



Phase 1 Environmental Risk Assessment

Land Adj to Coppice Inn, Lanner

09 October 2017

Wheal Jane Consultancy

Old Mine Offices, Wheal Jane, Baldhu, Truro, Cornwall, TR3 6EE

01872 560200

www.wheal-jane-consultancy.co.uk

consultancy@wheal-jane.co.uk

SI19244/PH1

DOCUMENT CONTROL SHEET

Client	SPS Architectural
Project Title	Land Adj to Coppice Inn, Lanner
Document Title	Phase 1 Environmental Risk Assessment
Document No.	SI19244/PH1

Date	Status	Revision	Prepared By	Approved By
9 October 2017	FINAL	0	Ben Osborne	Michael Rees

CONTENTS

	Page
Executive Summary	
1 Introduction.....	1
2 Scope And Objectives	1
3 Information Sources	1
4 Site Location And Layout.....	2
5 Surrounding Area	2
6 Proposed Development	2
7 Site Walkover Survey.....	3
8 Site History.....	3
9 Environmental Setting.....	5
10 Qualitative Risk Assessment	9
10.1 Introduction.....	9
10.2 Initial Conceptual Site Model.....	9
10.3 Initial Conceptual Site Model Matrix.....	12
11 Ground Stability Risk Assessment.....	13
11.1 Introduction.....	
11.2 Groundwater.....	15
12 Conclusions And Recommendations	15
12.1 Conclusions.....	
12.2 Recommendations.....	15
13 Notes	17

APPENDICES

Appendix A	Site Photographs
Appendix B	Groundsure EnviroInsight And Geoinsight Reports
Appendix C	Historical Mapping

EXECUTIVE SUMMARY

Objectives

Wheal Jane Consultancy was commissioned by SPS Architectural (the client) to undertake an environmental risk assessment for a proposed 5-property residential development.

Site Setting

Current Use	The site is currently an undeveloped parcel of land.
History	The site was used as a refuse heap in the late nineteenth century and has since remained as undeveloped land.
Geology	The north of the site is sat upon alluvial deposits which is turn is underlain by the Mylor Slate Formation.
Controlled Waters	The site is within 250m of a Zone 2 and Zone 3 Floodplain area.
Radon	The property is in a Radon Affected Area, greater than 30% of properties are above the action level.

Preliminary Conceptual Site Model

The potential pollutant linkages for the site have been identified as follows:

- Risk of ingress of radon gas has been identified as High.
- Risk of contamination to soils and/or controlled waters from a former refuse heap have been identified as Moderate to High.
- Risk of ingress from ground gas has been identified as Low.
- Risk of contamination to soils and/or controlled waters from historical mining activity have been identified as Low to Moderate.
- Risk of contamination to soils and/or controlled waters from a fuel garage have been identified as Low to Moderate.

Conclusions

- An intrusive investigation is required to quantify the potential contamination risk posed by material of the refuse heap.

Recommendations

- An intrusive investigation is recommended to determine the presence of any heavy metals, petroleum hydrocarbons and polycyclic aromatic hydrocarbons.
 - It's also recommended that the advice of a suitably qualified geotechnical engineer is sought prior the commencing of work to address any potential issues with compressible deposits.
-

1 INTRODUCTION

- 1.1.1 Wheal Jane Consultancy was commissioned by SPS Architectural (the client) to undertake an environmental risk assessment at the site of a proposed 5-property residential development.
- 1.1.2 This report has been prepared by Wheal Jane Consultancy 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 Wheal Jane Consultancy.

2 SCOPE AND OBJECTIVES

- 2.1.1 The Objective of this Desk Study is to examine past and present site conditions to identify any potential risk of contamination or ground instability resulting from historical and contemporary site usage. Any recommendations for further works have been made as deemed appropriate, based upon the findings of the investigation.
- 2.1.2 This assessment has been undertaken with guidance from BS10175:2011⁽¹⁾ and Environment Agency report CLR11⁽²⁾, and as such represents a Phase 1 Desk Study / Qualitative Risk Assessment.
- 2.1.3 This report does not constitute an asbestos inspection that may fall within the 'Control of Asbestos' regulations, 2006.

3 INFORMATION SOURCES

- 3.1.1 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, Wheal Jane Consultancy cannot accept any responsibility for any inaccuracy of third party information. The sources used in this assessment are listed below:

Groundsure EnviroInsight report (Ref: GS-4324331), dated 05th October 2017.

Groundsure Geoinsight reports (Ref: GS-4324332), dated 05th October 2017.

Groundsure mapping (Ref: GS-4324333), dated 05th October 2017.

British Geological Survey (BGS) online mapping.

1 BS 10175:2011 'Investigation of Potentially Contaminated Sites – Code of Practice'.

2 Environment Agency, 2004. Contaminated Land Report 11 - Model Procedures for the Management of Land Contamination.

4 SITE LOCATION AND LAYOUT

- 4.1.1 The site is located along the A393 in Lanner and is approximately centred on National Grid Reference 172487. 039844.
- 4.1.2 The site is approximately 0.47 hectares in size.
- 4.1.3 The site layout can be seen in Figure 1 below.

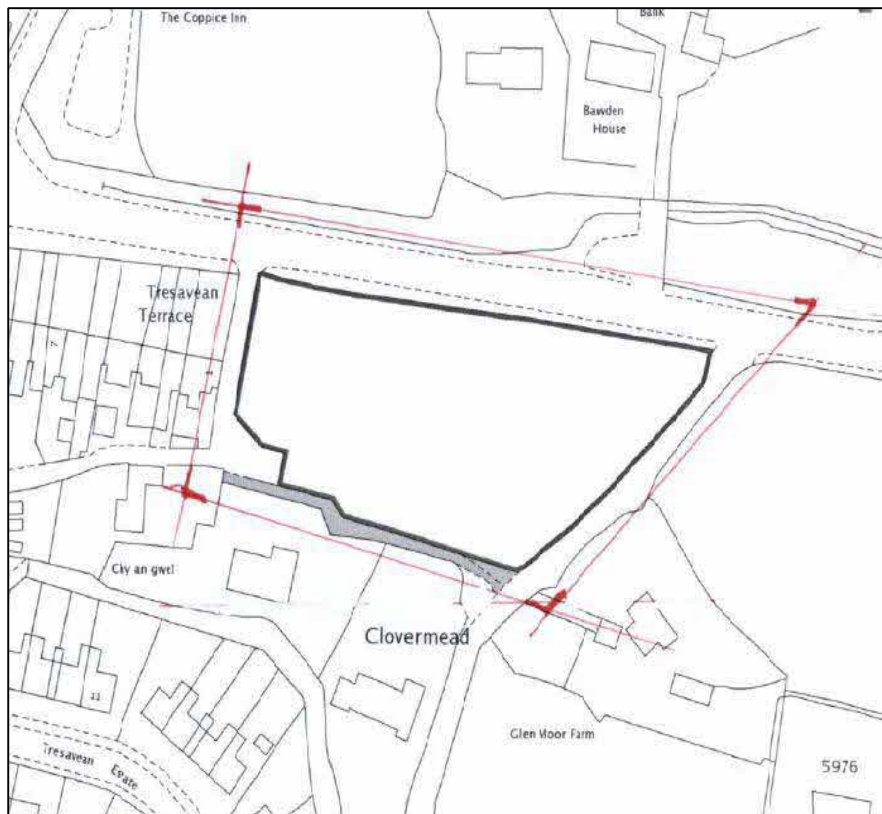


Figure 1: Aerial view of the site layout (adapted from HM Land Registry Title Plan, No: CL194148)

5 SURROUNDING AREA

- 5.1.1 The proposed development is located along the A393 in Lanner.
- 5.1.2 The immediate surrounding area is a mixture of agricultural and residential housing.

6 PROPOSED DEVELOPMENT

- 6.1.1 It has been proposed to convert the parcel of land into a 5-property residential development.

7 SITE WALKOVER SURVEY

- 7.1.1 Wheal Jane Consultancy conducted a site walkover survey on 09th October 2017. Photographs from the walkover survey are provided in Appendix A.
- 7.1.2 The site is currently a parcel of undeveloped land.
- 7.1.3 The site is bound to the east, south and west by residential properties and to the north by the A393.
- 7.1.4 An access road to the site entrance from the A393 runs along the eastern boundary.

8 SITE HISTORY

Using a range of historical mapping sources, an overview of the findings relating to the site and its surroundings can be found below in Table 1.

Table 1: Summary of Historical Site Usage

Source	On Site	Surroundings
OS Country Series 1880	The site is part of a larger refuse heap for material waste from the surrounding mine workings	Further workings/refuse heaps are to the east and west within 100m. Numerous shafts can be located approximately 250m to the south. Residential housing is located adjacent to the west. Tresavean Mine and its associated workings extend between 500-1000m to the south west.
OS Country Series 1908	Site has become rough pasture land.	Tresavean Mine to the south west is now disused. Adjacent workings/heaps are now also pasture land.
OS Provisional 1974 - 1977	Site has achieved its current state	Increased residential development within Lanner. A small workings labelled Penventon Quarry exists 750m to the south east

OS National Grid 1993	Site has achieved its current state	Coppice Inn Public House erected to the north. Two residential properties constructed adjacent to the southern boundary of the site.
OS 1:10000 Raster 2002	Site has achieved its current state	Recreational land has been created on an area of former mine workings to the south.

9 ENVIRONMENTAL SETTING

The table below outlines the key environmental settings relating to the site.

Table 2: Overview of the environmental settings

Geology	
Reference to the BGS online 1:50,000 bedrock geology map viewer shows that the northern section of the site is upon Alluvial Deposits of clay, silt, sand and gravel. This is underlain by the Mylor Slate Formation – Hornfelses Slate and Hornfelses Siltstone of Frasnian age.	
Records of background estimated soil chemistry on site are as follows:	
- Arsenic: >120 mg/kg	
- Cadmium: <1.8 mg/kg	
- Lead: 100-200 mg/kg	
- Chromium: 60 - 90 mg/kg	
- Nickel: 15 - 30 mg/kg	
Surface Water	
Culverts	Three culverts exist within 500m of the site, the closest to the site lies 45m northwest. All three culverts divert tertiary rivers.
Primary Rivers	No primary rivers exist within 500m of the site.
Secondary Rivers	One secondary river can be located 473m to the east.
Tertiary Rivers	Numerous tertiary rivers flow within 500m of the site. The nearest of which can be located 11m to the north.
Surface Water Abstractions	There are no surface water abstraction licences within 1500m of the site.
Monitoring	There is no biological data within 1500m of the site. Chemical data exists on the Hicks Mill Stream, 38m to the north. Between 2005-2007 the stream was graded 'C' or 'Fairly Good'. This improved to grade 'B' or 'Good' between 2008-2009.
Groundwater	

Geological Classification: Secondary A- Permeable layers capable of supporting water at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The groundwater vulnerability and soil leaching potential on site is categorised as 'I1 – Soils which can possibly transmit a wide range of pollutants'.

There are no source protection zones within 500 metres of the site.

There are groundwater flooding susceptibility areas within 50m of the proposed development relating to flooding within the superficial deposits.

Due to the land contours, it is estimated that the flow of groundwater will be to the east.

There are two active groundwater abstraction licences within 2000m. Both are attached to Trevince and Gouorow Farms for household, domestic and general farming purposes.

Radon

The property is in a Radon Affected Area, greater than 30% of properties are above the action level.

Sensitive Land Uses

Environmental	West Cornwall Bryophytes SSSI lies 1471m to the west.
	The site lies 409m to the south west of the Cornwall & West Devon Mining Landscape.
	There are no AONB's within 2000m of the site.
	There are no NNR's within 2000m of the site.
	The site is located within a existing Nitrate Vulnerable Zone.
Ecological	No invasive species were noted in or around the immediate surroundings of the site.
	There are no known species or habitats of importance subject to legal protection.
Archaeological	The site is not known to be in or around any archeologically sensitive areas.
Other Environmental Information	
Contaminated Land	No sites determined as Contaminated Land under Part 2A EPA 1990 are situated within 500m of the site.
Waste	There are no Environment Agency landfill sites within 1000m.

	There are no Environment Agency historic landfill sites within 1000m,			
	There is one active discharge consent licence within 1000m of the site. This is attached to a property 41m to the north for sewage discharges to a soakaway.			
	There are four recorded pollution incidents within 500m of the proposed development.			
Pollution Incidents	264m	East	Incident Date: 22-March-2001 Pollutant: Other Pollutant Description: Other	Water Impact: (Minor Impact) Land Impact: (No Impact) Air Impact: (No Impact)
	414m	East	Incident Date: 13-September-2002 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: (Minor Impact) Land Impact: (No Impact) Air Impact: (No Impact)
	441m	East	Incident Date: 13-September-2002 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: (Minor Impact) Land Impact: (No Impact) Air Impact: (No Impact)
	447m	East	Incident Date: 17-September-2002 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: (Minor Impact) Land Impact: (No Impact) Air Impact: (No Impact)
Flooding	The site possesses a very low RoFRaS Flood Rating however this rating becomes high 36m to the north east.			
	The site is within 250m of a Zone 2 and Zone 3 Floodplain area.			

Industrial Land Uses	<p>5 current potentially contaminative uses exist with 500m of the site. The most substantial of these include;</p> <ul style="list-style-type: none"> - Shaft; 169m south east, 172m south east - Lanner Garage; 217m west - Haulage Company; 228m west
Unexploded Ordnance (UXO)	<p>54 historic potentially contaminative uses exist within 250 m of the site. The most substantial of those include:</p> <ul style="list-style-type: none"> - Refuse Heap; Onsite, 44m west, 175m south east, 307m east - Disused Shaft; 159m south east, 166m south east, 226m south - Disused Copper Mine; 258m south west - Engine House; 384m south
Documentary Mine Search	<p>The risk to the site and its surroundings from the presence of UXO's is negligible.</p> <p>A documentary mine search has not been compiled for this site.</p>

10 QUALITATIVE RISK ASSESSMENT

10.1 Introduction

10.1.1 The Assessment of risk is based upon the principal of the pollutant linkage, which is described in more detail below. This assessment seeks to identify plausible pollutant linkages associated with the proposed development. Once this has been done, the resultant risk is determined on the basis of the probability and the possible consequence of the pollutant linkages being present. As such, this qualitative risk assessment has been undertaken in accordance guidance published in CIRIA C552⁽³⁾.

10.2 Initial Conceptual Site Model

10.2.1 This conceptual site model has been undertaken with due regard to guidance provided in BS10175:2011 and CLR11. 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.

10.2.2 This definition is based on the principles of risk assessment defined as a combination of the probability (or frequency) of occurrence of a defined hazard and the magnitude (including the seriousness) of the consequences. Central to the risk assessment process is the concept of pollutant linkage, which is a linkage between a contaminant and a receptor by means of a pathway.

³ CIRIA, 2001. CIRIA 552 - Contaminated land risk assessment. A guide to good practice.

Table 3. Summary of statutory definitions relating to pollution linkage.

Statutory definitions relating to pollution linkage.	
Contaminant	“a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of controlled waters.”
Receptor	“a living organism, a group of living organisms, and ecological system or a piece of property” which meets given criteria. “controlled waters which are, or could be, polluted by a contaminant”.
Pathway	“one or more routes or means by, or through, which a receptor: is being exposed to, or affected by, a contaminant, or could be so exposed or affected”.

10.2.3 Without the presence of all three components, there is no linkage and therefore no risk. The relationship between these components is discussed below in order to identify the existence of any source-pathway-receptor linkage on the site, and hence the potential risks associated with any contamination.

Table 4: Identified Sources, Pathways and Receptors

Source – Pathway – Receptor Overview	
Contaminant sources	Naturally occurring radon
	Refuse Heaps - Leachate
	Refuse Heaps – Ground Gas
	Mining Activity
	Garage
Pathways	Inhalation of dust and vapours
	Dermal contact
	Ingestion
	Ingress into buildings
	Percolation
Receptors	Future site users
	Site workers

Flora & Fauna
Groundwater
Surface Waters

10.2.4 From this table, the Conceptual Site Model can be derived. It outlines the critical pollutant linkages of concern for a particular land contamination problem. The development of the CSM is a primary planning tool that's used to organise information about the site and support the decision-making process in managing potentially contaminated sites. The matrix below makes up the initial CSM based on the data and information collated during the desk study and site walkover.

10.3 Initial Conceptual Site Model Matrix

Preliminary Conceptual Model							
Source(s)	Contaminant(s)	Pathway(s)	Receptor(s)	Probability	Consequence	Risk Assessment	
On Site	Natural Geology	Radon gas	Ingress into proposed buildings	Future site users	High	Severe	High Risk - The site is located within a radon affected area where greater than 30% of properties are above the action level.
	Refuse Heap	Total Petroleum Hydrocarbons	Soil and dust ingestion and inhalation Ground & surface waters	Future site users, site workers, site flora and fauna	Moderate to High	Moderate to High	Moderate to High Risk – Site is situated upon refuse heap that is likely to contain waste material from the former mine workings that once surrounded the Lanner area. Tresavean Mine to the south is known for its copper and tin production.
		Polycyclic Aromatic Hydrocarbons Heavy Metals					
	Ground Gases	Ingress into proposed properties	Future site users	Negligible	Moderate	Low Risk – Age of the refuse heap is indicated to have been from the late 19 th century meaning the material will have passed its gassing peak.	
Off Site	Historical Mining Activity	Polycyclic Aromatic Hydrocarbons Heavy Metals	Soil and dust ingestion and inhalation Ground & surface waters	Future site users, site workers, site flora and fauna	Low	Moderate to High	Low to Moderate Risk – Site was seemingly never worked directly for resources. Any onsite contamination is likely predominantly due to stockpiling of waste materials.
	Garage	Total Petroleum Hydrocarbons Polycyclic Aromatic Hydrocarbons Heavy Metals	Soil and dust ingestion and inhalation Ground & surface waters	Future site users, site workers, site flora and fauna	Low to Moderate	Moderate	Low to Moderate Risk – Groundwater flow is in the direction of the site however as chemical monitoring downstream of the garage has been graded 'Fairly Good' or 'Good', it would seem unlikely that an offsite migration of hydrocarbons is occurring.

11 GROUND STABILITY RISK ASSESSMENT

11.1 Introduction

11.1.1 This risk assessment has been undertaken with due regard to the advice relating to ground instability as provided in the Department of the Environment (Welsh Offices) Planning Policy Guidance (no. 14) for “Development on Unstable Land”. The guidance discusses the causes of Unstable Land and defines them as falling into one of three categories:

- i. The effects of underground cavities; these may be of natural origin or due to mining or to civil engineering works;
- ii. Unstable slopes; these may be natural, in both coastal and inland situations; or man-made, whether excavated, as in quarries or cuttings, or constructed, as in tips and embankments;
- iii. Ground compression; this may be of natural origin due to peat, alluvial, estuarine or marine soils; or due to human activities, e.g. made ground, landfill or restored opencast mines; and ground subject to movement due to shrinking and swelling clays.

11.1.2 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.

11.1.3 The risks posed by each type of unstable ground are discussed based upon the proposed redevelopment of the site for dwellings. Table 5 below outlines the key findings.

Table 5: Overview of the risks posed by unstable ground

Underground Cavities
The property is situated within a mining district. Small-scale underground mining may have occurred.
Unstable Slopes
The site is flat; the risk from unstable slopes is low.

British Geological Survey Data

Information relating to potential ground instability issues at this site has been collected from the BC digital mapping and collated within the Groundsure GeoInsight report, which is provided as Appendix B. Below is the summarised information.

Natural Hazard Findings

Hazard	Risk Classification
Shrink – Swell	Very Low - Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink -swell clays.
Landslides	Very Low - Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
Soluble Rocks	Negligible - Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
Compressible Deposits	Moderate - Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property – possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
Collapsible Deposits	Very Low - Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

Running Sand

Low - Possibility of running sand problems after major changes in ground conditions
Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand.
For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

11.2 Groundwater

11.2.1 It is possible that groundwater could be shallow in this area, and therefore requirements for dewatering of shallow excavations should be considered. It is anticipated that groundwater will flow to the east.

12 CONCLUSIONS AND RECOMMENDATIONS

12.1 Conclusions

12.1.1 The site has a longstanding history as a parcel of undeveloped land that was previously used as a refuse heap for materials relating to the surrounding mining activity.

12.1.2 The exact nature and composition of the fill is unknown therefore it must be assumed that the potential exists to cause significant harm until otherwise tested and discounted. With the likelihood that the infill comprises of waste materials from mining related activities, its highly possible that contamination of the soils exists particularly when taking into account the alluvial nature of the subsurface. Chemical monitoring of the stream adjacent to the site has been rated Good in recent years which would suggest offsite migration of any contaminants is not occurring.

12.1.3 Within the surrounding area, a fuel station that lies to the west of the site isn't likely to be a contaminative source taking into account the monitoring results as stated above.

12.1.4 The residential nature of this development means there will be future users of this site to which a potentially unacceptable level of risk would exist without any further quantification.

12.1.5 It's been assessed that the site will require an intrusive investigation to determine the presence of any subsurface contamination.

12.2 Recommendations

12.2.1 An intrusive investigation is recommended to determine the presence of any heavy metals, total petroleum hydrocarbons and polycyclic aromatic hydrocarbons.

12.2.2 It's also recommended that the advice of a suitably qualified geotechnical engineer at the commencing of work to address any potential issues with stability.

12.2.3 Full Radon protection measures will be required in all properties within any proposed residential development.

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

12.2.5 Material to be removed from site should have its Waste Acceptance Criteria (WAC) ascertained.

13 NOTES

This report is concerned solely with the property, as defined by this report, or parts thereof examined.

The report should not be used in connection with adjacent properties.

In respect of site works, Wheal Jane Consultancy cannot accept any liabilities for any additional mine workings found outside the limits of any areas examined.

The information in the Groundsure EnviroInsight and RadonCheck reports, which have been used in compiling this Phase 1 Desk Study report, is derived from a number of statutory and non-statutory sources. While every effort is made by the supplier to ensure accuracy, the supplier cannot guarantee the accuracy or completeness of such information or data, nor to identify all the factors that may be relevant.

The conclusions and recommendations relate to the type and extent of development outlined in this report for this specific property only and should not be taken as suitable for any other form or extent of development on this property without further consultation with Wheal Jane Consultancy.

This report is confidential to the client, the client's legal and professional advisors, and may not be reproduced or distributed without our permission other than to directly facilitate the sale or development of the property concerned.

We have no liability toward any person not party to commissioning this report.

Unless otherwise expressly stated, nothing in this report shall create or confer any rights or other benefits pursuant to the Contracts (Rights of Third Parties) Act 1999 in favour of any person other than the person commissioning this report.

This report is not an asbestos inspection that may fall within the control of Control of Asbestos Regulations 2006.

APPENDICES:

- A. *Site Photographs*
- B. *Groundsure Report*
- C. *Historical Maps*

APPENDIX A

Site Photographs



Photograph 1: View of the northern site boundary



Photograph 2: View of the western site boundary



Photograph 3: Access road along the eastern boundary



Photograph 4: View looking west

APPENDIX B

Groundsure Report



Wheal Jane Enterprises

WHEAL JANE WHEAL JANE ENTEPRISES, -,
TRURO/BALDHU, TR3 6EE

Groundsure
Reference:

GS-4324331

Your Reference: 19244

Report Date 5 Oct 2017

Report Delivery Method: Email - pdf

Enviro Insight

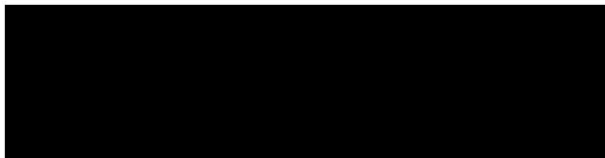
Address: LAND ADJ TO COPPICE INN, LANNER, TR16 6BY

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Enviro Insight

Address: LAND ADJ TO COPPICE INN, LANNER, TR16 6BY
Date: 5 Oct 2017
Reference: GS-4324331
Client: Wheal Jane Enterprises

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 10-Jul-2013
Grid Reference: 172487,039844
Site Size: 0.47ha

Report Reference: GS-4324331
Client Reference: 19244

Contents Page

Contents Page	3
Overview of Findings	6
Using this report	10
1. Historical Land Use	11
1. Historical Industrial Sites	12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping	12
1.2 Additional Information –Historical Tank Database	13
1.3 Additional Information –Historical Energy Features Database	13
1.4 Additional Information –Historical Petrol and Fuel Site Database	14
1.5 Additional Information –Historical Garage and Motor Vehicle Repair Database	14
1.6 Potentially Infilled Land	14
2. Environmental Permits, Incidents and Registers Map	16
2. Environmental Permits, Incidents and Registers	17
2.1 Industrial Sites Holding Licences and/or Authorisations	17
2.1.1 Records of historic IPC Authorisations within 500m of the study site	17
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site	17
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site	17
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site	17
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site	17
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site	18
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	18
2.1.8 Records of Licensed Discharge Consents within 500m of the study site	18
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site	18
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	19
2.2 Dangerous or Hazardous Sites	19
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents	19
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site	19
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site	19
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	20
3. Landfill and Other Waste Sites Map	21
3. Landfill and Other Waste Sites	22
3.1 Landfill Sites	22
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site	22
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site	22
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site	22
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site	23
3.2 Other Waste Sites	23
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site	23
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site	23
4. Current Land Use Map	24
4. Current Land Uses	25
4.1 Current Industrial Data	25
4.2 Petrol and Fuel Sites	25
4.3 National Grid High Voltage Underground Electricity Transmission Cables	26
4.4 National Grid High Pressure Gas Transmission Pipelines	26

5. Geology	27
5.1 Artificial Ground and Made Ground.....	27
5.2 Superficial Ground and Drift Geology	27
5.3 Bedrock and Solid Geology	27
6 Hydrogeology and Hydrology	28
6a. Aquifer Within Superficial Geology	28
6b. Aquifer Within Bedrock Geology and Abstraction Licences	29
6c. Hydrogeology –Source Protection Zones and Potable Water Abstraction Licences	30
6d. Hydrogeology –Source Protection Zones within confined aquifer	31
6e. Hydrology –Detailed River Network and River Quality	32
6.Hydrogeology and Hydrology	33
6.1 Aquifer within Superficial Deposits.....	33
6.2 Aquifer within Bedrock Deposits.....	33
6.3 Groundwater Abstraction Licences.....	34
6.4 Surface Water Abstraction Licences.....	38
6.5 Potable Water Abstraction Licences.....	39
6.6 Source Protection Zones.....	39
6.7 Source Protection Zones within Confined Aquifer.....	40
6.8 Groundwater Vulnerability and Soil Leaching Potential.....	40
6.9 River Quality.....	40
6.9.1 Biological Quality:.....	40
6.9.2 Chemical Quality:.....	41
6.10 Detailed River Network.....	41
6.11 Surface Water Features.....	42
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)	43
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map	44
7 Flooding	45
7.1 River and Coastal Zone 2 Flooding.....	45
7.2 River and Coastal Zone 3 Flooding.....	45
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating.....	45
7.4 Flood Defences.....	46
7.5 Areas benefiting from Flood Defences.....	46
7.6 Areas benefiting from Flood Storage.....	46
7.7 Groundwater Flooding Susceptibility Areas.....	46
7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes.....	46
7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?.....	46
7.8 Groundwater Flooding Confidence Areas.....	47
8. Designated Environmentally Sensitive Sites Map	48
8. Designated Environmentally Sensitive Sites	49
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	49
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	49
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	49
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	49
8.5 Records of Ramsar sites within 2000m of the study site:.....	49
8.6 Records of Ancient Woodland within 2000m of the study site:	50
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	50
8.8 Records of World Heritage Sites within 2000m of the study site:.....	50
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:	50

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:	50
8.11 Records of National Parks (NP) within 2000m of the study site:	50
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	51
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	51
8.14 Records of Green Belt land within 2000m of the study site:.....	51
9. Natural Hazards Findings	52
9.1 Detailed BGS GeoSure Data.....	52
9.1.1 Shrink Swell.....	52
9.1.2 Landslides.....	52
9.1.3 Soluble Rocks.....	52
9.1.4 Compressible Ground.....	53
9.1.5 Collapsible Rocks.....	53
9.1.6 Running Sand.....	53
9.2 Radon.....	53
9.2.1 Radon Affected Areas.....	53
9.2.2 Radon Protection.....	54
10. Mining	55
10.1 Coal Mining.....	55
10.2 Non-Coal Mining.....	55
10.3 Brine Affected Areas	55
Contact Details	56
Standard Terms and Conditions	58

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	1	18	34
1.2 Additional Information –Historical Tank Database	0	0	0	0
1.3 Additional Information –Historical Energy Features Database	0	0	0	1
1.4 Additional Information –Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information –Historical Garage and Motor Vehicle Repair Database	0	0	2	1
1.6 Potentially Infilled Land	1	1	18	33

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	1	0	0
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	4
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	0	2
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	5	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	4	30
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	4
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	1	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	Yes	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	2	2	6	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes					
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Yes					
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low					
7.4 Are there any Flood Defences within 250m of the study site?	No					
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No					
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No					
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface					
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Moderate					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	1	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	1	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?

Moderate

9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?

Very Low

9.1.2 What is the maximum Landslides hazard rating identified on the study site?

Very Low

9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?

Negligible

9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?

Moderate

9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?

Very Low

9.1.6 What is the maximum Running Sand hazard rating identified on the study site?

Low

9.2 Radon

9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is in a Radon Affected Area, as greater than 30% of properties are above the Action Level.

9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?

Full radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?

No

10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?

Yes

10.3 Are there any brine affected areas within 75m of the study site?

No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flow areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon.

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

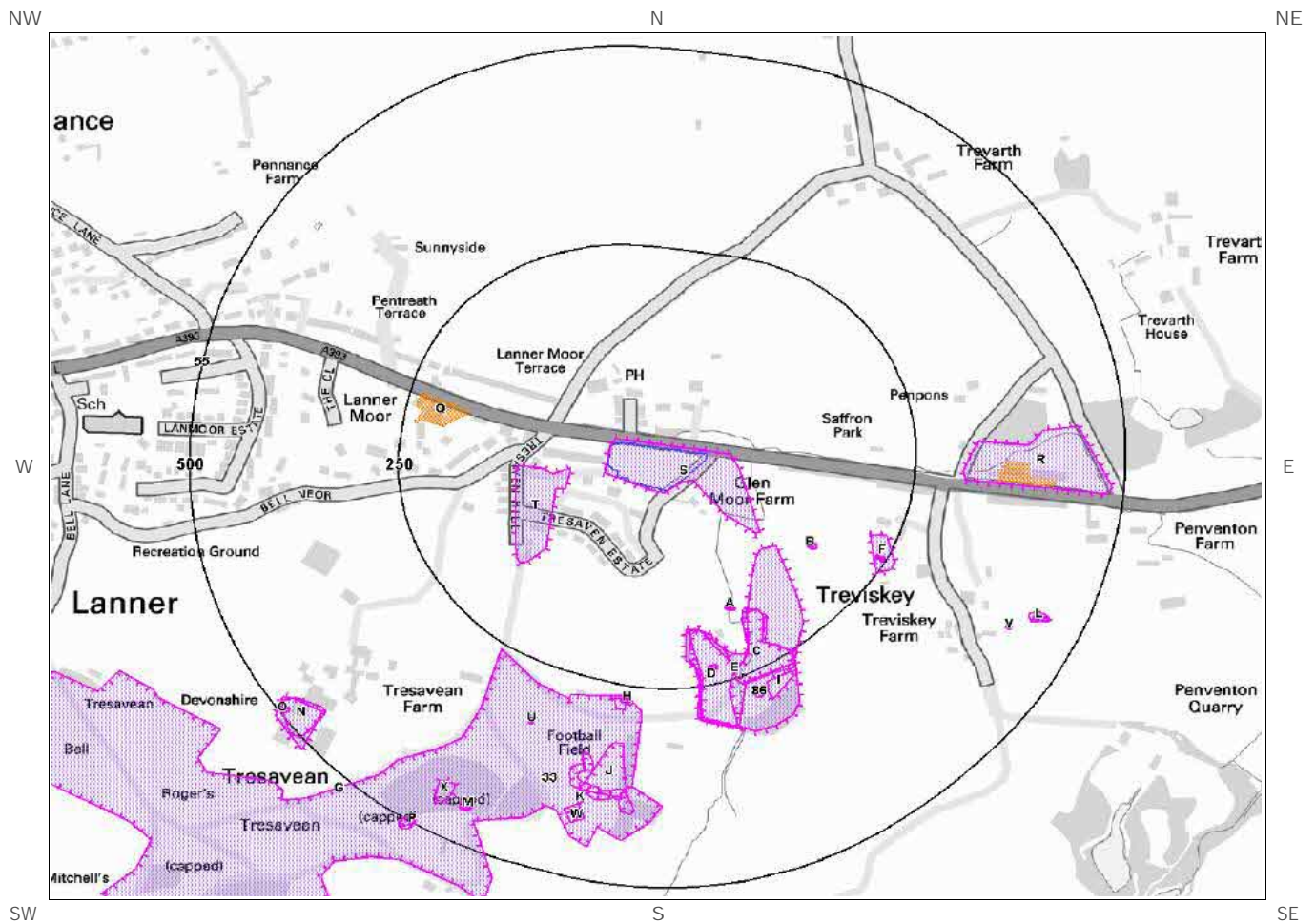
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

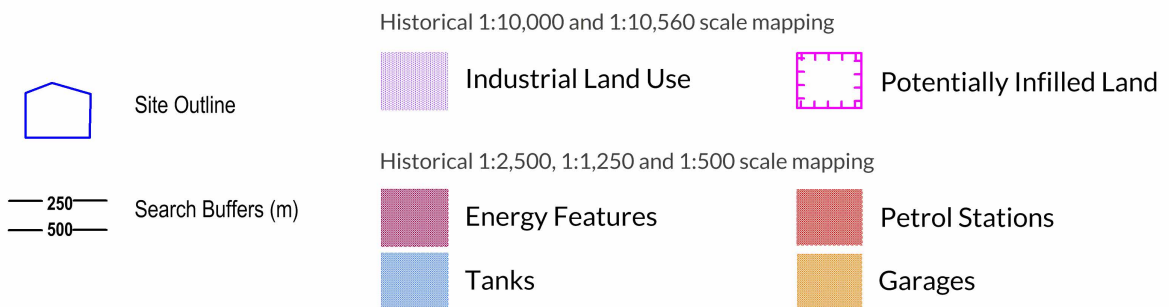
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 54

ID	Distance [m]	Direction	Use	Date
1S	0	On Site	Refuse Heap	1878
2T	44	W	Refuse Heap	1878
3C	127	SE	Unspecified Heap	1878
4A	159	SE	Unspecified Old Shaft	1962
5A	159	SE	Unspecified Disused Shaft	1975
6B	162	SE	Unspecified Old Shafts	1962
7B	162	SE	Unspecified Disused Shaft	1975
8A	164	SE	Unspecified Old Shaft	1908
9A	164	SE	Unspecified Shaft	1878
10B	166	SE	Unspecified Old Shafts	1908
11C	175	SE	Refuse Heap	1962
12D	177	S	Refuse Heap	1962
13E	177	SE	Refuse Heaps	1908
14F	219	SE	Unspecified Heap	1878
15D	226	S	Unspecified Old Shafts	1908
16E	226	S	Unspecified Shaft	1878
17D	227	S	Unspecified Shaft	1962
18F	236	SE	Unspecified Old Shafts	1962
19F	242	SE	Unspecified Old Shafts	1908
20F	242	SE	Unspecified Shaft	1878
21G	258	SW	Disused Copper Mine	1908
22G	258	SW	Disused Copper Mine	1878
23H	263	S	Unspecified Disused Shaft	1975
24H	267	S	Unspecified Old Shaft	1908
25H	267	S	Unspecified Shaft	1878
26H	267	S	Unspecified Shaft	1962
27I	269	SE	Unspecified Pit	1908
28I	275	SE	Unspecified Disused Shaft	1975
29R	307	E	Refuse Heap	1878
30U	320	S	Unspecified Shaft	1908
31J	322	S	Refuse Heap	1962
32J	344	S	Unspecified Ground Workings	1975
33	384	S	Engine House	1878

34K	399	S	Unspecified Shaft	1908
35K	408	S	Unspecified Shaft	1962
36V	416	SE	Unspecified Old Shaft	1908
37W	422	S	Unspecified Shaft	1878
38L	433	SE	Refuse Heap	1878
39X	433	SW	Unspecified Pit	1975
40L	440	SE	Unspecified Shaft	1878
41M	446	SW	Unspecified Old Shaft	1908
42M	448	SW	Unspecified Shaft	1962
43M	451	SW	Unspecified Shaft	1878
44L	451	SE	Unspecified Old Shaft	1962
45N	457	SW	Refuse Heap	1908
46N	457	SW	Unspecified Heap	1878
47N	461	SW	Refuse Heap	1962
48N	489	SW	Unspecified Shaft	1908
49N	489	SW	Unspecified Shaft	1908
50N	489	SW	Unspecified Shaft	1878
51O	494	SW	Unspecified Disused Shaft	1975
52O	494	SW	Unspecified Shaft	1962
53P	495	SW	Unspecified Disused Shaft	1975
54P	498	SW	Unspecified Shaft	1962

1.2 Additional Information –Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 0

Database searched and no data found.

1.3 Additional Information –Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary: 1

ID	Distance (m)	Direction	Use	Date
55	499	W	Electricity Substation	1972

1.4 Additional Information –Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information –Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 3

ID	Distance (m)	Direction	Use	Date
56Q	176	W	Garage	1993
57Q	177	W	Garage	1972
58R	346	E	Garage	1972

1.6 Potentially Infilled Land

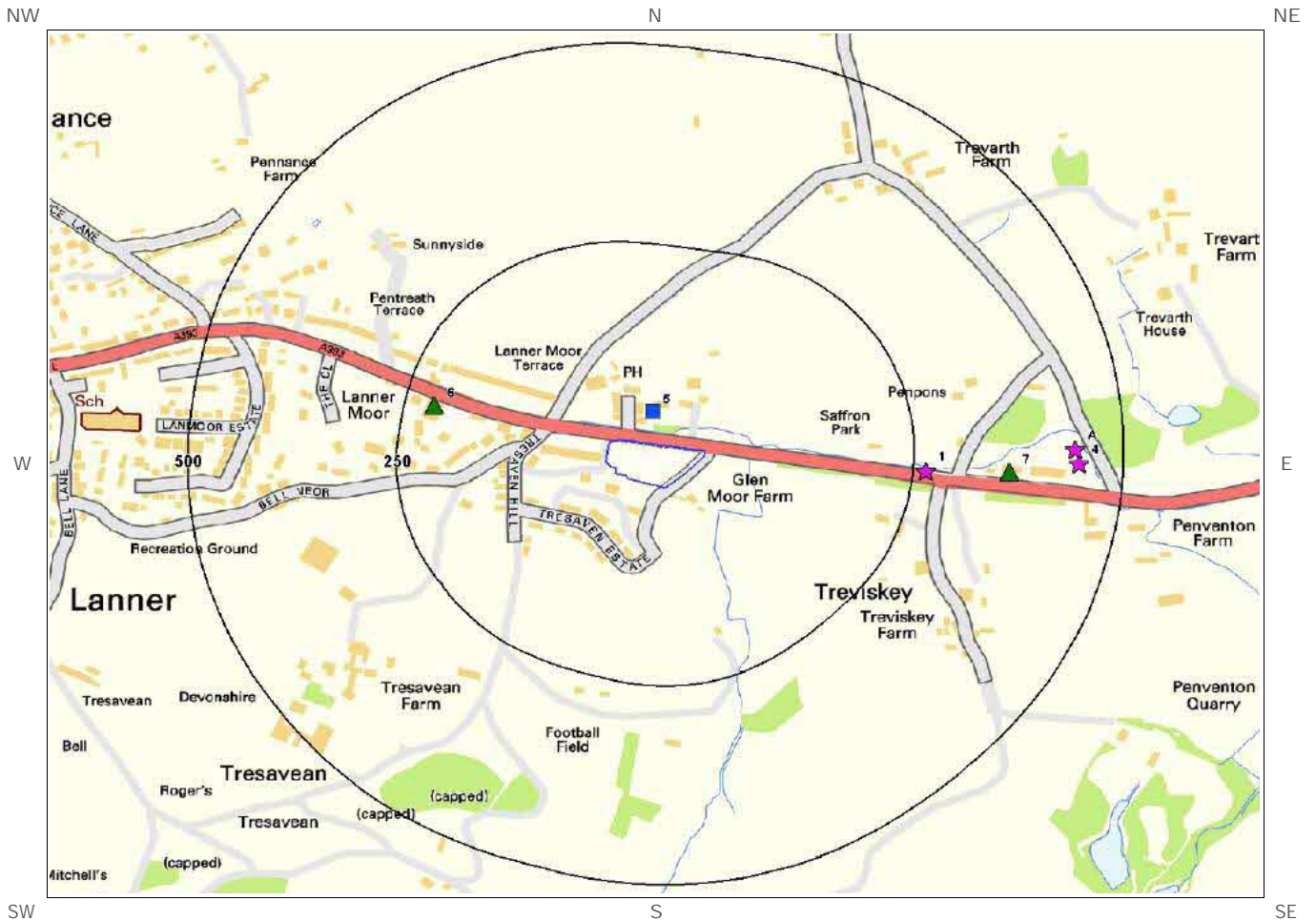
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 53

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:















ID	Distance(m)	Direction	Use	Date
59S	0	On Site	Refuse Heap	1878
60T	44	W	Refuse Heap	1878
61C	127	SE	Unspecified Heap	1878
62A	159	SE	Unspecified Old Shaft	1962
63A	159	SE	Unspecified Disused Shaft	1975
64B	162	SE	Unspecified Disused Shaft	1975
65B	162	SE	Unspecified Old Shafts	1962
66A	164	SE	Unspecified Old Shaft	1908
67A	164	SE	Unspecified Shaft	1878
68B	166	SE	Unspecified Old Shafts	1908
69C	175	SE	Refuse Heap	1962
70D	177	S	Refuse Heap	1962
71E	177	SE	Refuse Heaps	1908
72F	219	SE	Unspecified Heap	1878
73D	226	S	Unspecified Old Shafts	1908
74D	226	S	Unspecified Shaft	1878
75D	227	S	Unspecified Shaft	1962

76F	236	SE	Unspecified Old Shafts	1962
77F	242	SE	Unspecified Old Shafts	1908
78F	242	SE	Unspecified Shaft	1878
79G	258	SW	Disused Copper Mine	1878
80G	258	SW	Disused Copper Mine	1908
81H	263	S	Unspecified Disused Shaft	1975
82H	267	S	Unspecified Shaft	1878
83H	267	S	Unspecified Old Shaft	1908
84H	267	S	Unspecified Shaft	1962
85I	269	SE	Unspecified Pit	1908
86	275	SE	Unspecified Disused Shaft	1975
87R	307	E	Refuse Heap	1878
88U	320	S	Unspecified Shaft	1908
89J	322	S	Refuse Heap	1962
90J	344	S	Unspecified Ground Workings	1975
91K	399	S	Unspecified Shaft	1908
92K	408	S	Unspecified Shaft	1962
93V	416	SE	Unspecified Old Shaft	1908
94W	422	S	Unspecified Shaft	1878
95L	433	SE	Refuse Heap	1878
96X	433	SW	Unspecified Pit	1975
97L	440	SE	Unspecified Shaft	1878
98M	446	SW	Unspecified Old Shaft	1908
99M	448	SW	Unspecified Shaft	1962
100M	451	SW	Unspecified Shaft	1878
101L	451	SE	Unspecified Old Shaft	1962
102O	457	SW	Refuse Heap	1908
103O	457	SW	Unspecified Heap	1878
104O	461	SW	Refuse Heap	1962
105O	489	SW	Unspecified Shaft	1908
106O	489	SW	Unspecified Shaft	1908
107O	489	SW	Unspecified Shaft	1878
108O	494	SW	Unspecified Shaft	1962
109O	494	SW	Unspecified Disused Shaft	1975
110P	495	SW	Unspecified Disused Shaft	1975
111P	498	SW	Unspecified Shaft	1962

2. Environmental Permits, Incidents and Registers Map



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

- | | | | | | |
|---|--------------------|---|-------------------------------|---|--|
|  | Site Outline |  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Search Buffers (m) |  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | |  | Dangerous Substances (List 2) |  | Part A(2) and Part B Authorised Processes |
| | |  | Water Industry Referrals |  | COMAH / NIHS Sites |
| | |  | Licenced Discharge Consents |  | Sites Determined as Contaminated Land |
| | |  | Red List Discharge Consents |  | Hazardous Substance Consents and Enforcements |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

2

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
6	215	W	172227 39916	Address: Lanner Moor Garage, Lanner, Redruth, TR16 6HT Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: Data requested, not received. Date of Enforcement: Data requested, not received. Comment: Data requested, not received.
7	365	E	172917 39832	Address: Cornwall Kawasaki Centre, Treviskey, Lanner, TR16 6AS Process: Waste Oil Burner Status: New Legislation Applies Permit Type: Part B Enforcement: Data requested, not received. Date of Enforcement: Data requested, not received. Comment: Data requested, not received.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

1

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
5	41	N	172490 039910	Address: ADJ BILMARJO, LANNER MOOR, LANNER, REDRUTH, CORNWALL Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NRA-SW-8043 Permit Version: 1 Receiving Water: SOAKAWAY Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 11/06/1996 Effective Date: 11-Jun-1996 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

4

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1	264	E	172815 39834	Incident Date: 22-Mar-2001 Incident Identification: 721 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2A	441	E	172994 39862	Incident Date: 13-Sep-2002 Incident Identification: 107729 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3A	441	E	172994 39862	Incident Date: 13-Sep-2002 Incident Identification: 107729 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	447	E	172999 39843	Incident Date: 17-Sep-2002 Incident Identification: 108401 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

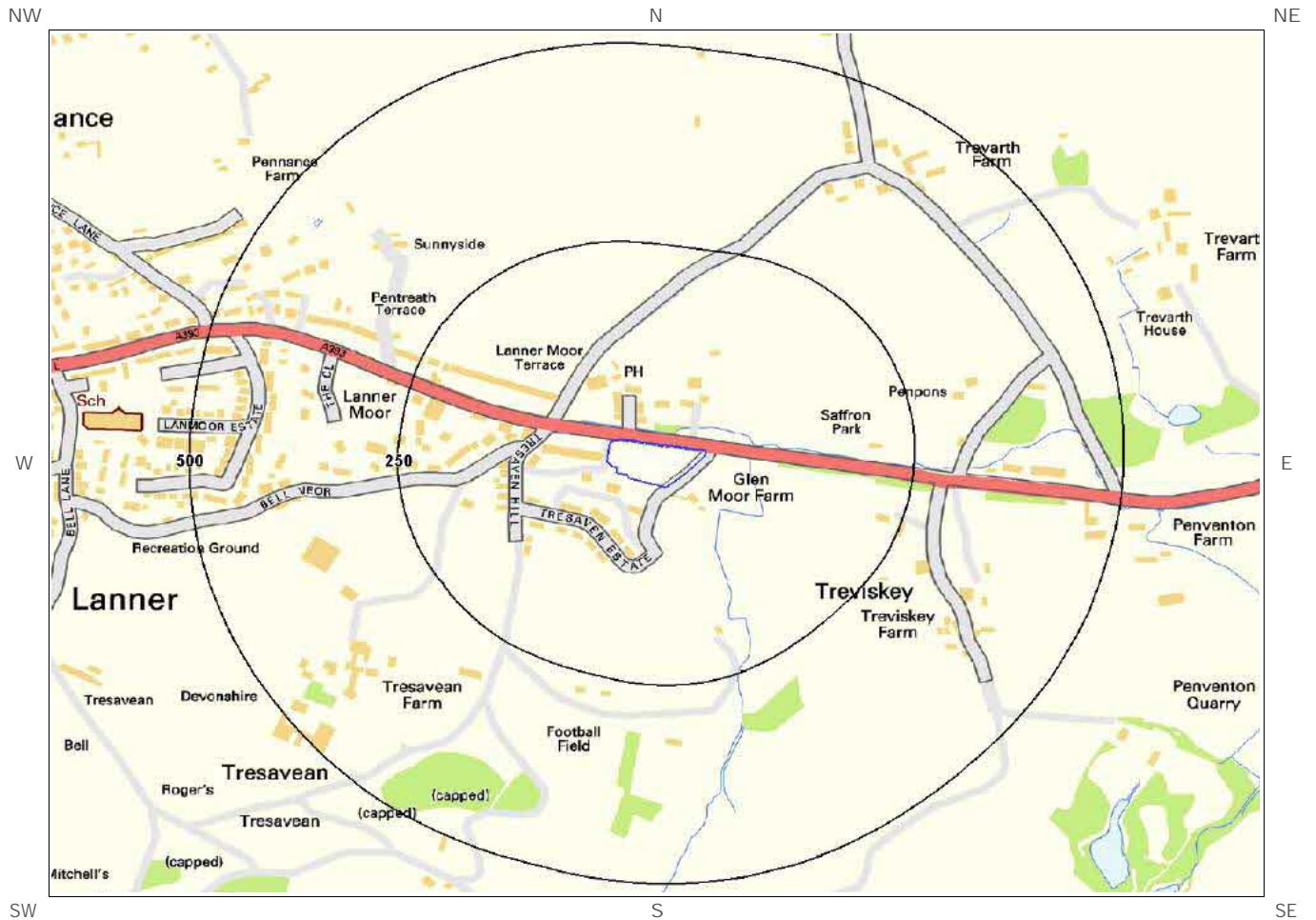
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

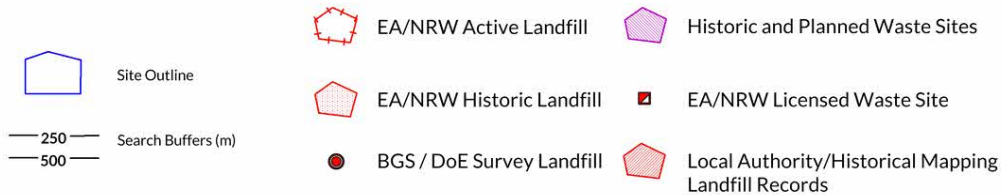
0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

2

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1126	N	172500 41000	Site Address: Carnmarth, Lanner, Redruth Waste Licence: - Site Reference: WM2/1, WM9/5/2/40 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1985 Last Recorded: -
Not shown	1185	N	172500 41000	Site Address: Carnmarth, Lanner, Redruth Waste Licence: - Site Reference: WM2/1, WM9/5/2/40 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1985 Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

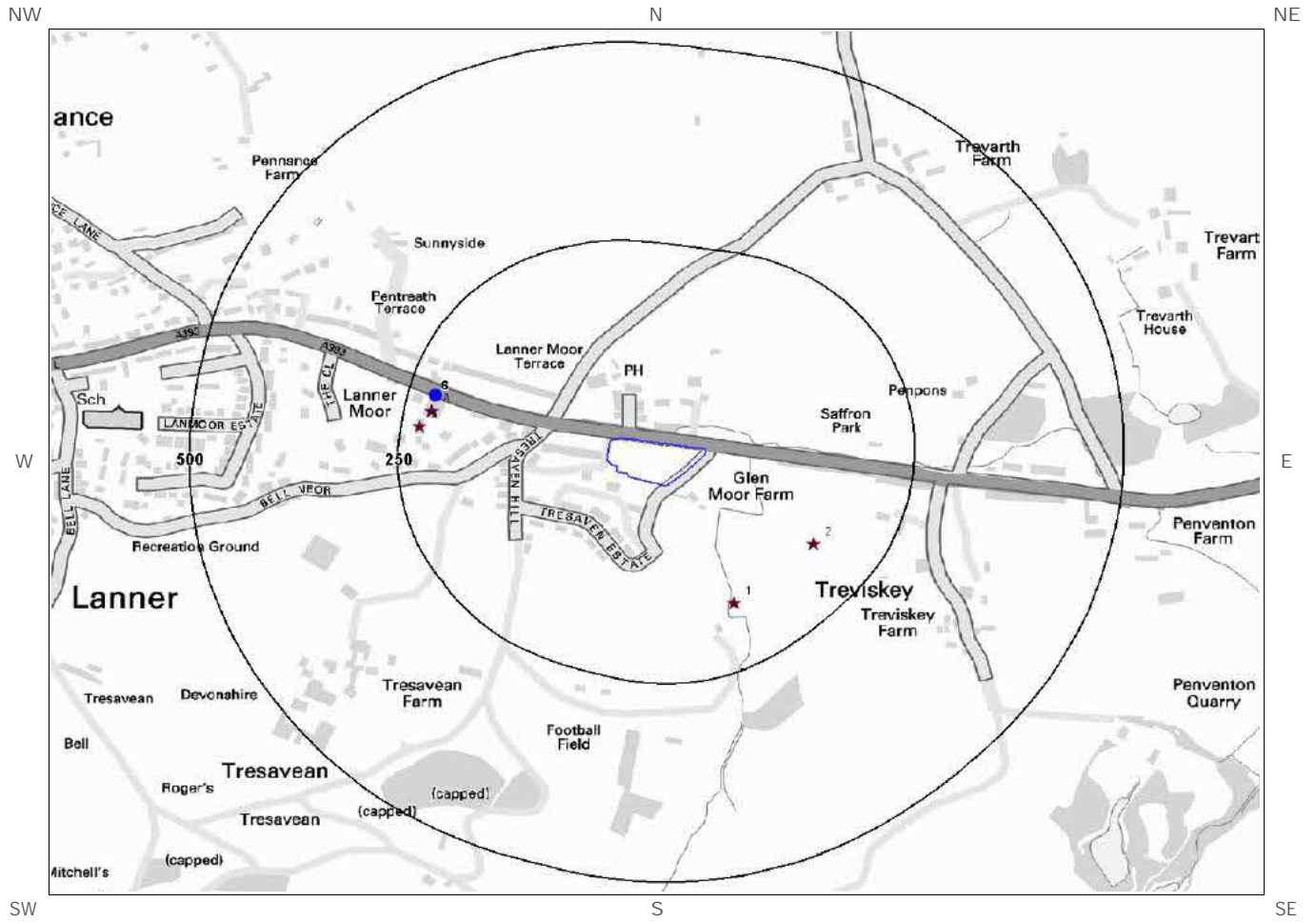
Database searched and no data found.

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

0

Database searched and no data found.

4. Current Land Use Map



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

5

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	169	SE	Shaft	172586 39666	TR16	Unspecified Quarries Or Mines	Extractive Industries
2	172	SE	Shaft	172681 39741	TR16	Unspecified Quarries Or Mines	Extractive Industries
3A	217	W	Lanner Garage	172224 39909	Lanner Moor, Redruth, TR16 6HT	Vehicle Repair, Testing and Servicing	Repair and Servicing
4A	218	W	Lanner Moor Garage	172224 39909.	A393, Lanner, Redruth, Cornwall, TR16 6HT	Petrol and Fuel Stations	Road and Rail
5	228	W	Nick Williams Light Haulage	172209 39888.	1, Glenview, Lanner Moor, Redruth, TR16 6HU	Distribution and Haulage	Transport, Storage and Delivery

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
6	218	W	172228 39928	Gulf	Lanner Moor Garage, A393, A393, Lanner, Redruth, Cornwall, TR16 6HT	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

5.3 Bedrock and Solid Geology

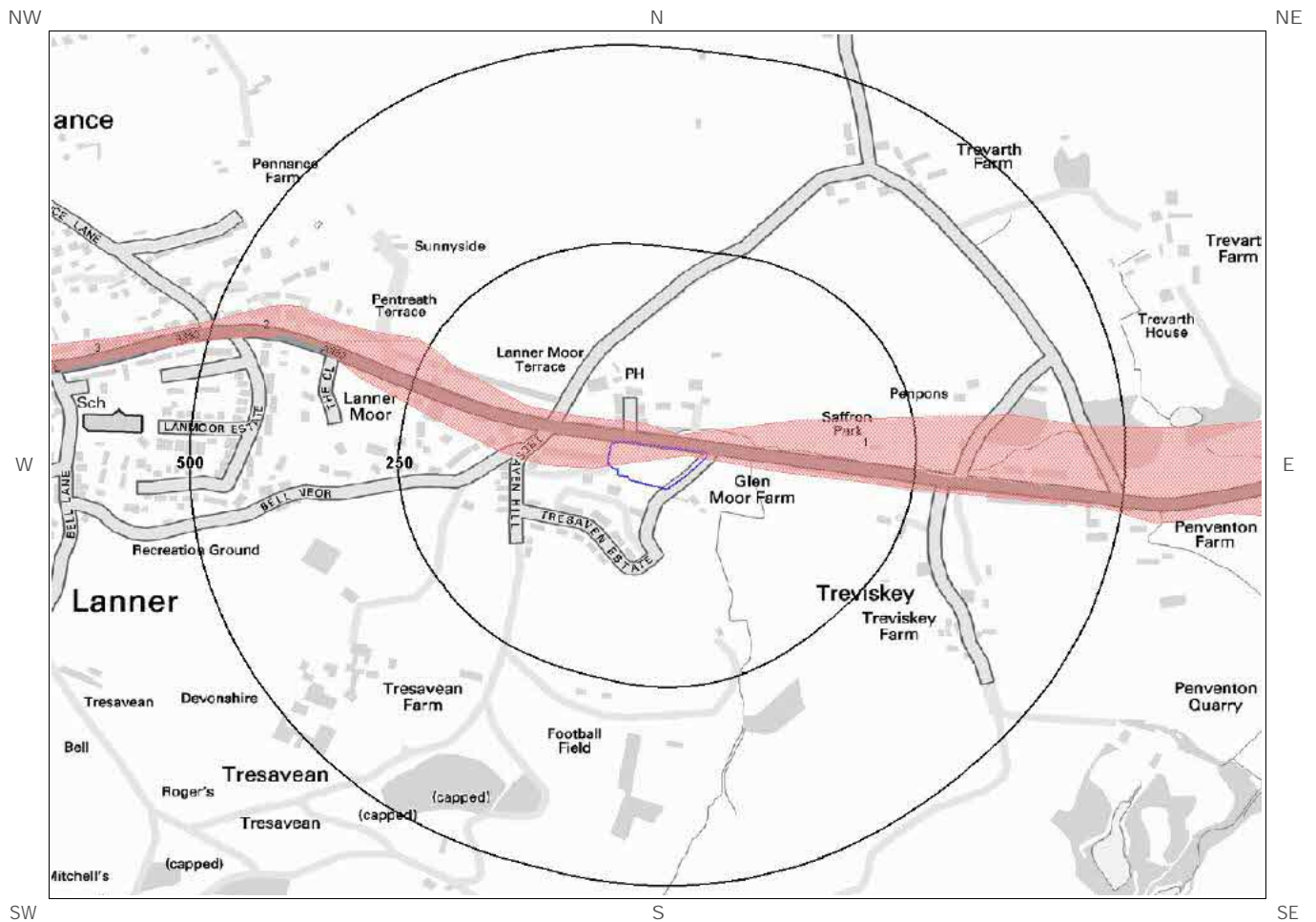
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
MRS�-HSSL	MYLOR SLATE FORMATION	HORNFELSED SLATE AND HORNFELSED SILTSTONE
UDP-FELS	UNNAMED DYKE, PERMIAN	FELSITE
UDP-FELS	UNNAMED DYKE, PERMIAN	FELSITE

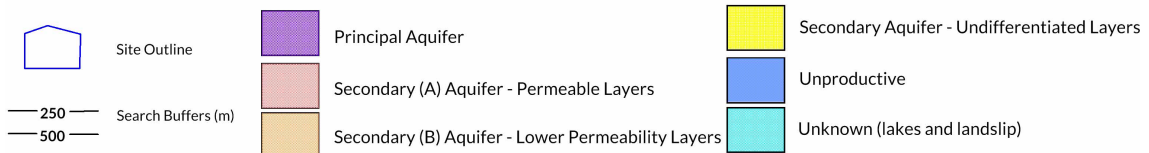
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

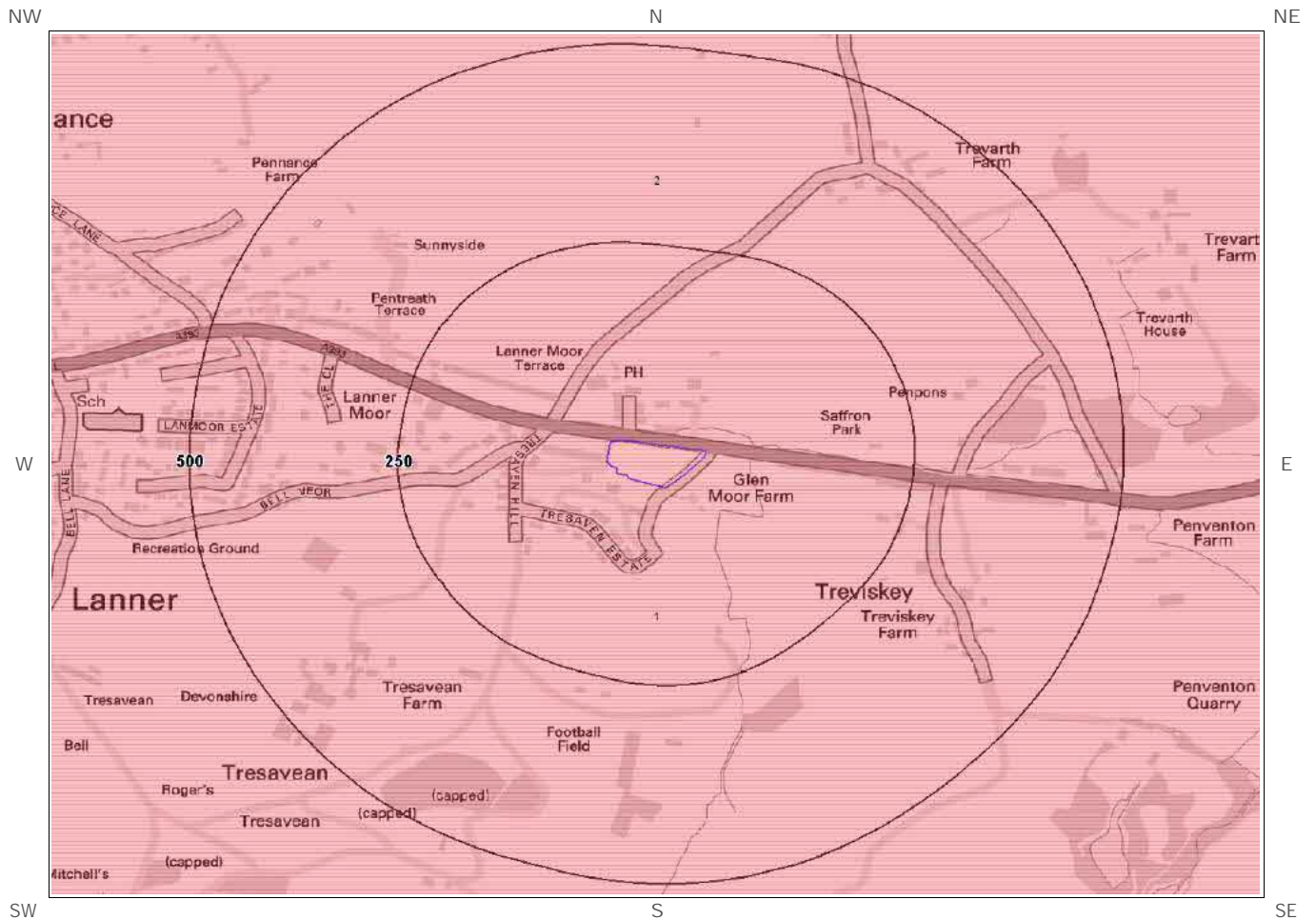
6a. Aquifer Within Superficial Geology



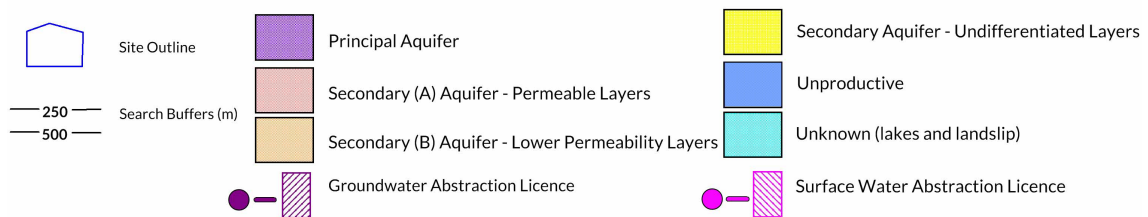
© Crown copyright and database rights 2017
Ordnance Survey license 100035207.



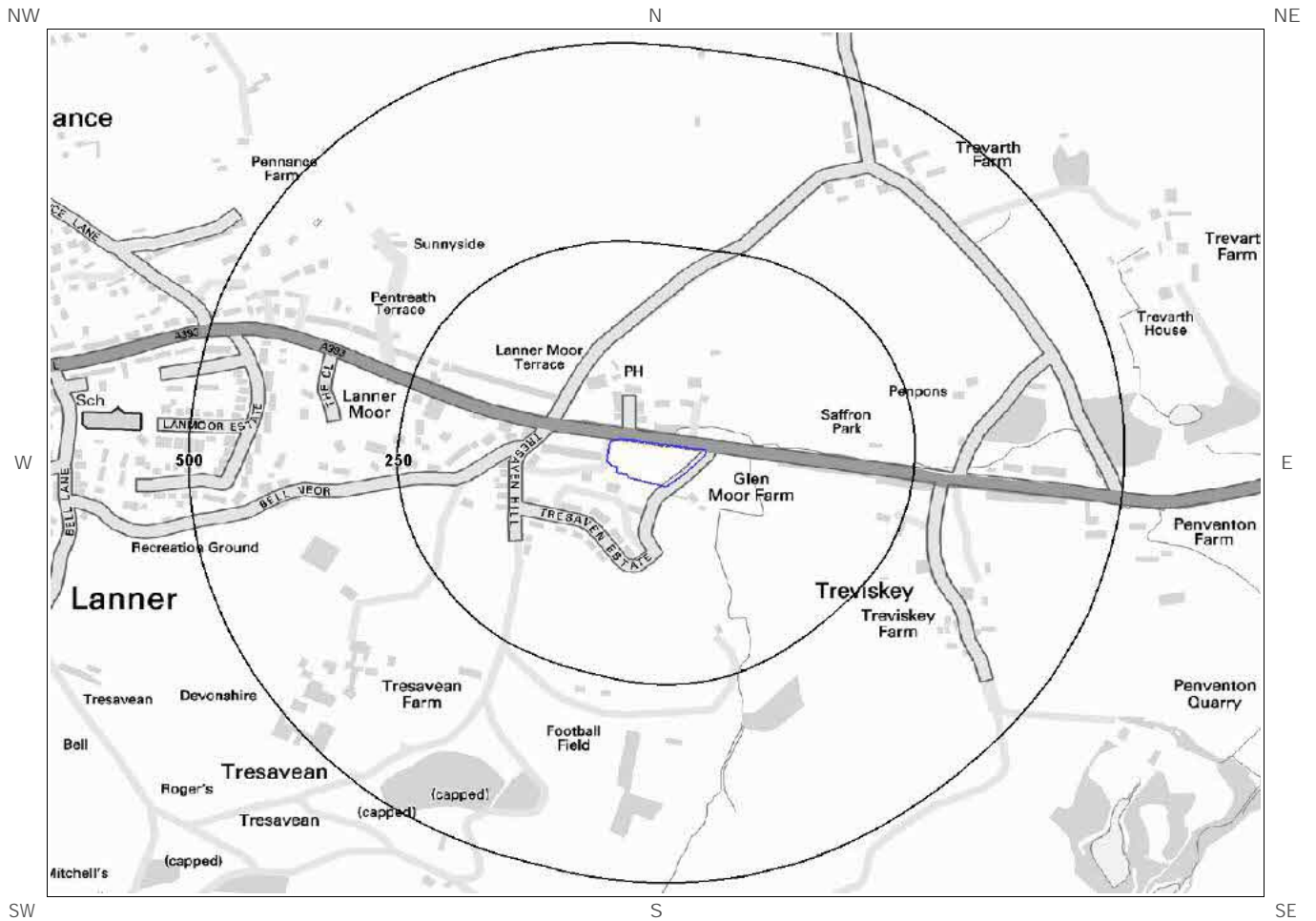
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



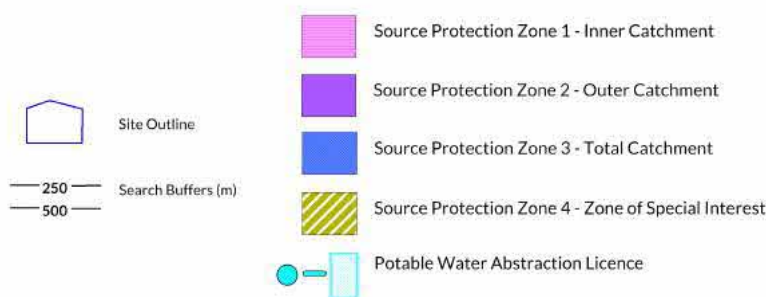
© Crown copyright and database rights 2017
Ordnance Survey license 100035207.



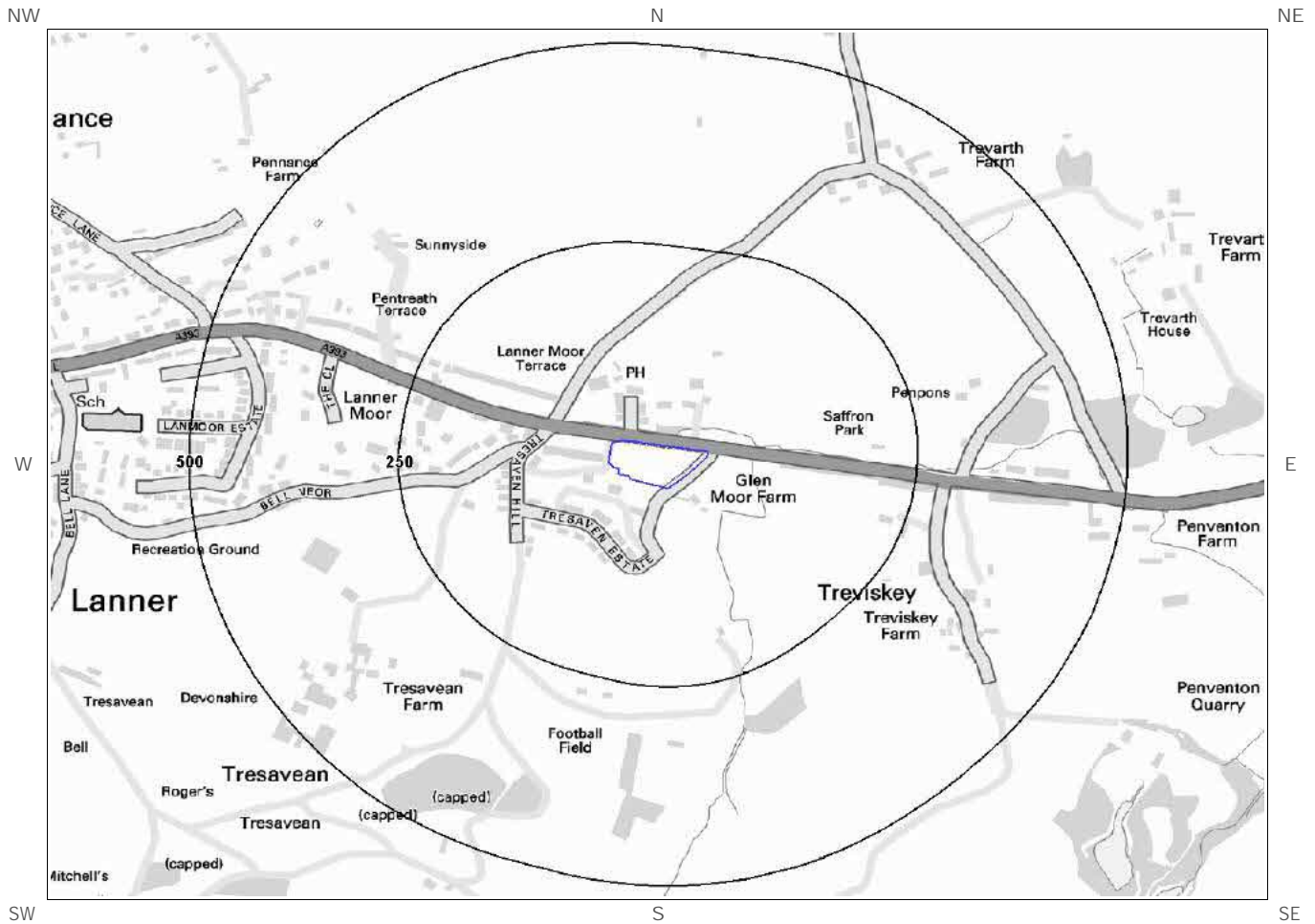
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



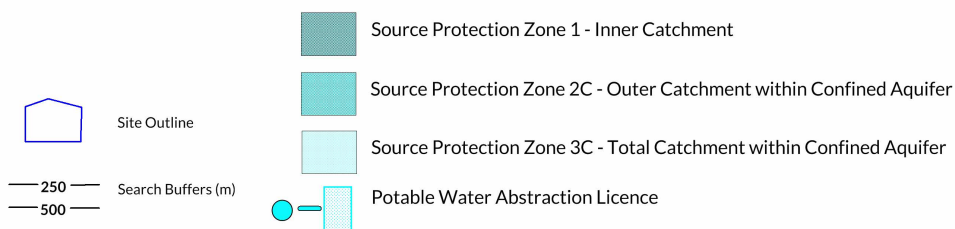
© Crown copyright and database rights 2017
Ordnance Survey license 100035207.



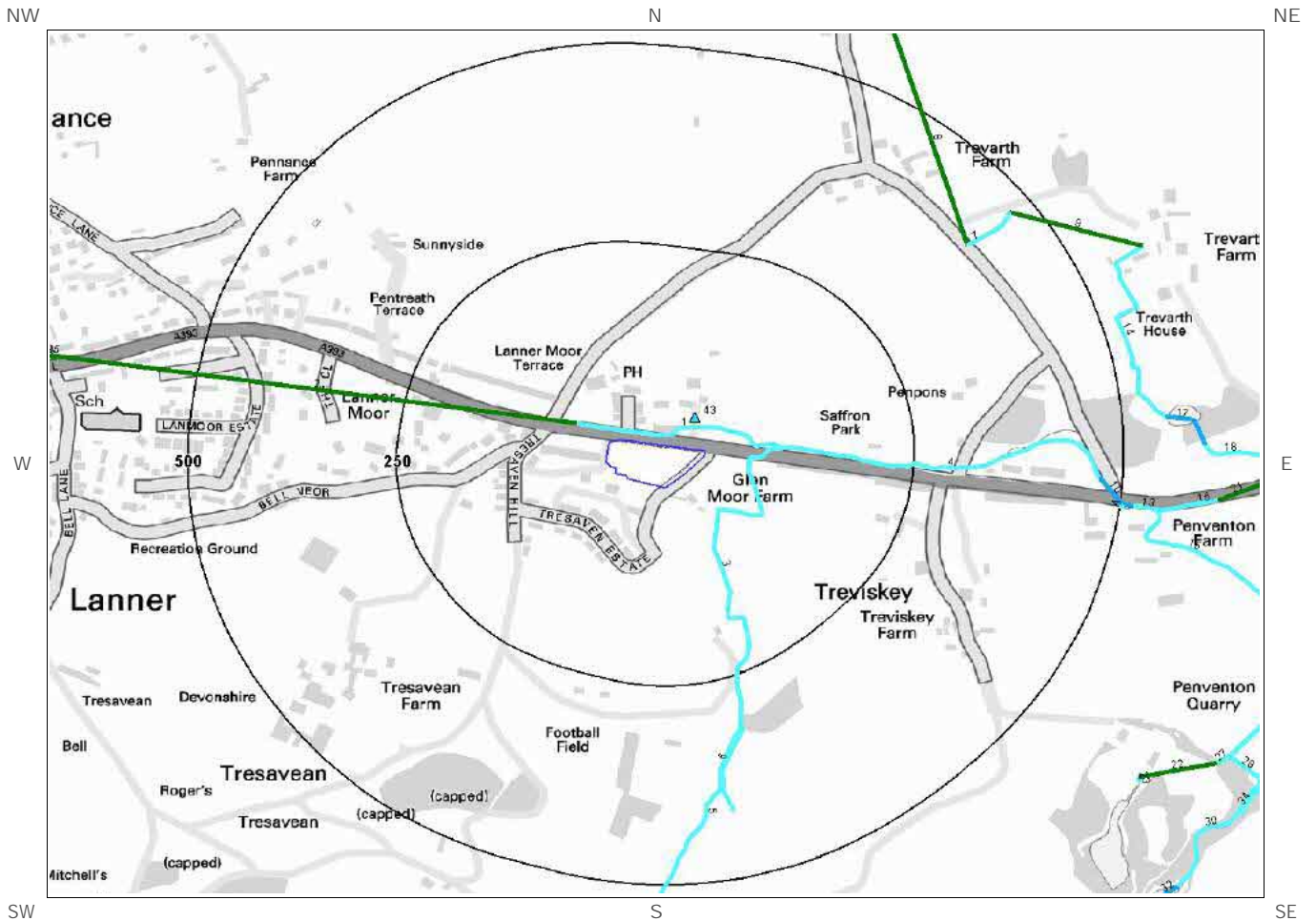
6d. Hydrogeology – Source Protection Zones within confined aquifer



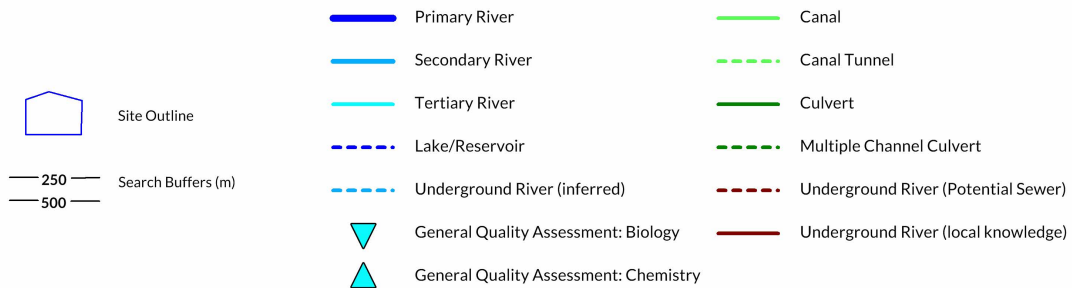
© Crown copyright and database rights 2017
Ordnance Survey license 100035207.



6e. Hydrology – Detailed River Network and River Quality



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property?
Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	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	260	NW	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

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	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	127	N	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

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	714	NW	172100 40500	Status: Historical Licence No: 15/48/022/G/031 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "west Trevarth Farm, Camborne-redruth - Borehole" Data Type: Point Name: Andrew Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 9917 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 5/12/1983 Version End Date:
Not shown	714	NW	172100 40500	Status: Historical Licence No: 15/48/022/G/031 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: West Trevarth Farm, Camborne-redruth - Borehole Data Type: Point Name: Andrew Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 9917 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 5/12/1983 Version End Date:
Not shown	837	S	172700 39000	Status: Historical Licence No: 15/48/022/G/175 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Badger Hill Farm, Gwennap - Borehole Data Type: Point Name: Hall Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 11152 Original Start Date: 16/2/1981 Expiry Date: - Issue No: 100 Version Start Date: 17/3/1988 Version End Date:
Not shown	837	S	172700 39000	Status: Historical Licence No: 15/48/022/G/175 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "badger Hill Farm, Gwennap - Borehole" Data Type: Point Name: Hall Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 11152 Original Start Date: 16/2/1981 Expiry Date: - Issue No: 100 Version Start Date: 17/3/1988 Version End Date:
Not shown	1013	SE	173400 39300	Status: Historical Licence No: 15/48/022/G/176 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "trevince & Gouorow Farms, Gwennap - Tapped Spring" Data Type: Point Name: Stone Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 7330 Original Start Date: 24/2/1981 Expiry Date: - Issue No: 100 Version Start Date: 15/7/1992 Version End Date:
Not shown	1013	SE	173400 39300	Status: Historical Licence No: 15/48/022/G/176 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: Ground Water - Fresh Point: "trevince & Gouorow Farms, Gwennap - Tapped Spring" Data Type: Point Name: Stone Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 7330 Original Start Date: 24/2/1981 Expiry Date: - Issue No: 100 Version Start Date: 15/7/1992 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1013	SE	173400 39300	<p>Status: Active Licence No: 15/48/022/G/176 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Trevince & Gouorow Farms, Gwennap - Tapped Spring Data Type: Point Name: Stone</p> <p>Annual Volume (m³): 10974 Max Daily Volume (m³): 30.07 Original Application No: 7330 Original Start Date: 24/2/1981 Expiry Date: - Issue No: 101 Version Start Date: 27/9/2007 Version End Date:</p>
Not shown	1013	SE	173400 39300	<p>Status: Active Licence No: 15/48/022/G/176 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - Fresh Point: Trevince & Gouorow Farms, Gwennap - Tapped Spring Data Type: Point Name: Stone</p> <p>Annual Volume (m³): 10974 Max Daily Volume (m³): 30.07 Original Application No: 7330 Original Start Date: 24/2/1981 Expiry Date: - Issue No: 101 Version Start Date: 27/9/2007 Version End Date:</p>
Not shown	1090	SE	173100 38900	<p>Status: Historical Licence No: 15/48/022/G/199 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Trebowland Manor Farm, Gwennap - Borehole Data Type: Point Name: Johns</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 12249 Original Start Date: 15/7/1993 Expiry Date: - Issue No: 100 Version Start Date: 15/7/1993 Version End Date:</p>
Not shown	1090	SE	173100 38900	<p>Status: Historical Licence No: 15/48/022/G/199 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "trebowland Manor Farm, Gwennap - Borehole" Data Type: Point Name: Johns</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 12249 Original Start Date: 15/7/1993 Expiry Date: - Issue No: 100 Version Start Date: 15/7/1993 Version End Date:</p>
Not shown	1228	N	172400 41100	<p>Status: Historical Licence No: 15/48/022/G/030 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Carn Villa, Camborne-redruth - Borehole Data Type: Point Name: Green</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9904 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 1/2/1988 Version End Date:</p>
Not shown	1228	N	172400 41100	<p>Status: Historical Licence No: 15/48/022/G/030 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "carn Villa, Camborne-redruth - Borehole" Data Type: Point Name: Green</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9904 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 1/2/1988 Version End Date:</p>
Not shown	1236	N	172300 41100	<p>Status: Historical Licence No: 15/48/022/G/012 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "well Farm, Redruth - Well" Data Type: Point Name: Davis</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10064 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 16/2/1981 Version End Date:</p>
Not shown	1236	N	172300 41100	<p>Status: Historical Licence No: 15/48/022/G/012 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Well Farm, Redruth - Well Data Type: Point Name: Davis</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10064 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 16/2/1981 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1371	N	172100 41200	<p>Status: Historical Licence No: 15/48/022/G/156 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "murree Farm, Higher Trevethan - Borehole" Data Type: Point Name: Kitts</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 8810 Original Start Date: 31/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/3/1966 Version End Date:</p>
Not shown	1371	N	172100 41200	<p>Status: Historical Licence No: 15/48/022/G/156 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Murree Farm, Higher Trevethan - Borehole Data Type: Point Name: Kitts</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 8810 Original Start Date: 31/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/3/1966 Version End Date:</p>
Not shown	1392	NW	171500 40900	<p>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</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10110 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date:</p>
Not shown	1392	NW	171500 40900	<p>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</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10110 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date:</p>
Not shown	1534	SE	173100 38400	<p>Status: Historical Licence No: 15/48/022/G/007 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "angear Farm, Gwennap" Data Type: Point Name: Brush</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10782 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date:</p>
Not shown	1534	SE	173100 38400	<p>Status: Historical Licence No: 15/48/022/G/007 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Angear Farm, Gwennap Data Type: Point Name: Brush</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10782 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date:</p>
Not shown	1648	SE	173500 38500	<p>Status: Historical Licence No: 15/48/022/G/080 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Gillyvean, Gwennap - Well Data Type: Point Name: Ralph</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6589 Original Start Date: 31/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/3/1966 Version End Date:</p>
Not shown	1648	SE	173500 38500	<p>Status: Historical Licence No: 15/48/022/G/080 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "gillyvean, Gwennap - Well" Data Type: Point Name: Ralph</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6589 Original Start Date: 31/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/3/1966 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1772	SW	171400 38400	<p>Status: Historical Licence No: 15/48/022/G/186 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "west Trethellan Farm, Gwennap - Tapped Spring" Data Type: Point Name: Powell</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9019 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 11/1/1982 Version End Date:</p>
Not shown	1772	SW	171400 38400	<p>Status: Historical Licence No: 15/48/022/G/186 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: West Trethellan Farm, Gwennap - Tapped Spring Data Type: Point Name: Powell</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9019 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 11/1/1982 Version End Date:</p>
Not shown	1819	SE	174100 38900	<p>Status: Historical Licence No: 15/48/022/G/024 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - Fresh Point: Burncoose, Gwennap - Well Data Type: Point Name: Williams</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9964 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 19/10/2001 Version End Date:</p>
Not shown	1819	SE	174100 38900	<p>Status: Historical Licence No: 15/48/022/G/024 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "burncoose, Gwennap - Well" Data Type: Point Name: Williams</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9964 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 19/10/2001 Version End Date:</p>
Not shown	1819	SE	174100 38900	<p>Status: Historical Licence No: 15/48/022/G/024 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: Ground Water - Fresh Point: "burncoose, Gwennap - Well" Data Type: Point Name: Williams</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9964 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 19/10/2001 Version End Date:</p>
Not shown	1819	SE	174100 38900	<p>Status: Historical Licence No: 15/48/022/G/024 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Burncoose, Gwennap - Well Data Type: Point Name: Williams</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 9964 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 19/10/2001 Version End Date:</p>
Not shown	1837	SW	171600 38200	<p>Status: Historical Licence No: 15/48/022/G/015 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Little Treweege Farm, Stithians - Well A Data Type: Point Name: Gay</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10181 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date:</p>
Not shown	1837	SW	171600 38200	<p>Status: Historical Licence No: 15/48/022/G/015 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "little Treweege Farm, Stithians - Well A" Data Type: Point Name: Gay</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 10181 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 31/12/1965 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1875	S	171750 38090	Status: Historical Licence No: 15/48/022/G/209 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Borehole - Treweege Barton Data Type: Point Name: Pryor Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: C0330 Original Start Date: 1/9/2003 Expiry Date: 31/3/2018 Issue No: 101 Version Start Date: 13/8/2004 Version End Date:
Not shown	1909	S	171900 38000	Status: Historical Licence No: 15/48/022/G/084 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "treweege Barton, Stithians - Well" Data Type: Point Name: Dennis Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 6638 Original Start Date: 31/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 12/12/1983 Version End Date:
Not shown	1909	S	171900 38000	Status: Historical Licence No: 15/48/022/G/084 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Treweege Barton, Stithians - Well Data Type: Point Name: Dennis Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 6638 Original Start Date: 31/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 12/12/1983 Version End Date:
Not shown	1944	SW	171690 38040	Status: Historical Licence No: 15/48/022/G/209 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Borhole At Treweege Barton, Stithians Data Type: Point Name: Pryor Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: C0330 Original Start Date: 1/9/2003 Expiry Date: 31/3/2018 Issue No: 101 Version Start Date: 13/8/2004 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1770	NE	173880 41030	Status: Active Licence No: 15/48/022/S/041 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Surface Water - Fresh Point: Unnamed Trib Of Hicks Mill Stream At United Downs Data Type: Point Name: SUEZ UK Environment Ltd Annual Volume (m ³): 79000 Max Daily Volume (m ³): 3200 Application No: - Original Start Date: 28/2/2007 Expiry Date: 31/3/2018 Issue No: 103 Version Start Date: 27/7/2016 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
Not shown	1013	SE	173400 39300	Status: Historical Licence No: 15/48/022/G/176 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: Ground Water - Fresh Point: "Trevince & Gouorow Farms, Gwennap - Tapped Spring" Data Type: Point Name: Stone Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 7330 Original Start Date: 24/2/1981 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1013	SE	173400 39300	Status: Active Licence No: 15/48/022/G/176 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - Fresh Point: Trevince & Gouorow Farms, Gwennap - Tapped Spring Data Type: Point Name: Stone Annual Volume (m ³): 10974 Max Daily Volume (m ³): 30.07 Original Application No: 7330 Original Start Date: 24/2/1981 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1819	SE	174100 38900	Status: Historical Licence No: 15/48/022/G/024 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - Fresh Point: Burncoose, Gwennap - Well Data Type: Point Name: Williams Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 9964 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1819	SE	174100 38900	Status: Historical Licence No: 15/48/022/G/024 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: Ground Water - Fresh Point: "burncoose, Gwennap - Well" Data Type: Point Name: Williams Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 9964 Original Start Date: 31/12/1965 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
127	N	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GOAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
43	38	N	172540 39900	River Name: Hicks Mill Stream Reach: Source-hicks Mill End/Start of Stretch: Start of Stretch NGR	C	C	C	B	B

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	11	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	45	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
3	54	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	90	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
5	313	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	313	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
7	407	NE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
8	407	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
9	471	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
10	473	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

6.11 Surface Water Features

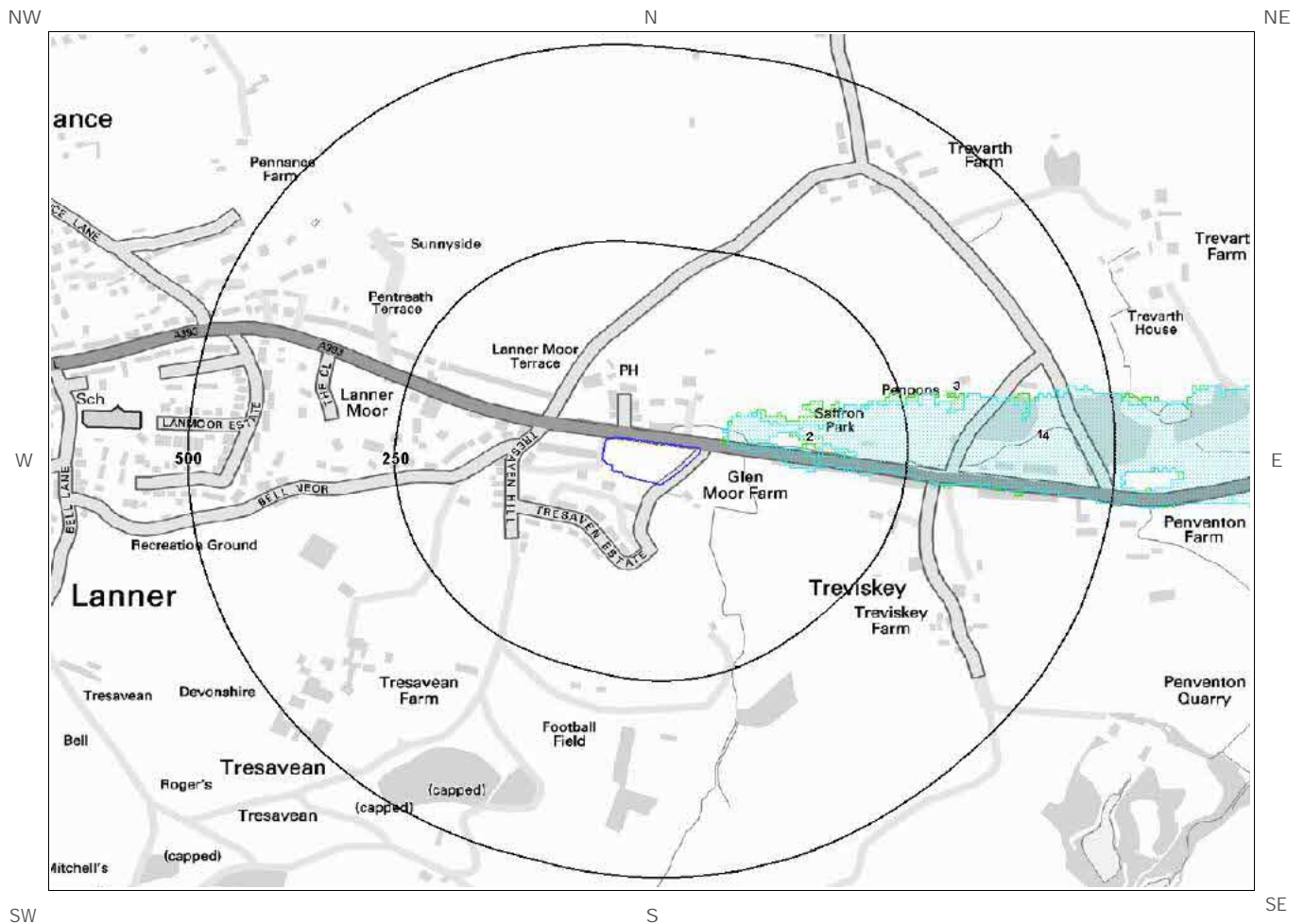
Are there any surface water features within 250m of the study site?

Yes

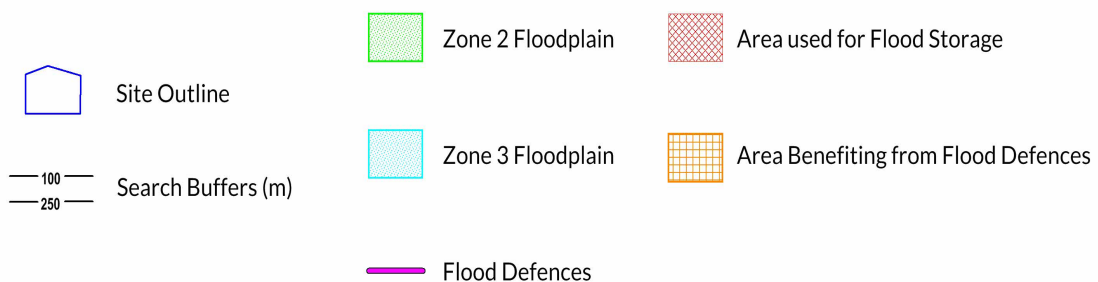
The following surface water records are not represented on mapping:

Distance (m)	Direction
12	N
13	N
28	N
54	E
74	E
90	E
224	E

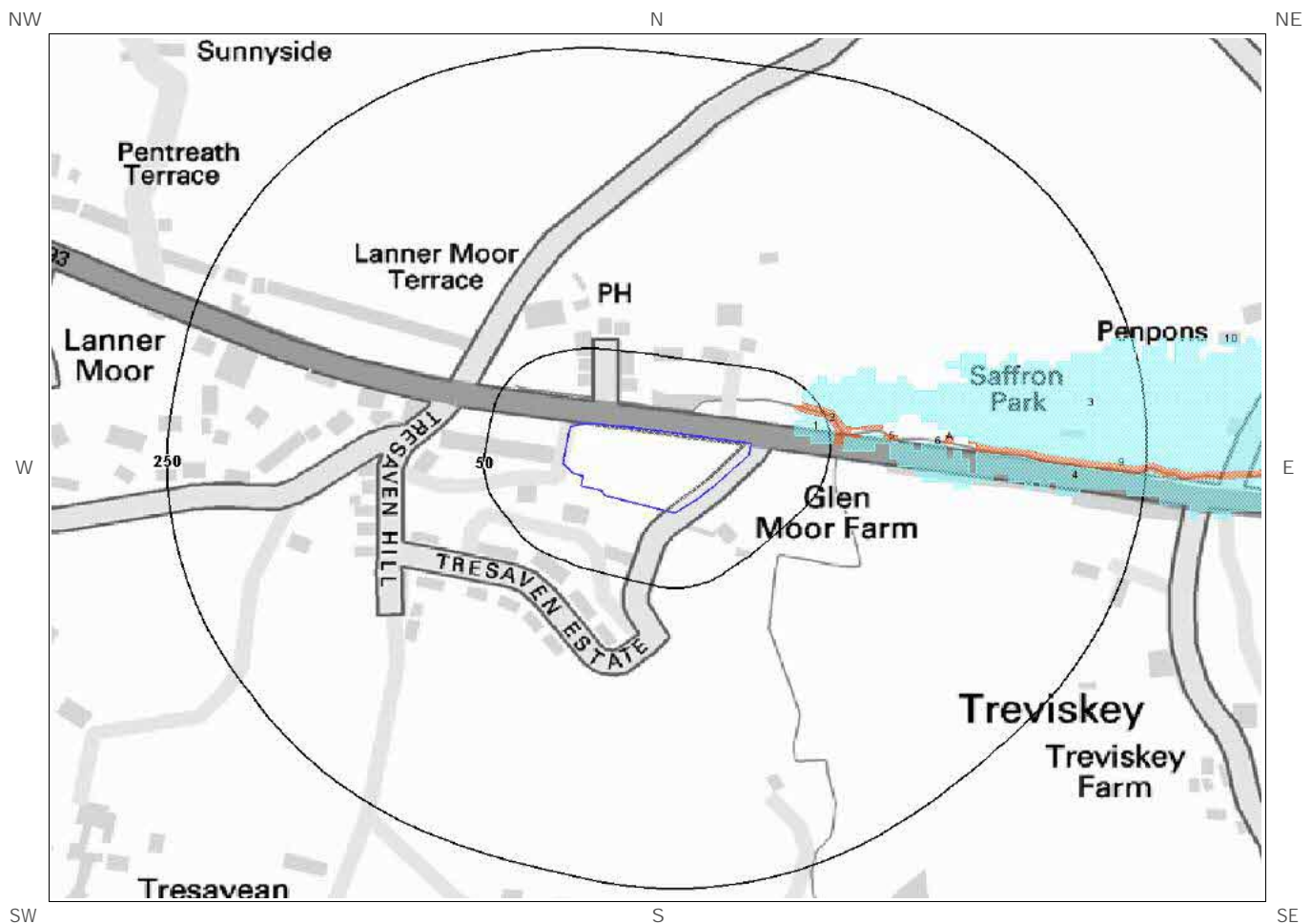
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



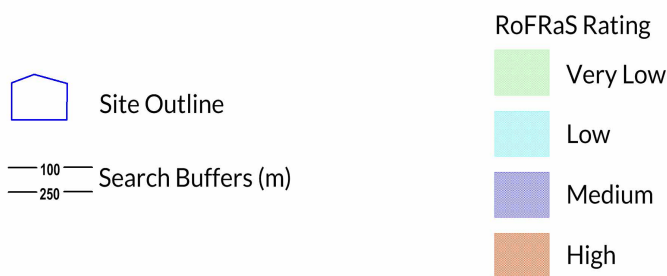
© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? Yes

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a –Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	28	E	17-Aug-2017	Zone 2 - (Fluvial /Tidal Models)
2	122	E	17-Aug-2017	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a –Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	33	E	22-Aug-2017	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
----	--------------	-----------	-------------------

1	28.0	E	Low
2	36.0	NE	High
3	43.0	NE	Low

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Superficial Deposits Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

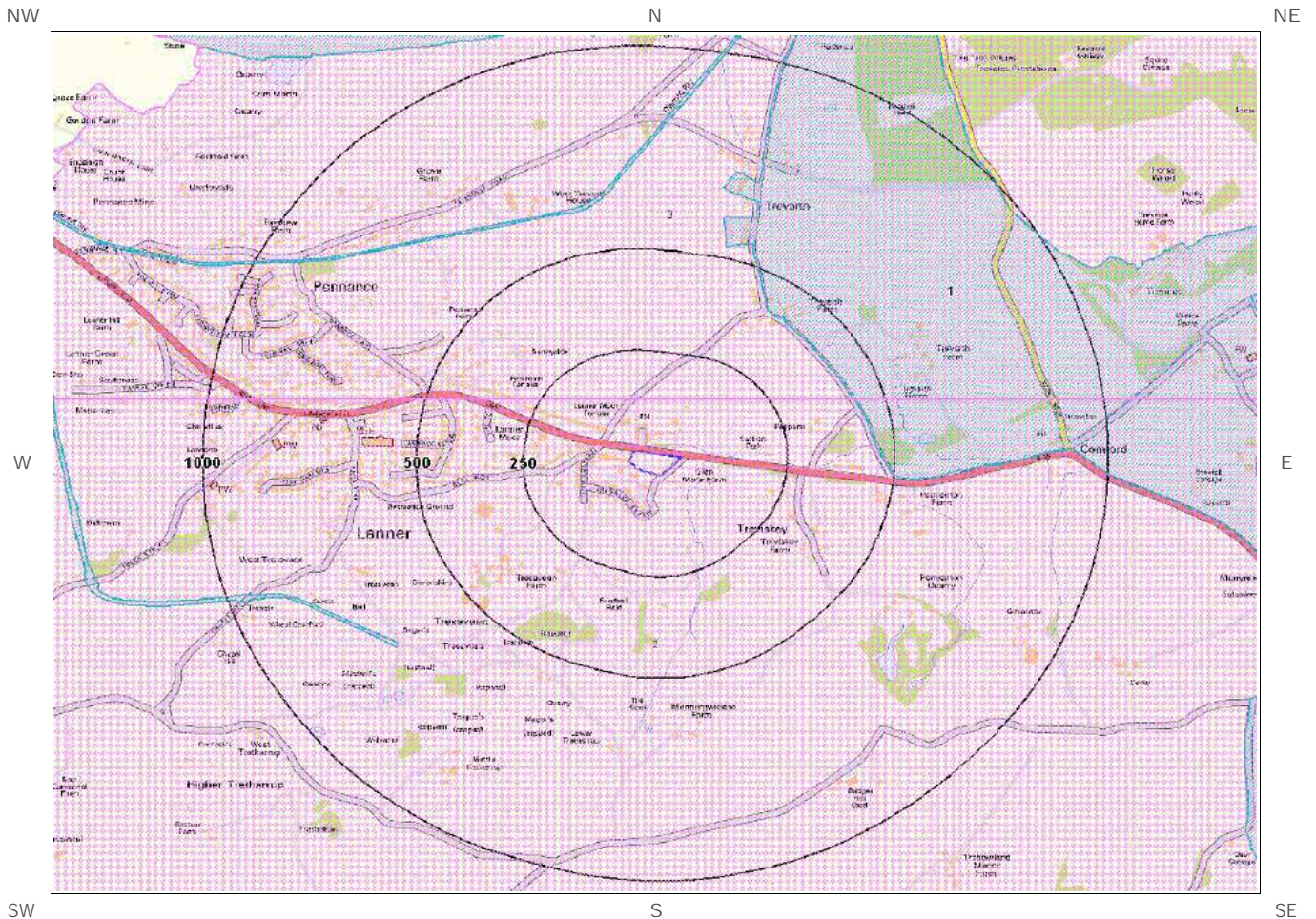
What is the British Geological Survey confidence rating in this result?

Moderate

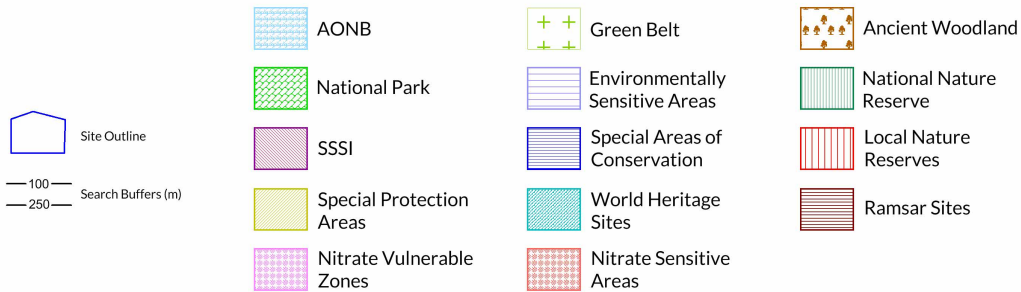
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

0

Database searched and no data found.

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

1

The following World Heritage Site records provided by English Heritage and Cadw are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	World Heritage Site Name	Data Source
1	409	NE	Cornwall and West Devon Mining Landscape	English Heritage

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

2

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0	On Site	Existing	DEFRA
3	127	N	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our [website](#). The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as greater than 30% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
0.0	On Site	South West England	Vein Mineral	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered
22.0	SE	Not available	Vein Mineral	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered

These are areas known or suspected to contain past underground mining for minerals and/or other materials where workings are likely to be extensive. In the case of mineral veins these are areas within 200m of mapped mineral veins within which it is likely that mining activities may have occurred. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:

Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506

Web: www.environment-agency.gov.uk

Email: enquiries@environment-agency.gov.uk

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe

Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority

Authority: Cornwall Council (Unitary)
Phone: 0300 1234 100

Web: <http://www.cornwall.gov.uk/>

Address: County Hall, Treyew Road, Truro, Cornwall, TR1 3AY

Gemapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444



Groundsure
LOCATION INTELLIGENCE



British Geological Survey

NATURAL ENVIRONMENT RESEARCH COUNCIL



Public Health England



The Coal Authority



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].

This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
<https://www.groundsure.com/terms-and-conditions-sept-2016>

Wheal Jane Enterprises	Groundsure Reference:	GS-4324332
WHEAL JANE WHEAL JANE ENTEPRISES, -, TRURO/BALDHU, TR3 6EE	Your Reference:	19244
	Report Date	5 Oct 2017
	Report Delivery Method:	Email - pdf

Geo Insight

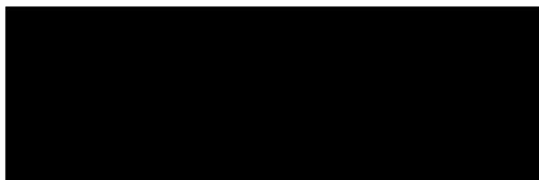
Address: LAND ADJ TO COPPICE INN, LANNER, TR16 6BY

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: LAND ADJ TO COPPICE INN, LANNER, TR16 6BY
Date: 5 Oct 2017
Reference: GS-4324332
Client: Wheal Jane Enterprises

NW N NE

W E



SW S SE

Aerial Photograph Capture date: 10-Jul-2013
Grid Reference: 172487,039844
Site Size: 0.47ha

Contents Page

Contents Page.....	3
Overview of Findings.....	5
1:10,000 Scale Availability.....	8
Availability of 1:10,000 Scale Geology Mapping.....	9
1 Geology (1:10,000 scale).....	10
1.1 Artificial Ground Map (1:10,000 scale).....	10
1. Geology 1:10,000 scale.....	11
1.1 Artificial Ground.....	11
1.2 Superficial Deposits and Landslips Map (1:10,000 scale).....	12
1.2 Superficial Deposits and Landslips.....	13
1.2.1 Superficial Deposits/ Drift Geology.....	13
1.2.2 Landslip.....	13
1.3 Bedrock and Faults Map (1:10,000 scale).....	14
1.3 Bedrock and Faults.....	15
1.3.1 Bedrock/ Solid Geology.....	15
1.3.2 Faults.....	15
2 Geology 1:50,000 Scale.....	16
2.1 Artificial Ground Map.....	16
2. Geology 1:50,000 scale.....	17
2.1 Artificial Ground.....	17
2.1.1 Artificial/ Made Ground.....	17
2.1.2 Permeability of Artificial Ground.....	17
2.2 Superficial Deposits and Landslips Map (1:50,000 scale).....	18
2.2 Superficial Deposits and Landslips.....	19
2.2.1 Superficial Deposits/ Drift Geology.....	19
2.2.2 Permeability of Superficial Ground.....	19
2.2.3 Landslip.....	19
2.2.4 Landslip Permeability.....	19
2.3 Bedrock and Faults Map (1:50,000 scale).....	20
2.3 Bedrock, Solid Geology & Faults.....	21
2.3.1 Bedrock/Solid Geology.....	21
2.3.2 Permeability of Bedrock Ground.....	21
2.3.3 Faults.....	21
3 Radon Data.....	22
3.1 Radon Affected Areas.....	22
3.2 Radon Protection.....	22
4 Ground Workings Map.....	23
4 Ground Workings.....	24
4.1 Historical Surface Ground Working Features derived from Historical Mapping.....	24
4.2 Historical Underground Working Features derived from Historical Mapping.....	24
4.3 Current Ground Workings.....	30
5 Mining, Extraction & Natural Cavities.....	32
5.1 Historical Mining.....	32
5.2 Coal Mining.....	37
5.3 Johnson Poole and Bloomer.....	37
5.4 Non-Coal Mining.....	37
5.5 Non-Coal Mining Cavities.....	38
5.6 Natural Cavities.....	39
5.7 Brine Extraction.....	39
5.8 Gypsum Extraction.....	40
5.9 Tin Mining.....	40
5.10 Clay Mining.....	40
6 Natural Ground Subsidence.....	41
6.1 Shrink-Swell Clay Map.....	41
6.2 Landslides Map.....	42
6.3 Ground Dissolution of Soluble Rocks Map.....	43
6.4 Compressible Deposits Map.....	44
6.5 Collapsible Deposits Map.....	45
6.6 Running Sand Map.....	46

6 Natural Ground Subsidence.....	47
6.1 Shrink-Swell Clays.....	47
6.2 Landslides.....	47
6.3 Ground Dissolution of Soluble Rocks.....	48
6.4 Compressible Deposits.....	48
6.5 Collapsible Deposits.....	48
6.6 Running Sands.....	49
7 Borehole Records.....	51
8 Estimated Background Soil Chemistry.....	52
9 Railways and Tunnels Map.....	53
9 Railways and Tunnels.....	54
9.1 Tunnels	54
9.2 Historical Railway and Tunnel Features	54
9.3 Historical Railways.....	55
9.4 Active Railways.....	55
9.5 Railway Projects.....	55

Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of faults within 500m of the study site boundary at 1:10,000 scale?	No

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and Faults

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of faults within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is in a Radon Affected Area, as greater than 30% of properties are above the Action Level.

3.2 Radon Protection

Full radon protective measures are necessary.

Section 4: Ground Workings

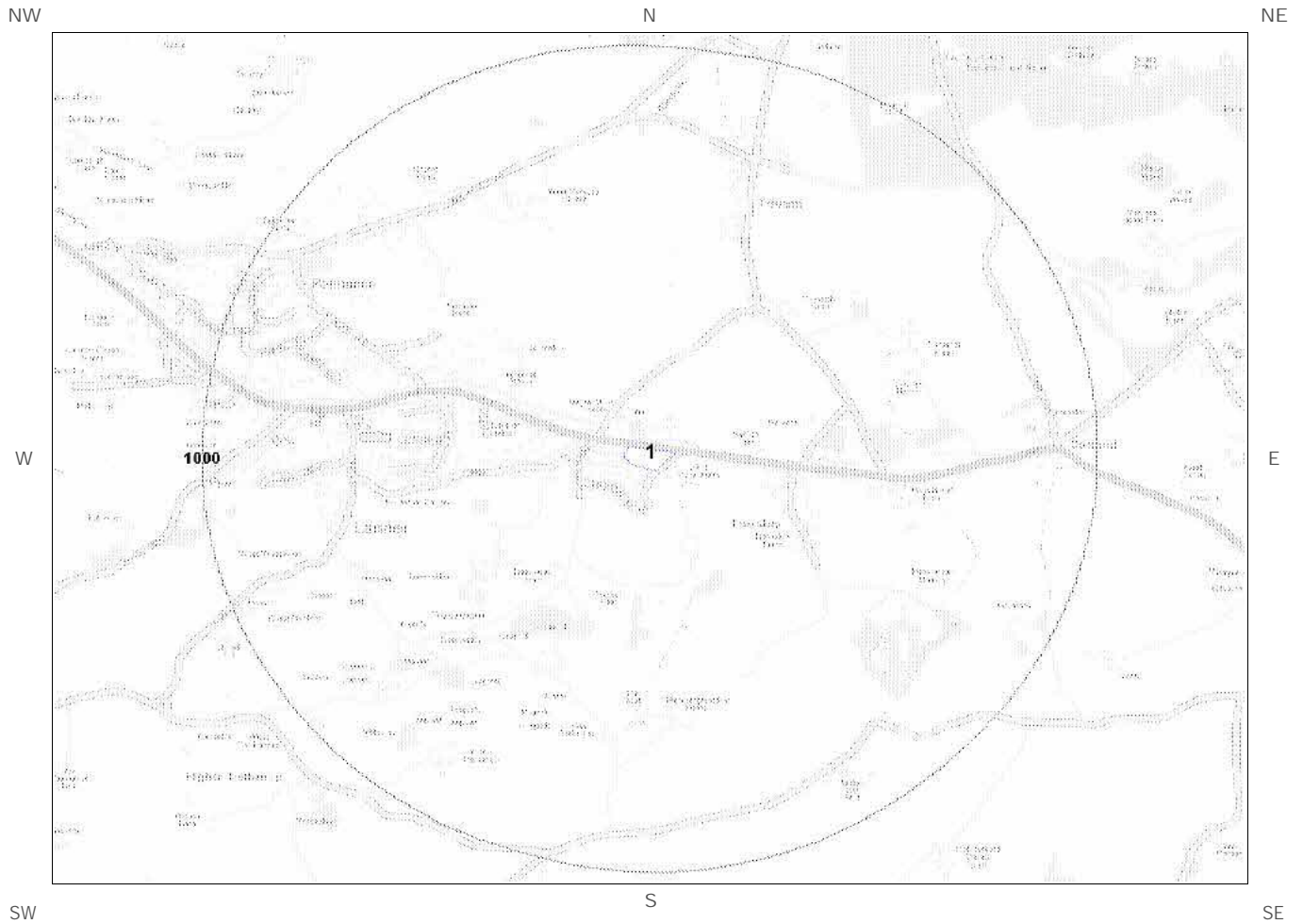
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	1	1	5	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	13	24	105
4.3 Current Ground Workings	0	0	0	0	12

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	13	24	103
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	2	1	1	0	7
5.5 Non-Coal Mining Cavities	0	0	3	2	9
5.5 Natural Cavities	0	0	0	0	0

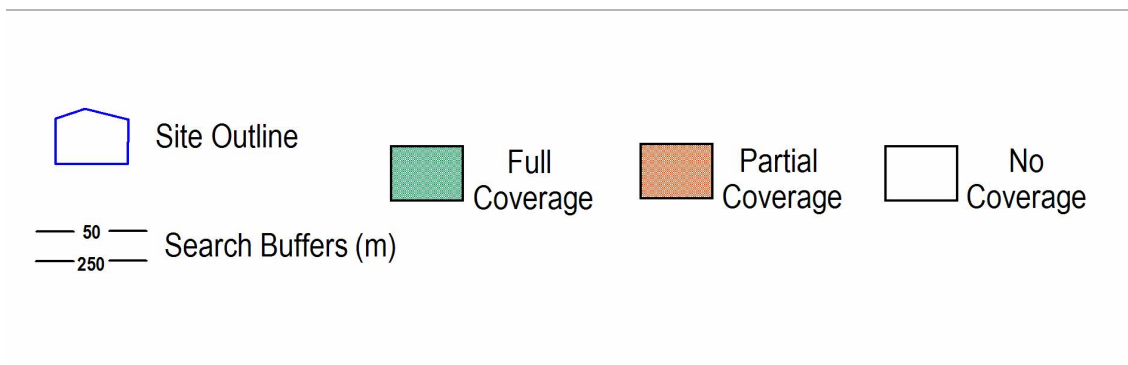
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	1	0	0	1	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Moderate				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	0		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	4	5	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	No coverage	No coverage	No coverage

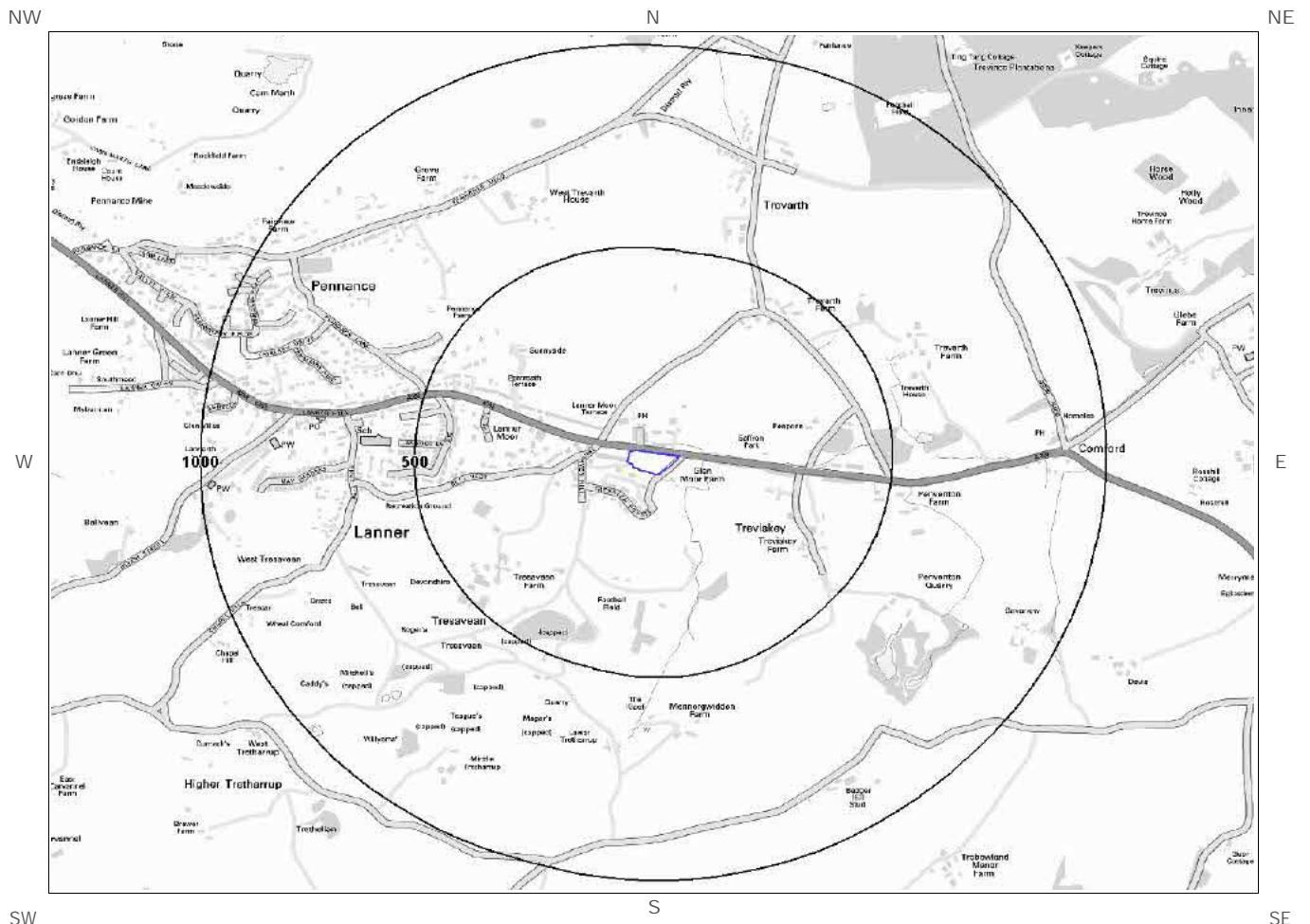
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

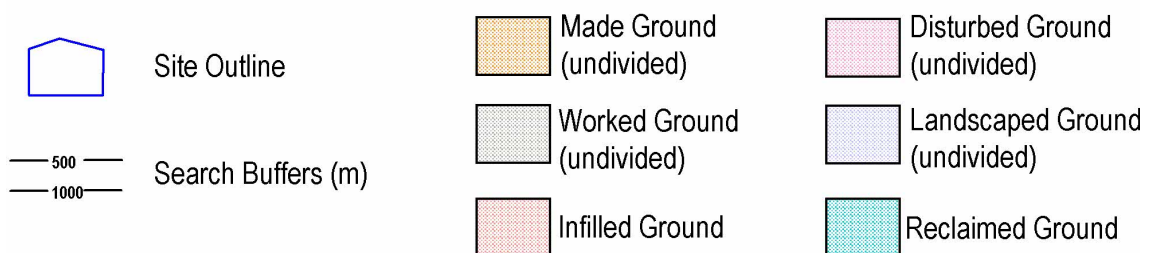
1 Geology (1:10,000 scale).

1.1 Artificial Ground Map (1:10,000 scale)



Artificial Ground Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



1. Geology 1:10,000 scale

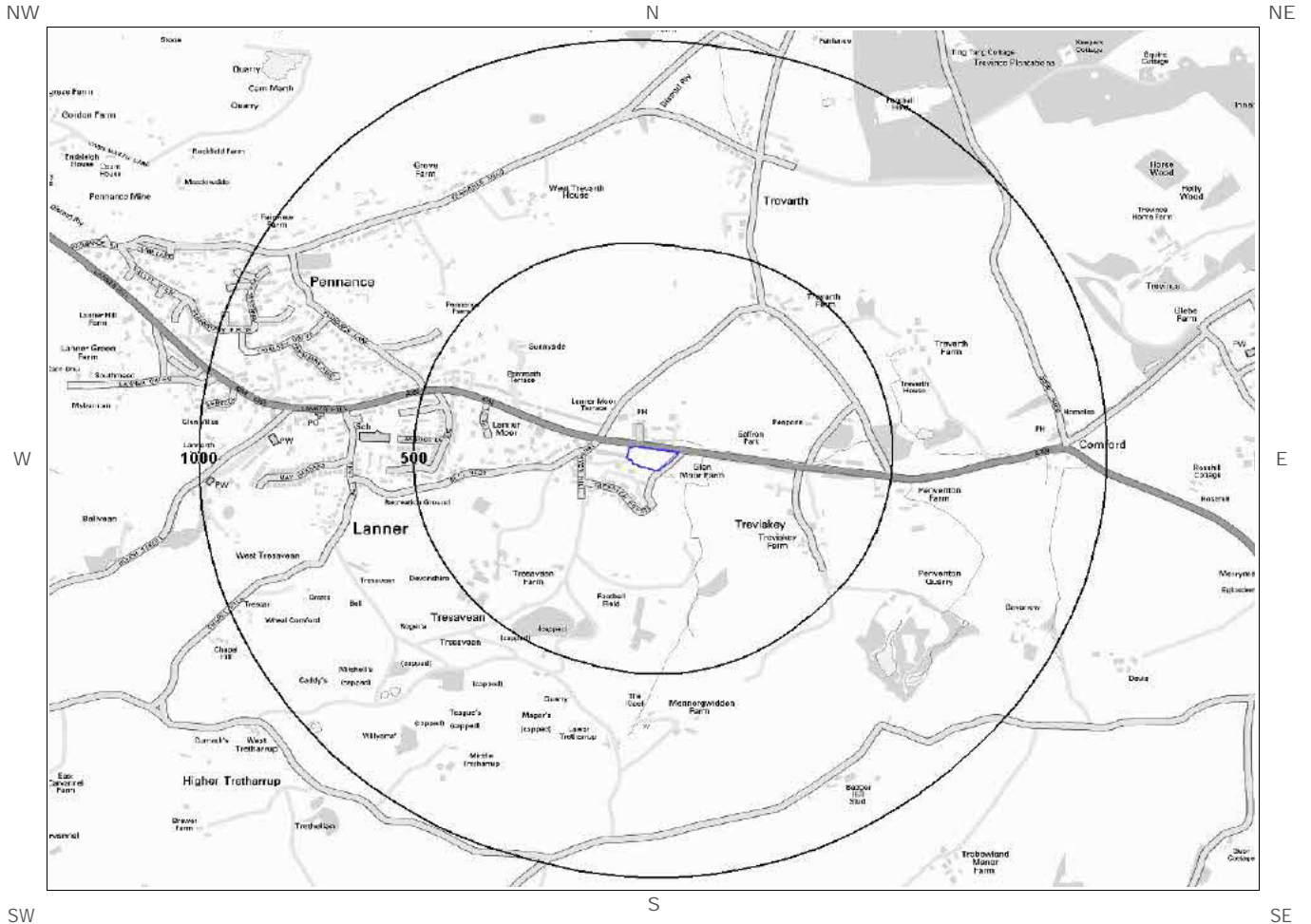
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? No




Database searched and no data found.

1.2 Superficial Deposits and Landslips Map (1:10,000 scale)



Artificial Ground Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

-  Site Outline
-  500
-  1000 Search Buffers (m)

1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

1.2.2 Landslip

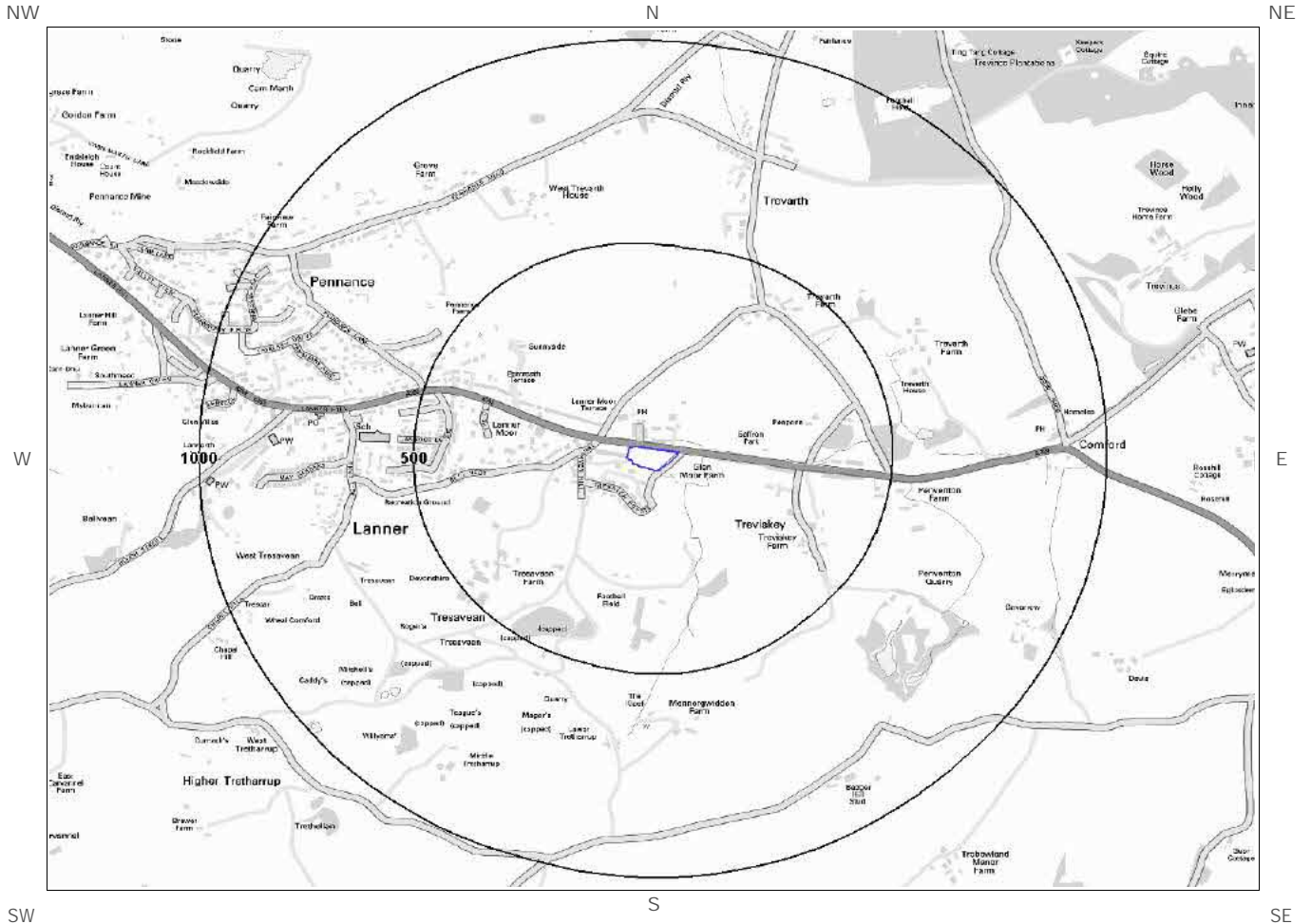
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

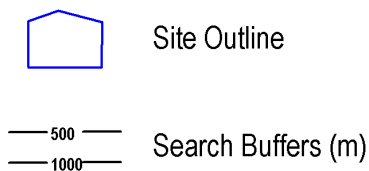
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and Faults Map (1:10,000 scale)



Bedrock and Faults Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



1.3 Bedrock and Faults

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

Database searched and no data found at this scale.

1.3.2 Faults

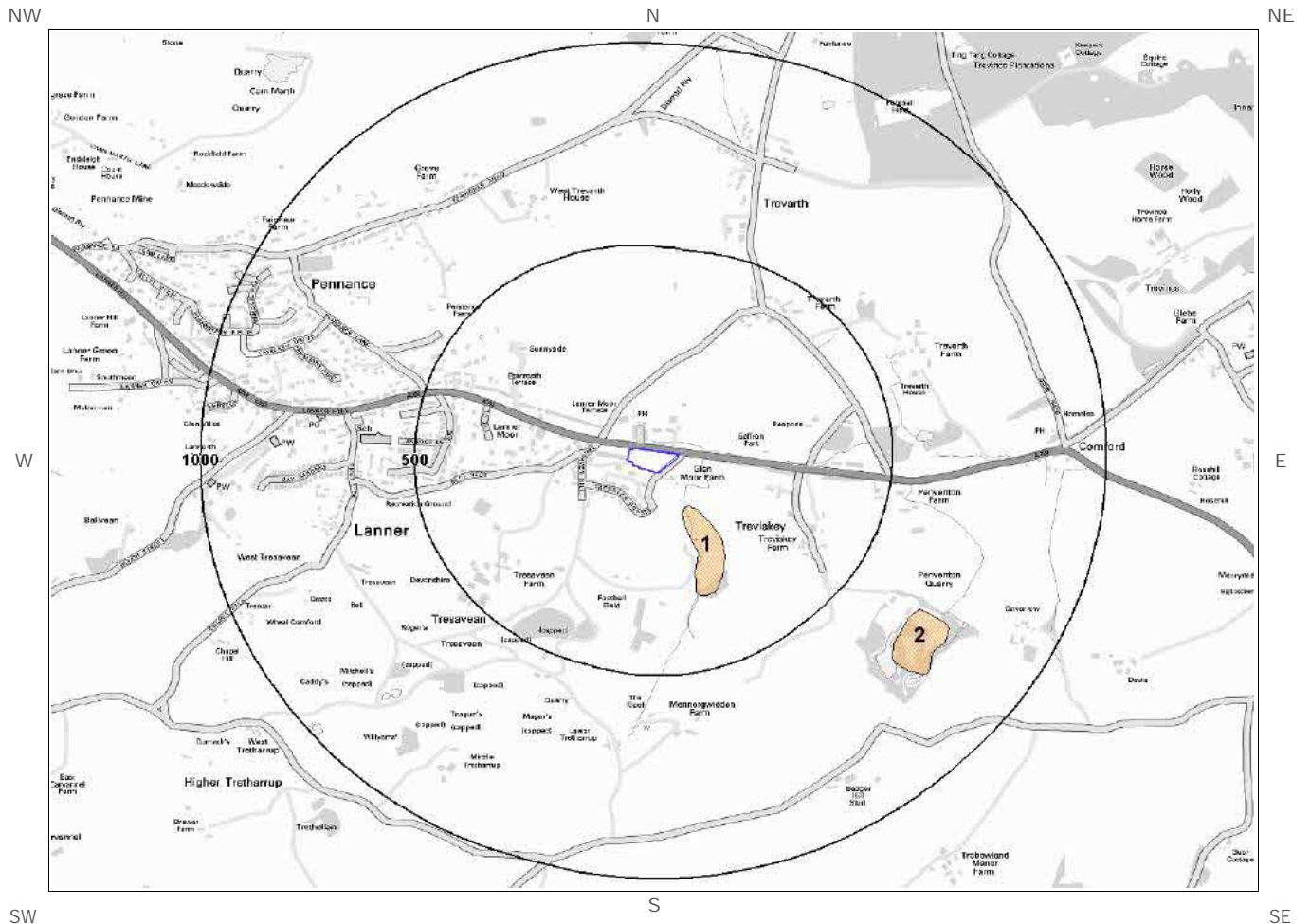
Are there any records of Faults within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found at this scale.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

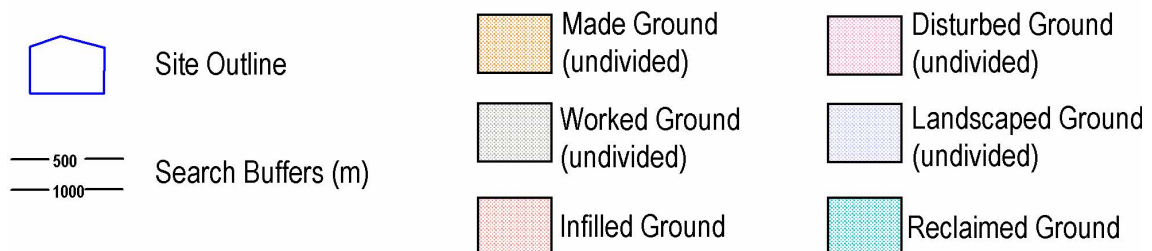
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale 2.1 Artificial Ground Map



Ground Workings Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 352

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

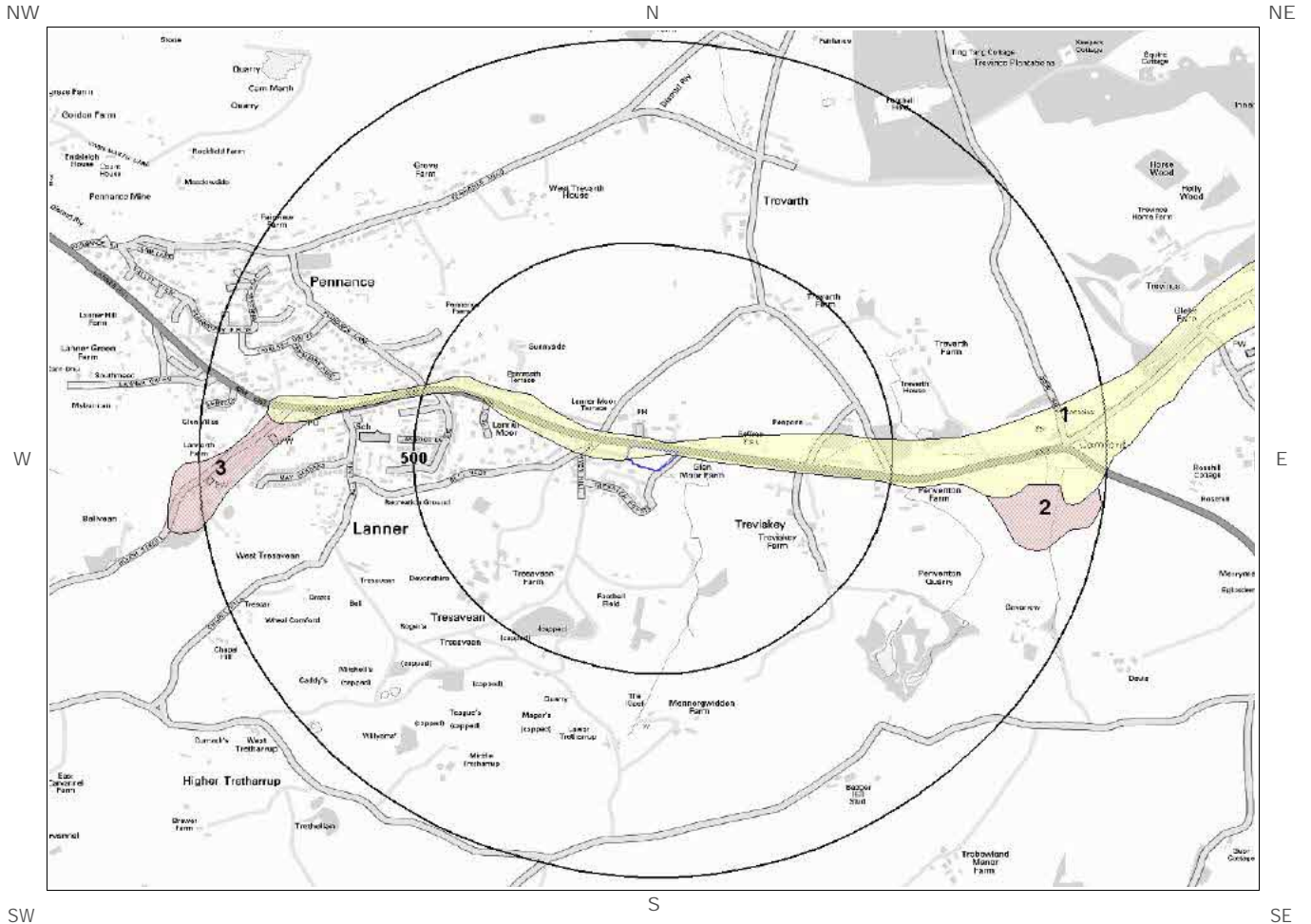
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	106.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

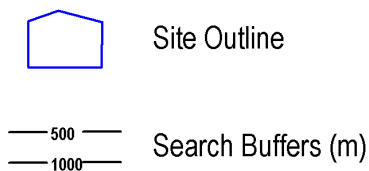
Database searched and no data found.

2.2 Superficial Deposits and Landslips Map (1:50,000 scale)



Ground Workings Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	Very Low

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

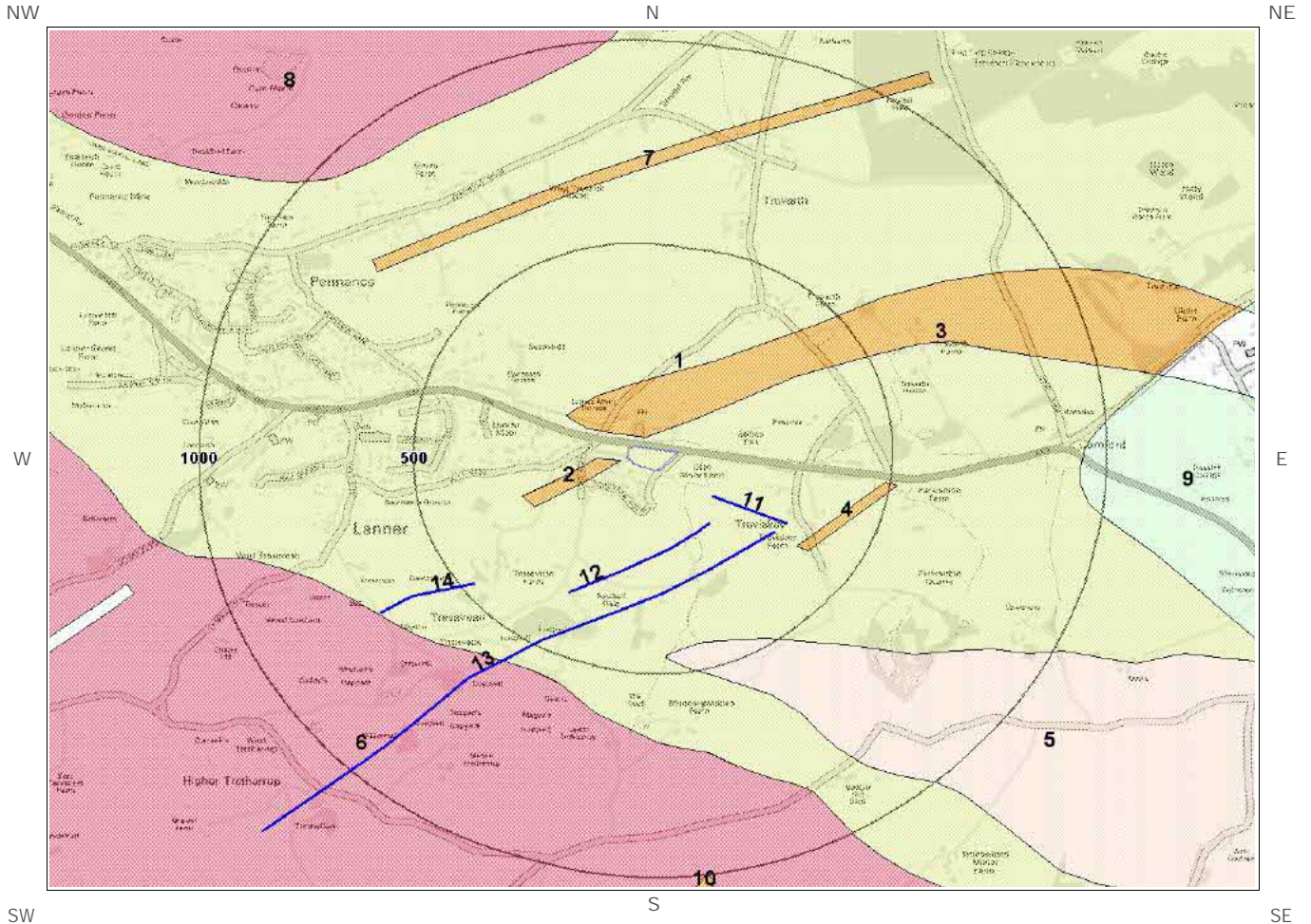
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No




Database searched and no data found.

2.3 Bedrock and Faults Map (1:50,000 scale)



Ground Workings Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

-  Site Outline
 -  500
 -  1000
- Search Buffers (m)

2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 352

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	MRSL-HSSL	MYLOR SLATE FORMATION - HORNFELED SLATE AND HORNFELED SILTSTONE	FRASNIAN
2	18.0	W	UDP-FELS	UNNAMED DYKE, PERMIAN - FELSITE	-
3	26.0	N	UDP-FELS	UNNAMED DYKE, PERMIAN - FELSITE	-
4	356.0	SE	UDP-FELS	UNNAMED DYKE, PERMIAN - FELSITE	-
5	434.0	S	MRSL-MBAR	MYLOR SLATE FORMATION - METABASALTIC-ROCK	FRASNIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low
18.0	W	Fracture	Low	Low
26.0	N	Fracture	Low	Low

2.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
11	127.0	SE	MINERAL_VEIN	Mineral vein, inferred
12	174.0	SE	MINERAL_VEIN	Mineral vein, inferred
13	270.0	SE	MINERAL_VEIN	Mineral vein, inferred
14	470.0	SW	MINERAL_VEIN	Mineral vein, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

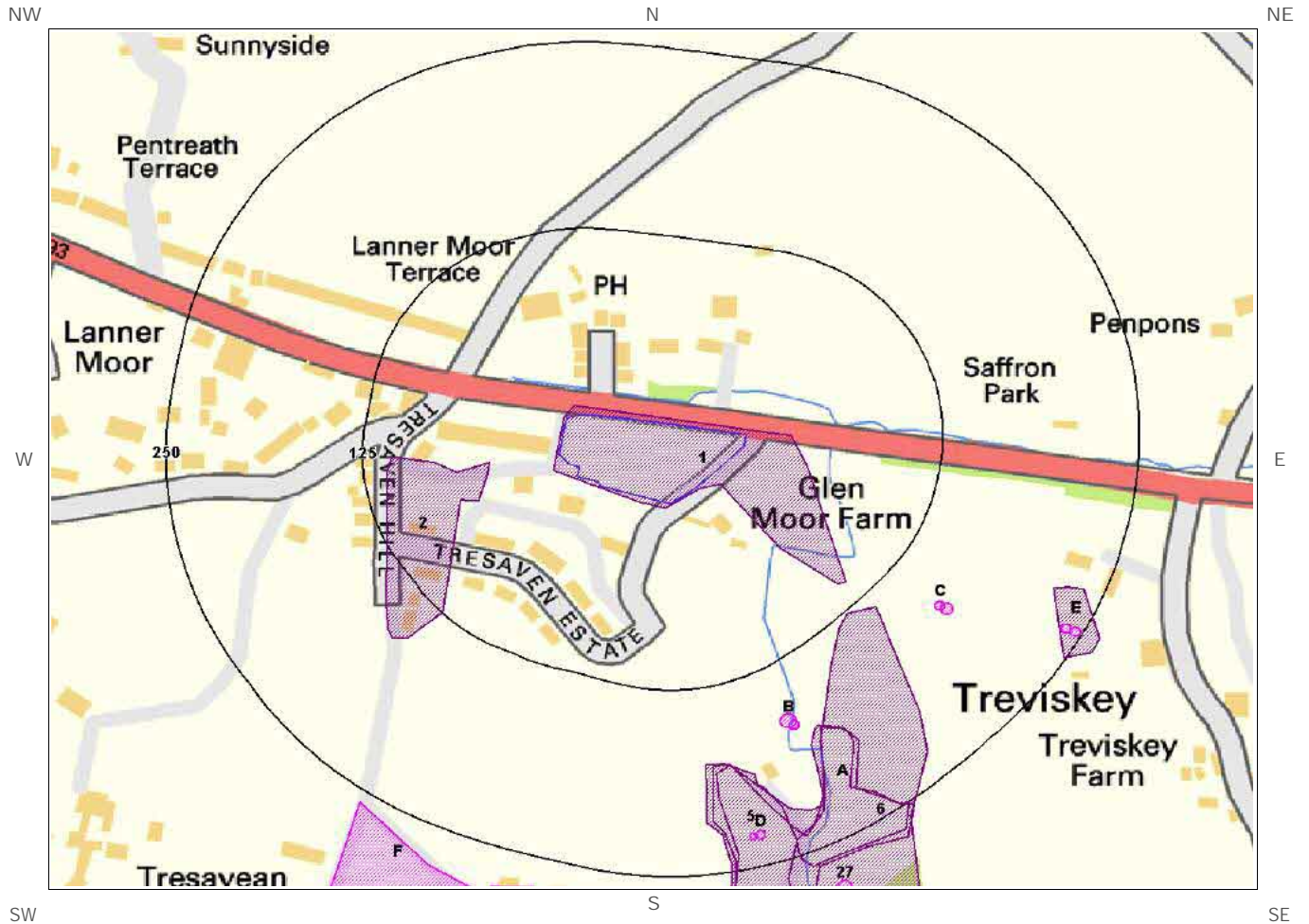
3.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as greater than 30% of properties are above the Action Level.

3.2 Radon Protection

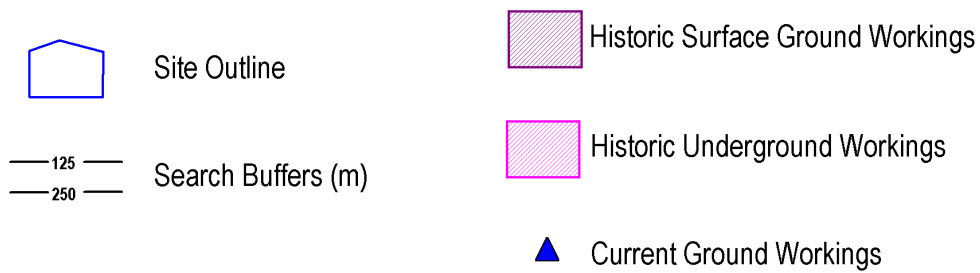
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary.

4 Ground Workings Map



Ground Workings Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	172494 39820	Refuse Heap	1878
2	44.0	W	172357 39784	Refuse Heap	1878
3A	127.0	SE	172545 39628	Unspecified Heap	1878
4A	175.0	SE	172620 39618	Refuse Heap	1958
5	177.0	S	172559 39578	Refuse Heap	1958
6	177.0	SE	172596 39589	Refuse Heaps	1908
7E	219.0	SE	172763 39734	Unspecified Heap	1878

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
8B	159.0	SE	172579 39668	Unspecified Old Shaft	1958
9B	159.0	SE	172579 39668	Unspecified Disused Shaft	1975
10C	162.0	SE	172676 39745	Unspecified Old Shafts	1958
11C	162.0	SE	172676 39745	Unspecified Disused Shaft	1975
12B	164.0	SE	172583 39666	Unspecified Old Shaft	1908

ID	Distance (m)	Direction	NGR	Use	Date
13B	164.0	SE	172583 39666	Unspecified Shaft	1878
14C	166.0	SE	172680 39743	Unspecified Old Shafts	1908
15D	226.0	S	172562 39592	Unspecified Old Shafts	1908
16D	226.0	S	172562 39592	Unspecified Shaft	1878
17D	227.0	S	172557 39591	Unspecified Shaft	1958
18E	236.0	SE	172756 39730	Unspecified Old Shafts	1958
19E	242.0	SE	172762 39728	Unspecified Old Shafts	1908
20E	242.0	SE	172762 39728	Unspecified Shaft	1878
21F	258.0	SW	172074 39365	Disused Copper Mine	1908
22F	258.0	SW	172074 39365	Disused Copper Mine	1878
Not shown	263.0	S	172456 39550	Unspecified Disused Shaft	1975
Not shown	267.0	S	172452 39550	Unspecified Old Shaft	1908
Not shown	267.0	S	172452 39550	Unspecified Shaft	1878
Not shown	267.0	S	172448 39545	Unspecified Shaft	1958
27	275.0	SE	172615 39557	Unspecified Disused Shaft	1975
Not shown	320.0	S	172342 39524	Unspecified Shaft	1908
Not shown	399.0	S	172401 39424	Unspecified Shaft	1908
Not shown	408.0	S	172394 39408	Unspecified Shaft	1958
Not shown	416.0	SE	172913 39642	Unspecified Old Shaft	1908
Not shown	422.0	S	172396 39403	Unspecified Shaft	1878
Not shown	440.0	SE	172946 39653	Unspecified Shaft	1878
Not shown	446.0	SW	172266 39417	Unspecified Old Shaft	1908
Not shown	448.0	SW	172262 39416	Unspecified Shaft	1958
Not shown	451.0	SW	172263 39415	Unspecified Shaft	1878
Not shown	451.0	SE	172958 39651	Unspecified Old Shaft	1958
Not shown	489.0	SW	172051 39538	Unspecified Shaft	1878
Not shown	489.0	SW	172051 39538	Unspecified Shaft	1908
Not shown	489.0	SW	172051 39538	Unspecified Shaft	1908
Not shown	494.0	SW	172044 39537	Unspecified Shaft	1958

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	494.0	SW	172044 39537	Unspecified Disused Shaft	1975
Not shown	495.0	SW	172199 39397	Unspecified Disused Shaft	1975
Not shown	498.0	SW	172192 39395	Unspecified Shaft	1958
Not shown	542.0	SW	172135 39380	Unspecified Shaft	1908
Not shown	544.0	SW	172132 39380	Unspecified Shaft	1958
Not shown	544.0	SW	172132 39380	Unspecified Disused Shaft	1975
Not shown	564.0	SW	172036 39440	Unspecified Shaft	1908
Not shown	564.0	SW	172036 39440	Unspecified Shaft	1878
Not shown	571.0	SW	172030 39433	Unspecified Shaft	1958
Not shown	611.0	SW	171915 39518	Unspecified Shaft	1878
Not shown	611.0	SW	171915 39518	Unspecified Shaft	1908
Not shown	612.0	SW	171980 39428	Unspecified Disused Shaft	1975
Not shown	615.0	SW	171909 39518	Unspecified Shaft	1958
Not shown	615.0	SW	171909 39518	Unspecified Disused Shaft	1975
Not shown	641.0	SW	172060 39315	Unspecified Shaft	1878
Not shown	644.0	SW	172057 39313	Unspecified Shaft	1908
Not shown	663.0	SW	171925 39322	Unspecified Disused Mine	1958
Not shown	663.0	SW	171925 39322	Unspecified Disused Mine	1975
Not shown	673.0	SW	172033 39293	Unspecified Shaft	1908
Not shown	674.0	SW	172168 39214	Unspecified Shaft	1908
Not shown	674.0	SW	172168 39214	Unspecified Shaft	1878
Not shown	675.0	SW	172160 39214	Unspecified Shaft	1958
Not shown	675.0	SW	172160 39214	Unspecified Disused Shaft	1975
Not shown	676.0	SW	172029 39293	Unspecified Shaft	1958
Not shown	676.0	SW	172029 39293	Unspecified Disused Shaft	1975
Not shown	703.0	SW	171712 39480	Unspecified Disused Mine	1958
Not shown	703.0	SW	171712 39480	Unspecified Disused Mine	1975
Not shown	711.0	SW	171835 39458	Unspecified Shaft	1878
Not shown	713.0	SW	171910 39356	Unspecified Shaft	1878

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	713.0	SW	171832 39456	Unspecified Shaft	1908
Not shown	714.0	W	171737 39657	Tin and Copper Mine	1878
Not shown	714.0	SW	171906 39356	Unspecified Shaft	1908
Not shown	716.0	SW	171830 39454	Unspecified Shaft	1958
Not shown	716.0	SW	171830 39454	Unspecified Disused Shafts	1975
Not shown	718.0	SW	171903 39354	Unspecified Shaft	1958
Not shown	718.0	SW	171903 39354	Unspecified Disused Shafts	1975
Not shown	749.0	SW	172075 39177	Unspecified Shaft	1878
Not shown	749.0	SW	172075 39174	Unspecified Shaft	1908
Not shown	751.0	SW	172072 39174	Unspecified Shaft	1958
Not shown	751.0	SW	172072 39174	Unspecified Disused Shaft	1975
Not shown	755.0	SW	171986 39228	Unspecified Shaft	1878
Not shown	759.0	SW	171758 39495	Unspecified Shaft	1878
Not shown	761.0	SW	171752 39497	Unspecified Shaft	1908
Not shown	788.0	SW	171851 39311	Unspecified Shaft	1878
Not shown	788.0	SW	171848 39308	Unspecified Shaft	1908
Not shown	789.0	W	171698 39550	Unspecified Disused Shaft	1975
Not shown	791.0	W	171552 39704	Unspecified Disused Mine	1958
Not shown	792.0	SW	171845 39306	Unspecified Shaft	1958
Not shown	792.0	SW	171845 39306	Unspecified Disused Shafts	1975
Not shown	793.0	W	171695 39550	Unspecified Shaft	1878
Not shown	802.0	SW	171742 39430	Unspecified Shaft	1908
Not shown	812.0	SW	171651 39339	Disused Tin and Copper	1908
Not shown	822.0	SW	171779 39345	Unspecified Shaft	1878
Not shown	826.0	W	171617 39628	Tin and Copper Mine	1878
Not shown	835.0	W	171623 39630	Unspecified Old Shaft	1908
Not shown	836.0	W	171622 39634	Unspecified Shafts	1878
Not shown	838.0	W	171620 39627	Unspecified Old Shaft	1958
Not shown	838.0	W	171620 39627	Unspecified Disused Shaft	1975

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	851.0	SW	171910 39164	Unspecified Disused Shaft	1975
Not shown	853.0	SW	171909 39164	Unspecified Shaft	1878
Not shown	854.0	SW	171904 39163	Unspecified Shaft	1908
Not shown	854.0	SW	171649 39502	Unspecified Shaft	1878
Not shown	855.0	SW	171901 39162	Unspecified Shaft	1958
Not shown	887.0	SW	171724 39309	Unspecified Shaft	1908
Not shown	889.0	SW	171717 39314	Unspecified Shaft	1958
Not shown	889.0	SW	171717 39314	Unspecified Disused Shaft	1975
Not shown	901.0	NW	172031 40680	Unspecified Disused Shaft	1974
Not shown	901.0	NW	172031 40680	Unspecified Disused Shaft	1980
Not shown	901.0	NW	172031 40680	Unspecified Disused Shaft	1992
Not shown	901.0	NW	172026 40678	Unspecified Old Shaft	1958
Not shown	901.0	NW	172030 40678	Unspecified Old Shaft	1906
Not shown	901.0	NW	172030 40678	Unspecified Shaft	1879
Not shown	909.0	SW	171657 39368	Unspecified Shaft	1908
Not shown	909.0	SW	171657 39368	Unspecified Shaft	1878
Not shown	911.0	N	172911 40915	Disused Copper Mine	1879
Not shown	911.0	N	172911 40915	Disused Copper Mine	1906
Not shown	913.0	N	172520 40788	Unspecified Disused Shaft	1992
Not shown	914.0	SW	171650 39368	Unspecified Old Shaft	1958
Not shown	914.0	SW	171650 39368	Unspecified Disused Shaft	1975
Not shown	925.0	N	172491 40803	Unspecified Old Shaft	1958
Not shown	926.0	N	172499 40803	Unspecified Disused Shaft	1980
Not shown	926.0	N	172499 40803	Unspecified Disused Shaft	1992
Not shown	926.0	N	172499 40803	Unspecified Disused Shaft	1974
Not shown	926.0	N	172498 40801	Unspecified Old Shaft	1906
Not shown	926.0	N	172498 40801	Unspecified Shaft	1879
Not shown	929.0	NE	173012 40673	Unspecified Disused Shafts	1992
Not shown	929.0	NE	173012 40673	Unspecified Old Shaft	1958

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	929.0	NE	173012 40673	Unspecified Disused Shafts	1980
Not shown	929.0	NE	173012 40673	Unspecified Disused Shafts	1974
Not shown	934.0	NE	173009 40677	Unspecified Shaft	1879
Not shown	936.0	NE	173018 40676	Unspecified Old Shaft	1906
Not shown	937.0	W	171528 39598	Unspecified Shaft	1878
Not shown	944.0	NW	171749 40535	Tunnel	1906
Not shown	946.0	SW	171562 39473	Unspecified Shaft	1878
Not shown	947.0	NW	171744 40534	Tunnel	1958
Not shown	949.0	SW	171552 39475	Unspecified Shaft	1908
Not shown	954.0	SW	171550 39475	Unspecified Shaft	1958
Not shown	959.0	W	171408 39696	Disused Tin Mine	1878
Not shown	959.0	W	171408 39696	Disused Tin Mine	1908
Not shown	984.0	N	172742 40829	Unspecified Old Shaft	1906
Not shown	986.0	N	172738 40832	Unspecified Old Shaft	1958
Not shown	986.0	N	172738 40832	Unspecified Disused Shafts	1980
Not shown	986.0	N	172738 40832	Unspecified Disused Shafts	1974
Not shown	986.0	N	172738 40832	Unspecified Disused Shafts	1992
Not shown	997.0	NE	173196 40628	Unspecified Disused Shafts	1992
Not shown	997.0	NE	173196 40628	Unspecified Old Shaft	1958
Not shown	997.0	NE	173196 40628	Unspecified Disused Shafts	1980
Not shown	997.0	NE	173196 40628	Unspecified Disused Shafts	1974

4.3 Current Ground Workings

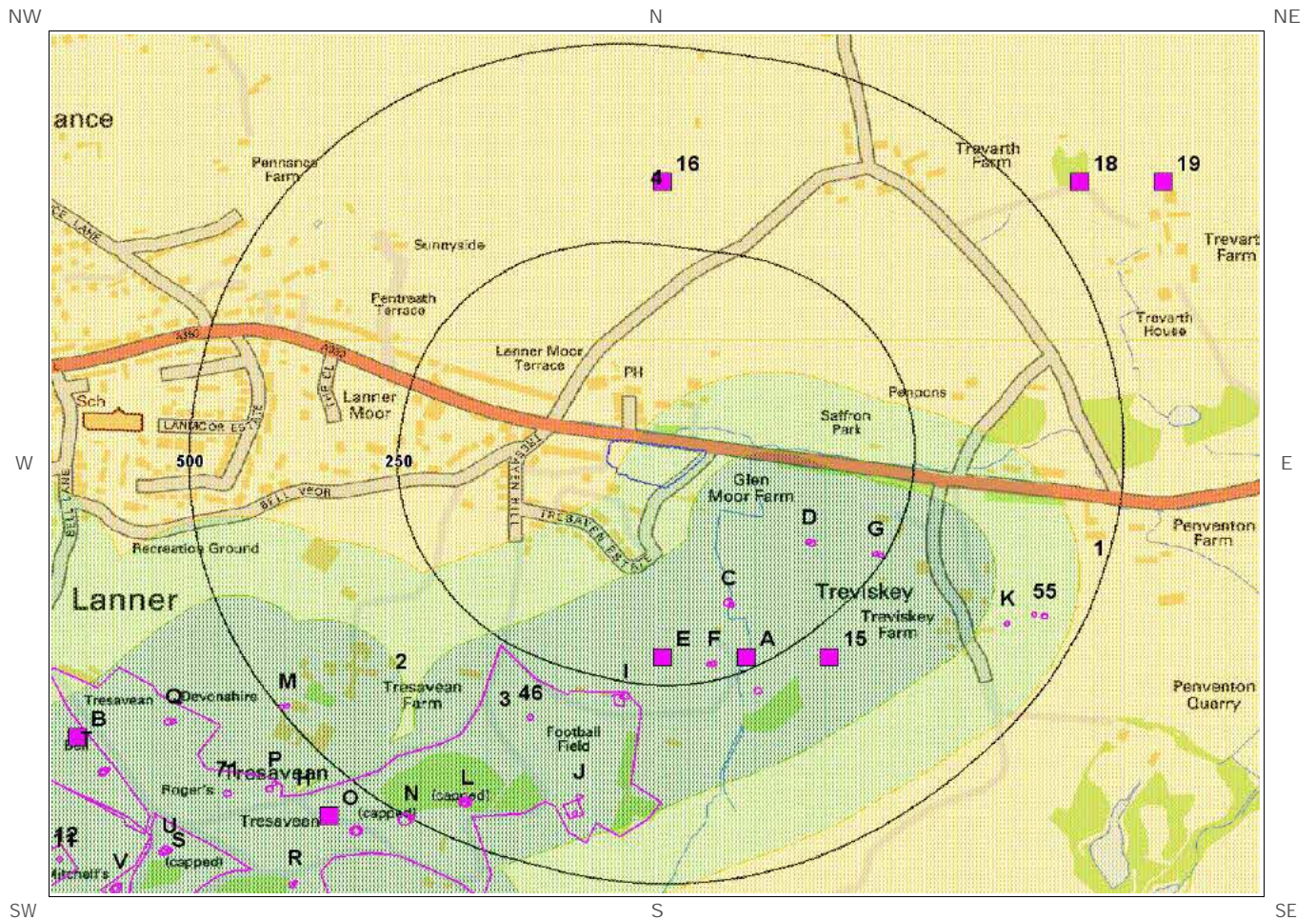
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	574.0	S	172261 39287	Igneous & Metamorphic Rock	Lower Tretharrap	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	638.0	SW	172066 39318	Copper	Tresavean Mine	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)	Ceased
Not shown	712.0	SE	173100 39400	Igneous & Metamorphic Rock	Penventon	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	712.0	SE	173100 39400	Igneous & Metamorphic Rock	Penventon	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	838.0	NW	171773 40380	China Clay	Pennance China clay & Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	919.0	SW	171648 39370	Tin	Wheal Comford	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)	Ceased
Not shown	919.0	SW	171648 39370	Copper	Wheal Comford	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)	Ceased
Not shown	920.0	NW	171740 40470	China Clay	Carn Marth Clay Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	940.0	W	171524 39611	Tin	West Tresavean Mine	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)	Ceased
Not shown	940.0	W	171524 39611	Copper	West Tresavean Mine	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)	Ceased
Not shown	988.0	SE	173290 39197	Igneous & Metamorphic Rock	Govorrow	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	990.0	NW	171744 40577	China Clay	Carn Marth Clay Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? Yes

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
26C	159.0	SE	172579 39668	Unspecified Old Shaft	1958
27C	159.0	SE	172579 39668	Unspecified Disused Shaft	1975
28D	162.0	SE	172676 39745	Unspecified Old Shafts	1958
29D	162.0	SE	172676 39745	Unspecified Disused Shaft	1975
30C	164.0	SE	172583 39666	Unspecified Old Shaft	1908
31C	164.0	SE	172583 39666	Unspecified Shaft	1878
32D	166.0	SE	172680 39743	Unspecified Old Shafts	1908
33E	226.0	S	172562 39592	Unspecified Shaft	1878
34F	226.0	S	172562 39592	Unspecified Old Shafts	1908
35F	227.0	S	172557 39591	Unspecified Shaft	1958
36G	236.0	SE	172756 39730	Unspecified Old Shafts	1958
37G	242.0	SE	172762 39728	Unspecified Old Shafts	1908
38G	242.0	SE	172762 39728	Unspecified Shaft	1878
39H	258.0	SW	172074 39365	Disused Copper Mine	1908
40H	258.0	SW	172074 39365	Disused Copper Mine	1878
41I	263.0	S	172456 39550	Unspecified Disused Shaft	1975
42I	267.0	S	172452 39550	Unspecified Shaft	1878
43I	267.0	S	172452 39550	Unspecified Old Shaft	1908
44I	267.0	S	172448 39545	Unspecified Shaft	1958
45A	275.0	SE	172615 39557	Unspecified Disused Shaft	1975

ID	Distance (m)	Direction	NGR	Details	Date
46	320.0	S	172342 39524	Unspecified Shaft	1908
47J	399.0	S	172401 39424	Unspecified Shaft	1908
48J	408.0	S	172394 39408	Unspecified Shaft	1958
49K	416.0	SE	172913 39642	Unspecified Old Shaft	1908
50J	422.0	S	172396 39403	Unspecified Shaft	1878
51K	440.0	SE	172946 39653	Unspecified Shaft	1878
52L	446.0	SW	172266 39417	Unspecified Old Shaft	1908
53L	448.0	SW	172262 39416	Unspecified Shaft	1958
54L	451.0	SW	172263 39415	Unspecified Shaft	1878
55	451.0	SE	172958 39651	Unspecified Old Shaft	1958
56M	489.0	SW	172051 39538	Unspecified Shaft	1878
57M	489.0	SW	172051 39538	Unspecified Shaft	1908
58M	489.0	SW	172051 39538	Unspecified Shaft	1908
59M	494.0	SW	172044 39537	Unspecified Shaft	1958
60M	494.0	SW	172044 39537	Unspecified Disused Shaft	1975
61N	495.0	SW	172199 39397	Unspecified Disused Shaft	1975
62N	498.0	SW	172192 39395	Unspecified Shaft	1958
63O	542.0	SW	172135 39380	Unspecified Shaft	1908
64O	544.0	SW	172132 39380	Unspecified Shaft	1958
65O	544.0	SW	172132 39380	Unspecified Disused Shaft	1975
66P	564.0	SW	172036 39440	Unspecified Shaft	1878
67P	564.0	SW	172036 39440	Unspecified Shaft	1908
68P	571.0	SW	172030 39433	Unspecified Shaft	1958
69Q	611.0	SW	171915 39518	Unspecified Shaft	1878
70Q	611.0	SW	171915 39518	Unspecified Shaft	1908
71	612.0	SW	171980 39428	Unspecified Disused Shaft	1975
72Q	615.0	SW	171909 39518	Unspecified Shaft	1958
73Q	615.0	SW	171909 39518	Unspecified Disused Shaft	1975
74R	641.0	SW	172060 39315	Unspecified Shaft	1878

ID	Distance (m)	Direction	NGR	Details	Date
75R	644.0	SW	172057 39313	Unspecified Shaft	1908
76S	663.0	SW	171925 39322	Unspecified Disused Mine	1958
77S	663.0	SW	171925 39322	Unspecified Disused Mine	1975
Not shown	673.0	SW	172033 39293	Unspecified Shaft	1908
Not shown	674.0	SW	172168 39214	Unspecified Shaft	1878
Not shown	674.0	SW	172168 39214	Unspecified Shaft	1908
Not shown	675.0	SW	172160 39214	Unspecified Shaft	1958
Not shown	675.0	SW	172160 39214	Unspecified Disused Shaft	1975
Not shown	676.0	SW	172029 39293	Unspecified Shaft	1958
Not shown	676.0	SW	172029 39293	Unspecified Disused Shaft	1975
85T	703.0	SW	171712 39480	Unspecified Disused Mine	1958
86T	703.0	SW	171712 39480	Unspecified Disused Mine	1975
87B	711.0	SW	171835 39458	Unspecified Shaft	1878
88U	713.0	SW	171910 39356	Unspecified Shaft	1878
89B	713.0	SW	171832 39456	Unspecified Shaft	1908
Not shown	714.0	W	171737 39657	Tin and Copper Mine	1878
91U	714.0	SW	171906 39356	Unspecified Shaft	1908
92B	716.0	SW	171830 39454	Unspecified Shaft	1958
93B	716.0	SW	171830 39454	Unspecified Disused Shafts	1975
94U	718.0	SW	171903 39354	Unspecified Shaft	1958
95U	718.0	SW	171903 39354	Unspecified Disused Shafts	1975
Not shown	749.0	SW	172075 39177	Unspecified Shaft	1878
Not shown	749.0	SW	172075 39174	Unspecified Shaft	1908
Not shown	751.0	SW	172072 39174	Unspecified Shaft	1958
Not shown	751.0	SW	172072 39174	Unspecified Disused Shaft	1975
Not shown	755.0	SW	171986 39228	Unspecified Shaft	1878
Not shown	759.0	SW	171758 39495	Unspecified Shaft	1878
Not shown	761.0	SW	171752 39497	Unspecified Shaft	1908

ID	Distance (m)	Direction	NGR	Details	Date
103V	788.0	SW	171851 39311	Unspecified Shaft	1878
104V	788.0	SW	171848 39308	Unspecified Shaft	1908
Not shown	789.0	W	171698 39550	Unspecified Disused Shaft	1975
Not shown	791.0	W	171552 39704	Unspecified Disused Mine	1958
107V	792.0	SW	171845 39306	Unspecified Shaft	1958
108V	792.0	SW	171845 39306	Unspecified Disused Shafts	1975
Not shown	793.0	W	171695 39550	Unspecified Shaft	1878
Not shown	802.0	SW	171742 39430	Unspecified Shaft	1908
111	812.0	SW	171651 39339	Disused Tin and Copper	1908
112	822.0	SW	171779 39345	Unspecified Shaft	1878
Not shown	826.0	W	171617 39628	Tin and Copper Mine	1878
Not shown	835.0	W	171623 39630	Unspecified Old Shaft	1908
Not shown	836.0	W	171622 39634	Unspecified Shafts	1878
Not shown	838.0	W	171620 39627	Unspecified Disused Shaft	1975
Not shown	838.0	W	171620 39627	Unspecified Old Shaft	1958
Not shown	851.0	SW	171910 39164	Unspecified Disused Shaft	1975
Not shown	853.0	SW	171909 39164	Unspecified Shaft	1878
Not shown	854.0	SW	171904 39163	Unspecified Shaft	1908
Not shown	854.0	SW	171649 39502	Unspecified Shaft	1878
Not shown	855.0	SW	171901 39162	Unspecified Shaft	1958
Not shown	887.0	SW	171724 39309	Unspecified Shaft	1908
Not shown	889.0	SW	171717 39314	Unspecified Shaft	1958
Not shown	889.0	SW	171717 39314	Unspecified Disused Shaft	1975
Not shown	901.0	NW	172031 40680	Unspecified Disused Shaft	1980
Not shown	901.0	NW	172031 40680	Unspecified Disused Shaft	1992
Not shown	901.0	NW	172031 40680	Unspecified Disused Shaft	1974
Not shown	901.0	NW	172026 40678	Unspecified Old Shaft	1958
Not shown	901.0	NW	172030 40678	Unspecified Old Shaft	1906

ID	Distance (m)	Direction	NGR	Details	Date
Not shown	901.0	NW	172030 40678	Unspecified Shaft	1879
Not shown	909.0	SW	171657 39368	Unspecified Shaft	1878
Not shown	909.0	SW	171657 39368	Unspecified Shaft	1908
Not shown	911.0	N	172911 40915	Disused Copper Mine	1906
Not shown	911.0	N	172911 40915	Disused Copper Mine	1879
Not shown	913.0	N	172520 40788	Unspecified Disused Shaft	1992
Not shown	914.0	SW	171650 39368	Unspecified Old Shaft	1958
Not shown	914.0	SW	171650 39368	Unspecified Disused Shaft	1975
Not shown	925.0	N	172491 40803	Unspecified Old Shaft	1958
Not shown	926.0	N	172499 40803	Unspecified Disused Shaft	1992
Not shown	926.0	N	172499 40803	Unspecified Disused Shaft	1974
Not shown	926.0	N	172499 40803	Unspecified Disused Shaft	1980
Not shown	926.0	N	172498 40801	Unspecified Old Shaft	1906
Not shown	926.0	N	172498 40801	Unspecified Shaft	1879
Not shown	929.0	NE	173012 40673	Unspecified Disused Shafts	1974
Not shown	929.0	NE	173012 40673	Unspecified Old Shaft	1958
Not shown	929.0	NE	173012 40673	Unspecified Disused Shafts	1992
Not shown	929.0	NE	173012 40673	Unspecified Disused Shafts	1980
Not shown	934.0	NE	173009 40677	Unspecified Shaft	1879
Not shown	936.0	NE	173018 40676	Unspecified Old Shaft	1906
Not shown	937.0	W	171528 39598	Unspecified Shaft	1878
Not shown	946.0	SW	171562 39473	Unspecified Shaft	1878
Not shown	949.0	SW	171552 39475	Unspecified Shaft	1908
Not shown	954.0	SW	171550 39475	Unspecified Shaft	1958
Not shown	959.0	W	171408 39696	Disused Tin Mine	1878
Not shown	959.0	W	171408 39696	Disused Tin Mine	1908
Not shown	984.0	N	172742 40829	Unspecified Old Shaft	1906
Not shown	986.0	N	172738 40832	Unspecified Old Shaft	1958

ID	Distance (m)	Direction	NGR	Details	Date
Not shown	986.0	N	172738 40832	Unspecified Disused Shafts	1980
Not shown	986.0	N	172738 40832	Unspecified Disused Shafts	1992
Not shown	986.0	N	172738 40832	Unspecified Disused Shafts	1974
Not shown	997.0	NE	173196 40628	Unspecified Disused Shafts	1974
Not shown	997.0	NE	173196 40628	Unspecified Disused Shafts	1992
Not shown	997.0	NE	173196 40628	Unspecified Disused Shafts	1980
Not shown	997.0	NE	173196 40628	Unspecified Old Shaft	1958

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	South West England	Vein Mineral	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
2	0.0	On Site	Not available	Vein Mineral	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
3	22.0	SE	Not available	Vein Mineral	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
4	127.0	N	South West England	Vein Mineral	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered
5H	524.0	SW	Not available	Vein Mineral	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	681.0	N	Not available	Vein Mineral	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	692.0	W	Not available	Vein Mineral	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	781.0	N	Not available	Vein Mineral	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	929.0	S	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	934.0	SW	Not available	Vein Mineral	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	952.0	W	Not available	Vein Mineral	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
12E	214.0	S	172500 039600	TRESAVEAN EAST, Lanner, Cornwall	-	Mylor Slate Formation	Unknown
13A	234.0	SE	172600 039600	TRESAVEAN BARRIER, Lanner, Cornwall	Worked Ground	Mylor Slate Formation	Unknown
14A	234.0	SE	172600 039600	TREVISKEY+BARRIER, Lanner, Cornwall	Worked Ground	Mylor Slate Formation	Unknown

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
15	288.0	SE	172700 039600	TREVISKEY, Lanner, Cornwall	Worked Ground	Mylor Slate Formation, Felsite	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite
16	330.0	N	172500 040200	CLINTON SOUTH, Lanner, Cornwall	-	Mylor Slate Formation, Felsite	Unknown
17O	552.0	SW	172100 039400	TRESAVEAN, Lanner, Cornwall	-	Granite, Mylor Slate Formation	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite
18	562.0	NE	173000 040200	EDGECOMBE, Lanner, Cornwall	-	Mylor Slate Formation, Felsite	Cassiterite, Tin, Tinstone
19	644.0	NE	173100 040200	CLIFFORD NEW, Gwennap, Cornwall	-	Mylor Slate Formation, Felsite	Cassiterite, Tin, Tinstone
20B	722.0	SW	171800 039500	COMFORD, Lanner, Cornwall	-	Granite, Mylor Slate Formation	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite
21B	722.0	SW	171800 039500	BELL VEOR MINE, Lanner, Cornwall	-	Granite, Mylor Slate Formation	Unknown
22B	722.0	SW	171800 039500	TRESAVEAN NORTH, Lanner, Cornwall	-	Granite, Mylor Slate Formation	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite
Not shown	945.0	W	171500 039700	TRESAVEAN WEST, Lanner, Cornwall	Head	Mylor Slate Formation, Granite	Cassiterite, Tin, Tinstone
Not shown	945.0	W	171500 039700	BELL VEAN, Lanner, Cornwall	Head	Mylor Slate Formation, Granite	Cassiterite, Tin, Tinstone
Not shown	977.0	SW	171700 039200	TRETHARUP, Lanner, Cornwall	-	Granite	Cassiterite, Tin, Tinstone

5.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary?

No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary?

No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? Yes

The following Tin Mining information provided by Groundsure is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	This site is within a postcode where tin mining is reported to have occurred. This may or may not mean that this site has been affected by tin mining. For further information you may wish to consider obtaining a Tin Mining report. This can be ordered from Mining Searches UK at http://www.miningsearchesuk.com/ , or by writing to Mining Searches UK. Highburrow Lane, Wilson Way, Pool Industrial Estate, Redruth, Cornwall. TR15 3RN Tel: 01209 218861
457.0	NW	This site is within a postcode where tin mining is reported to have occurred. This may or may not mean that this site has been affected by tin mining. For further information you may wish to consider obtaining a Tin Mining report. This can be ordered from Mining Searches UK at http://www.miningsearchesuk.com/ , or by writing to Mining Searches UK. Highburrow Lane, Wilson Way, Pool Industrial Estate, Redruth, Cornwall. TR15 3RN Tel: 01209 218861

5.10 Clay Mining

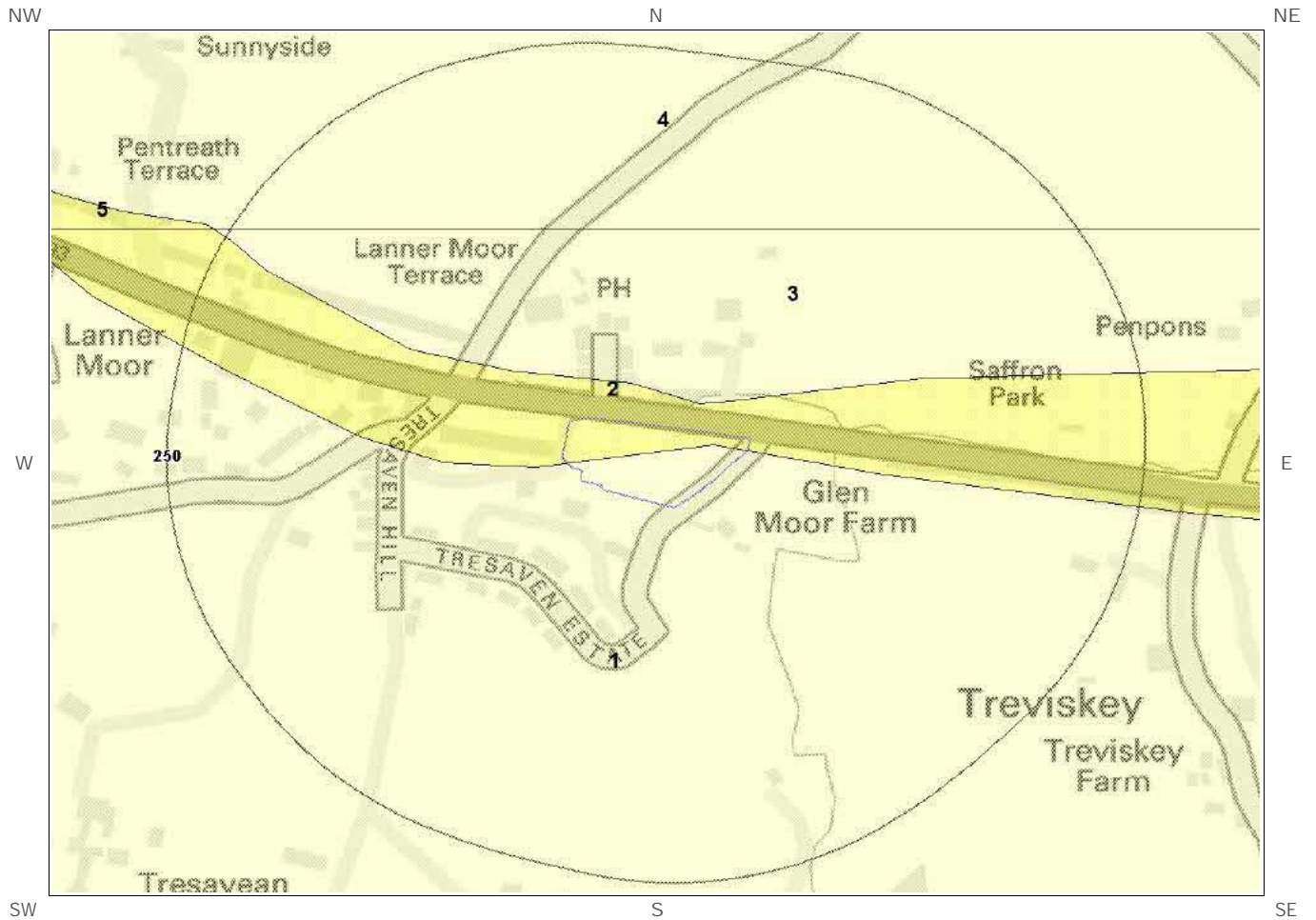
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

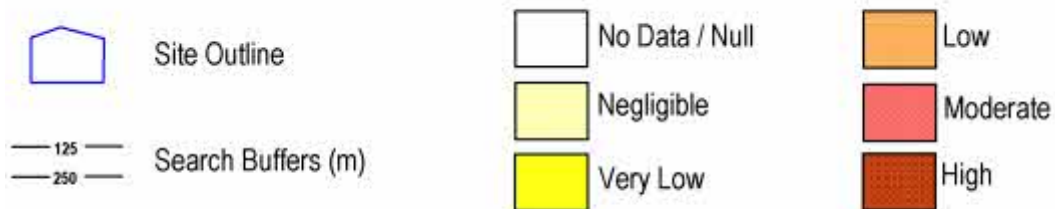
6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map

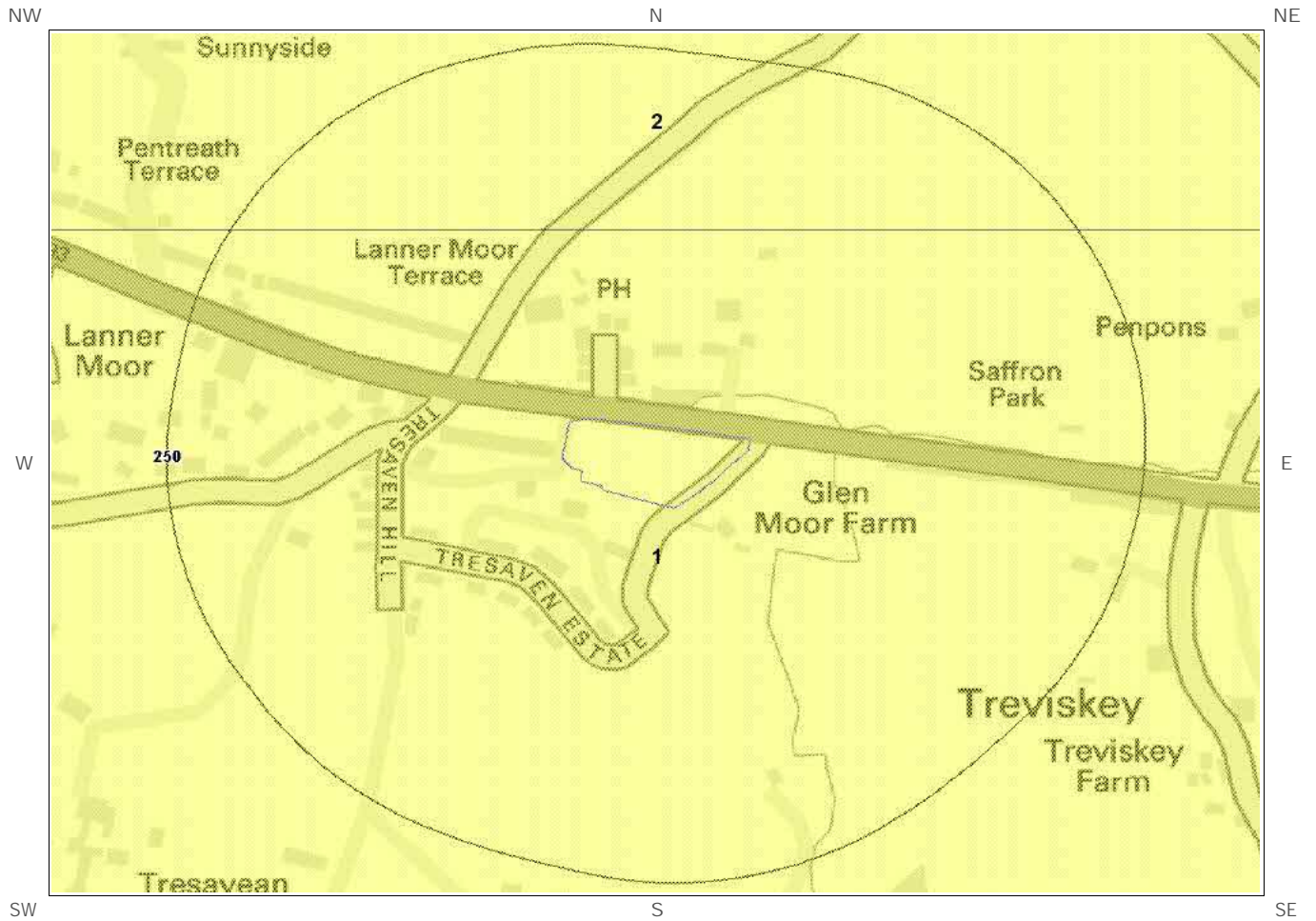


Shrink Swell Clay Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

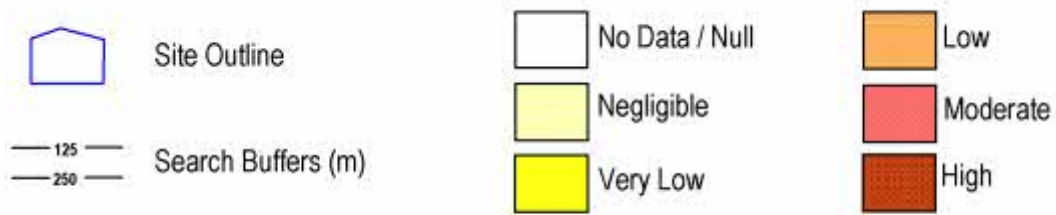


6.2 Landslides Map

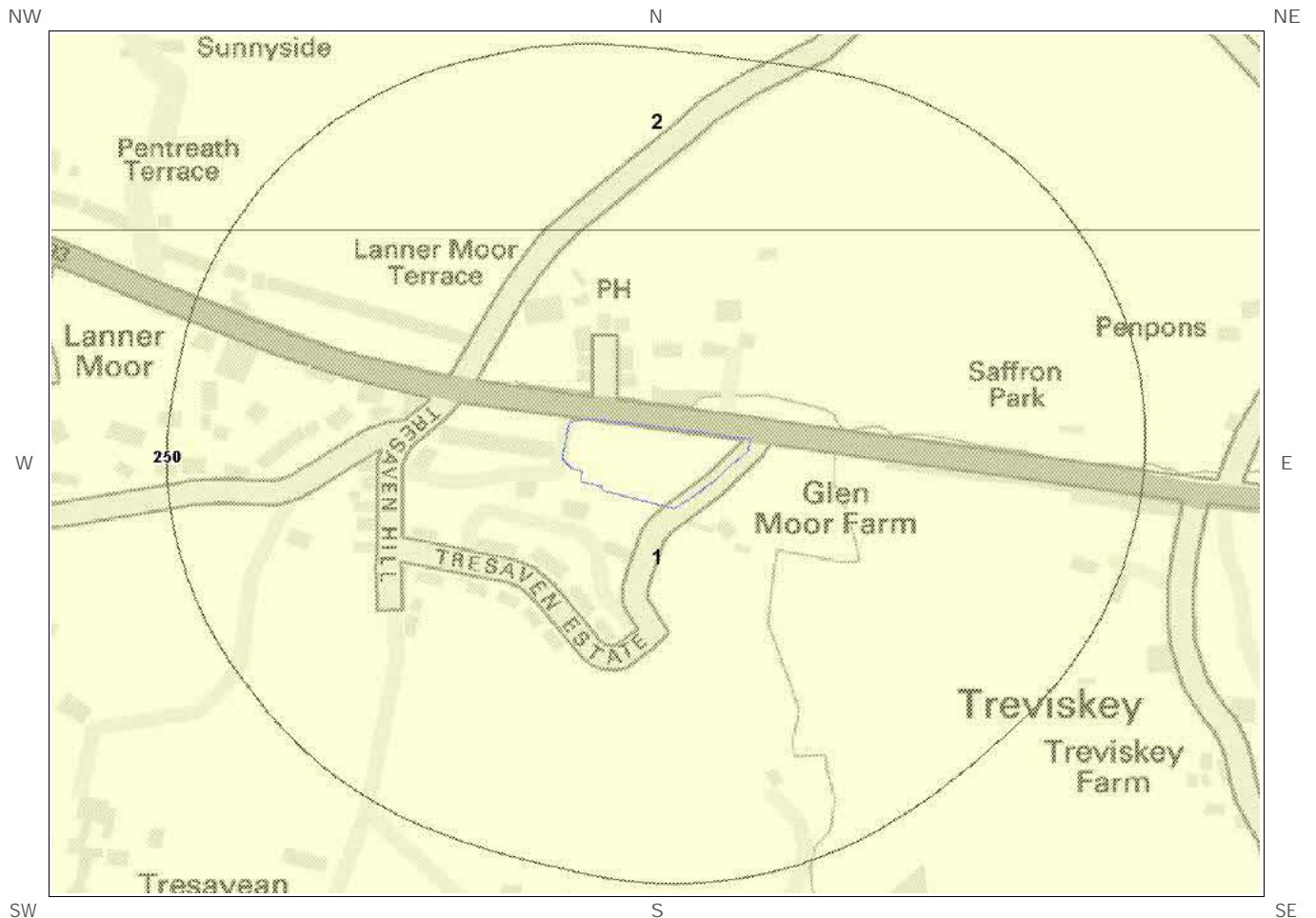


Landslides Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

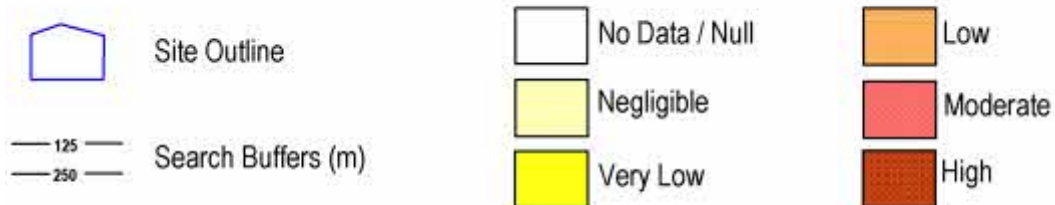


6.3 Ground Dissolution of Soluble Rocks Map

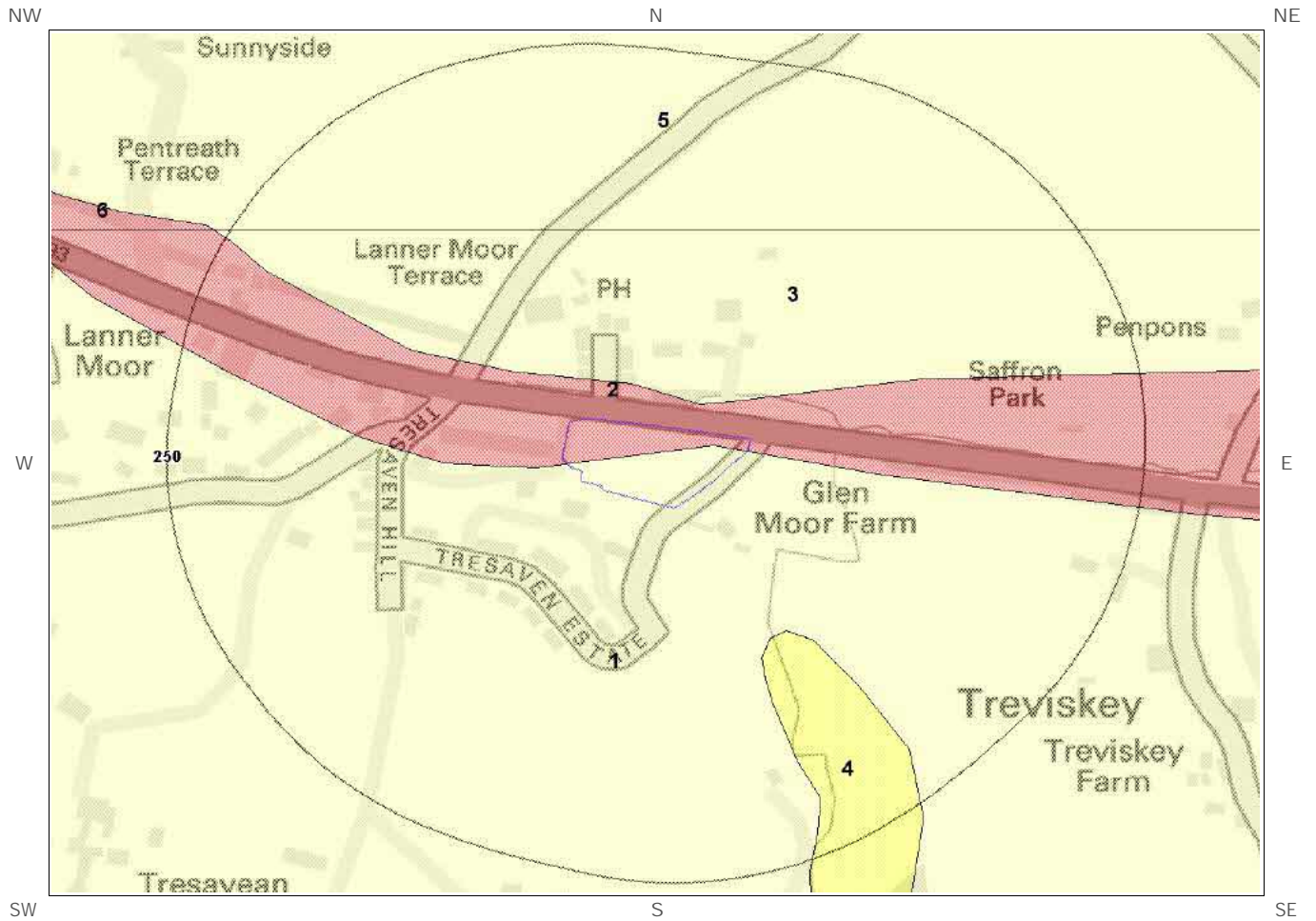


Ground Dissolution
Soluble Rocks Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

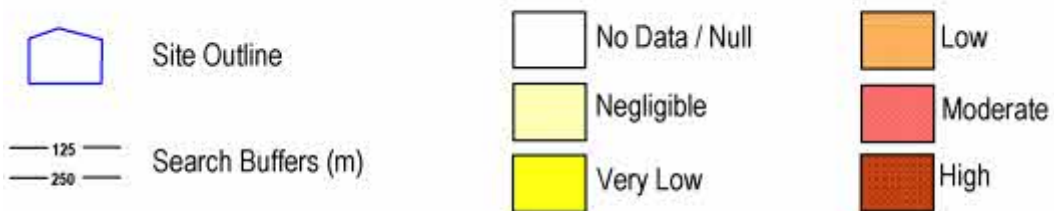


6.4 Compressible Deposits Map

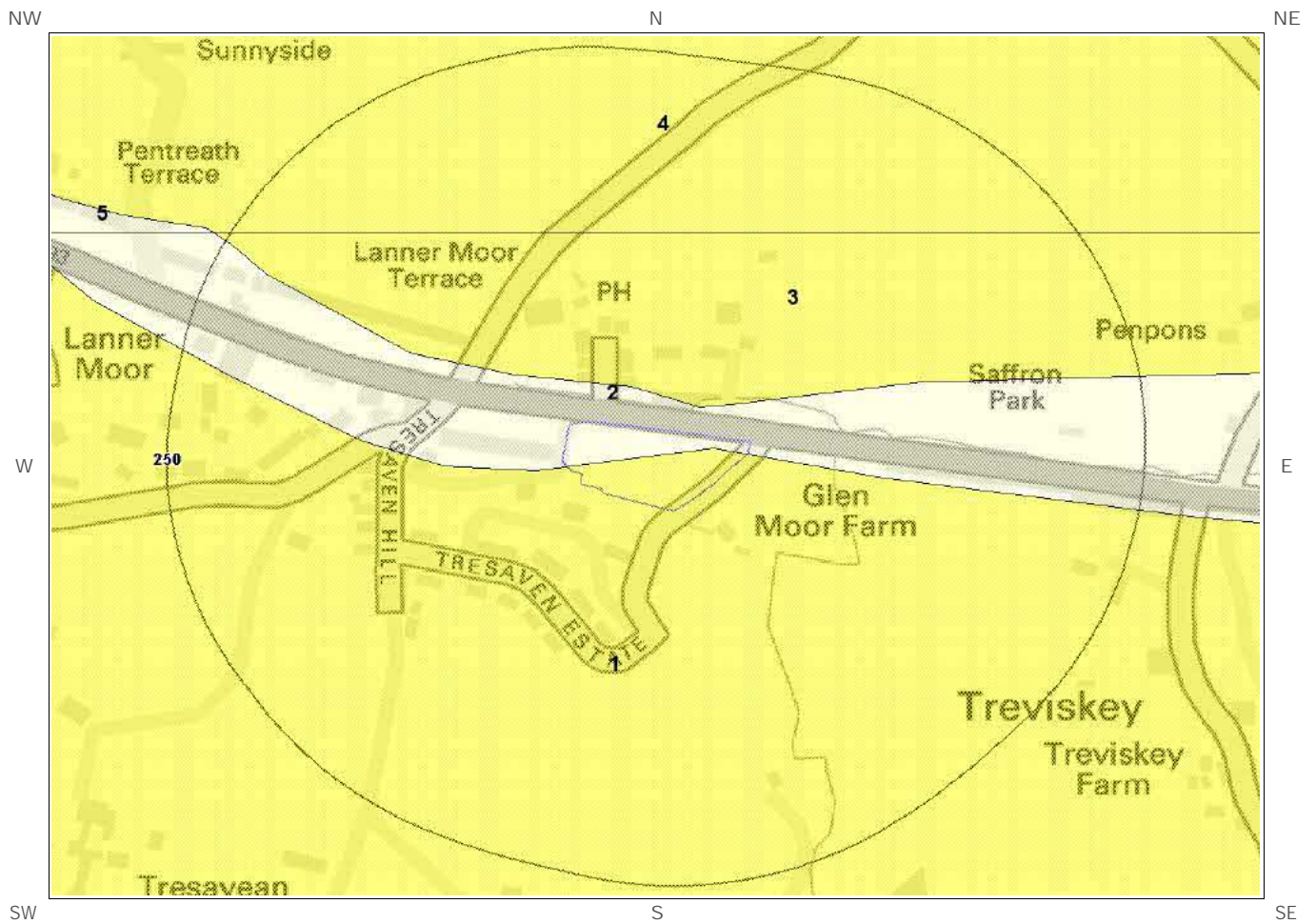


Compressible Deposits Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

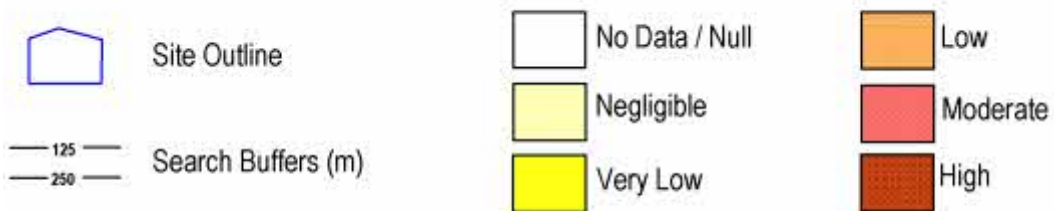


6.5 Collapsible Deposits Map

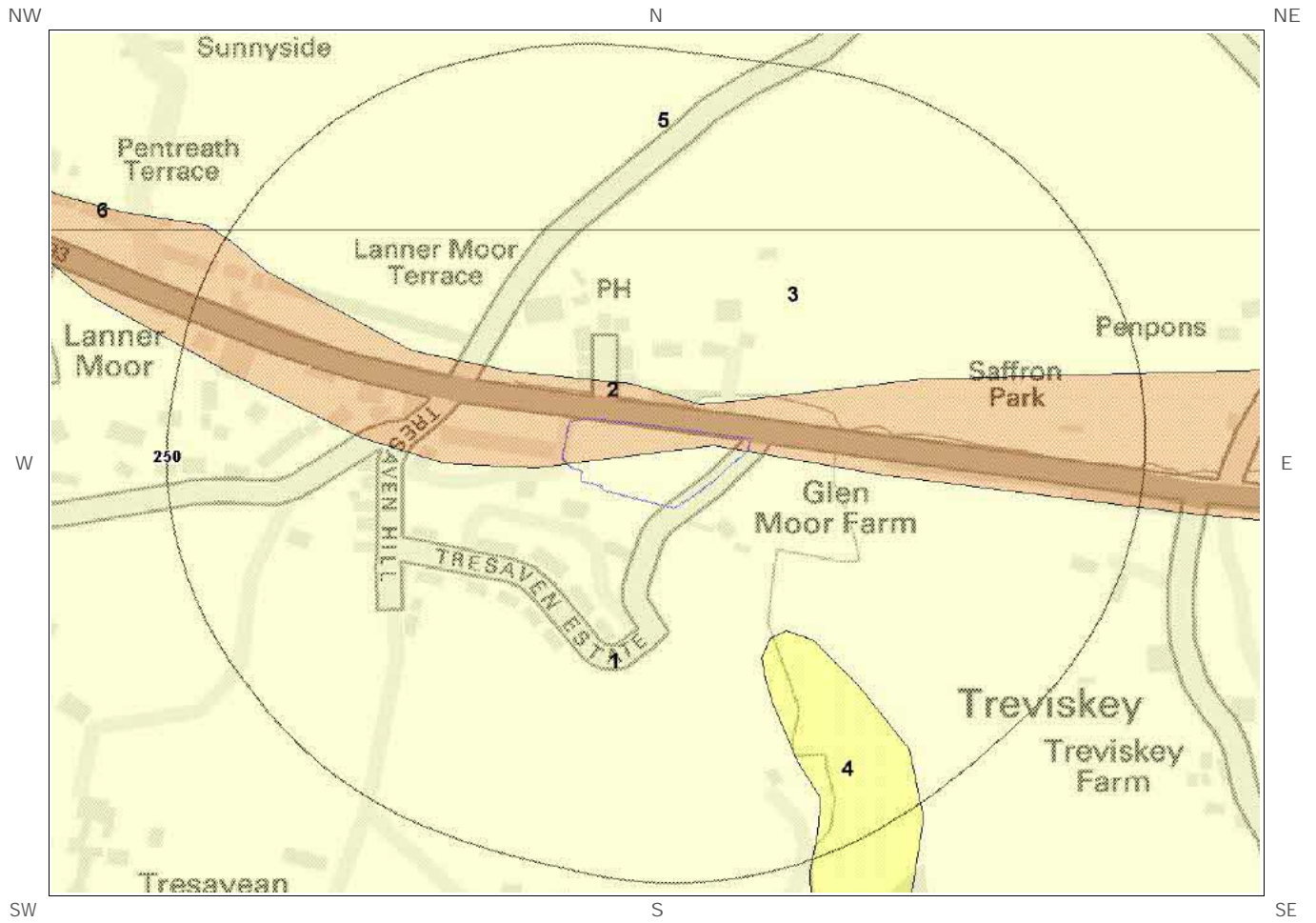


Collapsible Deposits Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.

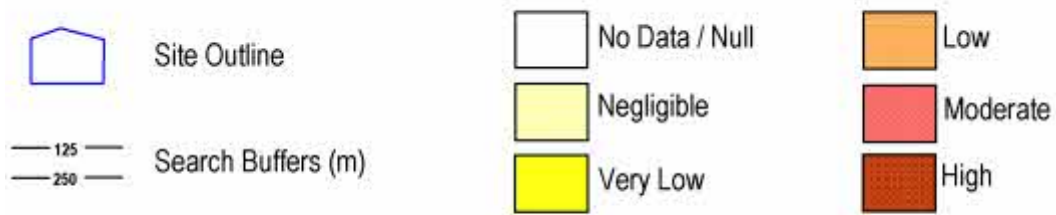


6.6 Running Sand Map



Running Sand Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? Moderate

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	18.0	N	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
3	18.0	N	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

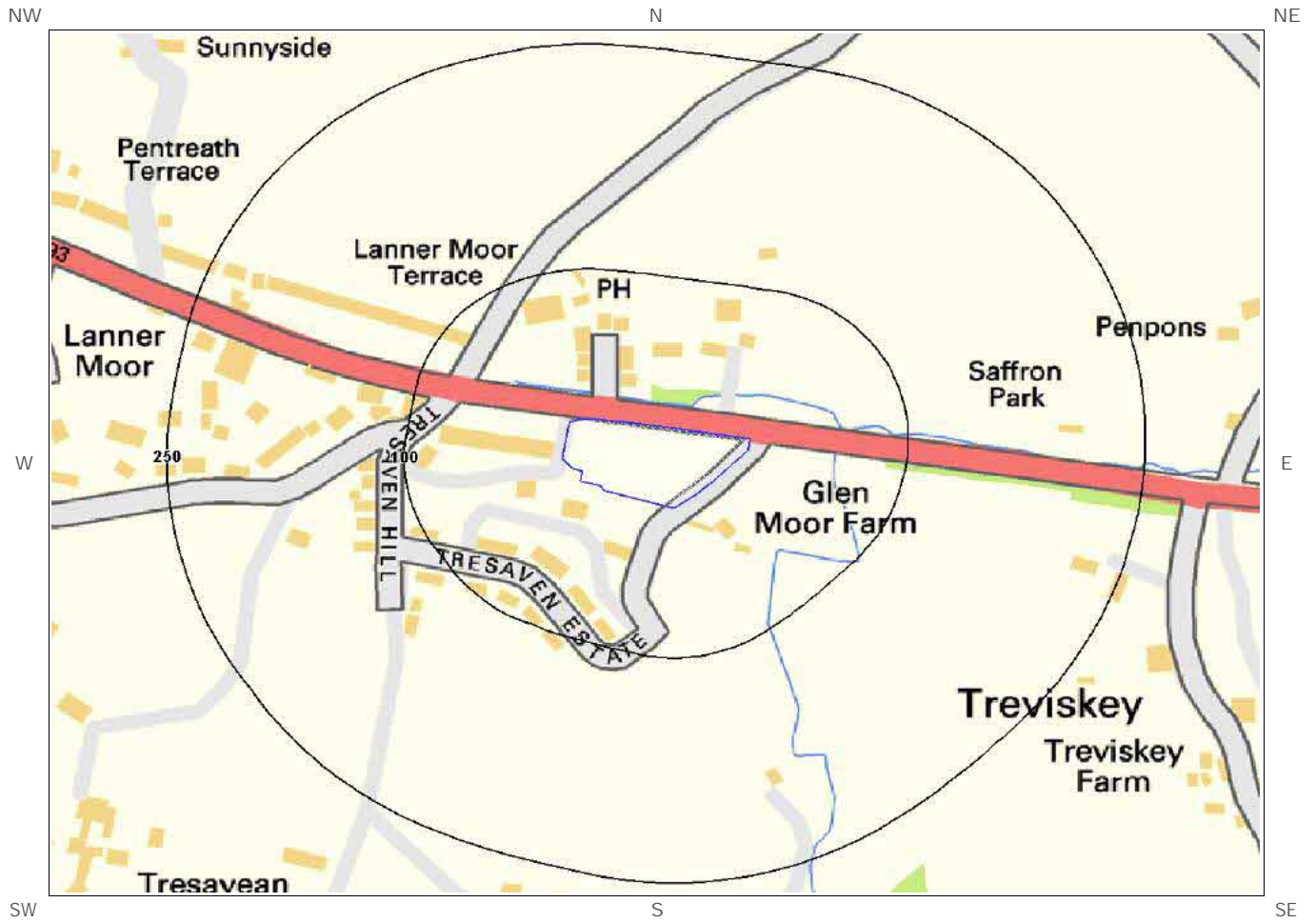
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
3	18.0	N	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

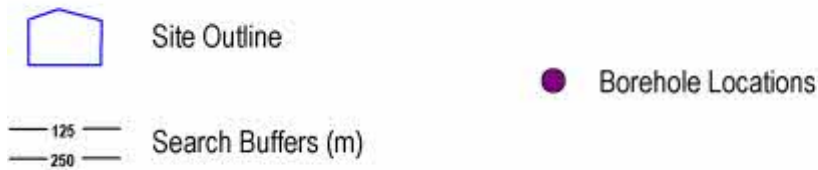
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.
3	18.0	N	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records Map



Borehole Records Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary: 0

Database searched and no data found.

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

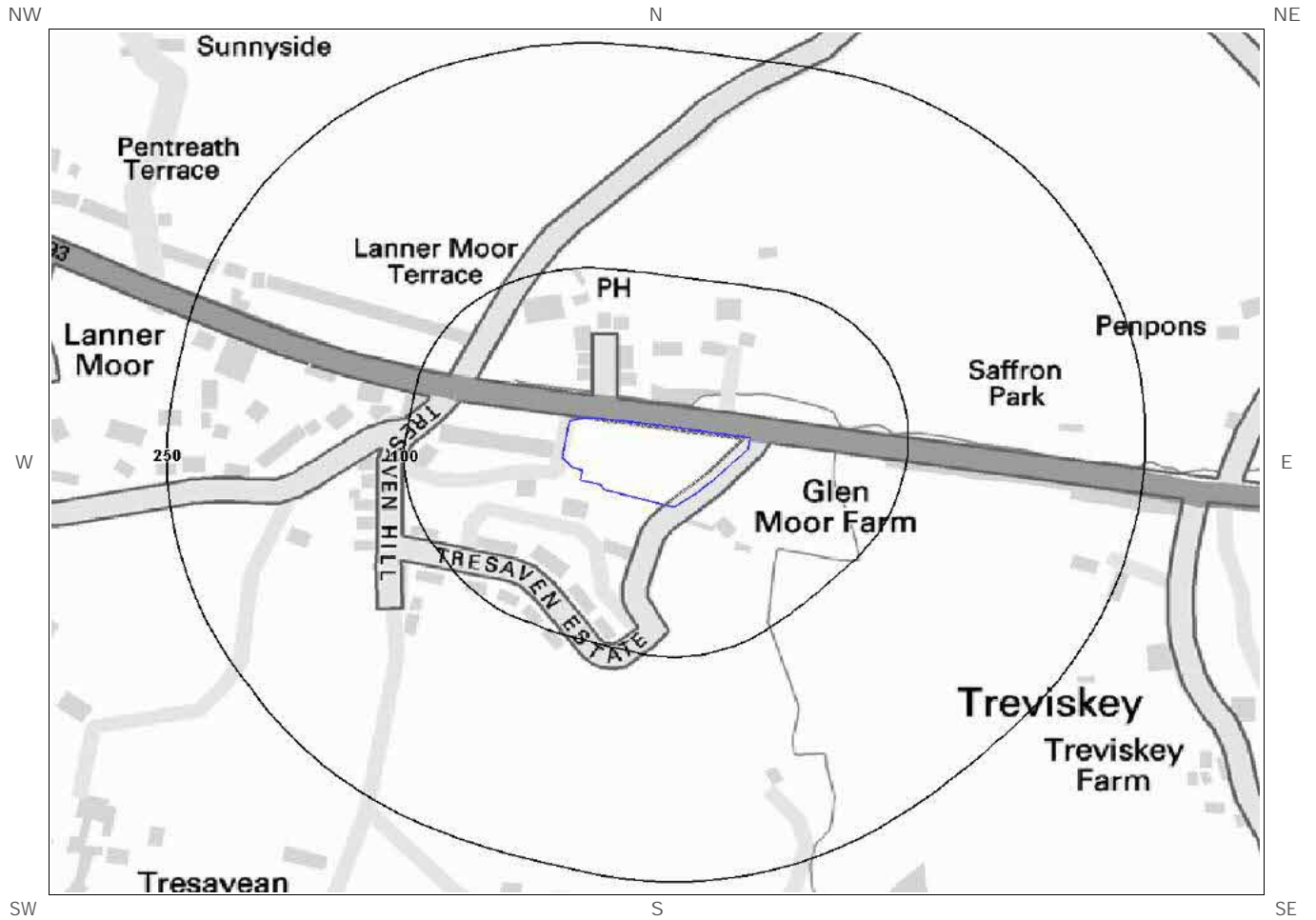
9

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	>120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	>120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	>120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	>120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
18.0	N	Sediment	>120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
18.0	W	Sediment	60 - 120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
22.0	N	Sediment	>120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
26.0	N	Sediment	60 - 120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
38.0	N	Sediment	60 - 120 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

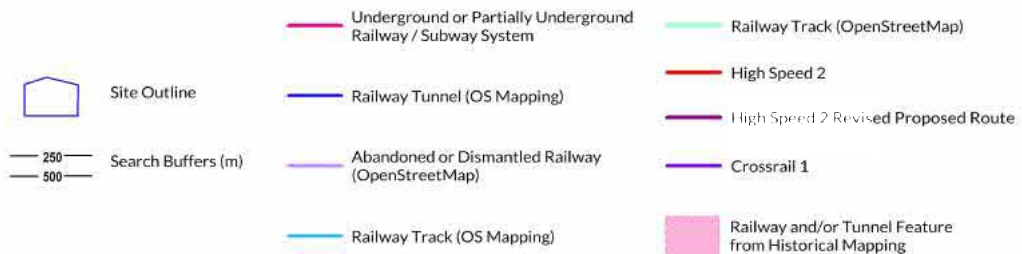
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels Map



Railways and Tunnels Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.
© OpenStreetMapContributors



9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX



The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email: enquiries.gs@jpb.co.uk
Website: www.jpb.co.uk



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505
Website: <http://www.ordnancesurvey.co.uk/>



Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website: <http://www1.getmapping.com/>



Peter Brett Associates
Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail: reading@pba.co.uk
Website: <http://www.peterbrett.com/home>



Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
<https://www.groundsure.com/terms-and-conditions-sept-2016/>

APPENDIX C

Historical Maps

Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

Client Ref: 19244
Report Ref: GS-4324333
Grid Ref: 172493, 39844

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

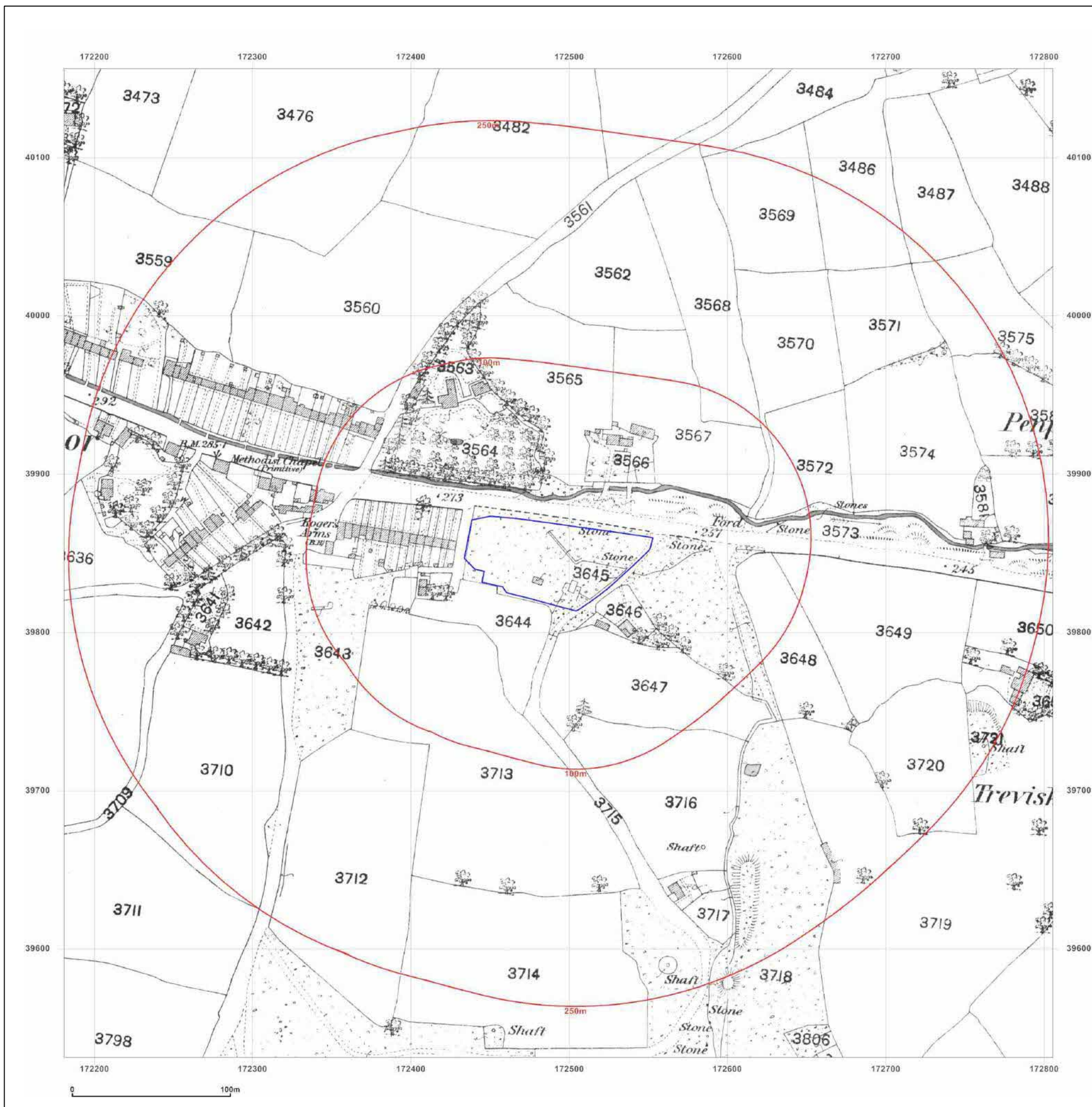


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

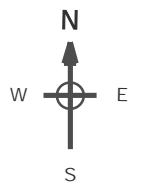
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

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

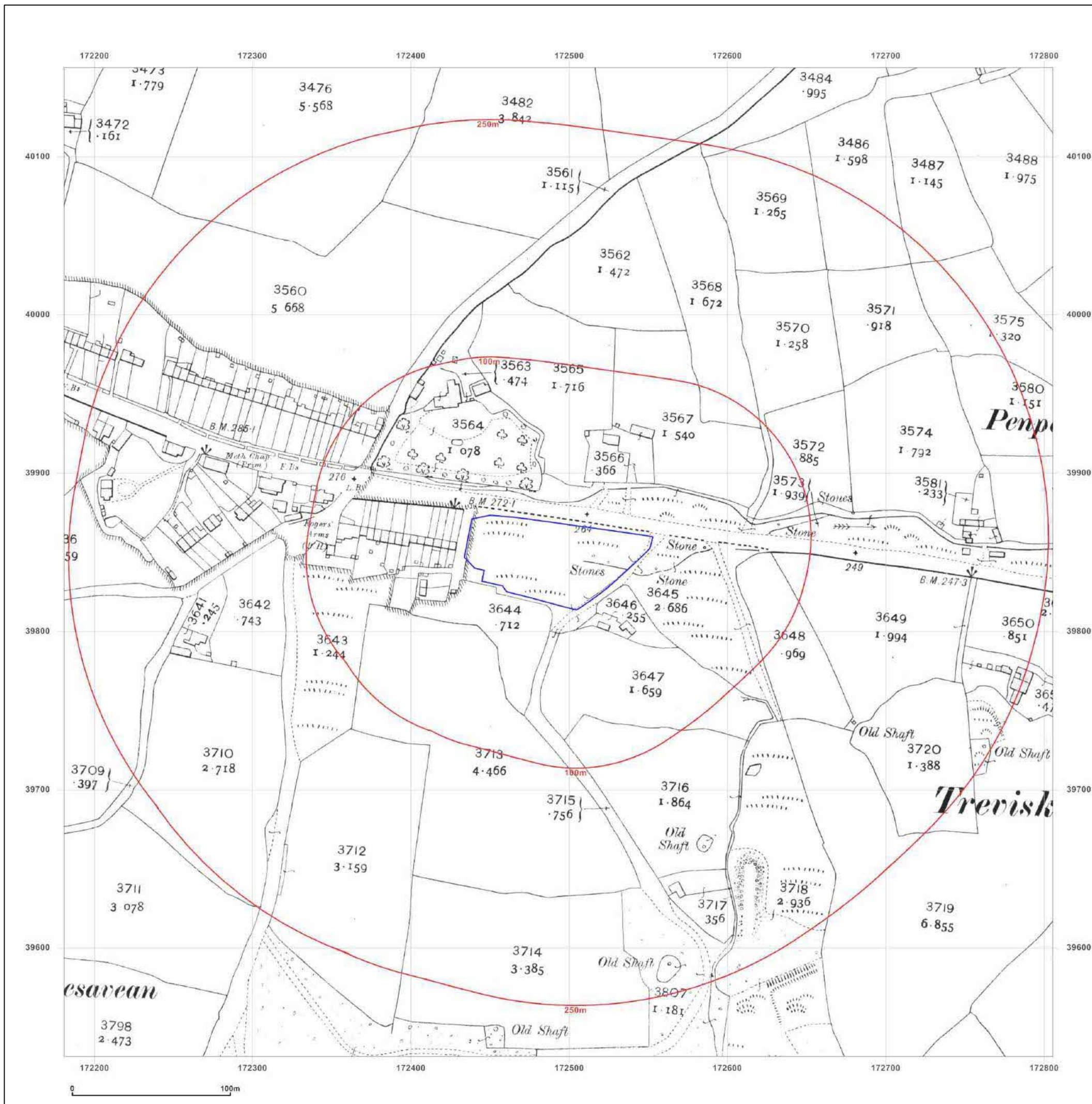


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

Client Ref: 19244
Report Ref: GS-4324333
Grid Ref: 172493, 39844

Map Name: National Grid

Map date: 1970-1972

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1970
Revised 1970
Edition N/A
Copyright 1971
Levelled 1953

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

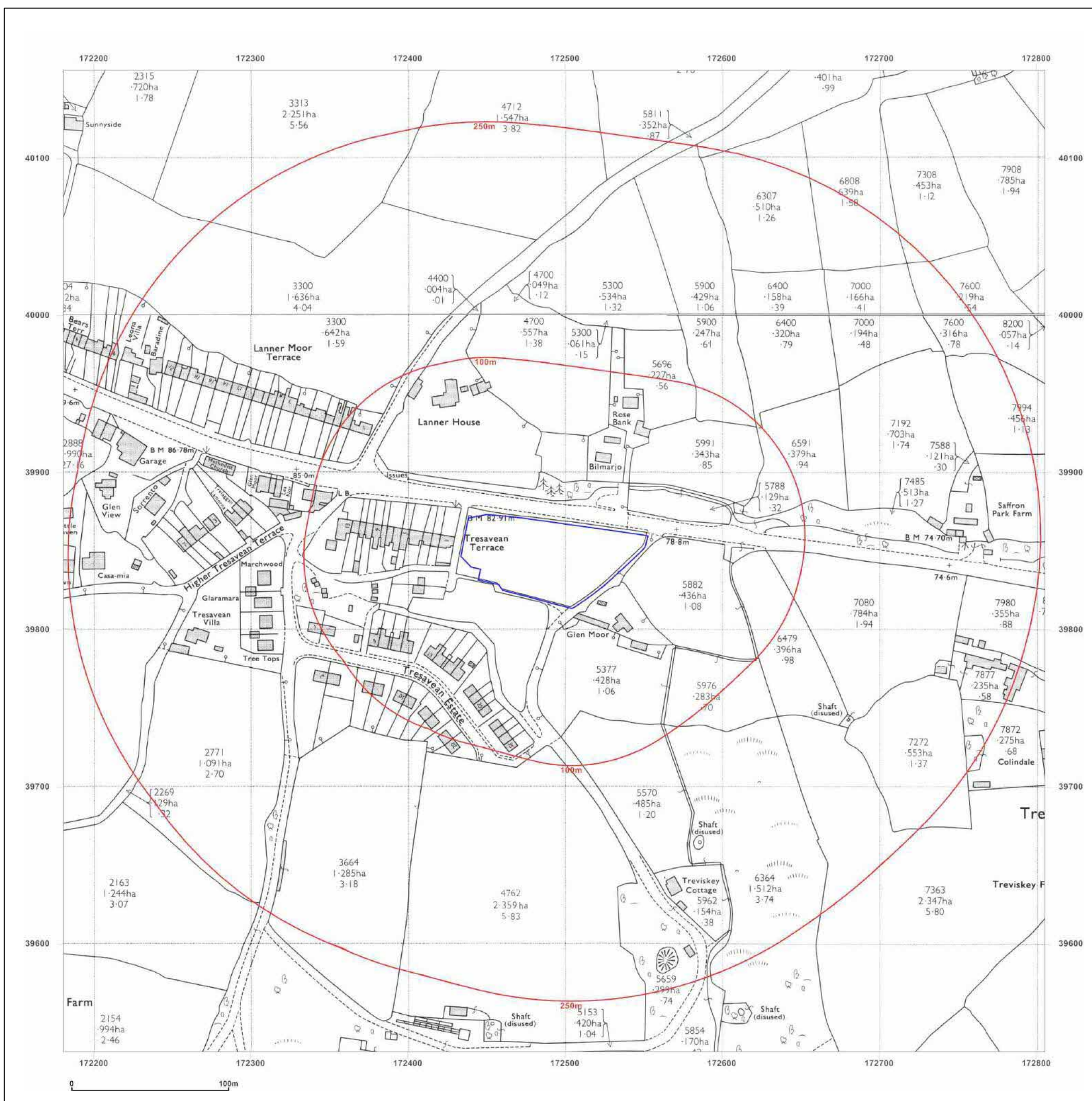


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

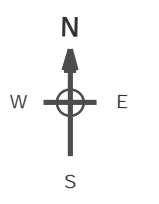
To view map legend click here [Legend](#)




Site Details:
 LAND ADJ TO COPPICE INN,
 LANNER, TR16 6BY

Client Ref: 19244
Report Ref: GS-4324333
Grid Ref: 172493, 39844

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



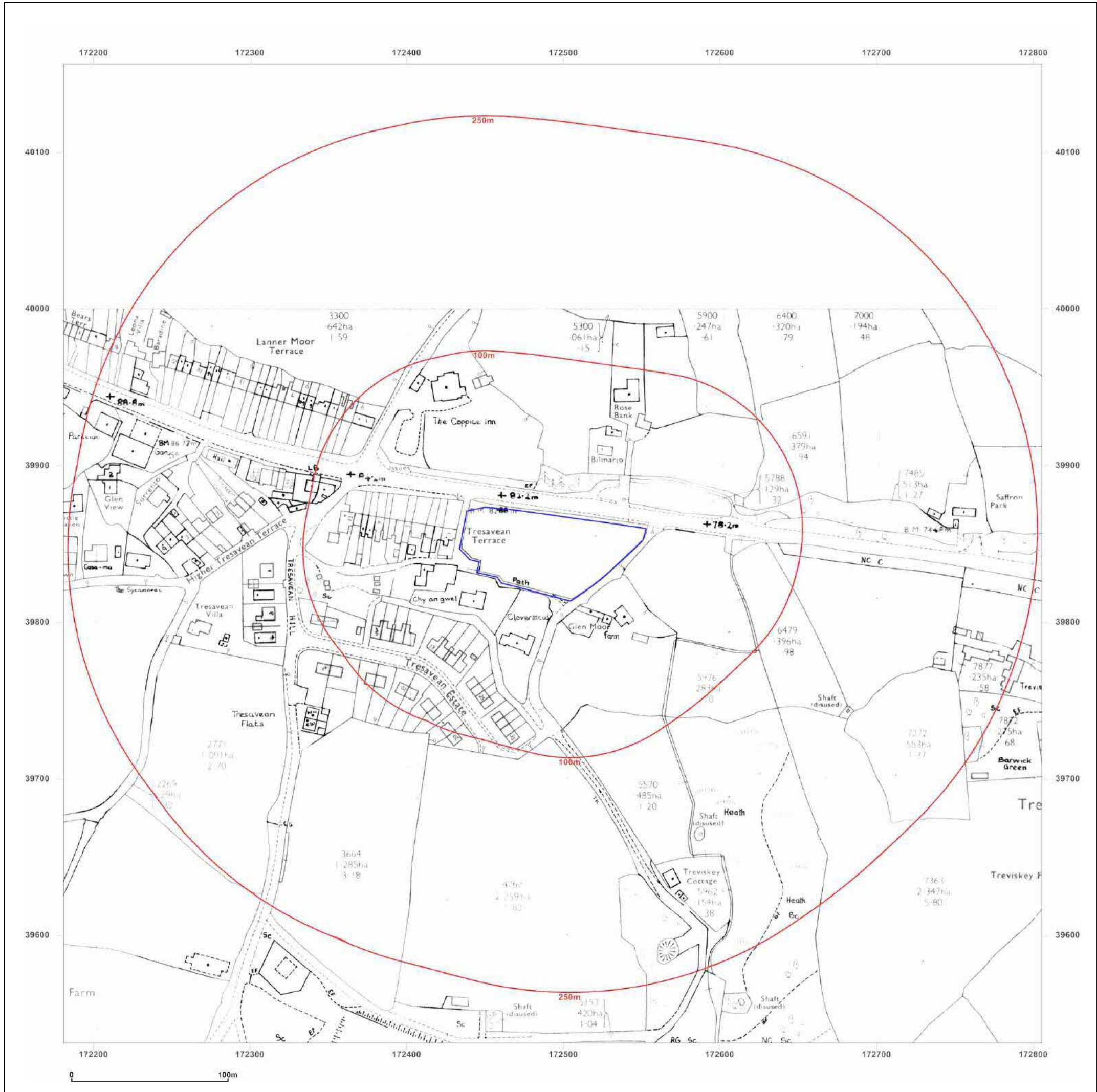
Surveyed 1972
 Revised 1993
 Edition N/A
 Copyright 1993
 Levelled 1972

Powered by

Produced by
 Groundsure Insights
 T: 0800 4759000
 E: info@groundsure.com
 W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

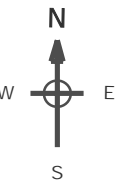
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: National Grid

Map date: 1994-1995

Scale: 1:2,500

Printed at: 1:2,500



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

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

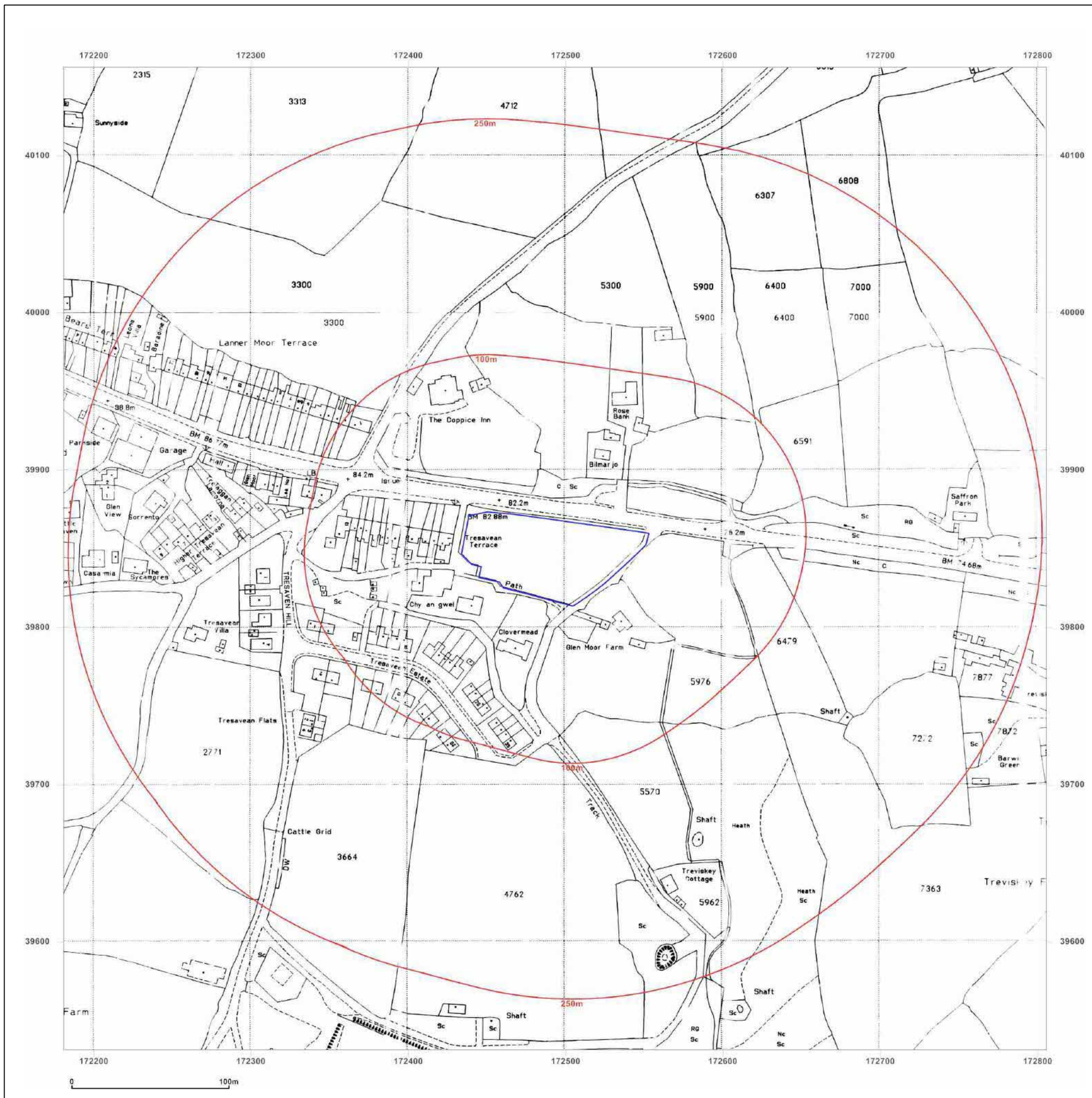


Produced by
Groundsure Insights
T: 01474 759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

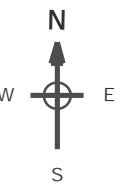
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: County Series

Map date: 1888

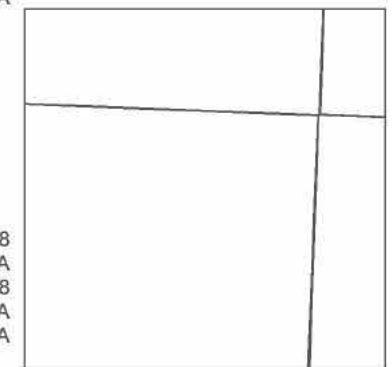
Scale: 1:10,560

Printed at: 1:10,560



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

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



Surveyed 1878
Revised N/A
Edition 1888
Copyright N/A
Levelled N/A

Surveyed 1878
Revised N/A
Edition 1888
Copyright N/A
Levelled N/A

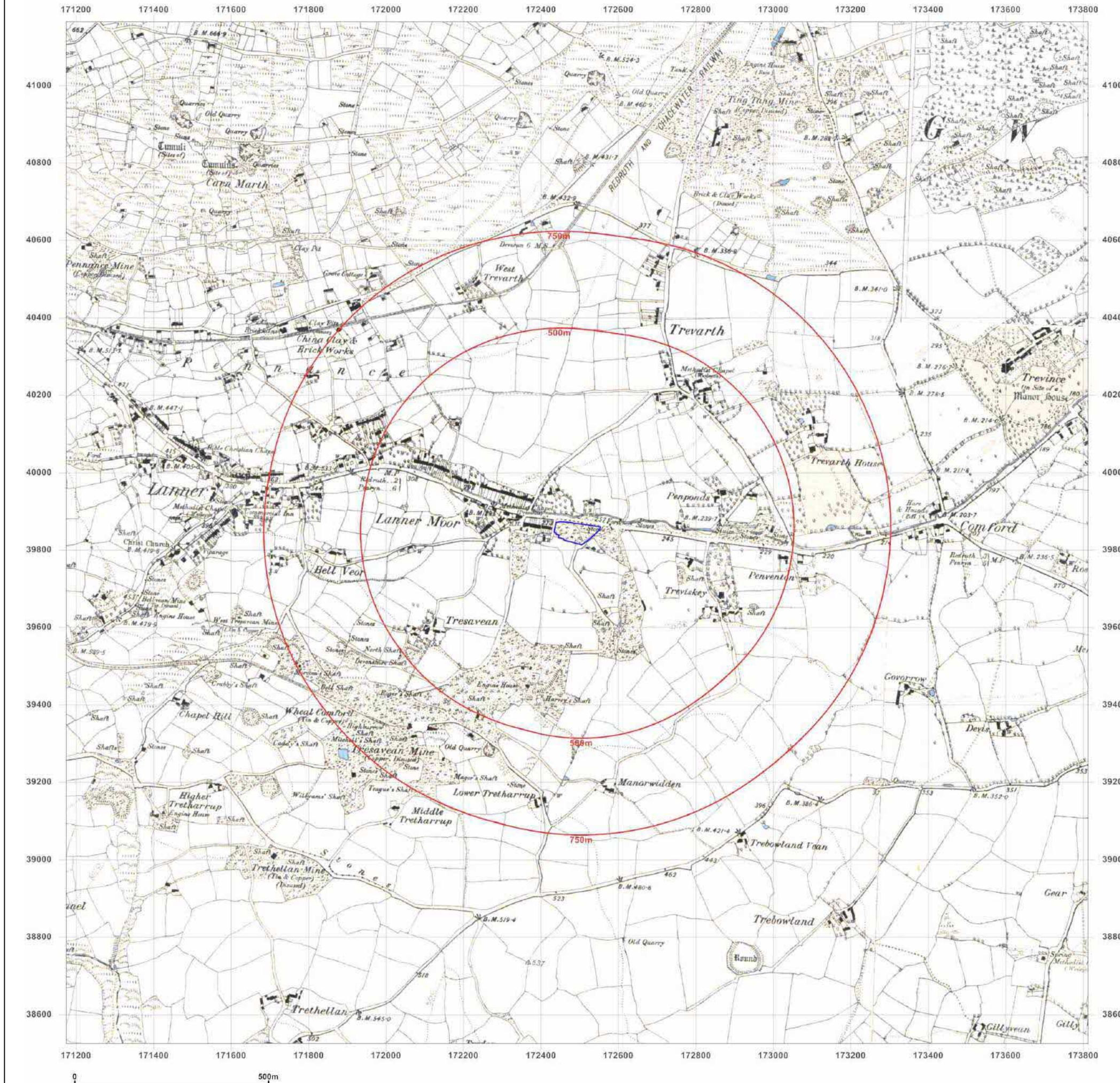


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: County Series

Map date: 1906-1908

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1877
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

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

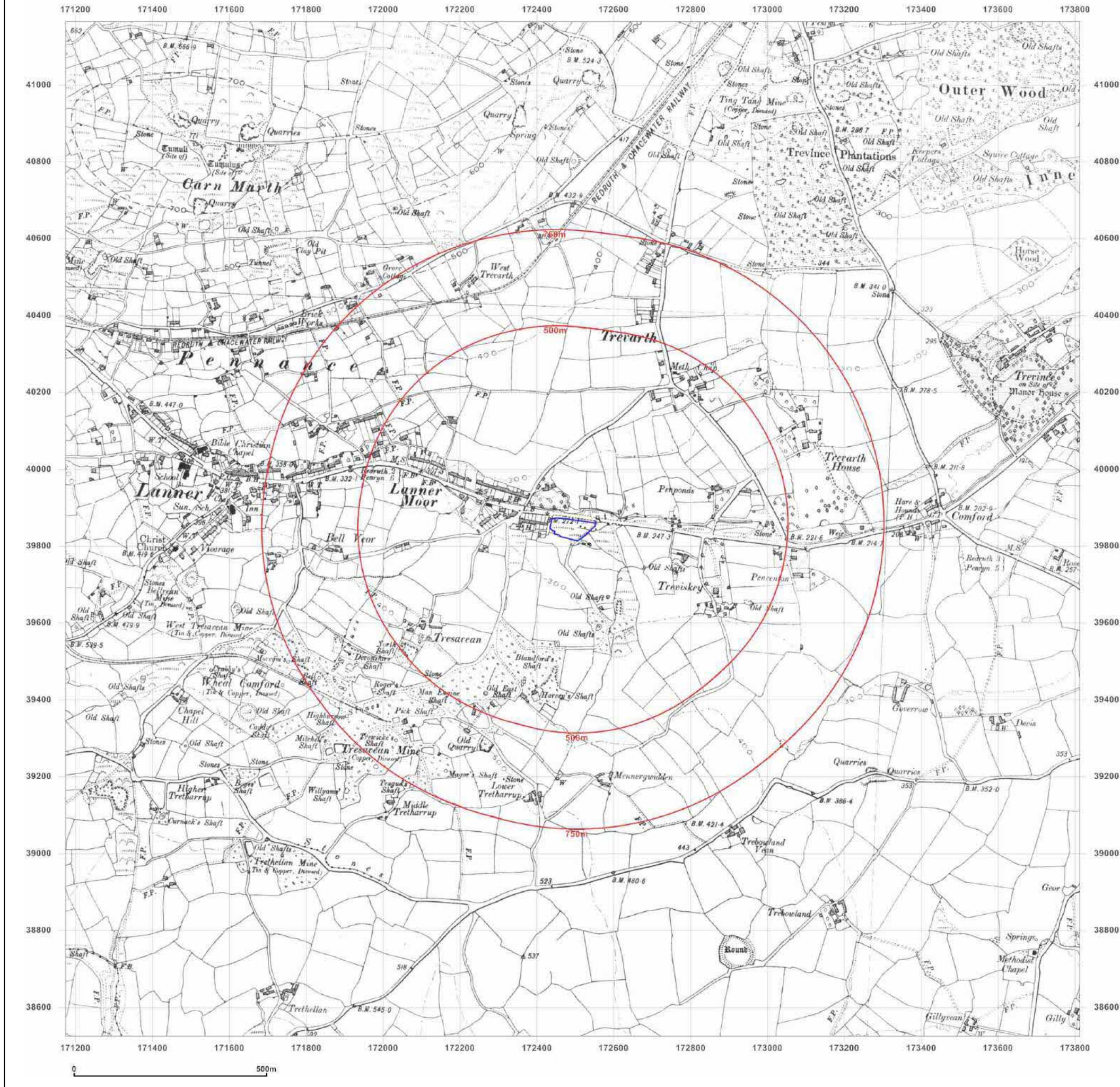


Produced by
Groundsure Insights
T: 01847 590000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

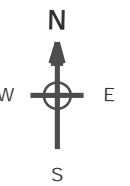
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: County Series

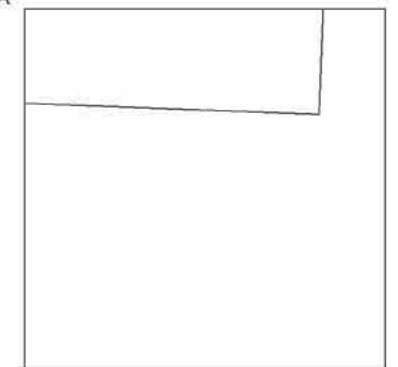
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

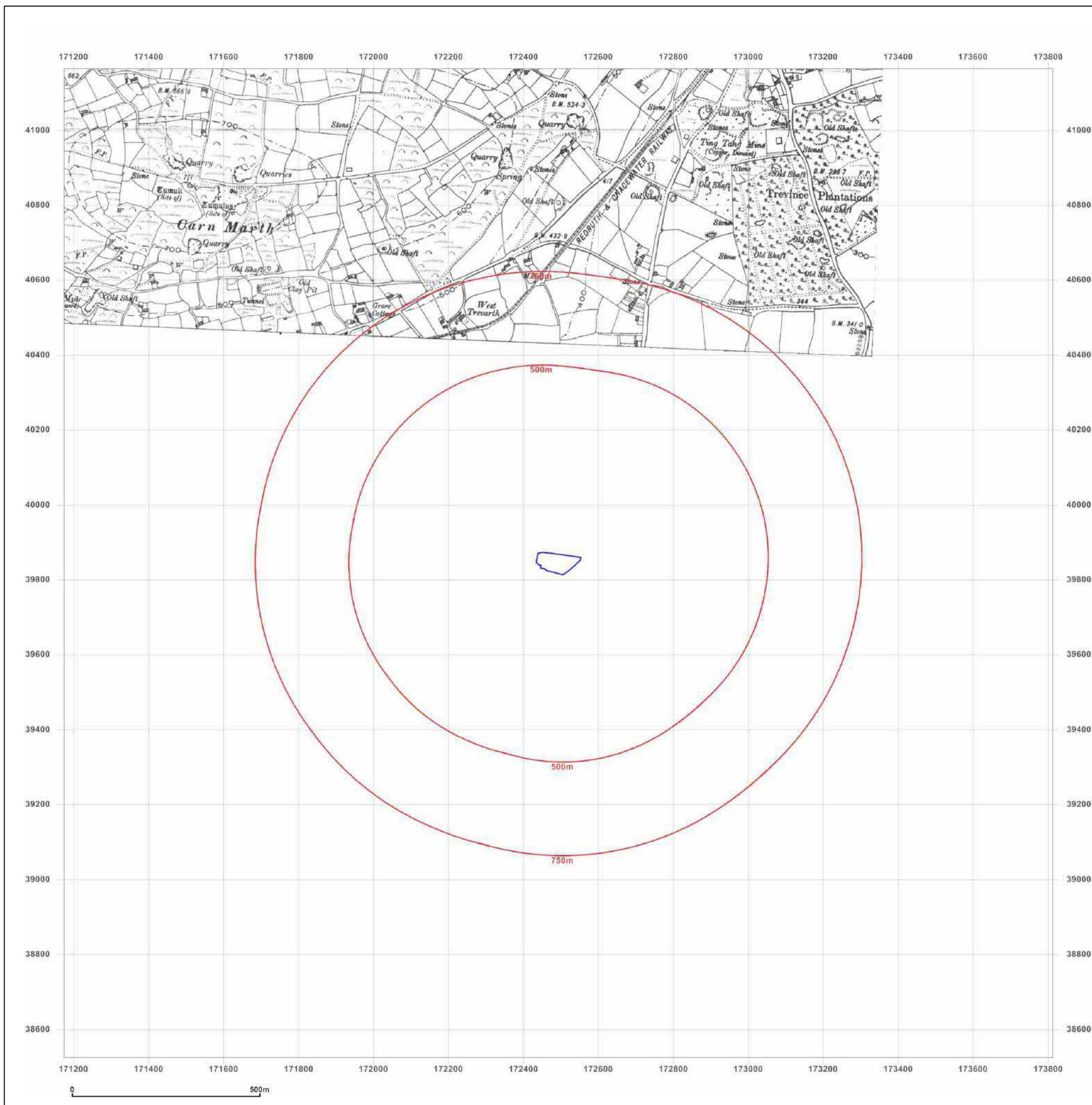


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crown Copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

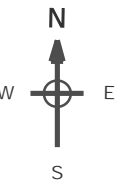
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: Provisional

Map date: 1958-1962

Scale: 1:10,560

Printed at: 1:10,560



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

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

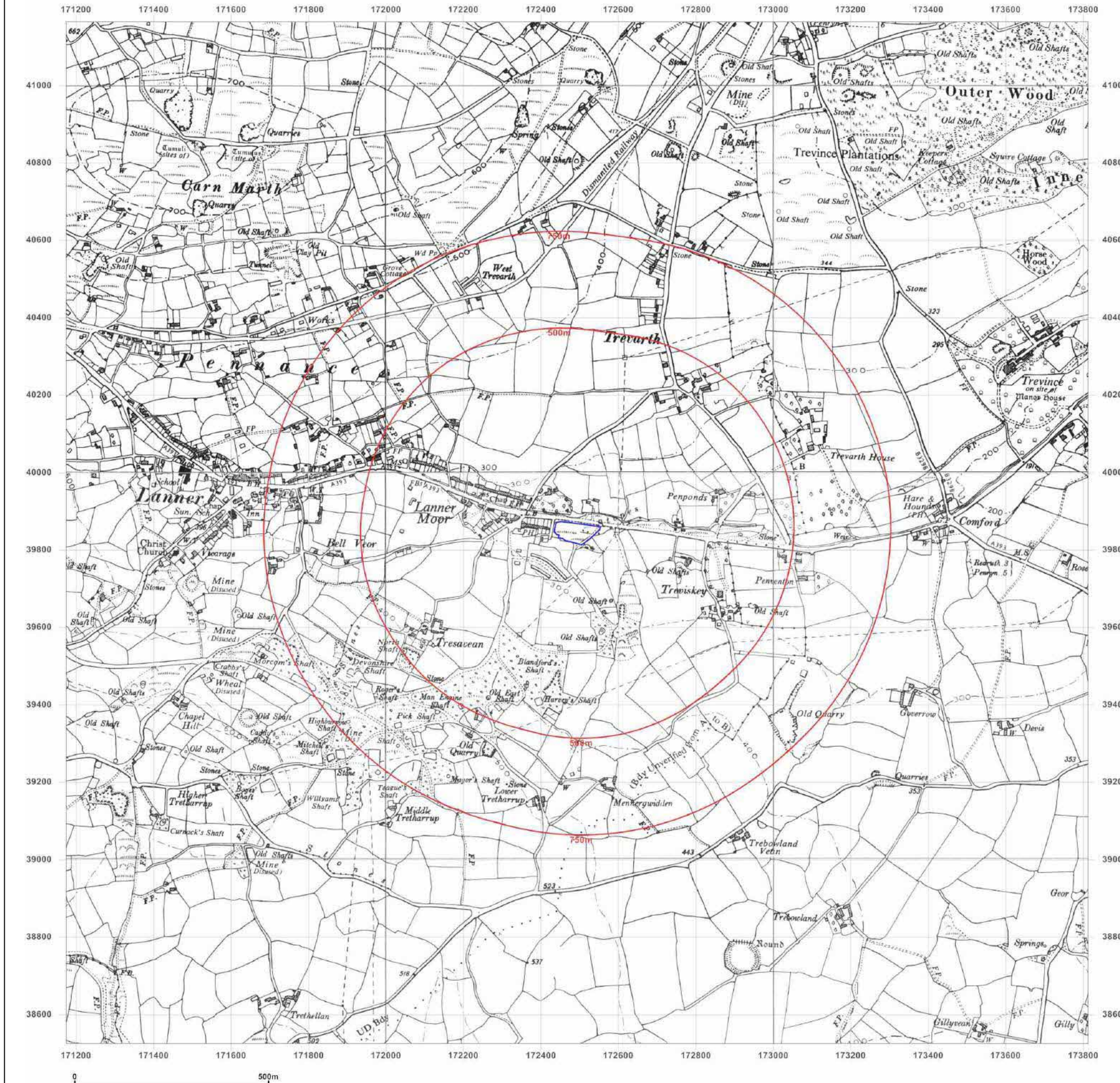


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1958
Revised 1968
Edition N/A
Copyright 1962
Levelled N/A

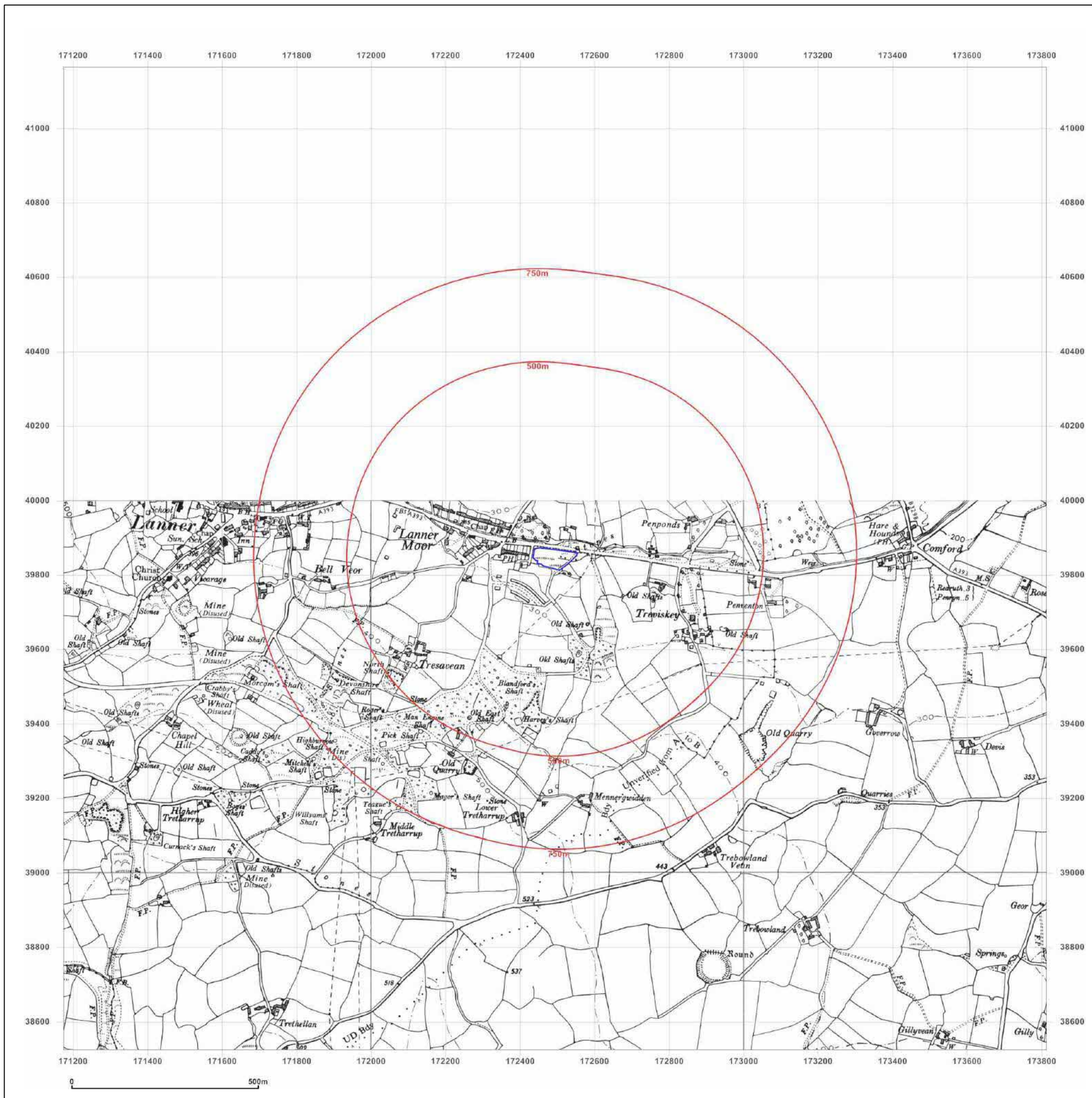


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

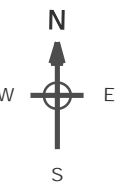
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: National Grid

Map date: 1974-1977

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1973
Revised 1974
Edition N/A
Copyright 1974
Levelled N/A

Surveyed 1972
Revised 1977
Edition N/A
Copyright 1977
Levelled N/A

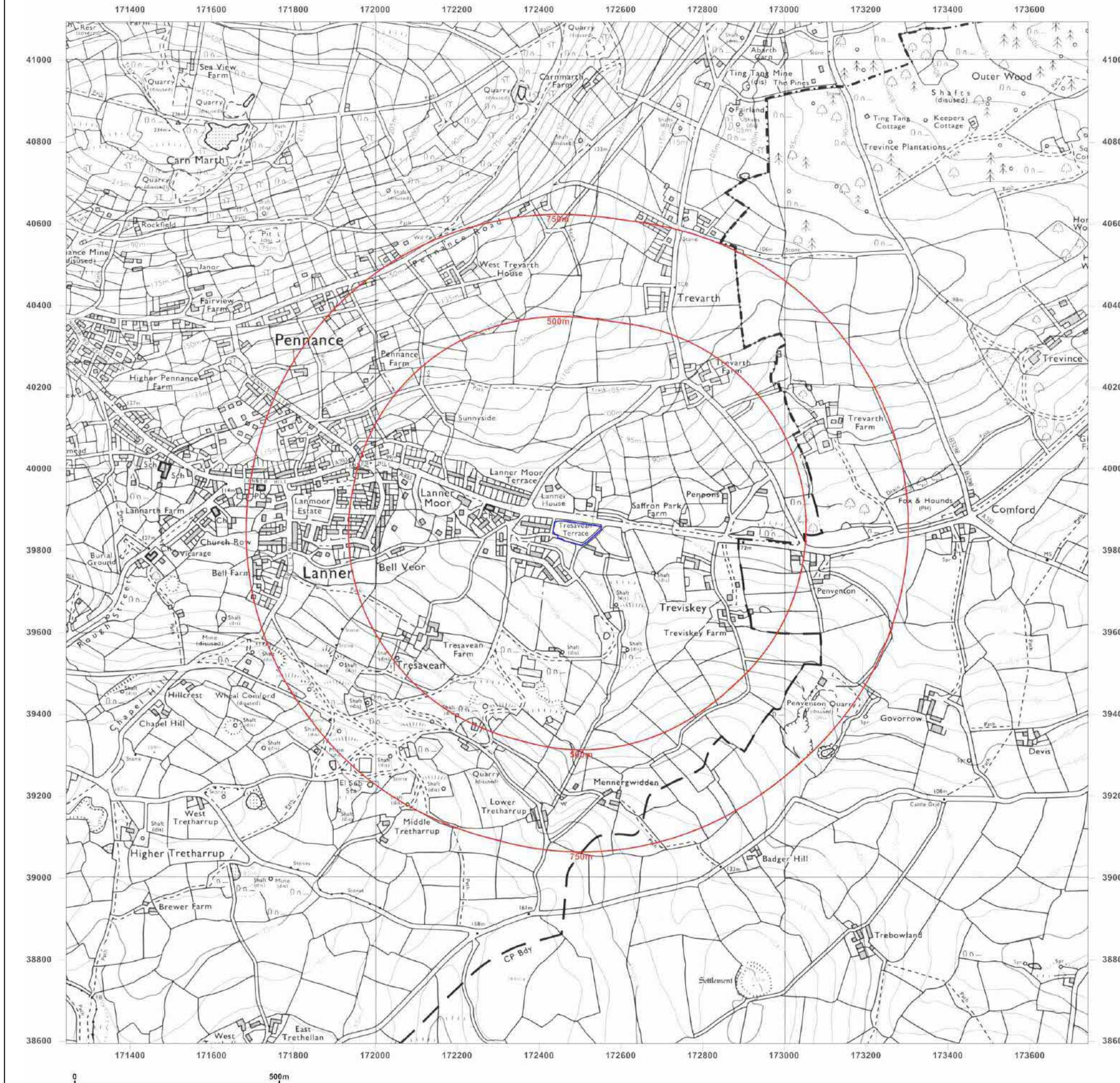


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

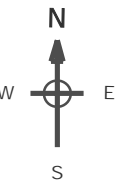
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: National Grid

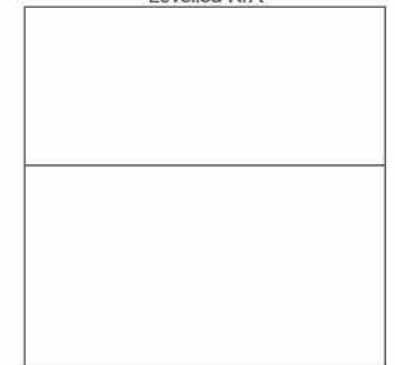
Map date: 1980

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1980
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

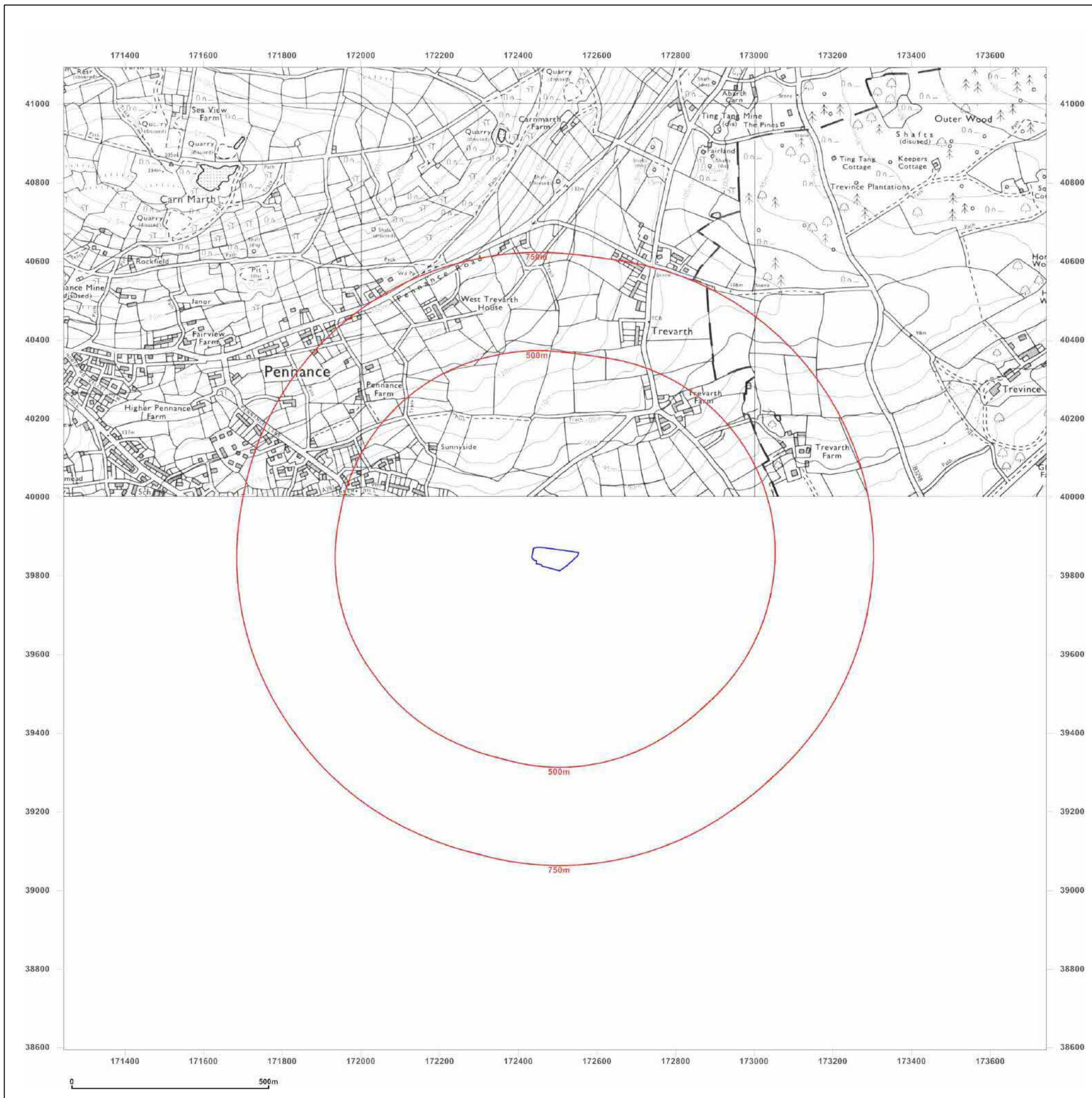


Produced by
Groundsure Insights
T: 01474 759000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

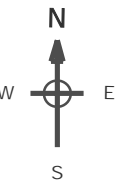
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: National Grid

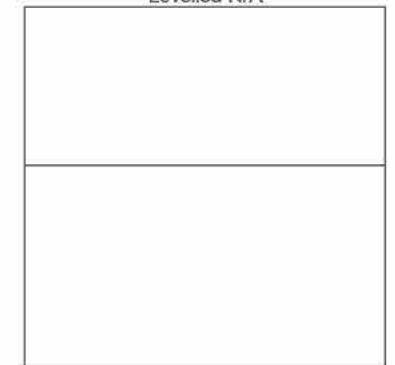
Map date: 1992

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1973
 Revised 1992
 Edition N/A
 Copyright N/A
 Levelled N/A

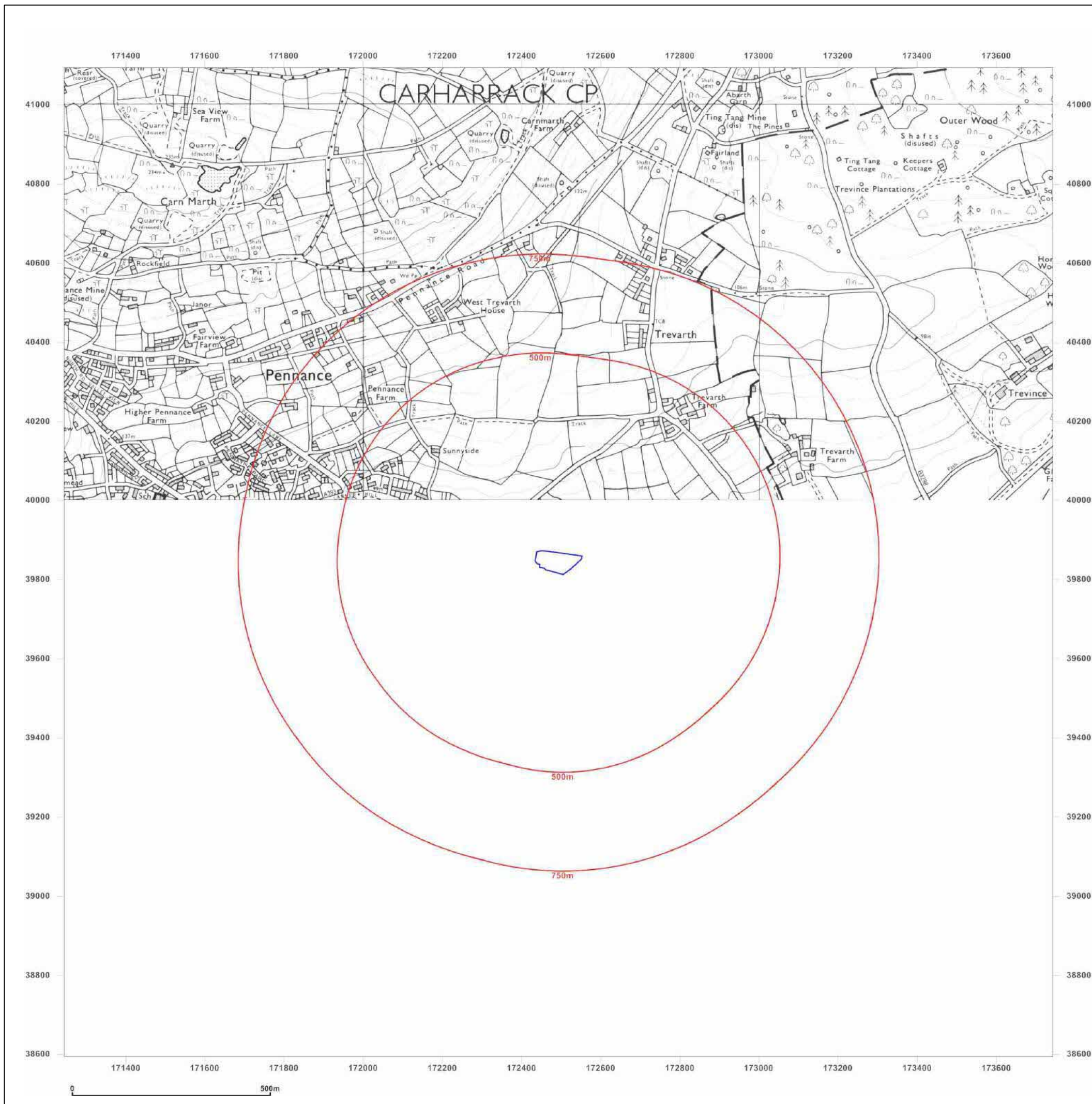


Produced by
 Groundsure Insights
 T: 0800 4759000
 E: info@groundsure.com
 W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

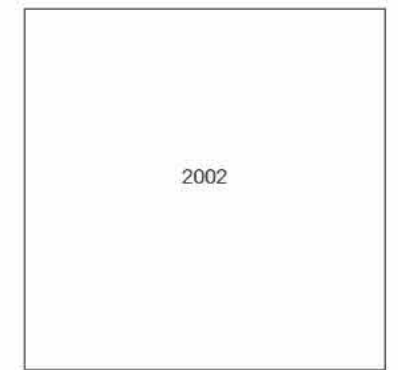
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000

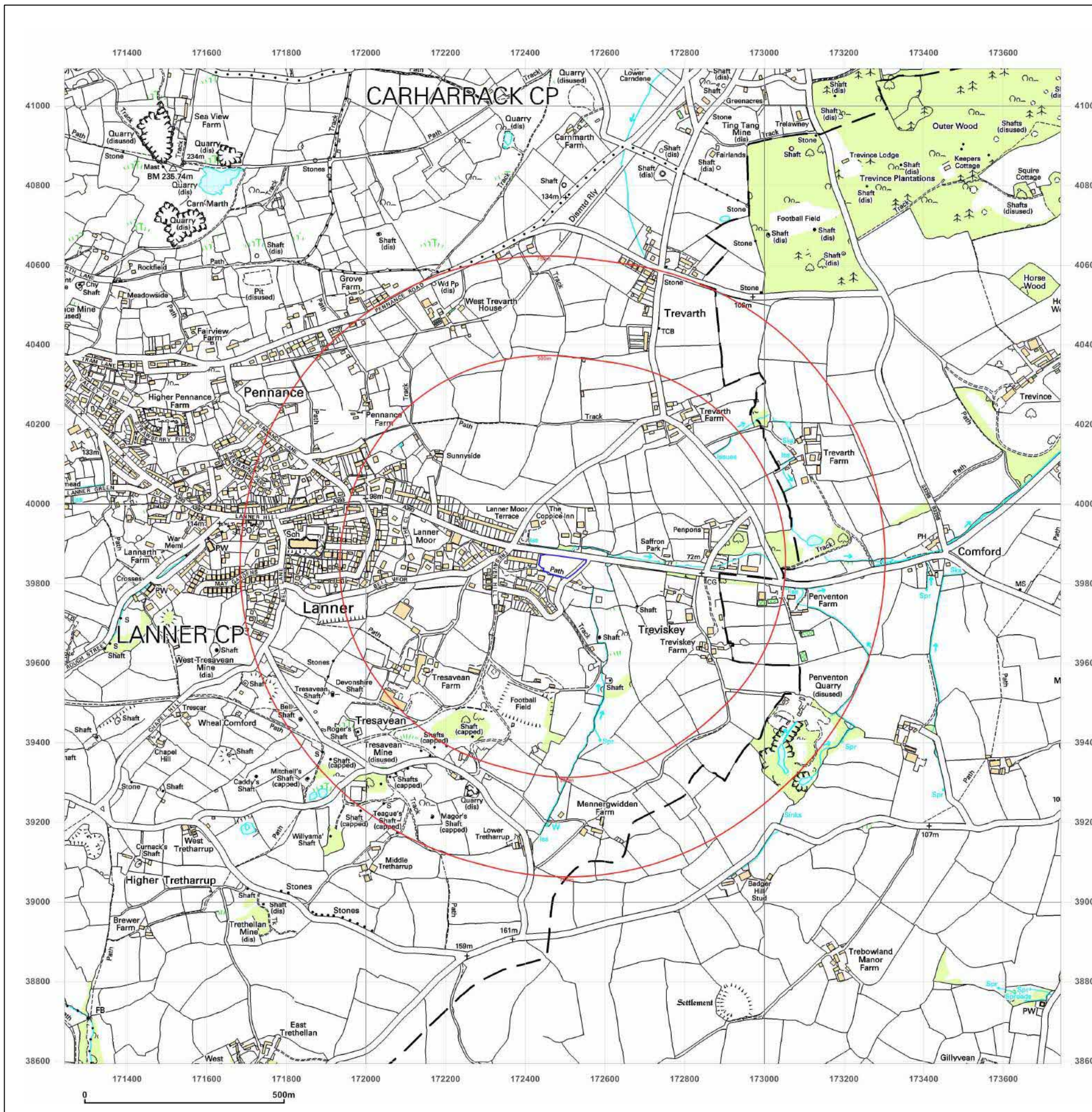


Produced by
Groundsure Insights
T: 01847 59000
E: info@groundsure.com
W: www.groundsure.com

© Crbw copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

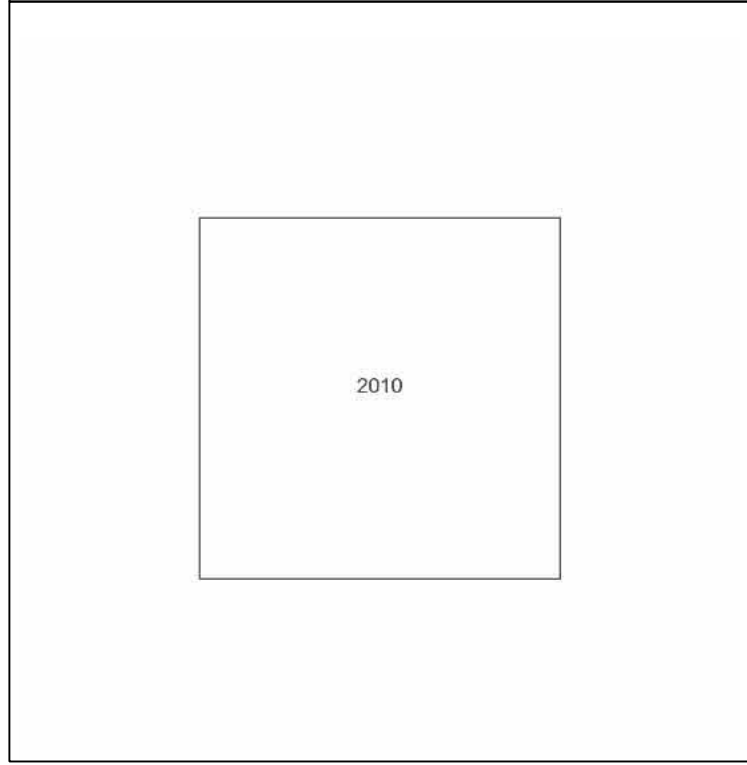
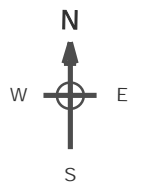
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

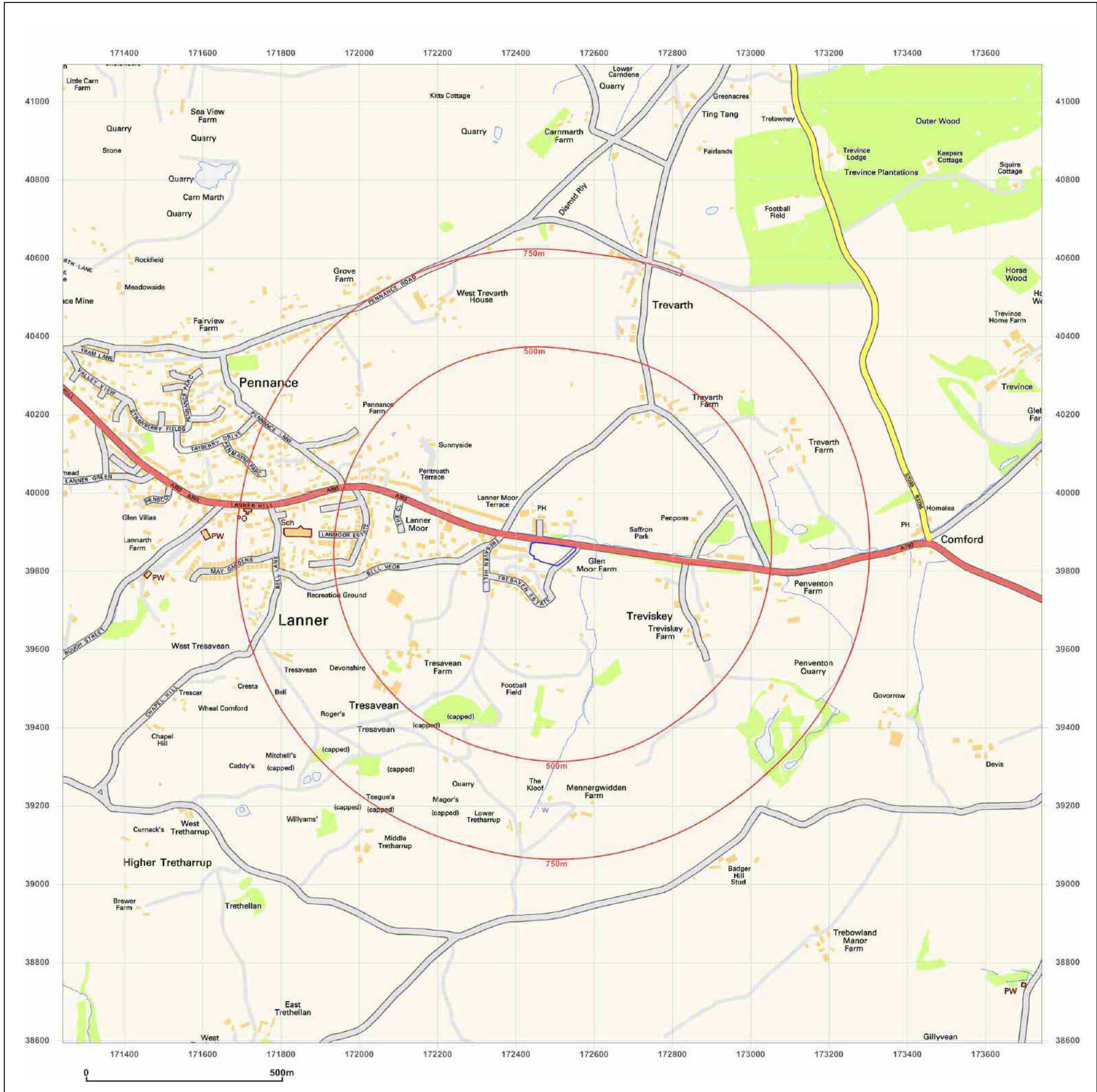


Produced by
Groundsure Insights
T: 0800 475900
E: info@groundsure.com
W: www.groundsure.com

© Crown Copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)



Site Details:

LAND ADJ TO COPPICE INN,
LANNER, TR16 6BY

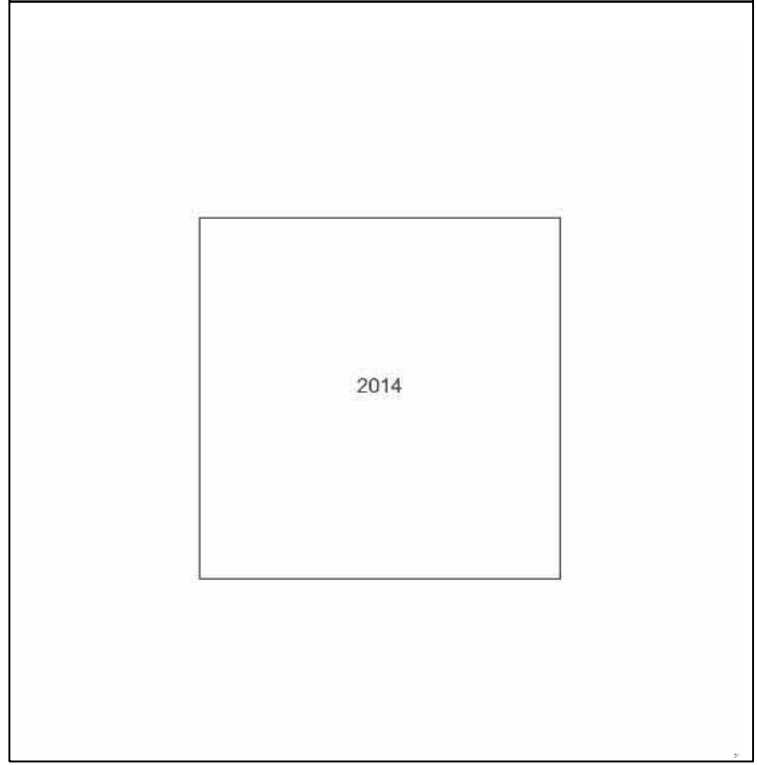
Client Ref: 19244
Report Ref: GS4324333
Grid Ref: 172493, 39844

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000

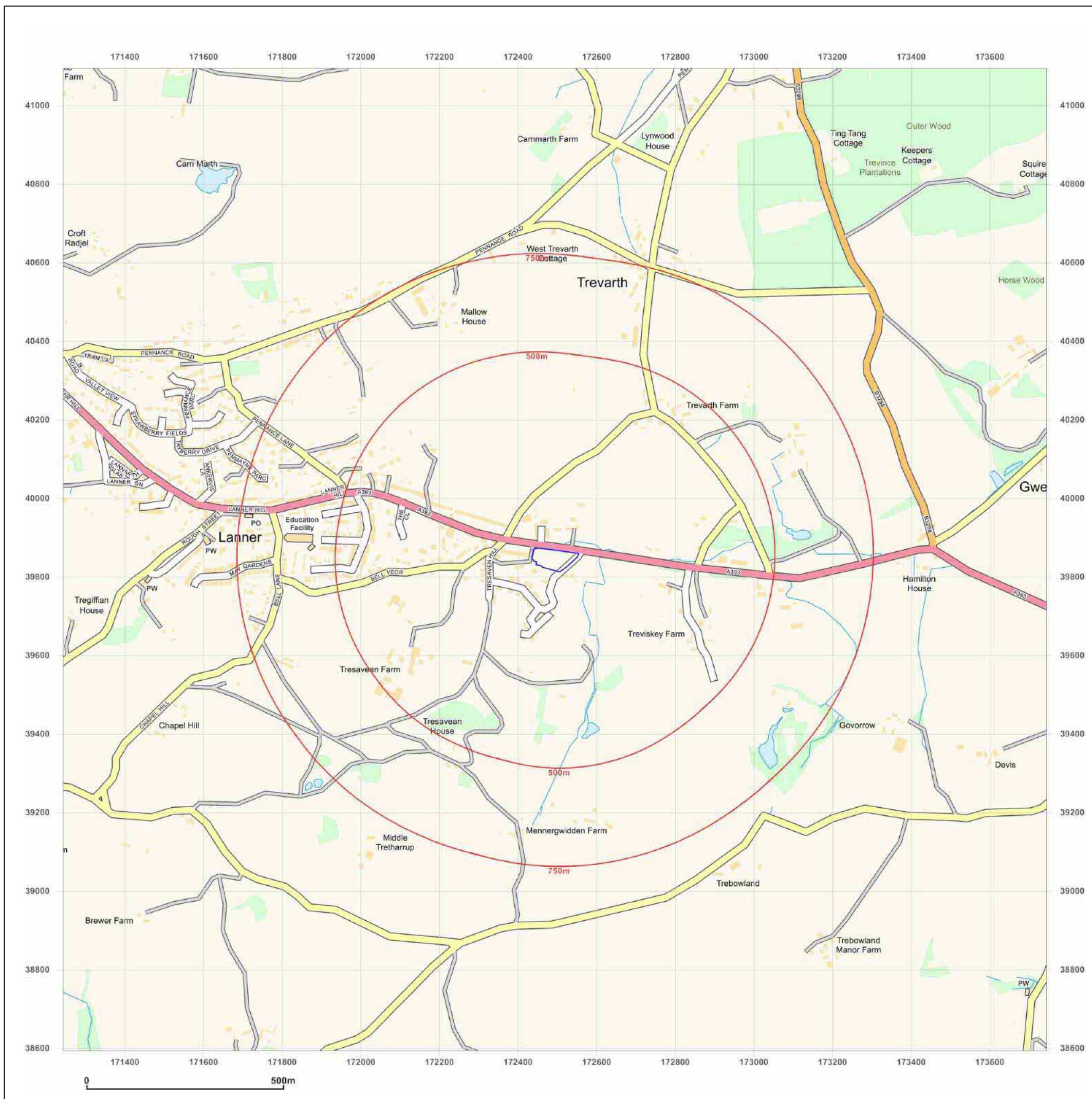


Produced by
Groundsure Insights
T: 0800 4759000
E: info@groundsure.com
W: www.groundsure.com

© Crown Copyright and database rights 2015 Ordnance Survey 100035207

Production date: 05 October 2017

To view map legend click here [Legend](#)





Wheal Jane Consultancy

Wheal Jane Group

