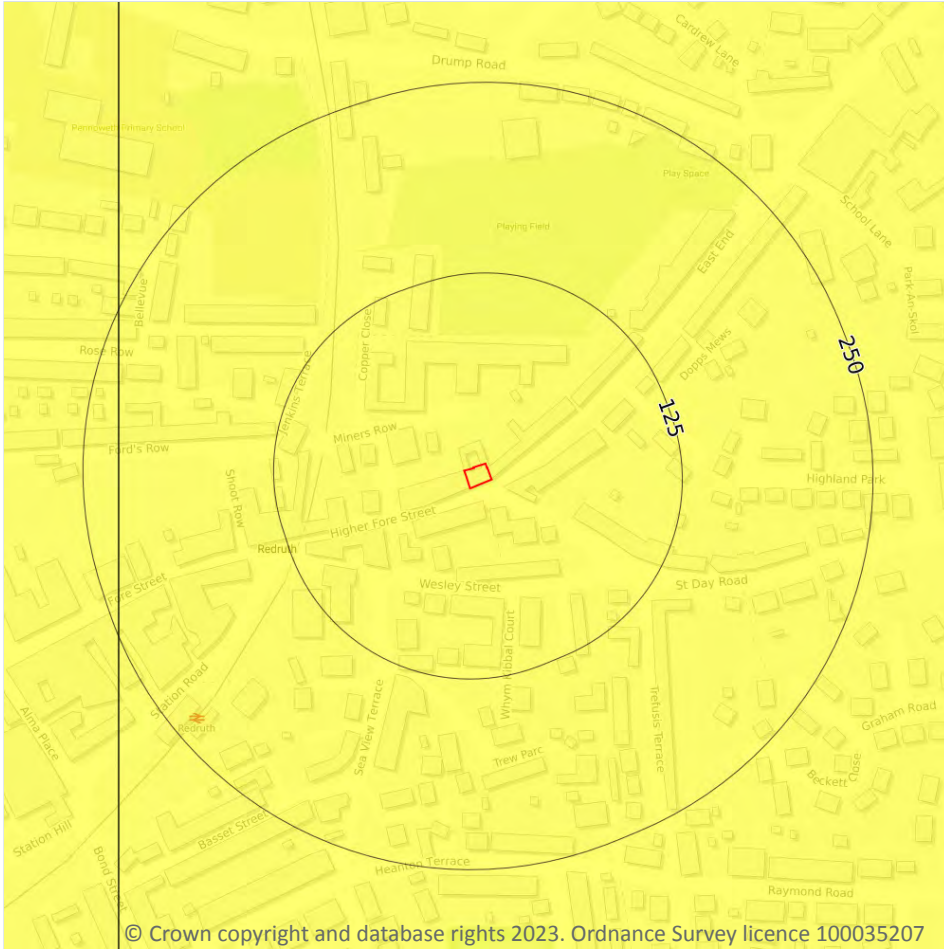
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

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

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



— Site Outline
Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m

1

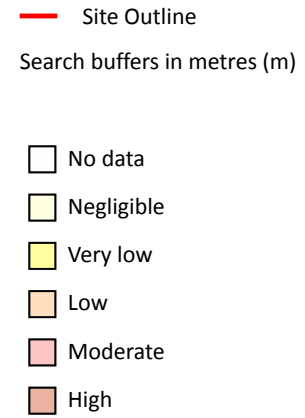
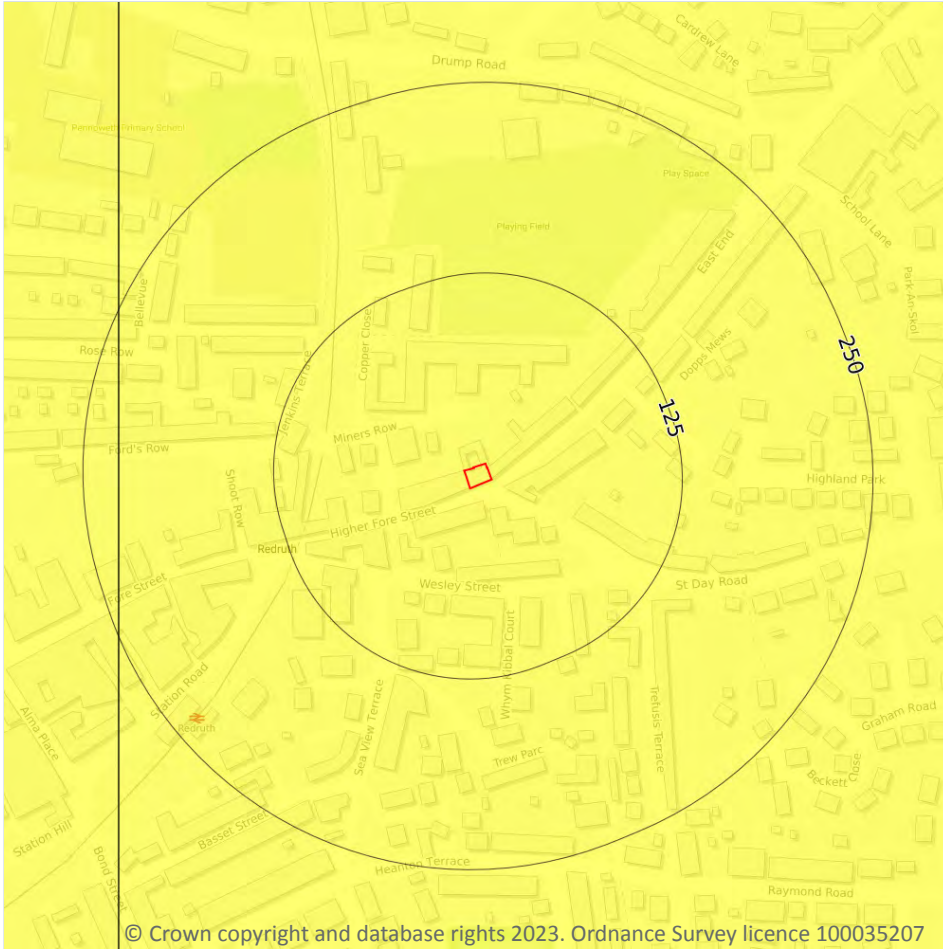
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

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

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.

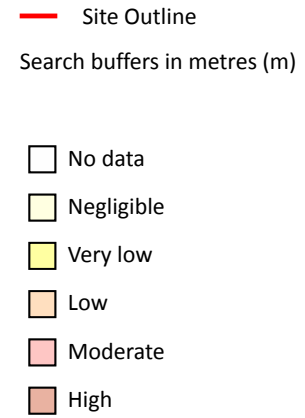
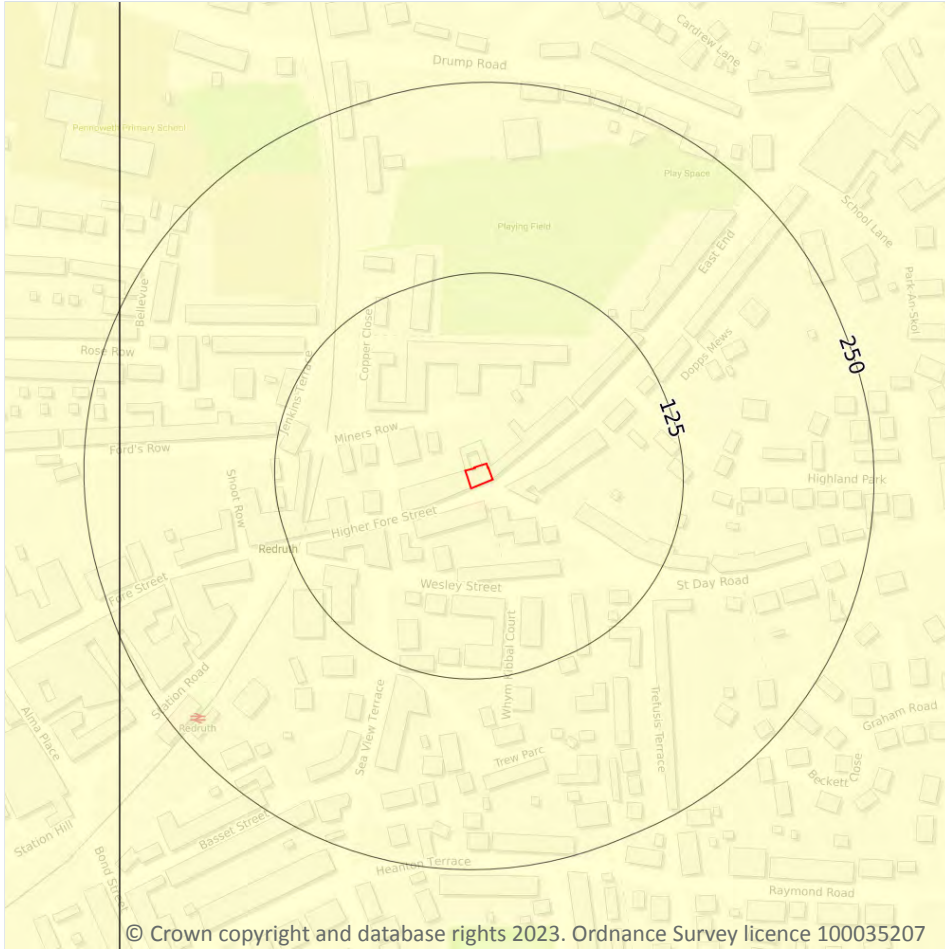
Features are displayed on the Natural ground subsidence - Landslides map on [page 90 >](#)

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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 91](#)

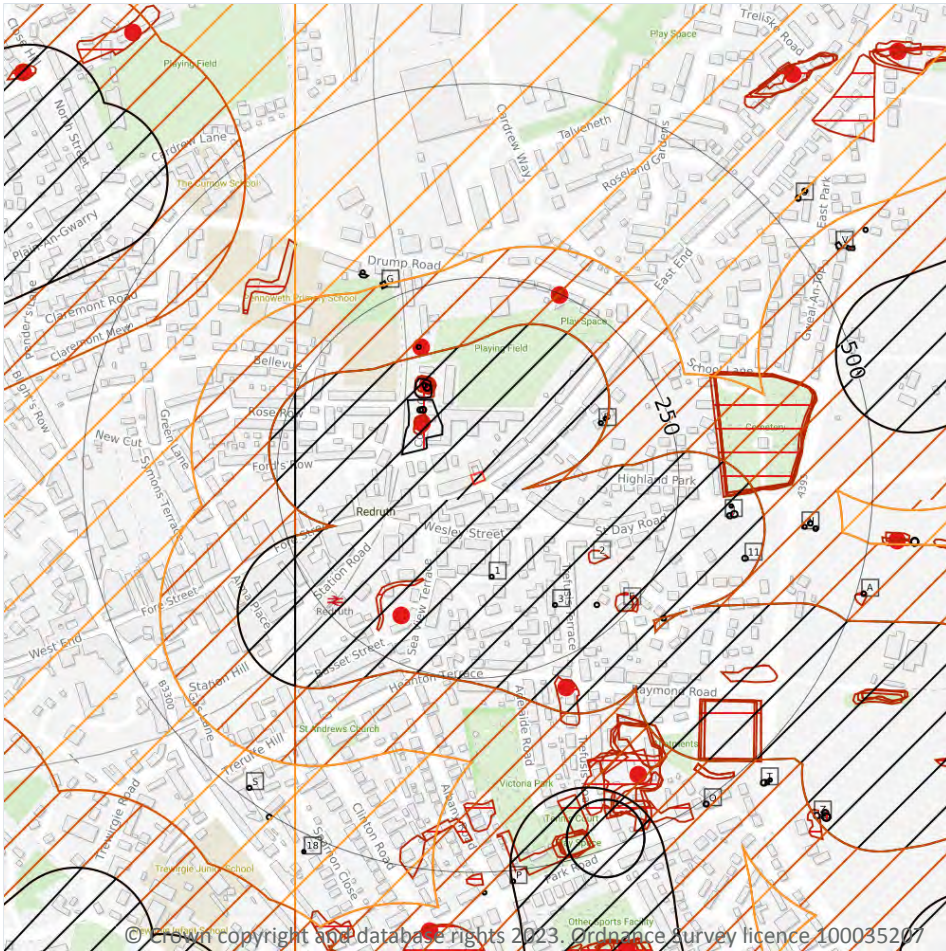
>

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



18.1 BritPits

Records within 500m

11

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 93](#) >

ID	Location	Details	Description
B	91m NW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
B	91m NW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
B	128m NW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
B	128m NW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
B	177m NW	Name: Pedn-an-drea Mine Address: REDRUTH, 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



ID	Location	Details	Description
B	177m NW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
C	193m SW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
C	193m SW	Name: Pedn-an-drea Mine Address: REDRUTH, 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
F	248m NE	Name: Gwealzemere Address: REDRUTH, 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
H	286m SE	Name: Heanton Terrace Address: REDRUTH, 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



ID	Location	Details	Description
K	428m SE	Name: Sparnon Address: Redruth, REDRUTH, 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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	9
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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 93](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
B	82m NW	Unspecified Heap	1879	1:10560
B	112m NW	Unspecified Heap	1938	1:10560
B	117m NW	Unspecified Heap	1906	1:10560
B	117m NW	Unspecified Heap	1879	1:10560
C	139m SW	Unspecified Ground Workings	1879	1:10560
2	164m SE	Unspecified Heap	1879	1:10560
E	227m SE	Unspecified Ground Workings	1879	1:10560
E	242m SE	Unspecified Ground Workings	1906	1:10560
F	242m NE	Unspecified Old Quarry	1879	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	95
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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 93](#) >



ID	Location	Land Use	Year of mapping	Mapping scale
B	64m NW	Tin and Copper Mine	1879	1:10560
B	101m NW	Unspecified Disused Shaft	1980	1:10000
B	101m NW	Unspecified Disused Shaft	1974	1:10000
B	103m NW	Unspecified Shaft	1906	1:10560
B	114m NW	Unspecified Shaft	1958	1:10560
1	119m S	Unspecified Shaft	1879	1:10560
B	122m NW	Unspecified Disused Shaft	1992	1:10000
B	122m NW	Unspecified Disused Shaft	1980	1:10000
B	122m NW	Unspecified Disused Shaft	1974	1:10000
B	127m NW	Unspecified Shaft	1879	1:10560
D	163m NE	Unspecified Old Shaft	1958	1:10560
D	171m NE	Unspecified Old Shaft	1906	1:10560
D	171m NE	Unspecified Old Shaft	1879	1:10560
B	176m NW	Unspecified Shaft	1879	1:10560
3	182m SE	Unspecified Shaft	1879	1:10560
E	213m SE	Unspecified Shaft	1879	1:10560
G	266m NW	Unspecified Old Shaft	1958	1:10560
E	288m SE	Unspecified Shaft	1879	1:10560
G	289m NW	Unspecified Old Shaft	1906	1:10560
G	294m NW	Unspecified Old Shaft	1879	1:10560
J	315m E	Unspecified Old Shafts	1958	1:10560
J	317m E	Unspecified Shaft	1879	1:10560
J	320m E	Unspecified Old Shafts	1906	1:10560
11	346m E	Unspecified Old Shafts	1958	1:10560
N	413m E	Unspecified Old Shafts	1958	1:10560
N	420m E	Unspecified Old Shafts	1906	1:10560
N	420m E	Unspecified Shafts	1879	1:10560
N	428m E	Unspecified Old Shafts	1906	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
N	428m E	Unspecified Shafts	1879	1:10560
S	484m SW	Unspecified Shaft	1879	1:10560
S	500m SW	Unspecified Shaft	1879	1:10560
Q	502m SE	Unspecified Shaft	1879	1:10560
A	507m E	Unspecified Shaft	1879	1:10560
P	511m S	Unspecified Shafts	1879	1:10560
18	519m SW	Unspecified Shaft	1879	1:10560
P	524m S	Unspecified Shafts	1879	1:10560
T	527m SE	Unspecified Old Shaft	1958	1:10560
T	529m SE	Unspecified Shaft	1906	1:10560
T	531m SE	Unspecified Shaft	1879	1:10560
U	535m NE	Unspecified Old Shaft	1958	1:10560
V	541m NE	Unspecified Old Shaft	1958	1:10560
U	549m NE	Unspecified Old Shaft	1906	1:10560
U	549m NE	Unspecified Shaft	1879	1:10560
V	551m NE	Unspecified Old Shaft	1906	1:10560
A	555m E	Unspecified Disused Shaft	1992	1:10000
A	555m E	Unspecified Disused Shaft	1980	1:10000
A	555m E	Unspecified Disused Shaft	1974	1:10000
V	582m NE	Unspecified Shaft	1879	1:10560
Z	605m SE	Unspecified Old Shaft	1958	1:10560
Z	610m SE	Unspecified Old Shaft	1906	1:10560
Z	610m SE	Unspecified Shaft	1879	1:10560
Z	613m SE	Unspecified Disused Shaft	1992	1:10000
Z	613m SE	Unspecified Disused Shaft	1980	1:10000
Z	613m SE	Unspecified Disused Shaft	1974	1:10000
-	663m E	Unspecified Old Shaft	1958	1:10560
-	671m E	Unspecified Old Shaft	1906	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	672m E	Unspecified Disused Shaft	1992	1:10000
-	672m E	Unspecified Disused Shaft	1980	1:10000
-	672m E	Unspecified Disused Shaft	1974	1:10000
-	746m S	Unspecified Shaft	1879	1:10560
-	816m S	Unspecified Old Shaft	1906	1:10560
-	816m S	Unspecified Shaft	1879	1:10560
-	841m SW	Unspecified Old Shaft	1958	1:10560
-	843m SW	Unspecified Old Shaft	1906	1:10560
-	866m SE	Unspecified Shafts	1879	1:10560
-	867m E	Unspecified Disused Shaft	1992	1:10000
-	867m E	Unspecified Old Shaft	1958	1:10560
-	867m E	Unspecified Disused Shaft	1980	1:10000
-	867m E	Unspecified Disused Shaft	1974	1:10000
-	877m E	Unspecified Old Shaft	1906	1:10560
-	877m E	Unspecified Shaft	1879	1:10560
-	895m SE	Unspecified Shafts	1879	1:10560
-	899m SW	Unspecified Old Shaft	1906	1:10560
-	919m E	Disused Copper	1906	1:10560
-	922m E	Disused Copper	1879	1:10560
-	929m SW	Unspecified Shaft	1906	1:10560
-	929m SW	Unspecified Shaft	1879	1:10560
-	952m S	Unspecified Shaft	1879	1:10560
-	955m E	Unspecified Old Shafts	1958	1:10560
-	957m S	Unspecified Old Shaft	1906	1:10560
-	957m S	Unspecified Shaft	1879	1:10560
-	957m S	Unspecified Old Shaft	1958	1:10560
-	957m S	Unspecified Disused Shaft	1992	1:10000
-	957m S	Unspecified Disused Shaft	1980	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
-	957m S	Unspecified Disused Shaft	1974	1:10000
-	957m S	Unspecified Disused Shaft	1980	1:10000
-	960m E	Unspecified Disused Shafts	1992	1:10000
-	960m E	Unspecified Disused Shafts	1980	1:10000
-	960m E	Unspecified Disused Shafts	1974	1:10000
-	961m E	Unspecified Old Shafts	1906	1:10560
-	993m E	Unspecified Old Shaft	1958	1:10560
-	995m E	Unspecified Old Shafts	1958	1:10560
-	998m E	Unspecified Disused Shafts	1992	1:10000
-	998m E	Unspecified Disused Shafts	1980	1:10000
-	998m E	Unspecified Disused Shafts	1974	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

23

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 93 >](#)

ID	Location	Name	Commodity	Class	Likelihood
A	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.
A	54m E	Not available	Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
4	188m W	Not available	Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
5	227m W	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
6	230m W	Not available	Vein Mineral	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
7	240m W	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
8	264m N	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.
E	283m SE	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.



ID	Location	Name	Commodity	Class	Likelihood
9	317m NW	South West England	Vein Mineral	C	Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered.
12	352m S	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.
14	412m S	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.
15	422m NW	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.
O	437m S	Wheal Sparnon	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.
16	454m 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.
R	475m E	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
19	522m 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.
20	579m SE	South West England	Vein Mineral	C	Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered.
23	685m SW	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.



ID	Location	Name	Commodity	Class	Likelihood
-	759m SW	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.
26	793m SE	Not available	Vein Mineral	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	809m NW	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.
-	909m 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.
-	930m 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.

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

36

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	Copper
On site	Tin
On site	Copper
On site	Copper
On site	Tin
On site	Tin
On site	Tin
On site	Tin
On site	Copper
6m NW	Tin
11m NE	Copper
15m W	Tin
25m NE	Copper
34m SW	Tin
50m SW	Tin
84m S	Tin



Location	Mineral
87m SW	Copper
92m S	Tin
94m S	Tin
95m S	Tin
106m NW	Tin
107m S	Copper
109m S	Copper
124m S	Copper
170m SE	Tin
180m SE	Tin
205m SE	Tin
206m SE	Tin
233m NE	Copper
256m E	Tin
259m NW	Copper
282m SE	Tungsten
324m S	Tin
369m E	Copper
381m S	Copper
499m S	Copper

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

2

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



Location	Mineral
208m SW	Copper

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0
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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
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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
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	1
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Generalised areas that may be affected by historical tin mining.

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

This data is sourced from Groundsure.



18.16 Clay mining

Records on site

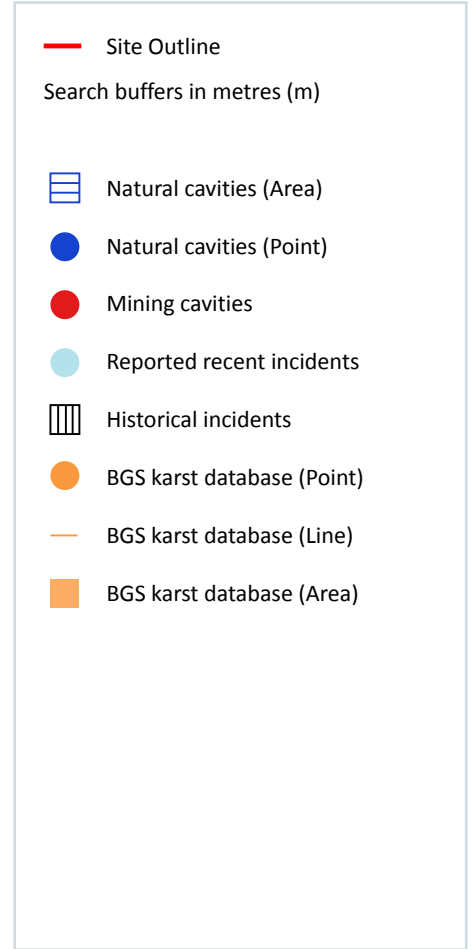
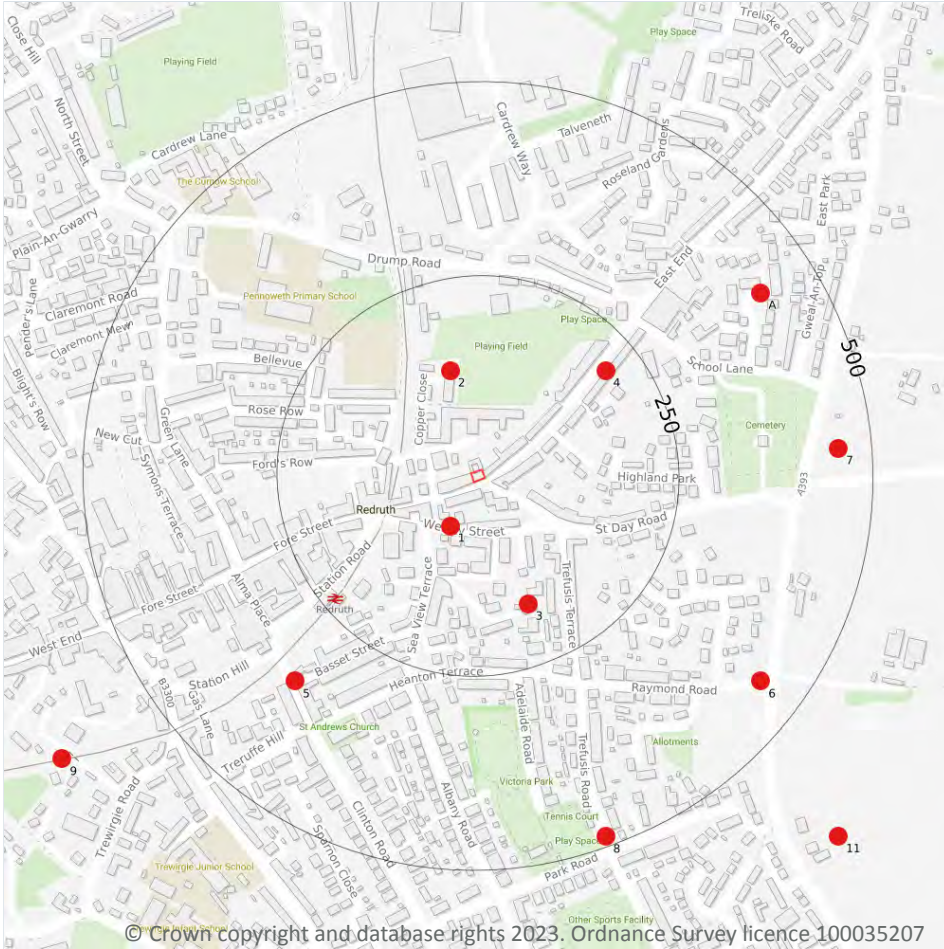
0

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

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



19 Ground cavities and sinkholes



19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

24

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 108](#) >

ID	Location	Mine Address	Mineral	Data source	Publisher
1	64m SW	Park-An-Skimmer, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
2	134m N	An Drump, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
3	171m S	Pednandrea United, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
4	204m NE	Dopps Mine, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
5	345m SW	Redruth, Cornwall	Cassiterite, Tin, Tinstone	-	-
A	425m NE	Gew, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
A	425m NE	Gweal-An-Top, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
6	442m SE	Polpone, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
7	457m E	Buggins, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
8	487m S	Spannon, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
9	639m SW	Trengwith/goodspeed, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.



ID	Location	Mine Address	Mineral	Data source	Publisher
-	649m W	Silver Hoskings, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
11	649m SE	Sparnon East, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	723m NE	Louisa, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	723m NE	Providence, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	895m E	St Aubyn, Redruth, Cornwall	Cassiterite, Tin, Tinstone	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	895m E	Grambler, Redruth, Cornwall	Unknown	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	924m SW	Carn Brea East, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNWALL MINES DATABASE	UNPUBLISHED PRIVATE DOCUMENT.
-	933m NW	Alice, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	933m NW	Redruth Consols, Redruth, Cornwall	Unknown	MINES AND MINERS OF CORNWALL: INDEX TO VOLUMES 1-16	ST AUSTELL : OLD CORNWALL PUBLICATIONS
-	933m NW	Tolgus East, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER



ID	Location	Mine Address	Mineral	Data source	Publisher
-	943m SE	East Trefusis, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	Mining in Cornwall & Decon, Mines and Men	University of Exeter Press
-	965m E	Cupid, Redruth, Cornwall	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite	CORNISH MINES (METALLIFEROUS AND ASSOCIATED MINERALS 1845-1913)	UNIVERSITY OF EXETER
-	996m W	Captain, Redruth, 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.

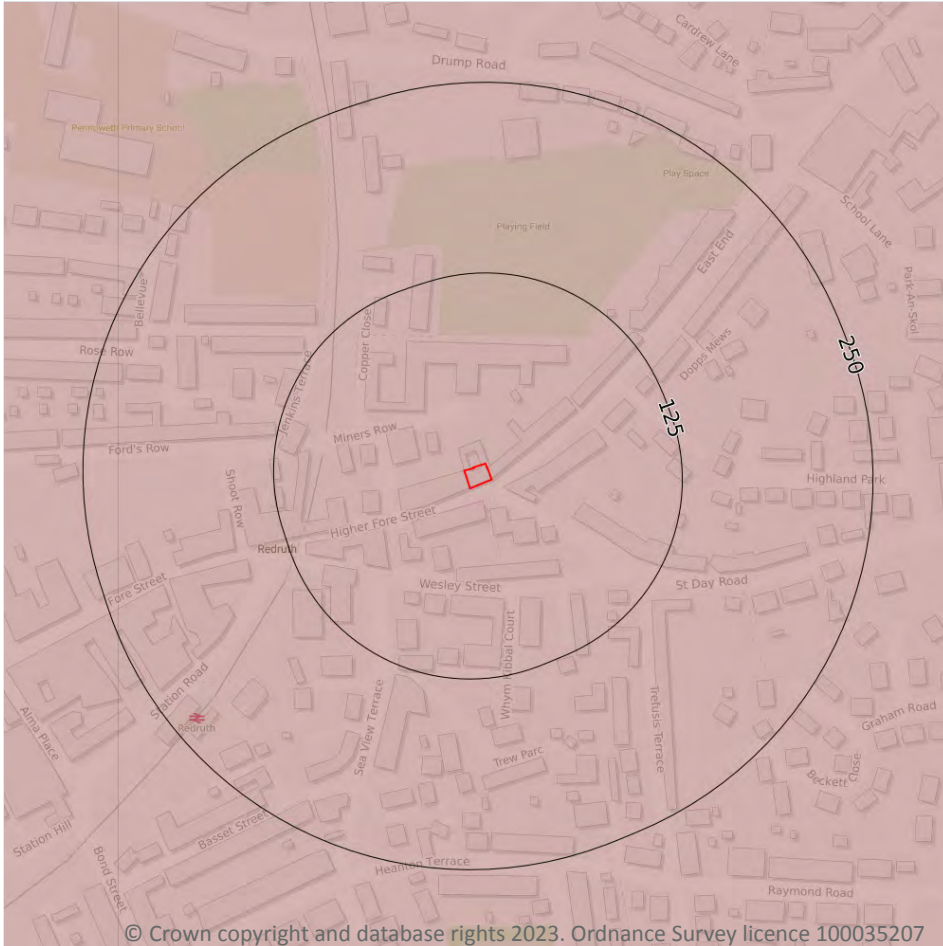
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over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



— Site Outline
 Search buffers in metres (m)

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

20.1 Radon

Records on site

1

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

Features are displayed on the Radon map on [page 113 >](#)

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

1

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 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	>120 mg/kg	> 18 mg/kg	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 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

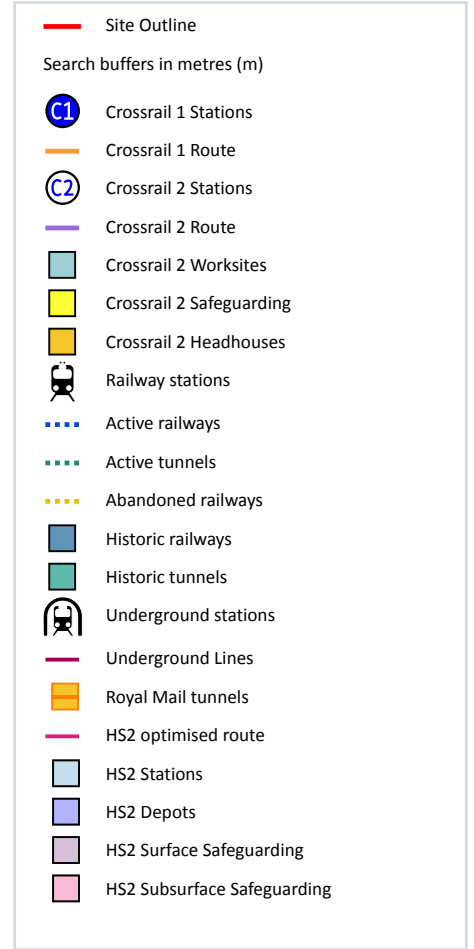
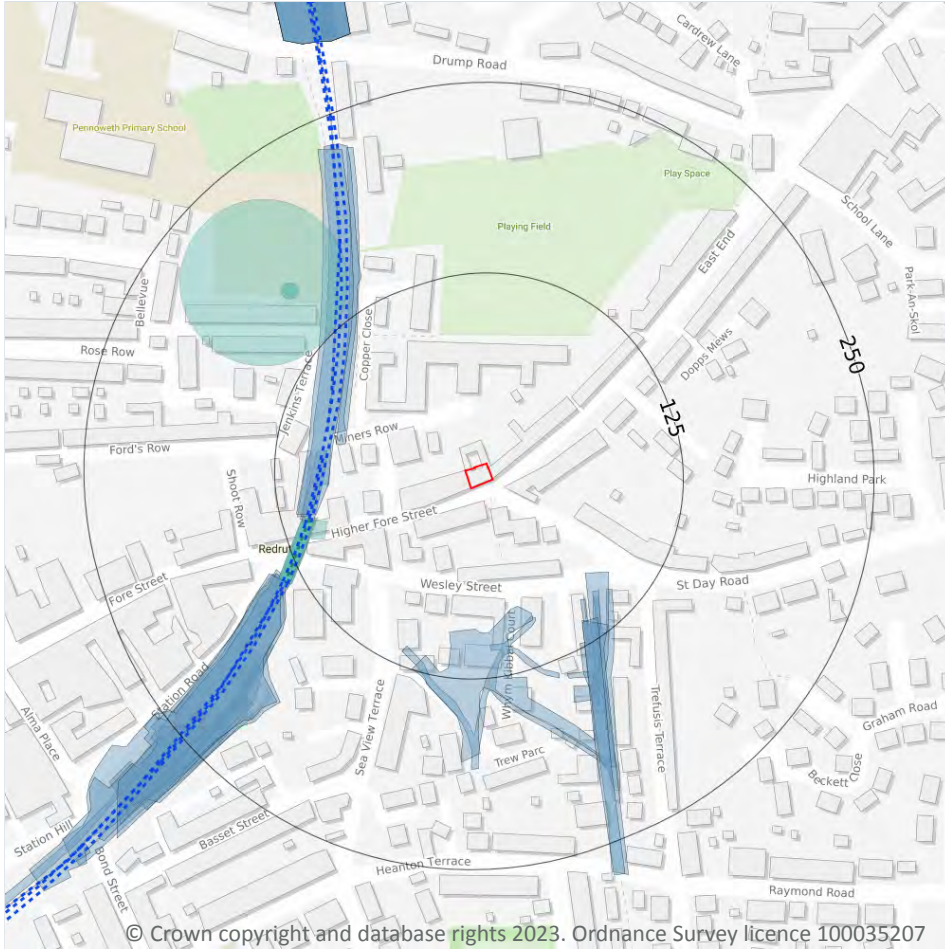
0

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

1

Railway tunnels taken from contemporary Ordnance Survey mapping.

Features are displayed on the Railway infrastructure and projects map on [page 116 >](#)

Location	Type
107m W	Railway Tunnel

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

26

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 116 >](#)

Location	Land Use	Year of mapping	Mapping scale
80m W	Railway Sidings	1908	2500
83m W	Railway Sidings	1906	10560
83m S	Railway Sidings	1879	10560
88m W	Railway Sidings	1958	10560
91m W	Railway Sidings	1880	2500
93m S	Tramway Sidings	1880	2500
96m W	Tunnel	1908	2500
98m SE	Railway Sidings	1908	2500
101m W	Tunnel	1968	1250
103m W	Tunnel	1970	2500
103m W	Tunnel	1994	1250
104m W	Tunnel	1986	1250
104m W	Tunnel	1989	1250



Location	Land Use	Year of mapping	Mapping scale
109m SE	Railway Sidings	1906	10560
111m SE	Railway Sidings	1938	10560
114m W	Tunnel	1908	2500
126m NW	Tunnel	1879	10560
134m SW	Railway Sidings	1938	10560
134m SW	Railway Sidings	1879	10560
135m SW	Railway Sidings	1906	10560
138m SW	Railway Sidings	1958	10560
159m NW	Tunnel	1880	2500
159m NW	Tunnel	1908	2500
165m SW	Railway Sidings	1880	2500
180m SW	Railway Sidings	1908	2500
232m SW	Railway Sidings	1989	1250

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

16

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on [page 116 >](#)

Location	Name	Type
91m W	The Cornish Main Line	rail
94m W	Not given	Multi Track
94m W	Not given	Multi Track
94m W	The Cornish Main Line	rail
101m NW	Not given	Multi Track
108m W	The Cornish Main Line	rail
111m W	The Cornish Main Line	rail
111m NW	The Cornish Main Line	rail
116m NW	The Cornish Main Line	rail
135m SW	The Cornish Main Line	rail
136m SW	Not given	Multi Track
138m SW	The Cornish Main Line	rail
170m NW	Not given	Multi Track
218m SW	Not given	Multi Track
246m SW	Not given	Multi Track
247m N	Not given	Multi Track

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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Appendix C

Historical Maps



Site Details:

COLLINS ARMS, 18 THE
 COLLINS ARMS, HIGHER FORE
 STREET, REDRUTH, TR15 2AP

Client Ref: 23528
Report Ref: GCL-O9A-CIJ-P4L-PIG
Grid Ref: 170235, 42164

Map Name: County Series Town Plan

Map date: 1879

Scale: 1:500

Printed at: 1:1,000



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

Surveyed 1879
 Revised N/A
 Edition N/A
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Production date: 09 October 2023

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

Site Details:

COLLINS ARMS, 18 THE COLLINS ARMS, HIGHER FORE STREET, REDRUTH, TR15 2AP

Client Ref: 23528
Report Ref: GCL-O9A-CIJ-P4L-PIG
Grid Ref: 170235, 42164

Map Name: County Series

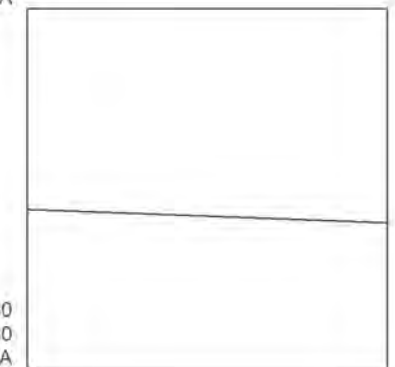
Map date: 1880

Scale: 1:2,500

Printed at: 1:2,500



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



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



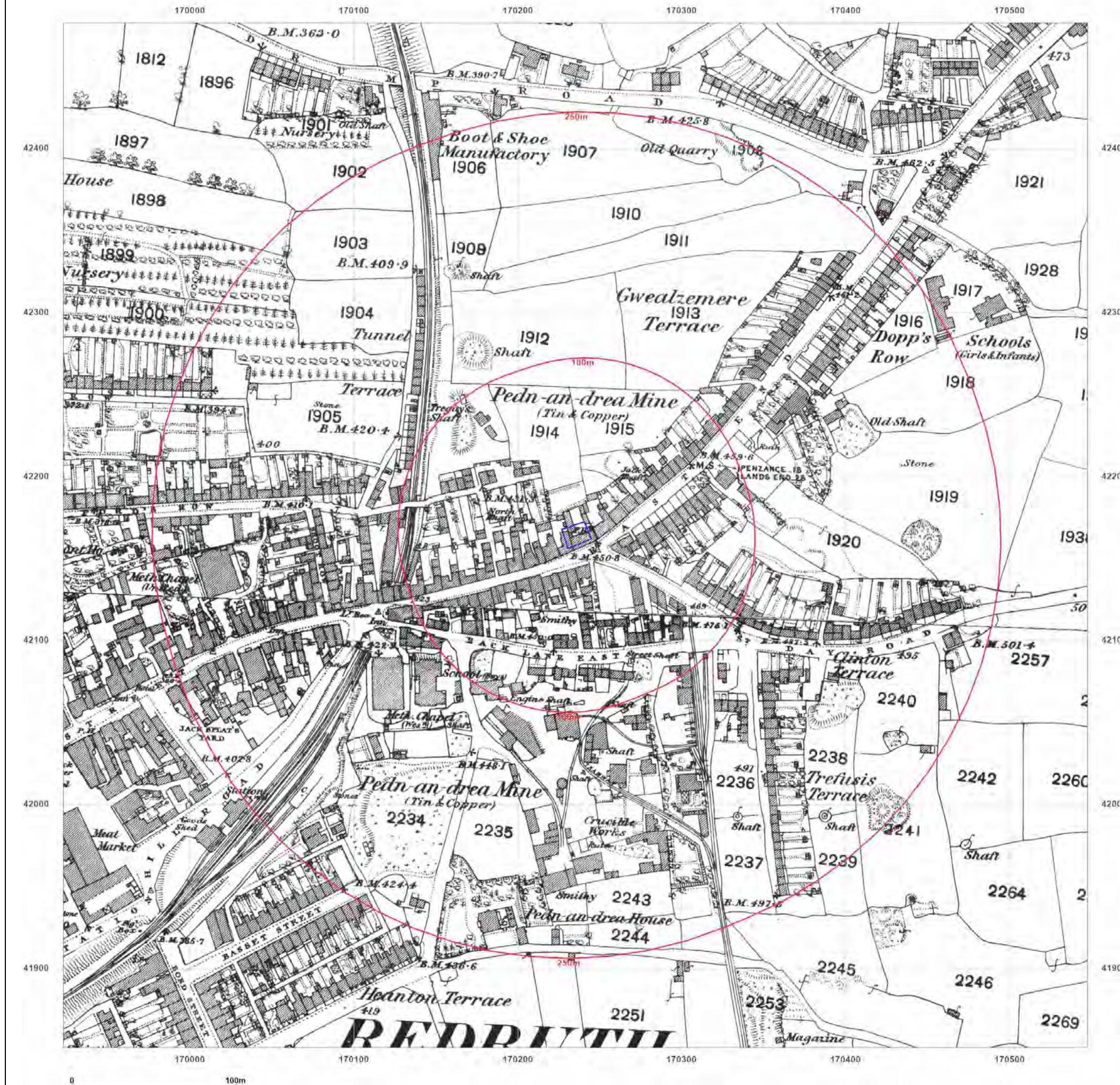
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Site Details:

COLLINS ARMS, 18 THE COLLINS ARMS, HIGHER FORE STREET, REDRUTH, TR15 2AP

Client Ref: 23528
Report Ref: GCL-O9A-CIJ-P4L-PIG
Grid Ref: 170235, 42164

Map Name: County Series

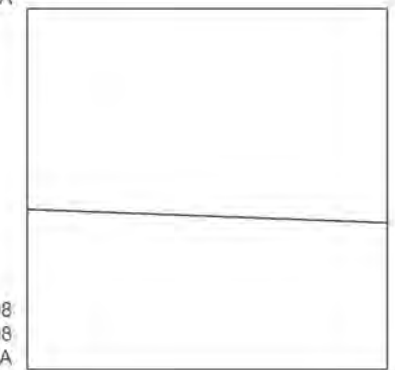
Map date: 1908

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



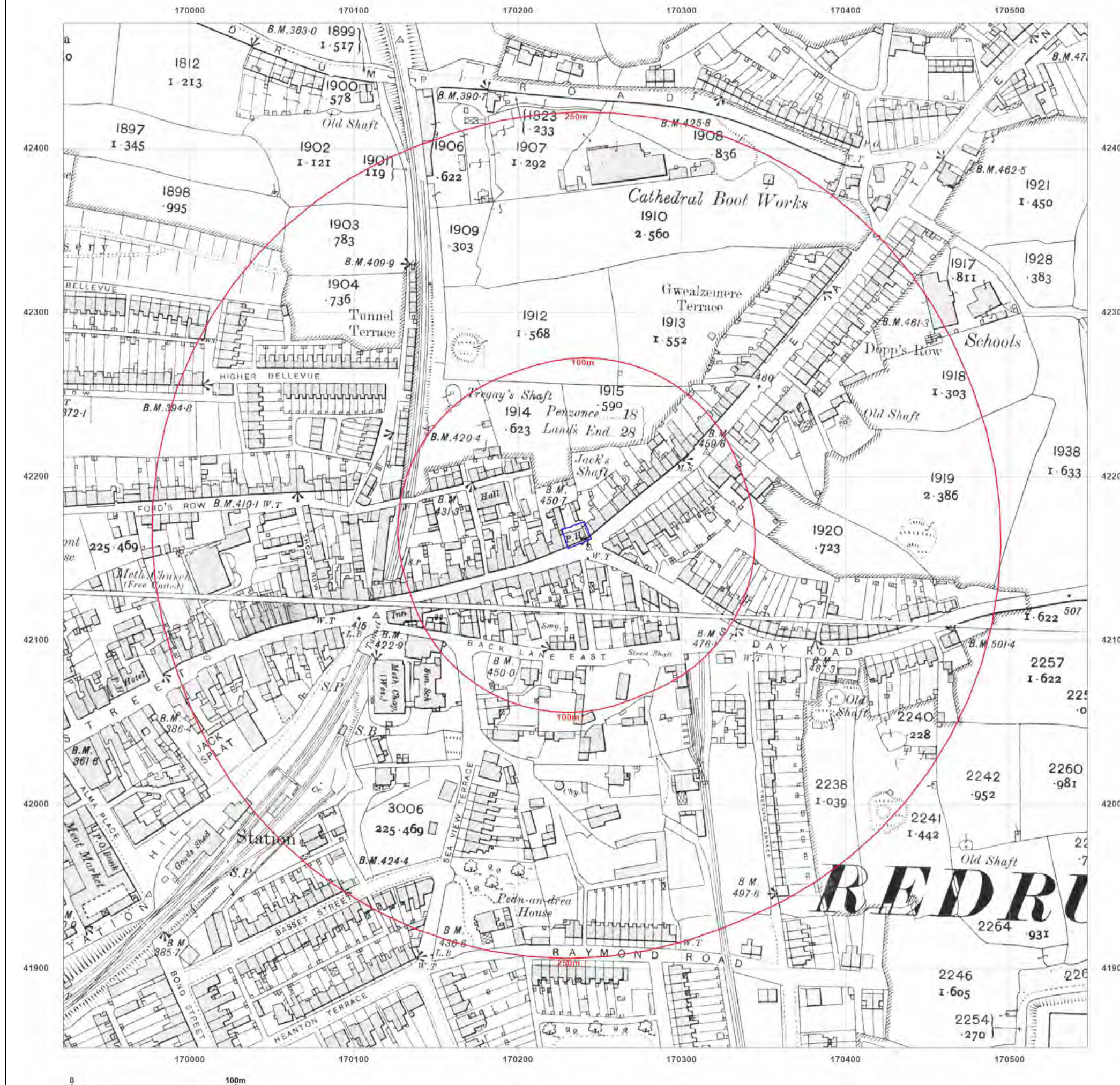
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Site Details:

COLLINS ARMS, 18 THE
 COLLINS ARMS, HIGHER FORE
 STREET, REDRUTH, TR15 2AP

Client Ref: 23528
Report Ref: GCL-O9A-CIJ-P4L-PIG
Grid Ref: 170235, 42164

Map Name: National Grid

Map date: 1967-1968

Scale: 1:1,250

Printed at: 1:2,000



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 Revised 1967
 Edition N/A
 Copyright 1967
 Levelled 1953

Surveyed 1967
 Revised 1967
 Edition N/A
 Copyright 1968
 Levelled 1953

Surveyed 1966
 Revised 1966
 Edition N/A
 Copyright 1967
 Levelled 1955

Surveyed 1967
 Revised 1967
 Edition N/A
 Copyright 1968
 Levelled 1953



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