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CLIENT: MR L THOMAS

PROJECT: THE CROFT, ST AGNES, CORNWALL

REPORT TITLE: PHASE 1 DESK STUDY

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SUMMARY

Your Environmental Solutions (YES) has been commissioned by Mr L Thomas to undertake a Phase 1 Desk Study at a site known as The Croft, St Agnes in Cornwall. This report has been commissioned to fulfil the contamination planning requirements for the proposed residential development.

It is proposed to construct a new residential dwelling with soft, private garden areas.

The site is situated within the former surface footprint of a tin mine, within a wider surrounding area used for mining, agriculture and to the northwest of the settlement of St Agnes.

The site and immediate surrounding area are not recorded to be overlain by superficial deposits. The site is recorded to be underlain by the Porthtowan Formation formed in the Devonian Period. These are graded beds of mudstones and sandstones formed in a marine environment.

The site is situated within a mineralised area. The closest recorded mineralised structure (lode) contains tin and is located beneath the site. Topsoil arsenic concentrations in the area of the site are recorded to range between 42mg/kg and 96mg/kg.

The site is recorded to be underlain by a secondary aquifer (A). The nearest surface water feature is a pond located at approximately 42m to the southwest of the site. The site is not within a water source protection zone.

Due to the local mineralogy and historical mining activity on site, there is potential for heavy metals and/or hydrocarbons to be present in the site's soils. The preliminary contamination risk assessment identified a moderate risk to human health, building materials, water supply pipework and controlled waters in line with its proposed use for a residential development with soft garden areas. A Phase 2 Site Investigation with soil sampling and chemical analyses should therefore be carried out to quantify the true risks.

The risk to flora, fauna and ecosystems is considered to be low with no further action required.

The site is in a radon affected area. As such radon protection measures should be installed in all buildings.

The risk to the site from subsidence relating to past extractive metalliferous mining is considered to be high. To further assess the risks, an intrusive on-site mining investigation is recommended.

1.0 INTRODUCTION

1.1 Background

Your Environmental Solutions (YES) has been commissioned by Mr L Thomas to undertake a Phase 1 Desk Study at a site known as The Croft, St Agnes in Cornwall. This report has been commissioned to fulfil the contamination planning requirements for the proposed residential development.

1.2 Objectives

The objectives of this report were as follows:

- Summarise the site setting.
- Carry out a walkover survey of the site.
- Review of historical mapping for the site area.
- Review of geological and soil mapping of the site area.
- Review of a mining report for the site area.
- Produce a conceptual model of sources, pathways and receptors of contamination.
- Undertake a preliminary contamination risk assessment.
- Provide recommendations for phase 2 intrusive works, if any.

1.3 Sources of Information

The following sources of information have been used:

- A walkover and photographic survey of the site (enclosed within Appendix A).
- Environmental Report (enclosed within Appendix B).
- Mining Report (enclosed within Appendix C).
- British Geological Society 1:50,000 Solid and Drift Geological Mapsheet 346 'Newquay'.
- UK Soil Observatory Mapping.

1.4 Site Details and Development Proposals

The site location and site boundary are shown on Figures 1 and 2, respectively.

The site is located at coordinates: 171570, 51040, postcode: TR5 0NB.

The site comprises a fenced, tarmacadam tennis court surrounded by a mix of herbaceous, scrub and tree species.

It is proposed to construct a new residential dwelling with soft, private garden areas.

2.0 SITE WALKOVER SURVEY

An Environmental Scientist from YES undertook the site walkover survey on the 17th September 2020 to assess the site for visual evidence of contamination.

Photographs taken during the walkover survey can be found within Appendix A.

The site is accessed via a track which leads from Trevaunance Road to the north of the site.

The site comprises a fenced tarmacadam tennis court surrounded by a mix of herbaceous, scrub and tree species. Within the central area of the tennis court is a circular depression, indicative of the presence of an uncapped mine shaft.

The topography of the site and surrounding area is generally sloping down gradient from the southwest towards the northeast.

There were no visual signs of contamination noted during the walkover survey.

3.0 ENVIRONMENTAL SETTING

3.1 Recorded Geology

Reference has been made to the British Geological Society 1:50,000 Solid and Drift Geological Mapsheet 346 'Newquay' and the UK Soil Observatory mapping.

3.1.1 *Superficial Geology*

The site and immediate surrounding area are not recorded to be overlain by superficial deposits.

3.1.2 *Solid Geology*

The site is recorded to be underlain by the Porthtowan Formation formed in the Devonian Period. These are graded beds of mudstones and sandstones formed in a marine environment.

3.1.3 *Mineralisation*

The site is situated within a mineralised area. The closest recorded mineralised structure (lode) contains tin and is recorded beneath the site.

Topsoil arsenic concentrations in the area of the site are recorded to range between 42mg/kg and 96mg/kg.

3.1.4 *Hydrogeological and Hydrological Setting*

The site is recorded to be underlain by a secondary aquifer (A). These aquifers are formed of moderately permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers.

The nearest surface water feature is a pond located at approximately 42m to the southwest of the site. The site is not within a water source protection zone.

3.2 Environmental Report Findings

The environmental report for the site is presented in Appendix B. Using the report, the following data has been investigated for the site:

- Contaminated Land Register Entries and Notices.
- BGS, Registered, Local Authority, Historical Landfill and Other Waste Sites.
- Local Authority Pollution Prevention and Control Permits.
- Registered Radioactive, Explosive and Hazardous Substances Sites.
- Environmental Enforcement, Prohibition Notices and Prosecutions.
- Discharge Consents to Controlled Waters.
- Environmental Pollution Incidents.
- Contemporary Trade Directory and Fuel Station Entries.
- Potentially Contaminative Historical Land Uses and Features.
- Environmentally Sensitive Sites.

The following potentially contaminative features and/or land uses are recorded within 250m of the site:

- Contemporary Trade Directory Entries:
 - Electrical Engineer (active) 88m.
- Potentially Contaminative Historical Land Uses and Features:
 - Mining and quarrying: 24m, 126m, 141m, 144m, 198m, 205m, 207m, 223m, 233m.
 - Electrical substation: 137m.

The nearest environmentally sensitive site is an Area of Outstanding Natural Beauty (AONB) at 83m distance.

3.3 Historical Land Use

The historical maps for the site and surrounding area are presented in Figure 3. The findings from a review of the maps are outlined as follows.

1880: The site is shown to be within an area of uncultivated ground which appears to be part of the surface footprint of the former Trevaunance Mine (tin) which links to the former Polberro Mine (tin) to the north. Two clay pits are shown at distance to the southwest of the site. The remainder of the surrounding area is farmland, with the settlement of St Agnes lying beyond the former New St Agnes Mine (tin) at distance to the southeast.

1907: The site and the surrounding area appear mostly unchanged from the last mapping period with the only change being the reopening and expansion of New St Agnes Mine as West Kitty Mine (tin and copper) and the opening of the mine of Wheal Friendly (tin) to the northeast.

1962 - 1963: The site and the surrounding area appear mostly unchanged from the last mapping period with no new potentially contaminative features identified.

1976 – 1990: The site is no longer shown to be uncultivated ground. In the surrounding area, all mining activity appears to have ceased and the settlement of St Agnes has grown substantially towards the east of the site.

Modern Mapping: The site is shown to contain a tennis court. In the surrounding area, St Agnes has continued to expand to meet the east/southeast of the site.

3.4 Mining Report

The mining report for the site is presented in Appendix C. The findings of the mining report are detailed as follows.

The site is situated within an area of extensive historic metalliferous mining activity. Three mineral lodes associated with the former Polberro Mine lie within the site. Two shafts and surface workings are suspected to lie within the site. An area of mine waste associated with a shaft lying just to the east is recorded to encroach within the site boundary.

The site lies within an existing Mineral Safeguarding Area, containing designated metalliferous mineral resources and/or strategic mine entries.

Based on the information reviewed, the risk to the site from subsidence relating to past extractive metalliferous mining is considered to be high. To further assess the risks, an intrusive on-site mining investigation is recommended.

4.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

4.1 Introduction

The contaminated land risk assessment has been undertaken in line with the conceptual site model (Figure 4) and the information collected from the desk study and site walkover survey.

Risk assessment is the process of collating known information on a hazard or set of hazards in order to estimate actual or potential risks to receptors. The guiding principle behind this approach is to establish connecting links between a hazardous source, via an exposure pathway to a potential receptor, referred to as a 'pollutant linkage'.

The conceptual model is a representation of the potential relationships between contaminant sources, pathways and receptors developed on the basis of hazard identification.

The objective of a preliminary contamination risk assessment is to identify the nature and magnitude of the potential risks through the consideration of likelihood (probability) and severity (consequence) of the hazard(s) to the receptor(s). The risk assessment has been carried out using the risk tables within Contaminated Land Risk Assessment. A guide to good practice (C552) (CIRIA, 2001), enclosed within Appendix D.

4.2 Preliminary Contamination Risk Assessment In Line with the Conceptual Site Model

The following table contains the sources, pathways and receptors, as identified in the conceptual model (Figure 4) and supporting table, compared to an appropriate level of risk.

Table 4.1: Preliminary Contamination Risk Assessment				
Sources	Receptors and Pathways	Categorisation of Risk		
		Probability	Consequence	Risk
Radon: Natural Mineralogy	Human Health: Inhalation of gas	Likely	Medium	Moderate
Heavy Metals: Natural Mineralogy Historical Mining Activity	Human Health: Direct soil and dust ingestion Consumption of vegetation Dermal contact with soils Inhalation of dust	Likely	Medium	Moderate
	Controlled Waters: Migration into groundwater Migration through soil Surface water runoff Deposition onto surface water	Likely	Mild	Low
	Flora/Fauna and Ecosystems: Plant uptake and accumulation	Unlikely	Mild	Low
	Building Materials: Direct contact with soils (SO ₄)	Likely	Medium	Moderate
Hydrocarbons & Volatile Organic Compounds: Historical Mining Activity	Human Health: Direct soil and dust ingestion Consumption of vegetation Dermal contact with soils Inhalation of dust & vapours	Likely	Medium	Moderate
	Controlled Waters: Migration into groundwater Migration through soil Surface water runoff Deposition onto surface water	Likely	Medium	Moderate
	Flora/Fauna and Ecosystems:	Likely	Mild	Low

Table 4.1: Preliminary Contamination Risk Assessment

Sources	Receptors and Pathways	Categorisation of Risk		
		Probability	Consequence	Risk
	Plant uptake and accumulation			
	Building Materials: Direct contact with soils	Likely	Medium	Moderate

Due to the local mineralogy and historical mining activity on site, there is potential for heavy metals and/or hydrocarbons to be present in the site's soils. The preliminary contamination risk assessment identified a moderate risk to human health in line with its proposed use for a residential development with soft garden areas. A Phase 2 Site Investigation with soil sampling and chemical analyses should therefore be carried out to quantify the true risks.

The risk to controlled waters is considered to be moderate. The site is within 250m of a surface water feature and as contamination with the potential to leach into the water environment has been identified on site. It is recommended that the site investigation should determine whether shallow groundwater is present beneath the site. If encountered, the groundwater should be sampled and analysed to quantify the risks. Depending on the presence of groundwater and the results of the chemical analyses, the risk may be downgraded from moderate to low.

The risks to building materials are considered to be moderate. Due to the local mineralogy there may be aggressive ground conditions with the potential to impact on any new concrete foundations. Soil sampling and chemical analyses should be undertaken for water soluble sulphate to determine the appropriate grade of concrete to be used.

The risk to water supply pipework is considered to be moderate. There are potential sources of hydrocarbon contamination on site which could penetrate standard pipework. Soil sampling and appropriate chemical analyses should be carried out to quantify the risks and determine a suitable pipework material to be used. If an existing water supply is to be used as part of the proposed development, this should be sampled.

The risk to flora, fauna and ecosystems is considered to be low. The site is not within an environmentally designated area and contamination with the potential to impact on local species or habitats has not been identified at the site.

The risk from the inhalation of radon is considered to be moderate; however, full radon protection measures should be installed within all buildings, which would mitigate this risk.

The risks to construction workers have not been included in this risk assessment. The risks to construction workers should be assessed independently in line with current health and safety legislation and regulations.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Due to the local mineralogy and historical mining activity on site, there is potential for heavy metals and/or hydrocarbons to be present in the site's soils. The preliminary contamination risk assessment identified a moderate risk to human health, building materials, water supply pipework and controlled waters in line with its proposed use for a residential development with soft garden areas. A Phase 2 Site Investigation with soil sampling and chemical analyses should therefore be carried out to quantify the true risks.

The risk to flora, fauna and ecosystems is considered to be low with no further action required.

The site is in a radon affected area. As such radon protection measures should be installed in all buildings.

The risk to the site from subsidence relating to past extractive metalliferous mining is considered to be high. To further assess the risks, an intrusive on-site mining investigation is recommended.

6.0 LIMITATIONS

The work undertaken to provide the basis of this report includes a study of the readily available documented information from a variety of sources. The information reviewed should not be considered exhaustive and has been accepted in good faith by YES, as providing a true indication of the site conditions. However, no liability can be accepted for the detailed accuracy or otherwise of any of the reports or documents prepared by others for the Client or for third parties, or for any associated errors or omissions.

It should be noted that the environment and contaminated land guidance and legislation are constantly under review, with authoritative guidance documents subject to change. The conclusions presented herein are based on guidance and legislation available at the time of issuing this report, and no liability can be accepted for the retrospective effects of any changes or amendments to such guidance and/or legislation.

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Wilson S (2008). Modular Approach to analysing vapour migration into buildings in the UK. London, EPP Publications Ltd

FIGURES



Drawing Notes:

Legend:

Client:

Mr L Thomas

Figure 1:

Site Location Plan

The Croft, St Agnes, Cornwall

Project Ref: YES 1028a

Drawing Ref: YES 1028a

Drawn By: AM

Date: 18/09/20

Checked By: AW

Date: 18/09/20

Grid Ref: 171570, 51040

Not To Scale

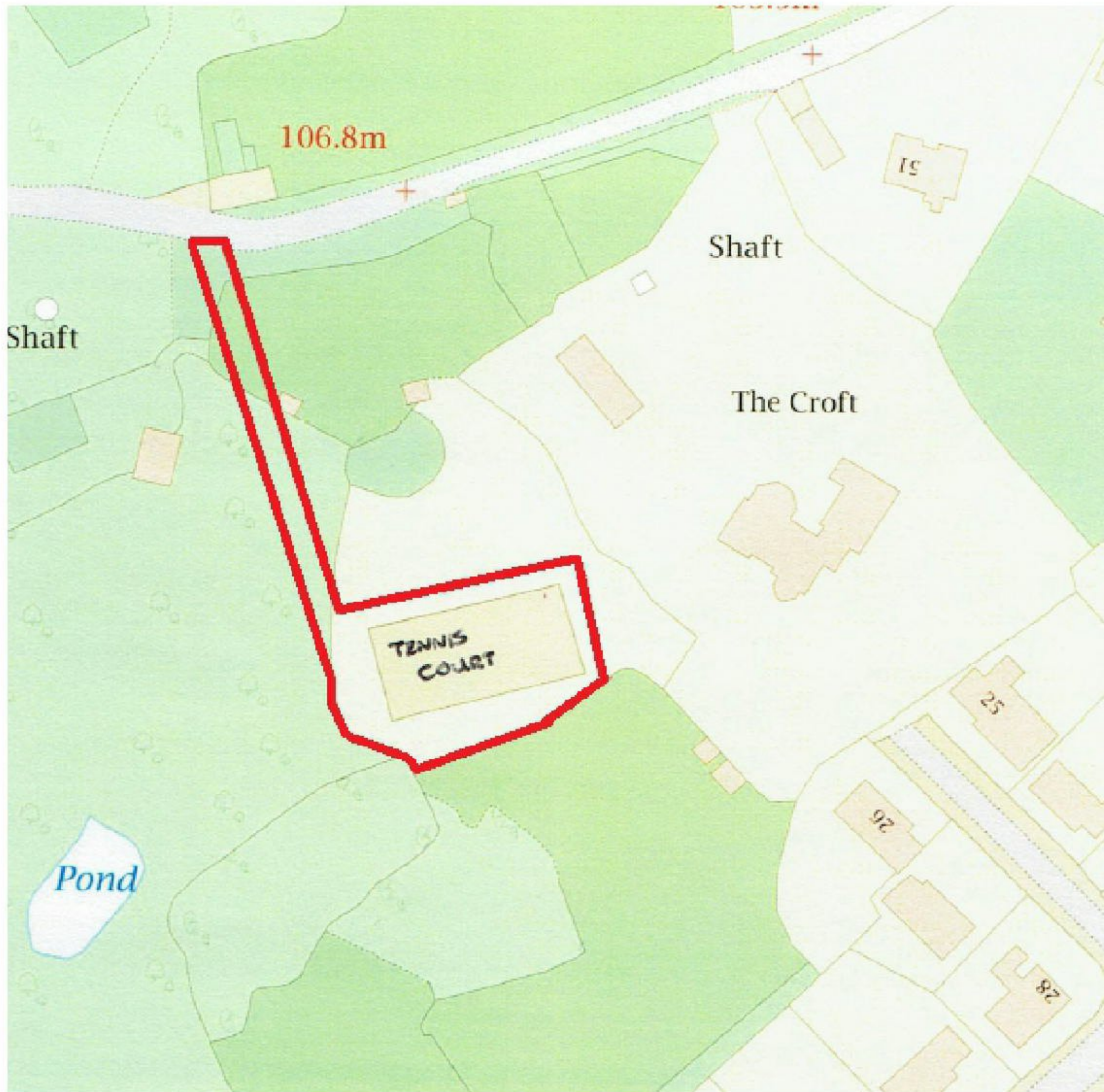
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YOUR ENVIRONMENTAL SOLUTIONS LTD



Woodcocks Roost,
Fore Street, Barringer,
Camborne, Cornwall TR14 0QR

E. info@urenvironmentalsolutions.com
W. www.urenvironmentalsolutions.com



Drawing Notes:

Legend:

 Site Boundary

Client:

Mr L Thomas

Figure 2:

Site Boundary Plan

The Croft, St Agnes, Cornwall

Project Ref: YES 1028a

Drawing Ref: YES 1028a

Drawn By: AM

Date: 18/09/20

Checked By: AW

Date: 18/09/20

Grid Ref: 171570, 51040

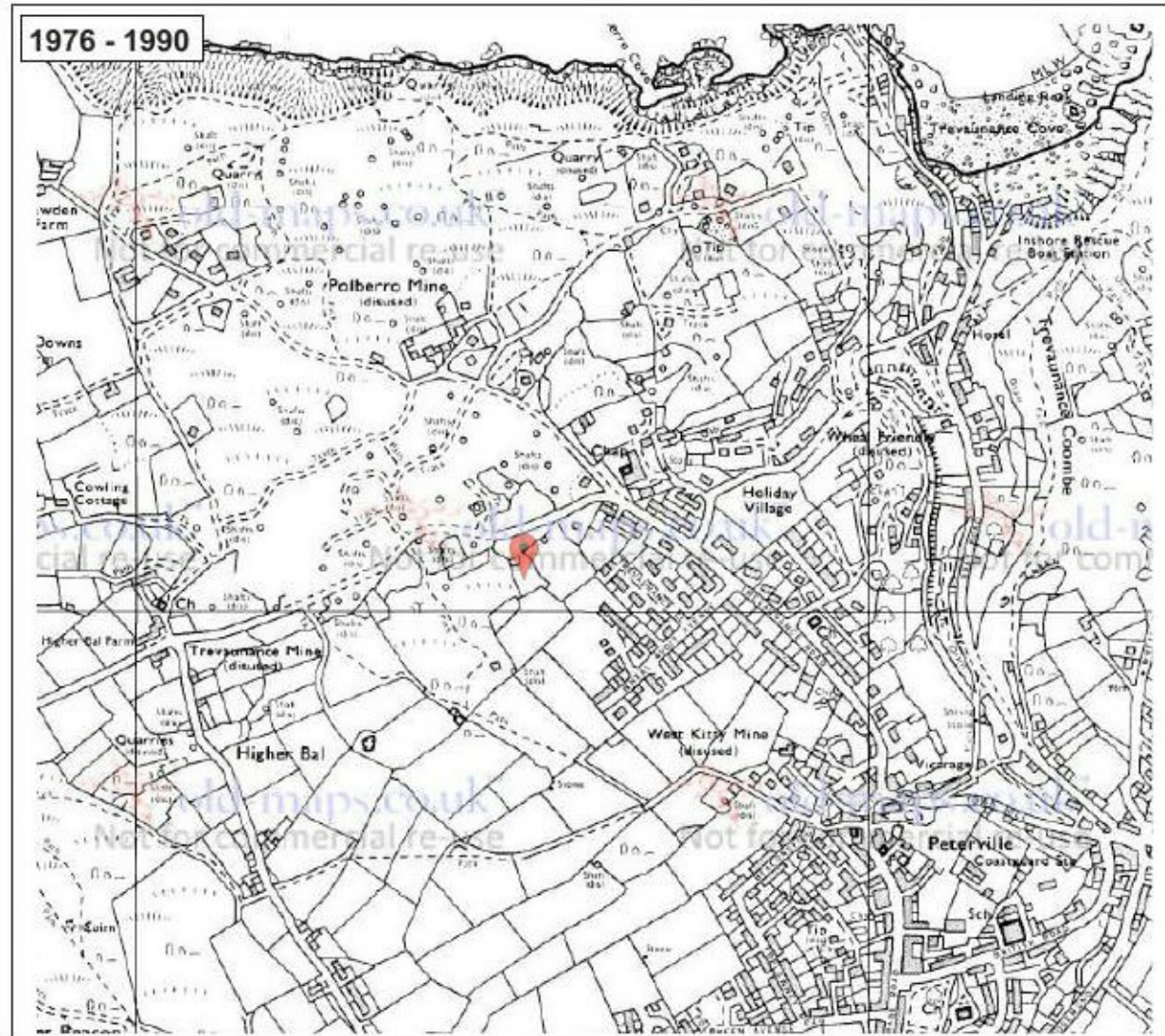
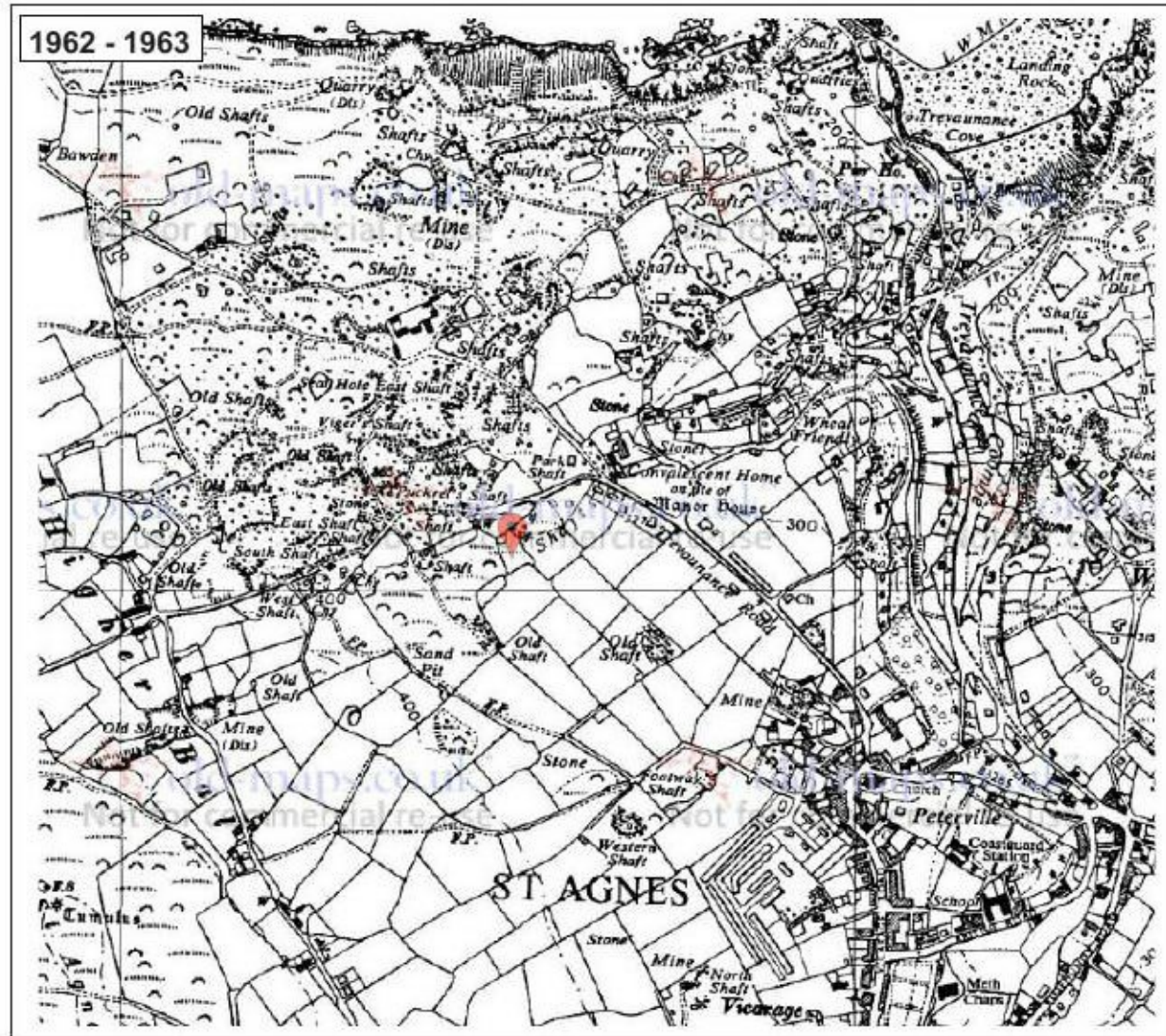
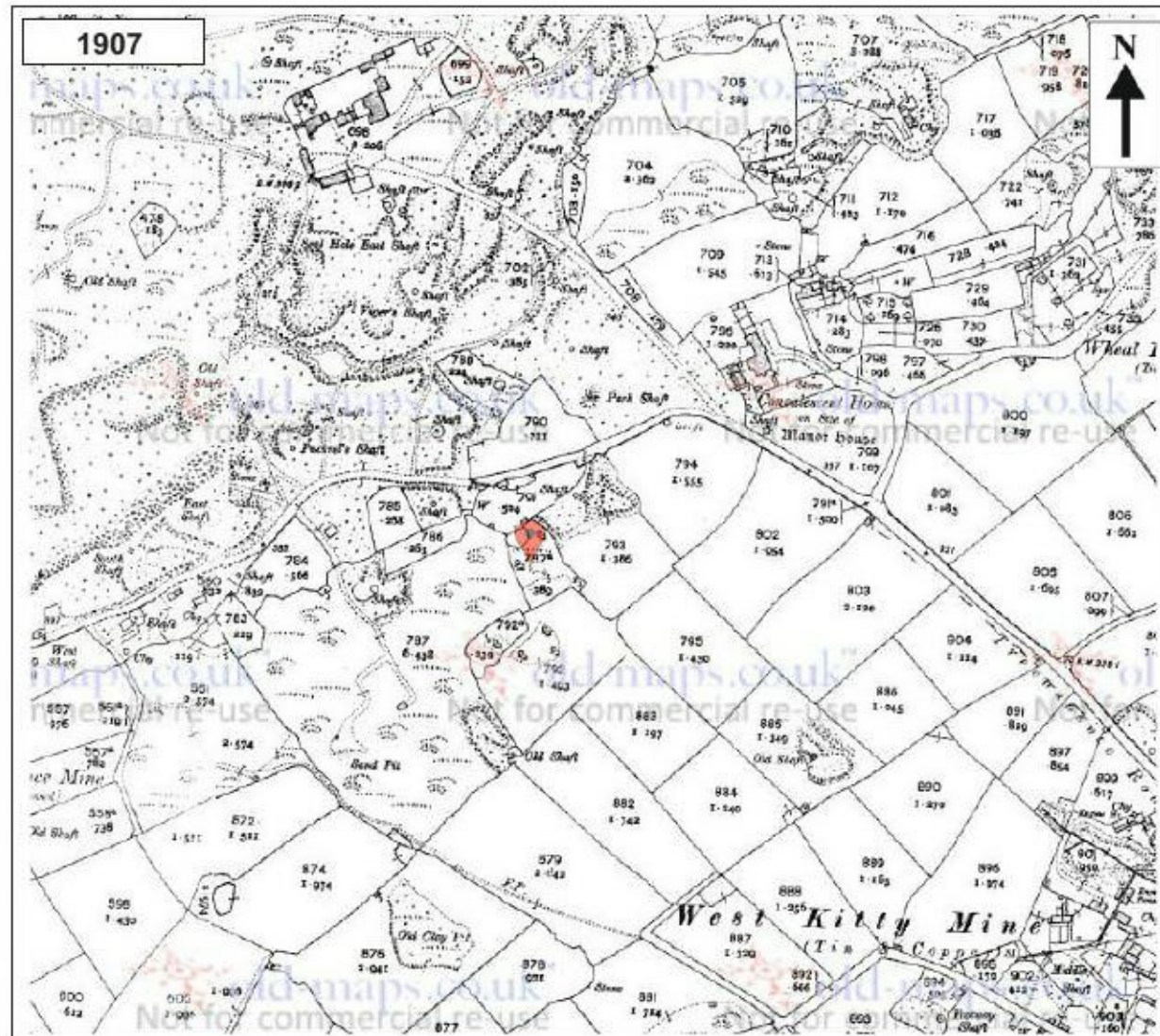
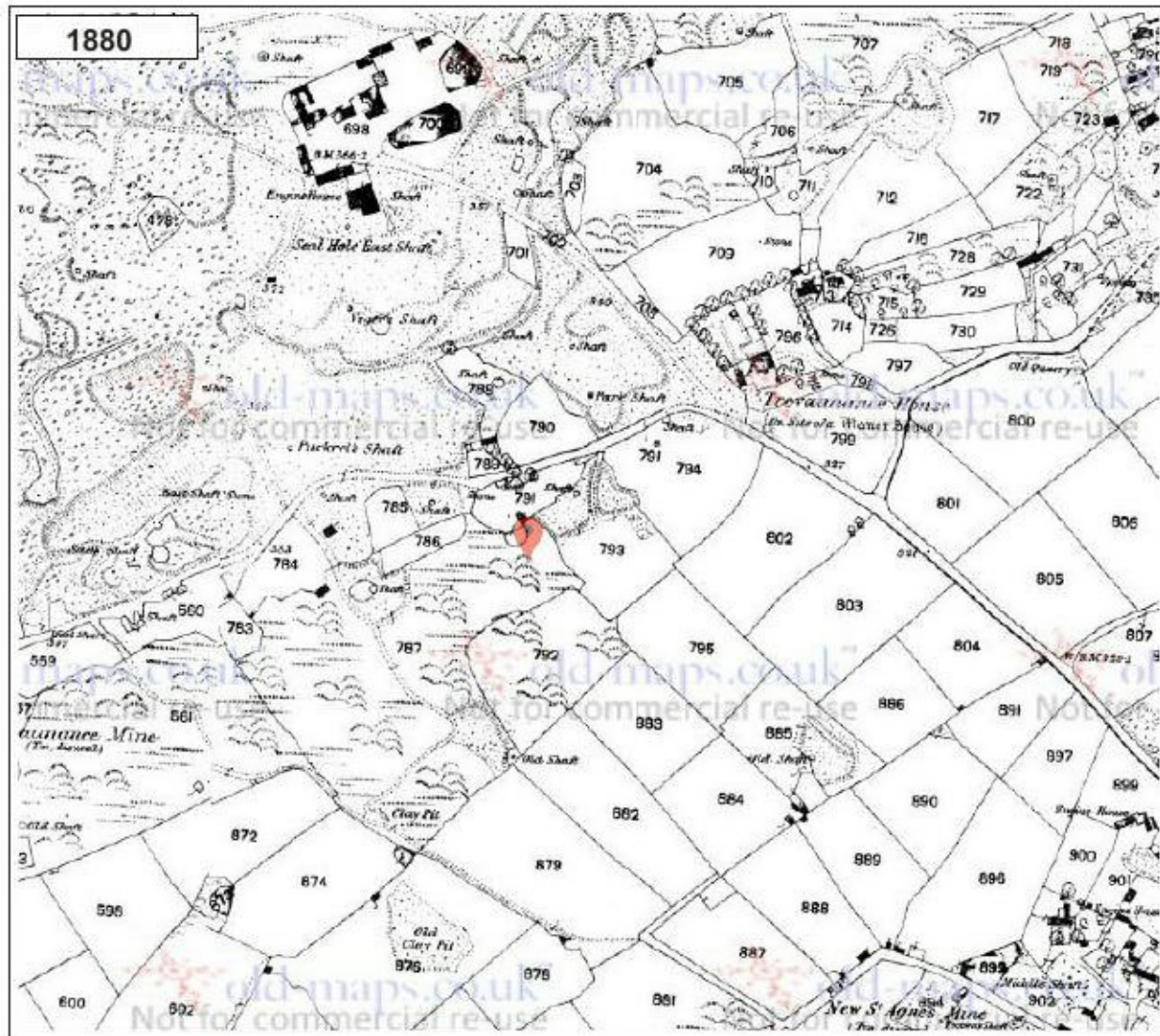
Not To Scale

yes
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Drawing Notes:

Legend:

Client:

Mr L Thomas

Figure 3:

Historical Mapping

The Croft, St Agnes, Cornwall

Project Ref: YES 1028a

Drawing Ref: YES 1028a

Drawn By: AM

Date: 18/09/20

Checked By: AW

Date: 18/09/20

Grid Ref: 171570, 51040

Not To Scale

yes
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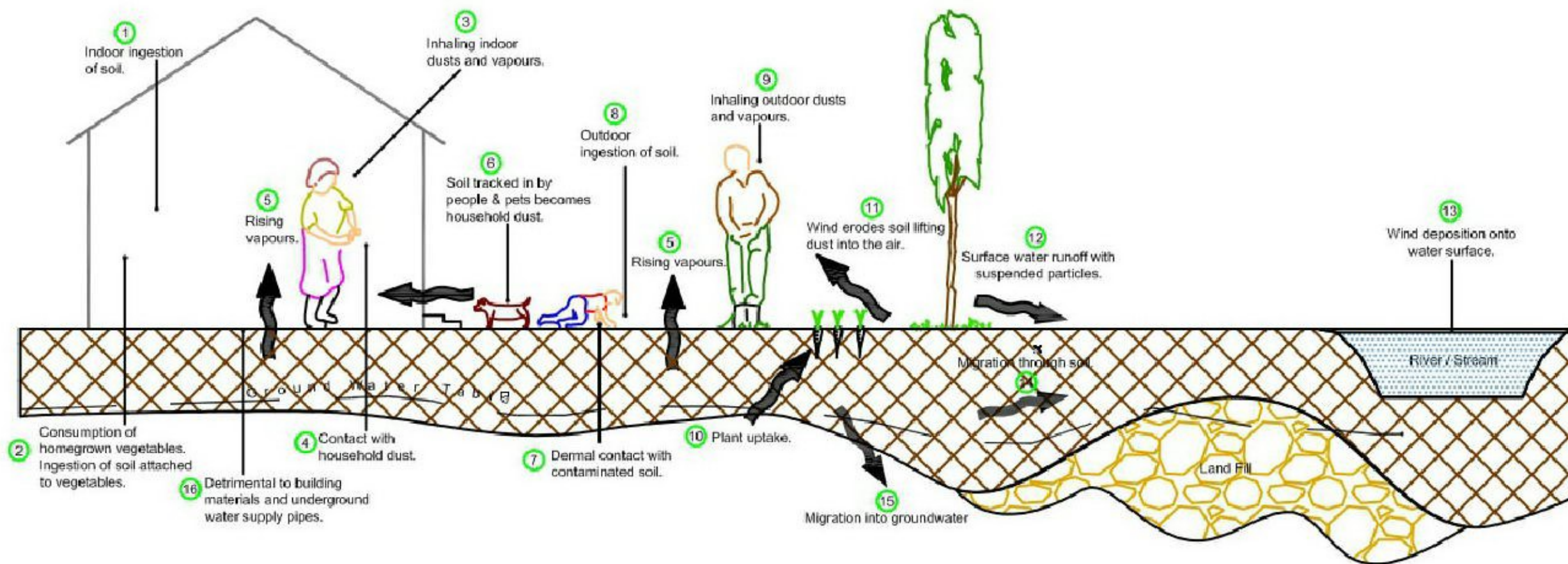
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Fore Street, Barringer,
Camborne, Cornwall TR14 0QR

E: info@urenvironmentalsolutions.com
W: www.urenvironmentalsolutions.com



Drawing Notes:

Legend:



Client:

Mr L Thomas

Figure 4:

Conceptual Site Model
The Croft, St Agnes, Cornwall

Project Ref: YES 1028a Drawing Ref: YES 1028a

Drawn By: AM Date: 18/09/20

Checked By: AW Date: 18/09/20

Grid Ref: 171570, 51040 Not To Scale

yes
YOUR ENVIRONMENTAL
SOLUTIONS LTD



Woodcocks Roost,
Fore Street, Barrigger,
Camborne, Cornwall TR14 0QR

E: info@urenvironmentalsolutions.com
W: www.urenvironmentalsolutions.com



FIGURE 5

CONCEPTUAL SITE MODEL – SITE SPECIFIC PLAUSIBLE POLLUTANT LINKAGES

Contaminant	Hazards	Pathways
Polyaromatic Hydrocarbons & Total Petroleum Hydrocarbons	Toxic by ingestion, skin contact and inhalation. Water pollutant. May reduce plant growth. Detrimental to buildings and water supply pipes.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 & 16
Arsenic & Other Heavy Metals	Toxic by ingestion, skin contact and inhalation. Water pollutant. May reduce plant growth.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 & 16
Radon	Toxic at elevated levels by inhalation.	5

APPENDIX A

SITE WALKOVER PHOTOGRAPHS



SITE WALKOVER PHOTOGRAPHS

THE CROFT, ST AGNES



PHOTOGRAPH 1: View along the northern boundary of the site towards the east



PHOTOGRAPH 2: View of a mine shaft within the central area of the site



PHOTOGRAPH 3: View of the northern area of the site



PHOTOGRAPH 4: View of the site access track towards the north



PHOTOGRAPH 5: View of the southern area of the site



PHOTOGRAPH 6: View of the southern boundary of the site



PHOTOGRAPH 7: View of the main site area towards the south



PHOTOGRAPH 8: View of a mine shaft on site

APPENDIX B

ENVIRONMENTAL REPORT

Homecheck Environmental



Contamination Risk **PASSED**

Professional Opinion

Argyll Environmental Consultants have passed this report in accordance with the definition of contaminated land within Part 2A of the Environmental Protection Act 1990. Please refer to the Professional Opinion page and Section 1 for further information.



Flood Risk: None Identified

Refer to Section 2 for further information

Conveyancer Guidance

While this report may have identified areas at risk of flooding within 250m of the search centre, we consider there to be no significant risk of flooding to the property. Please refer to Section 2 for further information.



Radon: **IDENTIFIED**

Refer to Section 3 for further information



Ground Stability: None Identified

Refer to Section 4 for further information



Other Influential Factors:

Refer to Section 5 for further information

Environmental Constraints: IDENTIFIED

See Section 5a

Report issued for the property at

**The Coft
ST. AGNES
TR5 0NB**

Report Reference
256979174_1_1

National Grid Reference
171570 51040

Customer Reference
1028_HCP

Report Date
14 September 2020

Contact Details

If you require assistance please contact your Search Provider or phone Customer Services on 0844 844 9966 or email helpdesk@homecheck.co.uk

Landmark Contribution

By purchasing this report, the recipient may be eligible for Remediation Contribution of up to £100,000 if served with a Remediation Notice by the Local Authority. Such a notice may require the homeowner to pay for all, or contribute to, the remediation of the property. For more information see Landmark's Terms and Conditions.



Professional Opinion

Contamination Risk

PASSED

In the professional opinion of Argyll Environmental Consultants, the level of contamination risk associated with the information disclosed in the Homecheck Professional report dated 14th September 2020 and reference 256979174_1_1, 1028_HCP for

**The Coft
ST. AGNES
TR5 ONB**

- 1) is unlikely that the property would be designated "contaminated land" within the meaning of Part 2A of the Environmental Protection Act 1990.
- 2) is unlikely to have an adverse effect on the security of the property for normal lending purposes.

The professional opinion refers to Section 1 of this report and should always be read in conjunction with the full text of that report. No physical site inspection or survey has been carried out or is proposed.

Approved by

Argyll Environmental Ltd



Contents and Summary of Findings



Site Location



Section 1: Contamination Risk Findings

Contamination Risk	0-25m	25-250m	250-500m	See Section
Designated Contaminated Land	No	No	No	1a
Landfill and Waste	No	No	Yes	1b
Potentially Contaminative Activities	No	No	No	1c
Known Pollution Incidents	No	No	No	1d
Other Potential Contaminative Land Uses	Yes	Yes	n/a	1e



Section 2: Flood Findings

Flood	0-25m	25-250m	See Section
River Flooding	No	No	2a
Coastal Flooding	No	No	2b
Surface Water Flooding	No	Yes	2c



Section 3: Radon Findings

Radon	Result	See Section
Radon Affected Property	Yes	3



Section 4: Ground Stability Findings

Ground Stability	Result	See Section
Man-Made Factors	No	4a
Natural Factors	No	4b



Section 5: Other Influential Factors

Other Influential Factors	Result	See Section
Environmental Constraints	Yes	5a



Site Location



Aerial Photograph

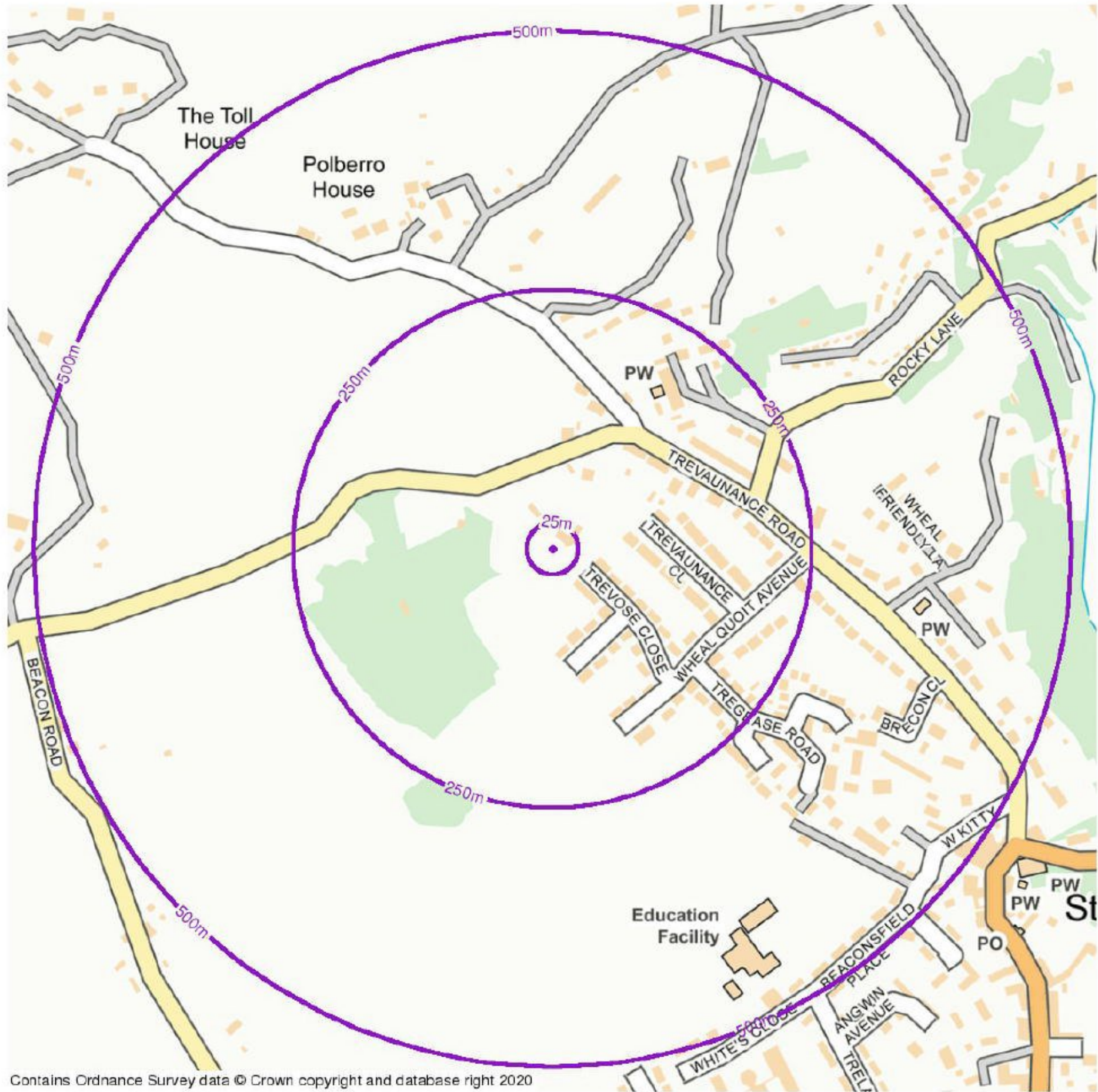
The photograph below shows the location of the site to which this report relates.





Location Map

The map below shows the location of the site to which this report relates.





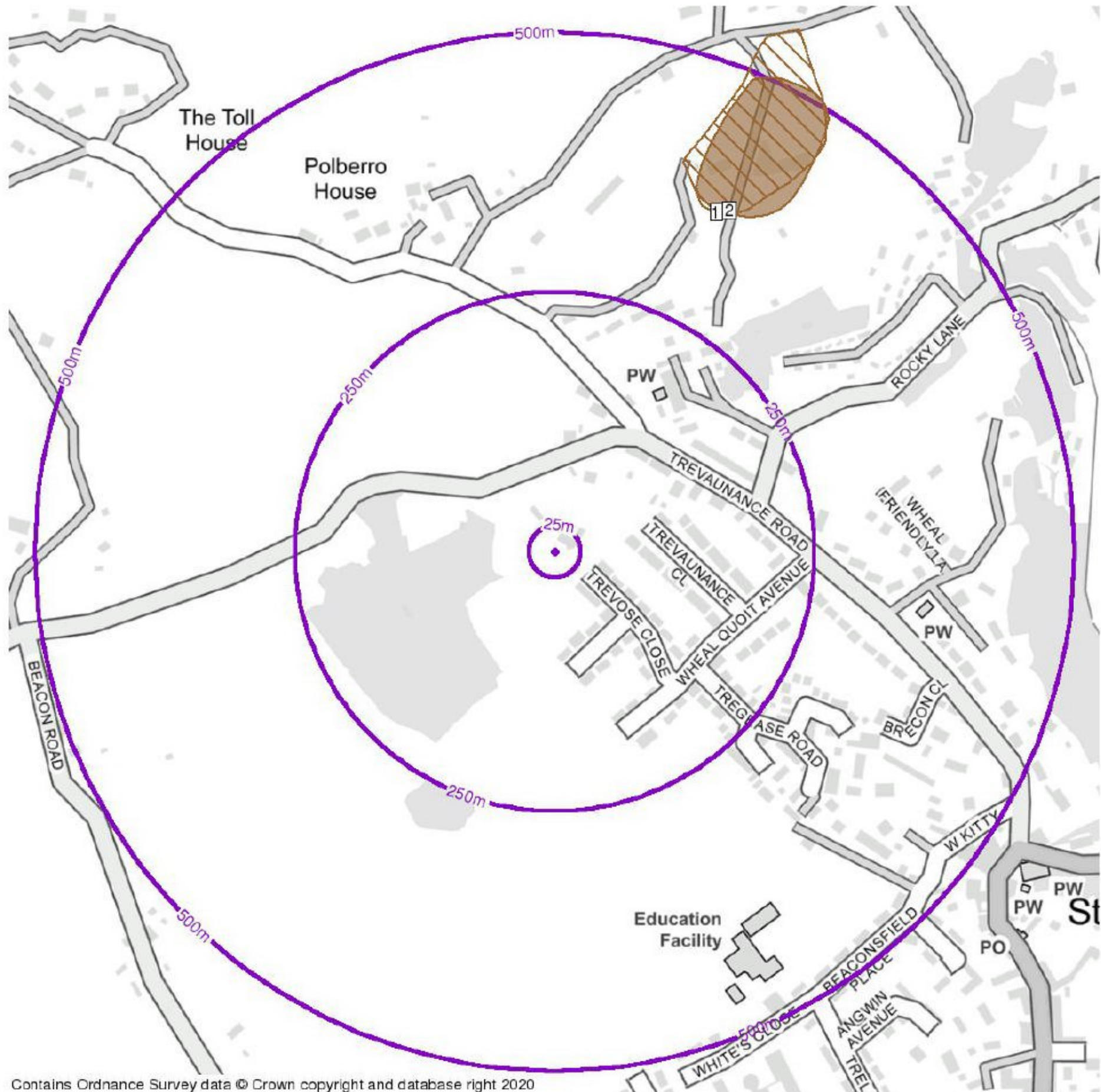
Section 1: Contamination Risk Findings

The whole of section 1 deals with potential sources of contamination and provides the information by which this report has either been passed or referred for assessment.



Section 1a and 1b: Information Map

The map detailed below shows the location of the Designated Contaminated Land and Landfill and Waste features highlighted within sections 1a and 1b of this report.



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Section 1a

Contaminated Land Registry Entries and Notices

Section 1b

Registered Landfill Sites

Registered Landfills (Potential Buffer)

BGS Recorded Landfill Sites

Local Authority Recorded Landfill Sites

Historical Landfill Sites

Permitted Waste Sites - Authorised Landfill Site Boundaries

Environmental Permitting Regulations - Waste

Integrated Pollution Control Registered Waste Sites

Registered Waste Treatment or Disposal Sites

Registered Waste Transfer Sites

Section 1a: Designated Contaminated Land

The data within this section tells you whether your property or surrounding area has been identified by the Local Authority as "Contaminated Land" under the Environmental Protection Act 1990. Should there be an indication of contamination, it is not necessarily a cause for concern. Your report will be assessed by our professional environmental consultants who will advise you what, if any, considerations need to be made should you proceed with the property purchase.

Enquiry	Result
Has any contaminated land been identified within 500m of the property?	No

Map ID	Reference	Location	Details	Distance	Contact
--------	-----------	----------	---------	----------	---------

Contaminated Land Register Entries and Notices

No factors identified for this property

Section 1b: Landfill and Waste

The information in this section is telling you about active and historic landfill and waste sites within 500 metres of the property. Having a landfill or waste site near your property does not necessarily mean that you or the property will be affected. However, it is something you need to be aware of, because landfill and waste can have a detrimental effect on the surrounding environment, house value and health. A closed landfill/waste site should be given equal consideration to an active site, because of landfill by-products. For instance, landfill with lots of organic material can continue to produce odours and gas for many years.

Enquiry	Result
Have any landfill and waste sites been identified within 500m of the property?	Yes

Map ID	Reference	Location	Details	Distance	Contact
--------	-----------	----------	---------	----------	---------

Registered Landfill Sites

No factors identified for this property

BGS Recorded Landfill Sites

No factors identified for this property

Local Authority Recorded Landfill Sites

1	Reference: 71	Rugby Ground, Polberro, St Agnes	Last Reported Status: Unknown Waste Text: Not Supplied Date of Closure: Not Supplied Boundary Quality: Good Positional Accuracy: Positioned by the supplier	362m	1
---	----------------------	----------------------------------	--	------	---

Local Authority Recorded Landfill Coverage

The following list details the Local Authorities that cover the search area who have made landfill data available:

Carrick District Council	- Has supplied landfill data	1
Cornwall County Council	- Had landfill data but passed it to the relevant environment agency	5

For further information regarding the availability of Local Authority Recorded Landfill data you may wish to forward enquiries to one or more of the contacts indicated above.

Map ID	Reference	Location	Details	Distance	Contact
--------	-----------	----------	---------	----------	---------

Historical Landfill Sites

2	Name: Adjacent To Rugby Ground Reference: EAHLD08026	Polberro, St Agnes	Specified Waste Type: Deposited Waste included Inert Waste Date of Issue: Not Supplied First Input Date: Not Supplied Last Input Date: Not Supplied Boundary Quality: As Supplied Positional Accuracy: Positioned by the supplier	365m	2
---	---	--------------------	--	------	---

Permitted Waste Sites - Authorised Landfill Site Boundaries

No factors identified for this property

Environmental Permitting Regulations - Waste

No factors identified for this property

Integrated Pollution Control Registered Waste Sites

No factors identified for this property

Registered Waste Treatment or Disposal Sites

No factors identified for this property

Registered Waste Transfer Sites

No factors identified for this property

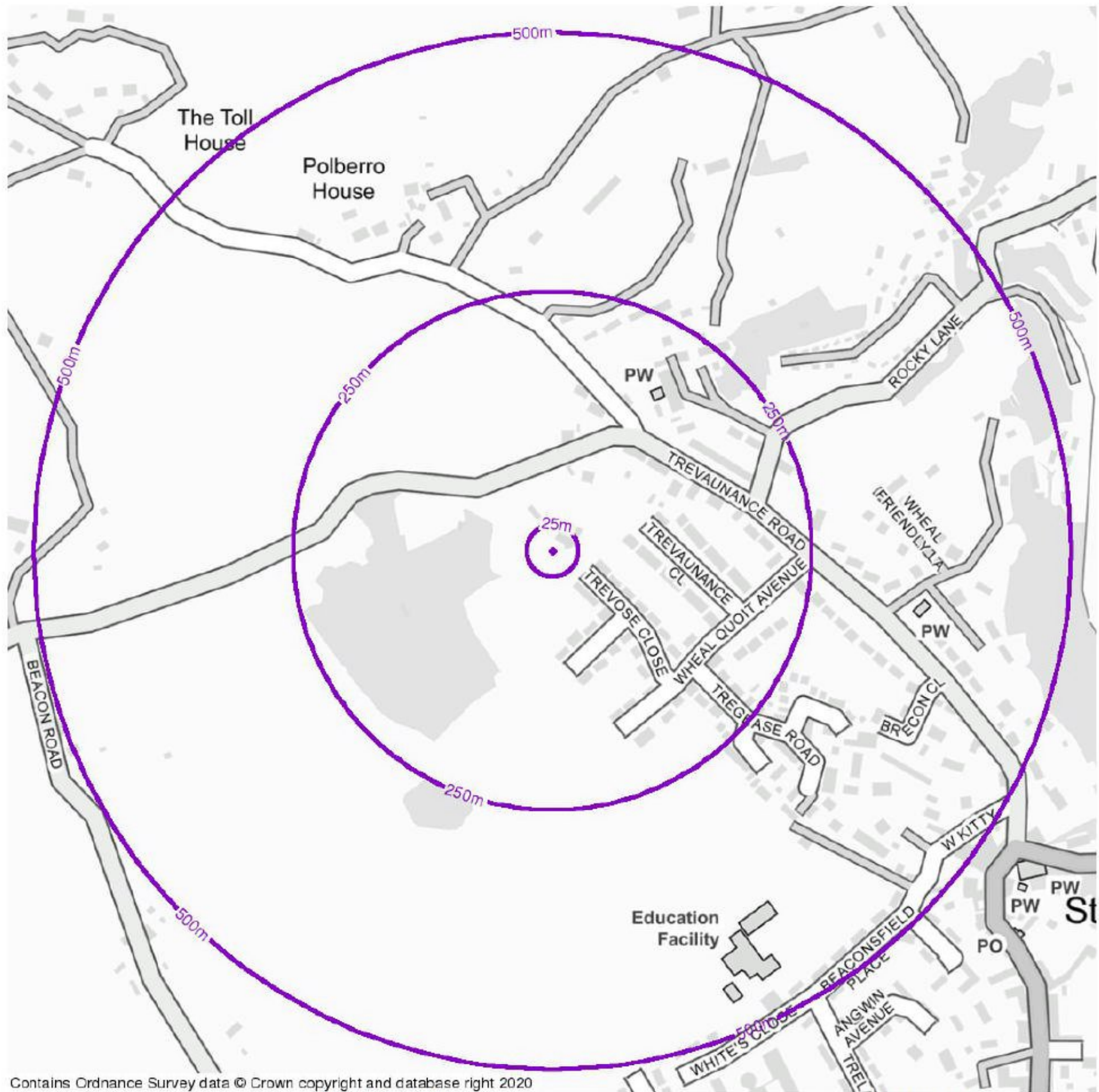
Next Steps

If you would like any further information in respect of the above findings we recommend that you get in touch with those listed in the 'Useful Contacts' section. Each contact reference shown in the above table relates to detailed contact information contained near the back of this report. Further information is also available in the 'Useful Information' section.



Section 1c and 1d: Information Map

The map detailed below shows the location of the Potentially Contaminative Activities and Known Pollution Incidents features highlighted within sections 1c and 1d of this report.



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Section 1c

Section 1d

- ▲ Local Authority Pollution Prevention and Controls
- ▼ Local Authority Integrated Pollution Prevention and Control
- ◀ Integrated Pollution Controls
- ▶ Environmental Permitting Regulations - Industry
- ◆ Consent to Discharge to Controlled Waters

- ✕ Radioactive Substances Register
- ✕ Planning Hazardous Substance Consents
- ✕ Control of Major Accident Hazards Sites (COMAH)
- ✕ Notification of Installations Handling Hazardous Substances (NIHHS)
- ★ Explosive Sites

- + Local Authority Pollution Prevention and Control Enforcements
- + Enforcement and Prohibition Notices
- + Planning Hazardous Substance Enforcements
- Prosecutions Relating to Authorised Processes
- Environmental Pollution Incidents
- Prosecutions Relating to Controlled Waters

Section 1c: Potentially Contaminative Activities

This section describes current and historic licensed activities within 500 metres of the property, which have the potential to cause contamination or have an impact on the environment. The licensed activities could range from pollution to air, land or water; storage or disposal of radioactive substances; or storage of hazardous or explosive materials. Licences may no longer be active, but the nature of the past activity means it could still have an impact.

Enquiry	Result
Have any potentially contaminative activities been identified within 500m of the property?	No

Map ID	Reference	Location	Details	Distance	Contact
--------	-----------	----------	---------	----------	---------

Local Authority Pollution Prevention and Controls

No factors identified for this property

Local Authority Integrated Pollution Prevention And Control

No factors identified for this property

Integrated Pollution Controls

No factors identified for this property

Environmental Permitting Regulations - Industry

No factors identified for this property

Consent to Discharge to Controlled Waters

No factors identified for this property

Radioactive Substances Register

No factors identified for this property

Planning Hazardous Substance Consents

No factors identified for this property

Control of Major Accident Hazards Sites (COMAH)

No factors identified for this property

Notification of Installations Handling Hazardous Substances (NIHHS)

No factors identified for this property

Explosive Sites

No factors identified for this property

Section 1d: Known Pollution Incidents

The data within this section describes unpermitted activity in your area (e.g. polluting incidents, or exceedance of permitted allowance) where the activity led to a prosecution or enforcement of regulations. Whilst all of these records are historic, the nature of the incident may have long term effects.

Enquiry	Result
Have any known pollution incidents been identified within 500m of the property?	No

Local Authority Pollution Prevention and Control Enforcements

No factors identified for this property

Enforcement and Prohibition Notices

No factors identified for this property

Planning Hazardous Substance Enforcements

No factors identified for this property

Prosecutions Relating to Authorised Processes

No factors identified for this property

Environmental Pollution Incidents

No factors identified for this property

Prosecutions Relating to Controlled Waters

No factors identified for this property



Section 1e: Information Map

The map detailed below shows the location of the Other Potential Contaminative Land Uses features highlighted within section 1e of this report.



- | | |
|--|---|
| ✘ Fuel Station Entries | ☑ Potentially Infilled Land (Non-Water) |
| ★ Contemporary Trade Directories | ☑ Potentially Infilled Land (Water) |
| ⊕ Former Marshes | ☑ Potentially Contaminative Industrial Uses (Past Land Use) |
| ▼ Historical Tanks and Energy Facilities | |

Section 1e: Other Potential Contaminative Land Uses

This section describes either current or historic activity, which could be considered to be contaminative. This section makes no statement about whether the activity requires a licence; however our environmental experts deem that the activities described in this section could lead to potential contamination. The information is taken from a variety of sources including trade directories, Landmark's extensive historical map collection and analysis of historic activity. Records are highlighted due to the potential for contamination to exist.

Enquiry	Result
Have any other potential sources of contamination been identified within 250m of the property?	Yes

Map ID	Reference	Location	Details	Distance	Contact
--------	-----------	----------	---------	----------	---------

Fuel Station Entries

No factors identified for this property

Contemporary Trade Directory Entries

3	Name: Gerry Kempthorne	Nutfield Trevaunance Close St. Agnes TR5 0SW	Classification: Electrical Engineers Status: Active Positional Accuracy: Automatically positioned to the address	88m	-
---	-------------------------------	---	---	-----	---

Former Marshes

No factors identified for this property

Potentially Infilled Land (Non-Water)

No factors identified for this property

Potentially Infilled Land (Water)

No factors identified for this property

Potentially Contaminative Industrial Uses (Past Land Use)

4	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888 - 1963	24m	-
5	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1908	126m	-
6	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	141m	-
7	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	144m	-
8	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1908	198m	-
9	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	205m	-
10	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	207m	-
11	Not Supplied	Not Supplied	Class: Quarrying of sand & clay, operation of sand & gravel pits Map Published Date: 1908 - 1963	223m	-
12	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	233m	-

Map ID	Reference	Location	Details	Distance	Contact
--------	-----------	----------	---------	----------	---------

Historical Tanks And Energy Facilities

13	Not Supplied	Not Supplied	Type: Electrical Sub Station Facilities Positional Accuracy: Positioned to location of cartographic text Date of Mapping: 1974	137m	-
----	--------------	--------------	---	------	---

Next Steps

If you would like any further information in respect of the above findings we recommend that you contact our Customer Services Team, whose details can be found in the 'Useful Contacts' section of this report. Further Information is also available in the 'Useful Information' section.



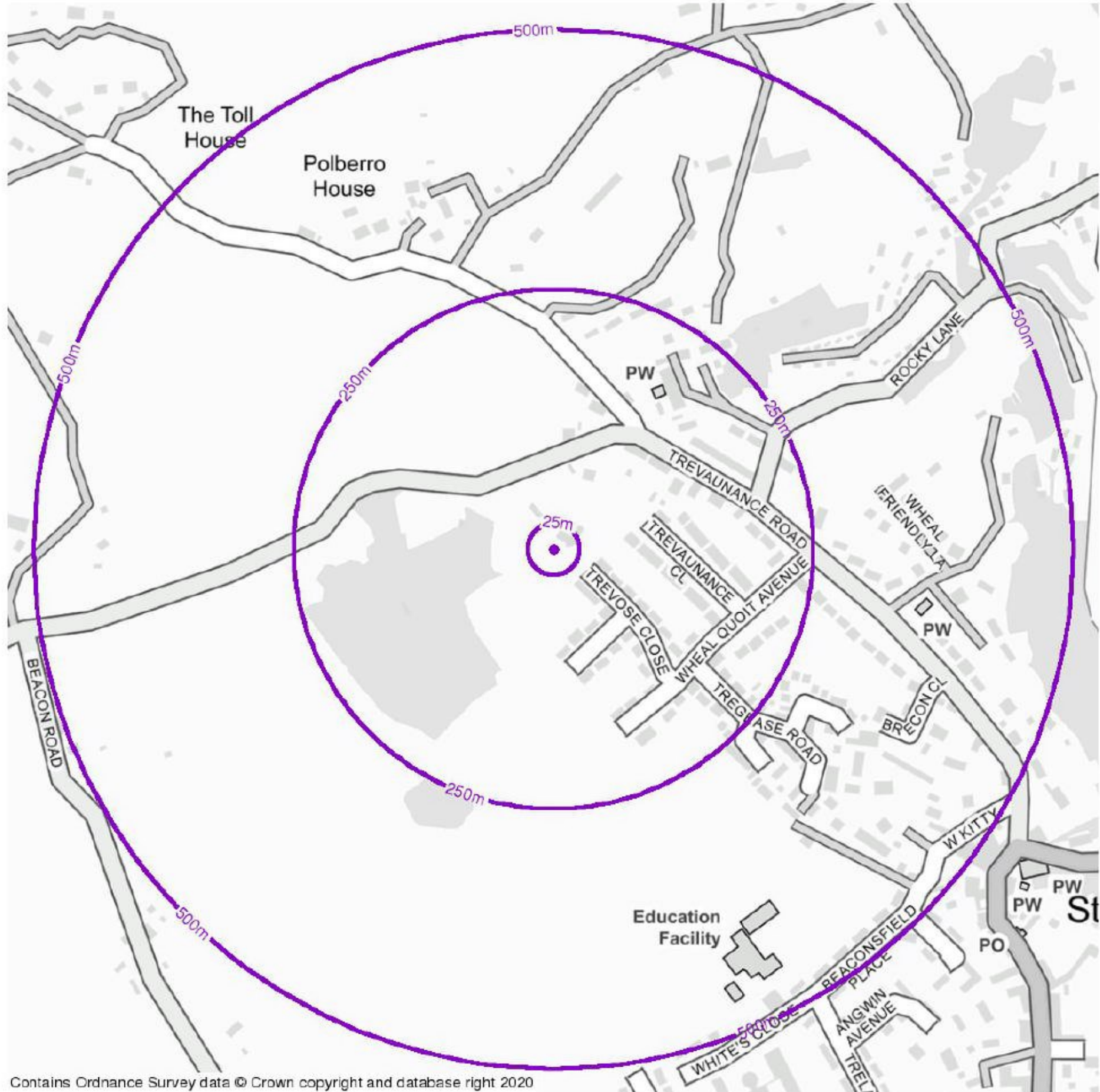
Section 2: Flood Findings

The whole of this section deals with potential sources of flooding that may impact the property.

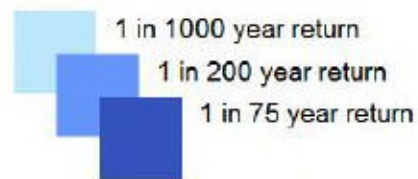


Section 2a and 2b: River and Coastal Flood Map

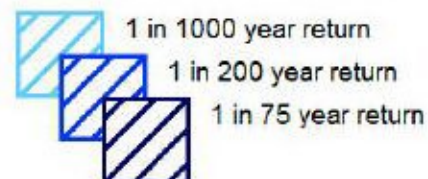
The map detailed below shows the location of potential river and coastal flood risk. The potential risk has been modelled on the basis of an event occurring on average every 75, 200 or 1000 years.



River Flooding



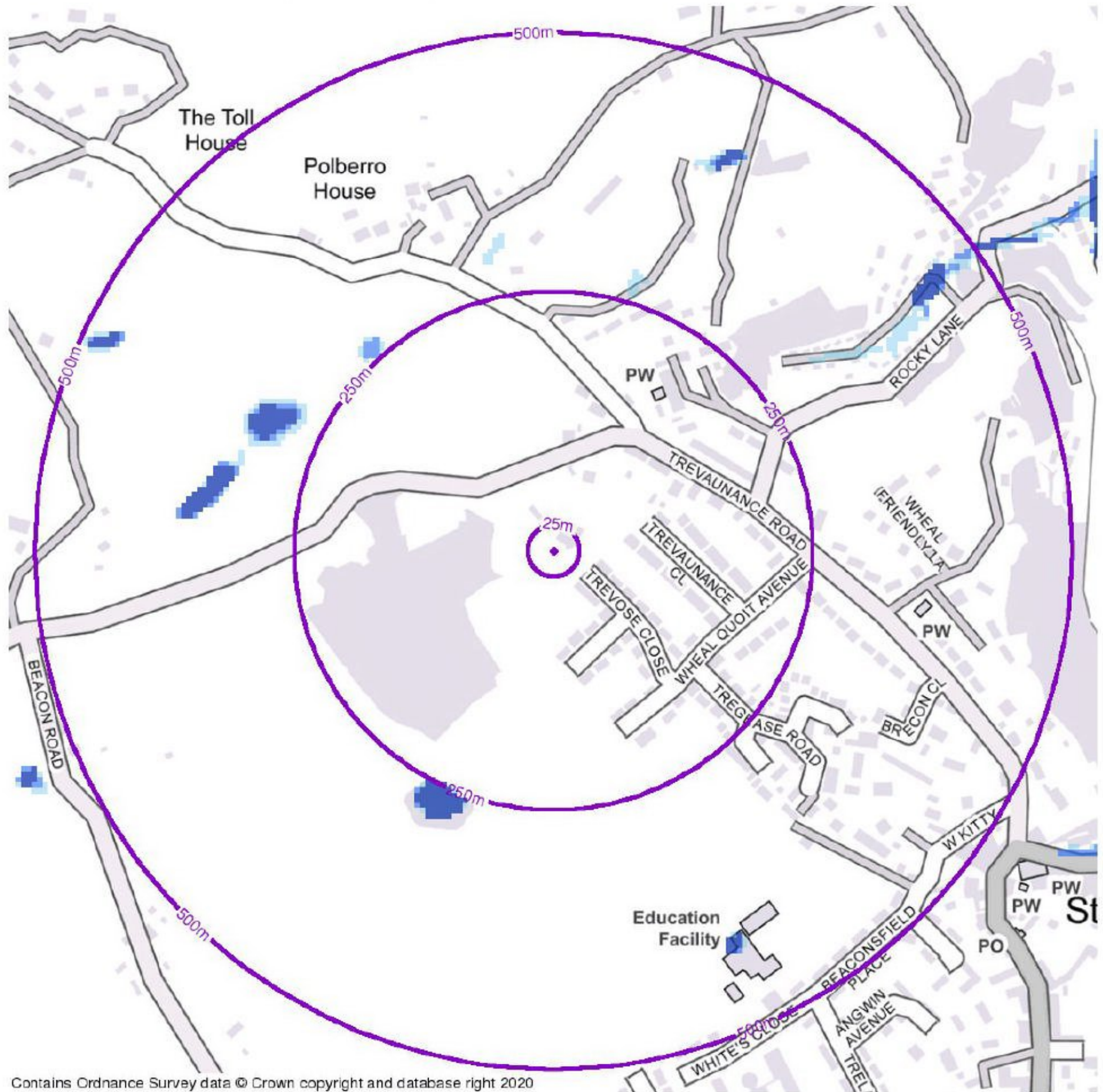
Coastal Flooding





Section 2c: Surface Water Flood Map

The map detailed below shows the location of potential surface water flood risk. The potential risk has been modelled on the basis of an event occurring on average every 75, 200 or 1000 years.



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Surface Water Flooding



Section 2a: River Flooding

River flooding mainly happens when the river catchment (that is the area of land that feeds water into the river and the streams that flow into the main river) receives greater than usual amounts of water (for example through rainfall or melting of snow). The amount of runoff depends on the soil type, catchment steepness, drainage characteristics, agriculture and urbanisation as well as the saturation of the catchment. The extra water causes the level of the water in the river to rise above its banks or retaining structures.

Enquiry	Result	Contact
Is there a potential risk of river flooding within 250m of the property?	No	-

Section 2b: Coastal Flooding

Coastal flooding is the inundation of land areas along the coast caused by sea water rising above normal tidal conditions. Coastal flooding can arise from a combination of high tides, wind induced tidal surge, storm surge created by low pressure and wave action.

Enquiry	Result	Contact
Is there a potential risk of coastal flooding within 250m of the property?	No	-

Section 2c: Surface Water Flooding

Surface water flooding results from rainfall running over ground before entering a watercourse or sewer. It is usually associated with high intensity rainfall events (typically greater than 30mm per hour) but can also occur with lower intensity rainfall or melting snow where the ground is already saturated, frozen, developed (for example in an urban setting) or otherwise has low permeability.

Enquiry	Result	Contact
Is there a potential risk of surface water flooding within 250m of the property?	Yes	-

Next Steps

In order to gain more detailed information on the type and likelihood of your property being impacted by a flood event, and the potential impact on insurance, we recommend that you purchase our Landmark Flood Report.

If you would like more information please contact your Search Provider or our Customer Services Team on **0844 844 9966** or email **helpdesk@homecheck.co.uk**.

Flood data provided by JBA Risk Management Limited. © Copyright JBA Risk Management Limited 2008-2020



Section 3: Radon Findings

The information within this section tells you whether the property is located in a radon affected area. Radon is a radioactive gas which occurs naturally in rocks and soils. You cannot see, hear, feel or taste it. Exposure to particularly high levels of radon may increase the risk of developing lung cancer, and is therefore something you need to be aware of or should consider.

Enquiry	Result	Contact
Is the property in a radon affected area?	The property is in a radon affected area, as over 30% of homes are above the action level	3
What level of radon protection measures for new dwellings or extensions to existing ones is required for the property?	Full radon protective measures are necessary in the construction of new dwellings or extensions	3

Next Steps

The level of radon concentration can only be established by having the building tested. Action should be taken if the indoor radon level is measured and found to be above 200 becquerel's per cubic meter. If you would like any further information we recommend you contact Public Health England whose details can be found in the 'Useful Contacts' section of this report.

Further Action

Airtech Environmental Systems can advise on radon testing kits, which cost £39.36 including VAT and can run from 7 days to 3 months. They also have a team of surveyors on hand to provide recommendations and advice for any properties above the target level of 100 becquerel's per cubic meter or action level of 200 becquerel's per cubic meter. Airtech Environmental Systems can provide a report, recommendations and a quotation for any recommended works. For more detailed information please call their free-phone number 0800 378017.



Section 4: Ground Stability Findings

This section provides summary information on factors that could affect the ground stability of the property. It considers both man-made factors (e.g. mining activity) and natural hazards (e.g. geological stability).

Section 4a: Man-Made Factors

Enquiry	Result	Contact
Is the property within 25m of a Coal Mining Affected Area?	No	-

Section 4b: Natural Factors

Enquiry	Result	Contact
What is the potential for natural ground instability in the area within 50m of the property?	Low	-

Comment: The British Geological Survey has assessed the area of search as having low potential for natural ground instability. This does not necessarily mean there is cause for concern in terms of the property's stability. Active subsidence will be dependent on local conditions, such as the proximity of trees or areas where trees have been removed, which require an inspection of the site to identify the nature of the ground on which the property is built. A house buyers survey is advised to look for signs of property damage that may indicate poor natural ground conditions.



Section 5: Other Influential Factors

The following section provides information on a variety of factors which may have an influence on the property or surrounding area.



Section 5a: Environmental Constraints

Enquiry	Result
Is the property within 250m of an area likely to be impacted by Environmental Constraints?	Yes

Map ID	Reference	Location	Details	Distance	Contact
Areas of Outstanding Natural Beauty					
N/A	Name: Cornwall	N/A	Total Area (m2) 964031731.73	83m	4
	Reference: Not Supplied		Designation Date 30th November 1959		

Local Nature Reserves

No factors identified for this property

National Nature Reserves

No factors identified for this property

National Parks

No factors identified for this property

Ramsar Sites

No factors identified for this property

Sites of Special Scientific Interest

No factors identified for this property

Special Areas of Conservation

No factors identified for this property

Special Protection Areas

No factors identified for this property

Next Steps

If you would like any further information in respect of the above findings we recommend that you get in touch with those listed in the 'Useful Contacts' section of this report. Each contact reference shown in the above table relates to detailed contact information contained within the back of this report.

Useful Contacts

Contact 1 - Carrick District Council (now part of Cornwall Council) - Environmental Health Department

County Hall Treyew Road Truro Cornwall TR1 3AY	Tel: 0300 1234 100	enquiries@cornwall.gov.uk www.cornwall.gov.uk
--	--------------------	--

Contact 2 - Environment Agency - National Customer Contact Centre (NCCC)

PO Box 544 Templeborough Rotherham S60 1BY	Tel: 03708 506 506	enquiries@environment-agency.gov.uk
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Contact 3 - Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards

Chilton Didcot Oxfordshire OX11 0RQ	Tel: 01235 822622 Fax: 01235 833891	radon@phe.gov.uk www.ukradon.org
--	--	-------------------------------------

Contact 4 - Natural England

County Hall Spetchley Road Worcester WR5 2NP	Tel: 0300 060 3900	enquiries@naturalengland.org.uk www.naturalengland.org.uk
---	--------------------	--

Contact 5 - Cornwall County Council (now part of Cornwall Council)

County Hall Treyew Road Truro Cornwall TR1 3AY	Tel: 0300 1234 100	enquiries@cornwall.gov.uk www.cornwall.gov.uk
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Landmark Information Group Limited

Legal and Financial Imperium Reading Berkshire RG2 0TD	Tel: 0844 844 9966 Fax: 0844 844 9980	helpdesk@homecheck.co.uk www.landmarkinfo.co.uk
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The Landmark website contains links to many of our data suppliers which may prove useful.

Please note that the Environment Agency/Natural Resources Wales/SEPA have a charging policy in place for enquiries.

Landmark works in association with:



Report Version: HCP v1.0.4.5

Useful Information

The following explanatory notes may be of assistance to users of the Homecheck Professional report. Practitioners are reminded that full guidance notes are contained in the Practitioners Guide.

Professional Opinion

A Professional Opinion in relation to Part 2A of the Environmental Protection Act 1990 is provided by Argyll Environmental Consultants. In many cases the report will be PASSED without referral. However, in some cases, entries that may be of concern are revealed by the search, in which case the report is REFERRED free of charge for more detailed consideration, although this will not include a physical site inspection. After such referral the report may be PASSED or suggestions made of some FURTHER ACTION that could be taken, in the form of questions to ask of the appropriate authorities. When responses to these questions are received it is the responsibility of the client and their professional advisors to decide if they are happy to proceed.

Flood Risk

A limited flood risk screening exercise is included in this report designed to satisfy basic flood risk screening due diligence including consideration of river, coastal and surface water flooding. Where a potential flood risk is "Identified" you may wish to consider commissioning a more detailed flood risk screening report. When there is "None Identified" this does not indicate that there is not risk of flooding at the property, but that the risk of flooding from the sources screened (river, coastal and surface water) within the vicinity of the property is such that the risk may not be considered significant.

Location Map

The Ordnance Survey location map may show features which are not necessarily otherwise included in this report. You are advised to supplement the information contained in the report with the descriptive text shown on the map.

Positional Accuracy

We locate data in a variety of ways according to information provided to us and subsequent in-house research. If data is provided as a point on the ground, we provide a "positional accuracy" which tells you how confident we are of the actual location.

Section 1b: Landfill and Waste

At present no complete national data set exists for landfill site boundaries, therefore, a point grid reference, provided by the data supplier, is used for some landfill sites. In certain cases the point grid references supplied provide only an approximate position, and can vary from the site entrance to the centre of the site. Where the exact position of the site is unclear for Registered Landfill data, Landmark construct either a 100 metre or 250 metre "buffer" around the point to warn of the possible presence of landfill. The size of this "buffer" relates to the positional accuracy that can be attributed to the site. The "buffer" is shown on the map as a red hatched area. For further information regarding landfill sites identified in the report, please contact the relevant environment agency or authority referenced in the Useful Contacts section.

The BGS holds records of over 3,000 landfill sites that accepted waste prior to the Control of Pollution Act (COPA) 1974. These were not subject to any strict regulation or monitoring.

Permitted Waste Sites and Environmental Permitting Regulations - Waste cover current or recently current consents issued for landfill sites, waste transfer, treatment or disposal sites by the Environment Agency/Natural Resources Wales, under Section 64 of the Environmental Protection Act 1990 (Part 2) and prescribed by regulation 10 of SI No. 1056 of the Waste Management Licensing Regulations 1994.

Section 1c: Potentially Contaminative Activities

Identified discharge consents could be for storm water discharges, soakaways or septic tanks.

If a radioactive substance licence has been identified the consent band will be given under enquiries and replies. Consents fall into one of four bands: Band 1 and 2 Nuclear licensed sites authorised by the Nuclear Installations Inspectorate e.g. nuclear power stations Band 3 Site registered/authorised to accumulate and dispose of radioactive materials, only non-nuclear operations are carried out on site e.g. hospitals Band 4 Sites registered to keep and use radioactive material e.g. laboratories, universities, commercial premises using appliances such as monitoring equipment, alarm systems, tritium lighting etc.

Data supplied for Explosive Sites, Control of Major Accident Hazards Sites (COMAH) and Notification of Installations Handling Hazardous Substances (NIHHS) contains public sector information published by the Health and Safety Executive and licensed under the Open Government Licence.

Section 1e: Other Potential Contaminative Land Uses

This section relates to categories of potentially contaminative land uses that have been identified by the analysis of selected Ordnance Survey historical mapping. The published date (range of dates) of the map (s) and the distance from the centre of search to the nearest point of the feature is given. Further details of the extent of the site or its activities are not available. Should you wish to examine the Ordnance Survey maps these are normally available for public inspection at the local archive or local major library. Alternatively, extracts of editions of Ordnance Survey maps are available on www.old-maps.co.uk

Potentially infilled land has been identified when a 'cavity' (a hole made by an extractive industry or natural occurrence e.g. pond) was indicated on a historic map but there was no evidence of its existence in the last available map for the area. No details of what may have been used to fill the cavity or exactly when or if it was filled are available from the mapping.

The point locations of historical tanks and energy facilities are identified from the text on Ordnance Survey 1:1250 and 1:2500 scale mapping published between 1943 and 1996, based upon a predetermined list of abbreviations, e.g. El Sub (Electricity Sub-station) and F Stn (Filling Station). The position of the point has been located at the centre of the identified text so that it would be within approximately 30 meters of the feature it was describing. The features themselves are related to energy and petroleum storage and cover the following: tanks, petrol storage, potential tanks (at depots etc.), electricity sub stations and related features, gas and gas monitoring related features, oil related features and miscellaneous power features. NB: It should be noted that the Ordnance Survey abbreviation for tank (tk) is the same as that for tracks. Therefore some of the captured text may relate to tracks and not tanks when the exact nature of the feature is not clear from the mapping.

Section 2: Flood Findings

Sections 2a, b and c of the report provide data on modelled extents of river, coastal and surface water flooding generated by JBA Risk Management, a market leader in flood risk assessment commonly engaged by insurers to assess flood risk. The data has been modelled for several perils or return periods: 1 in 75, 1 in 200 or 1 in 1000 which relate to areas with a 1.3%, 0.5% and 0.1% annual probability of flooding in any one year respectively. Properties at risk of flooding during a 1 in 75 year event are typically considered to be at a high risk of flooding. The data has been generated to provide a UK wide screening tool and as a result may have inherent limitations. In addition, there may be areas of the country which are modelled to varying degrees of accuracy based on currently available topographical information.

Section 3: Radon Findings

Due to the nature of way the information is gathered, your property/site may have more than one probability of radon attributed to it. We report the worst case scenario on the property/site you have provided. This information is an estimate of the probability that a property /site in Great Britain is at or above the "Action Level" for radon (the level at which Public Health England recommends that radon levels should be reduced, those with an average of 200 Bq m⁻³ or more). This information satisfies CON29 Standard Enquiry of Local Authority; 3.13 Radon Gas: Location of the Property in a Radon Affected Area. Where the property/site is a new build, this information provides information on the level of protection required for new buildings under BR211 (Scivyer, 2007) Radon: Guidance on protective measures for new buildings.

Disclaimer: "Some of the responses contained in this section are based on data and information provided by the Natural Environment Research Council (NERC) or its component bodies the British Geological Survey (BGS). Your use of any information contained in this report which is derived from or based upon such data and information is at your own risk. Neither NERC, BGS nor Public Health England where applicable, gives any warranty, condition or representation as to the quality, accuracy or completeness of such information and all liability (including liability for negligence) arising from its use is excluded to the fullest extent permitted by law."

Section 5a: Environmental Constraints

The Local Nature Reserves national dataset is "indicative" not "definitive". Definitive information can only be provided by individual local authorities and you should refer directly to their information for all purposes that require the most up to date and complete dataset.

General

If after reading the details in this report regarding the sites identified, you still require further information, please contact the relevant environment agency or authority indicated in the Useful Contacts section quoting the corresponding reference given in the text of the report.

The contacts in the Useful Contacts section may be able to provide further information relating to items identified in the report, however they are not in a position to advise how these might affect the value of a property. The findings of the report should be discussed with your professional advisor.

The Purpose and Scope of the Report

The report is designed to satisfy the concerns raised by the Law Society warning card and has been prepared to assist conveyancing professionals who may be advising clients when they sell or buy a property, obtain a mortgage, seek further mortgage advice, or commence any building works. It is designed to bring information to their attention and help them decide whether they need to seek any further specialist advice. As the report is so detailed, this information can cause concern, but professional advisors will see that further action is suggested on all issues that have been identified.

Limitations

This report has been published by Landmark Information Group Limited ("Landmark") and is supplied subject to our Terms and Conditions of Business, which can be found at <http://www.landmarkinfo.co.uk/Terms/Show/534>. It has been prepared on the understanding that it is to be used for an individual residential property transaction and should not be used or relied upon in a commercial property transaction. This report is neither a guarantee of the physical condition of the subject property nor a substitute for any physical investigation or inspection. The information in Homecheck Professional is derived from a number of statutory and non-statutory sources (see The Practitioner Guide for details). Whilst every effort is made to ensure the details in the report are correct, Landmark cannot guarantee the accuracy or completeness of such information or data, nor identify all the factors that may be relevant. If you are a private individual using this report Landmark recommends that you discuss its contents in full with your professional advisor. The methodology for risk assessment and the conclusions drawn therefrom are the responsibility of Argyll Environmental Consultants.

Insurance

Houses registered between 1st April 1999 and 31st December 2002 and covered by the NHBC Buildmark scheme probably have insurance against certain costs if contamination occurs within ten years of their construction. From 1st January 2003, NHBC will only provide this cover if building control has been carried out by NHBC Building Control Services Limited.

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If you experience difficulties accessing our Terms and Conditions, please copy and paste the link directly into your browser, you will then be able to access our Terms and Conditions from there. Should you still experience difficulties, please telephone our Customer Service Team on 0844 844 9966.

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This search has been produced by Landmark Information Group Ltd, Imperium, Imperial Way, Reading, Berkshire, RG2 0TD

Tel: 0844 844 9966

Fax: 0844 844 9980

Email: helpdesk@landmark.co.uk

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- Conveyancing Information Executive Members shall act in a professional and honest manner at all times in line with the Conveyancing Information Executive Standards and carry out the delivery of the Search with integrity and due care and skill.
- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.
- The standards can be seen here: <http://www.conveyinfoexec.com>

Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPO.

TPOs Contact Details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP

Tel: 01722 333306

Fax: 01722 332296

Website: www.tpos.co.uk

Email: admin@tpos.co.uk

Landmark Complaints Procedure

If you want to make a complaint to Landmark, we will:

- Acknowledge it within 5 working days of receipt
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time
- Provide a final response, in writing, at the latest within 40 working days of receipt
- Liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Customer Relationships Manager
Landmark Information
Imperium
Imperial Way
Reading
RG2 0TD

Tel: 0844 844 9966

Email: helpdesk@landmark.co.uk

Fax: 0844 844 9980

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs):

Tel: 01722 333306

Email: admin@tpos.co.uk

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.

APPENDIX C

MINING REPORT



Property Address	The Croft	Trevaunance Road
	St Agnes	TR5 0NB
National Grid Reference	171533	51035
Client & Client Ref	Liam Thomas	Online Order: 5201
Report Reference & Date	RJH/CMS/130114	07 April 2020



- Property Boundary
- Recorded Lode (Surface)
- Recorded Shaft
- Well/Spring
- Land Registry Boundaries
- Suspected Lode (Surface)
- Suspected Shaft
- Surface Workings
- Building
- Lode at Other Elevation
- Indicated Shaft (Doubtful)
- Mine Waste
- Former Structure
- Geological Fault
- Subsidence
- Alluvium/Tin Streaming
- Elvan
- Adit/Tunnel
- Adit Portal
- Quarry

Risk Rating:

HIGH - Further Action

Next Steps:

MINING INVESTIGATION

PROFESSIONAL OPINION

We believe that the property could be affected by subsidence related to historic metalliferous mining and we are unable to dismiss this without further assessment. An intrusive on-site Mining Investigation is required to assess the risks further. It is recommended borehole drilling or slot trenching be undertaken by a mining consultant to confirm whether the risk feature exists as indicated by the historic records.

Registered Office: Parc Ven House, Coach Lane, Redruth, Cornwall TR15 2TT. Registered in England & Wales. Registered Number: 4578850



Mining Search: METALLIFEROUS MINERALS



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This Mining Search provides an assessment of the subsidence risk presented to the property from historic metalliferous mining. The report findings are based on factual information from maps, plans and records in Cornwall Consultants Ltd private archive, the results of relevant on-site investigations, as well as commercially available datasets. This information has been interpreted by experts to reasonably predict the existence, location and likelihood of unrecorded mine workings.

The Findings

The property is situated within an area of extensive historic metalliferous mining activity. It is reported that subsidence has already been observed within the property, although the location is not known to us.

Our records indicate that three mineral lodes (deposits) associated with the former Polberro Mine lie within the property. These features are recorded on a mine plan, on a Geological Survey map and on a nineteenth century mining map. Unrecorded mine workings may exist on lode outcrops and these can cause subsidence problems. The principal area of risk to the property is the access road.

Two shafts and nearby surface workings are suspected to lie within the property. These features are inferred from information on the National Mapping Project. The true nature and position of these features is unconfirmed.

An area of mine waste associated with a shaft (which lies just to the east) encroaches within the property boundary. Mine waste material (loose rock debris) may obscure mine workings or cause differential settlement to overlying buildings. This feature is indicated on a nineteenth century mining map.

The property lies within an existing Mineral Safeguarding Area, containing designated metalliferous mineral resources and/or strategic mine entries. We believe this permission relates to non-extractive activities. Further information can be obtained from the Local Planning Authority, if required.

The Risk

Based on a detailed search and expert interpretation of our mining records archive we believe the risk to the property from subsidence relating to past extractive metalliferous mining is:

HIGH - Further Action

We believe that the property could be affected by subsidence related to historic metalliferous mining and we are unable to dismiss this without further assessment.

The Next Steps

To further assess the risks to this property we recommend the following course of action:

MINING INVESTIGATION

An intrusive on-site Mining Investigation is required to assess the risks further. It is recommended borehole drilling or slot trenching be undertaken by a mining consultant to confirm whether the risk feature exists as indicated by the historic records.

If further assessment has been recommended or you would just like to discuss the findings of this report, we would be happy to assist by phone on 01209 313511 or by email to mining@cornwallconsultants.co.uk or at a site meeting as required. Further explanation of the mining search process can be found on the attached information sheet and our website www.cornwallconsultants.co.uk.

Mining Search: METALLIFEROUS MINERALS



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Geology

Metallic mineralisation in the South West mainly occurs in lodes (veins), which are sheet-like structures occupying former fissures in the bedrock. Lodes are typically about 1 metre (m) wide but some reach 5m or more and are either vertical or inclined at steep angles. Mineral lodes containing tin, copper and other metalliferous minerals typically course in an east-northeast to west-southwest direction, while those containing lead and silver often course approximately north to south. Localised variations can occur, and lodes are also affected by other geological structures, such as crosscourses (geological faults) and elvan dykes (wide, planar igneous intrusions that are occasionally mineralised).

Mining Methods & History

The extraction of metalliferous minerals in the South West has taken place for thousands of years, throughout which shallow prospecting was widespread. This involved excavating costean (trial) pits in order to discover mineral lodes, often in areas where earlier tin-streaming had taken place. Once discovered, lodes were often mined by openworks (linear excavations) along the lode outcrop and later by means of shafts, adits (drainage tunnels) and levels (tunnels) driven away from the shafts. The ore was extracted from between the levels to leave stopes (narrow chasms). By the 19th century steam pumping engines enabled the workings to be deepened. During the tin and copper mining heyday, in the 18th and 19th centuries, the South West was one of the most productive mining regions in the world with over 2000 active mines. Thousands of shafts were sunk, and hundreds of miles of underground workings were driven along the lodes. However, by the end of the 19th century, the discovery of larger mineral deposits elsewhere led to the industrial decline in the South West and the closure of most mines. A lack of funds and regulations meant that mine workings were often left abandoned without being secured.

Mining Archive & Unrecorded Workings

The surviving officially deposited abandoned mine plans of most mines in the South West do not show the full extent of the underground workings, especially at shallow depth. It did not become a legal requirement for metal mines to keep comprehensive plans of the underground workings, and to deposit these upon abandonment until 1872. This law did not apply to mines that employed fewer than 12 people underground and neither did it require mines to survey any unused older workings. As a result, most of the old and shallow workings and smaller mines remain poorly recorded. We use a vast archive of other mining and geological records, maps, plans, books and datasets, along with our knowledge of the geology and mining methods to predict where workings could exist and might present a risk.

Subsidence Risks

Any near-surface mine working that has not been properly secured poses a potential subsidence risk at surface. Mine shafts present a high risk of localised subsidence. Often these features were capped with timber when mining ceased and all evidence of them became obliterated. Shallow adits can collapse or cause flooding and mine waste tips/dumps can cause differential settlement. However, one of the main causes of mining related subsidence is the collapse of near-surface mine workings on lode outcrops. These workings, in the form of small pits, openworks or shallow stopes, were often backfilled with unconsolidated waste rock and are not evident at surface until they collapse, thereby presenting a high risk of subsidence. There is no legal imperative to report subsidence to a central body and so no comprehensive database of historic subsidence events exists. Therefore, it is not possible to conclude comprehensively whether a property has previously been affected; but we include comment on subsidence at a property if we are aware of it.

Limitations of Mining Search

This Mining Search evaluates the subsidence risk from the extraction of metalliferous minerals only. It cannot be relied upon to indicate risk from clay, stone, coal, oil or other non-metalliferous extraction. It has been produced following a search and review of the extensive collection of abandoned mine plans, maps, records and archives in our possession and from this material we have endeavoured to provide as accurate a report as possible. However, considering that such records may not be wholly complete or accurate, we cannot accept liability for any inaccuracies or omissions with respect to those records. This Mining Search does not include an assessment of soil contamination risks. This report and any mining features described are applicable to the subject property only, the location or boundaries of which have been approved by the client in instructing and receiving this report. We cannot be liable for any erroneous or omitted information as portrayed on any plan supplied to us for this Mining Search. The report must not be relied upon for neighbouring properties, as any adjacent mining features may have been omitted for clarity. This report is confidential to the client, client's solicitor and/or mortgage lender or those acting through a conveyance service provider (as per the quoted reference number) and may not be reproduced or further distributed, re-sold or reassigned without our permission. We shall be under no liability whatsoever to any person who has not been party to the commissioning and fee paid for this report or any undisclosed third party. We have not visited the property.

Mining Search: METALLIFEROUS MINERALS



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Consumer Information

This search has been produced by Cornwall Consultants Ltd, Parc Vean House, Coach Lane, Redruth, TR15 2TT. Tel: (01209) 313511. Fax: (01209) 313512. Email: enquiries@cornwallconsultants.co.uk, which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. This search has been completed in accordance with our Terms and Conditions of business that can be viewed [here](#).

The Search Code:

- Provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom
- Sets out minimum standards which firms compiling and selling search reports have to meet
- Promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals
- Enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

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- at all times maintain adequate and appropriate insurance to protect consumers
- conduct business in an honest, fair and professional manner
- handle complaints speedily and fairly
- ensure that products and services comply with industry registration rules and standards and relevant laws
- monitor their compliance with the Code

Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Code.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

Contact Cornwall Consultants Ltd if you would like a copy of the Search Code or our Complaints Procedure. We trust this report provides the information you require, however should you have any queries, please contact Cornwall Consultants Ltd at: enquiries@cornwallconsultants.co.uk

TPOs contact details

The Property Ombudsman scheme
Milford House, 43-55 Milford Street,
Salisbury, Wiltshire SP1 2BP
Tel: **01722 333306** Fax: **01722 332296**
Email: admin@tpos.co.uk | Website: www.tpos.co.uk
You can get more information about the PCCB from www.propertycodes.org.uk or from our website at <https://cornwallconsultants.com/>

Complaints Procedure

Cornwall Consultants Ltd is registered with the Property Codes Compliance Board as a subscriber to the Search Code. A key commitment under the Code is that firms will handle any complaints both speedily and fairly.

If you want to make a complaint directly to Cornwall Consultants Ltd, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
- Liaise, at your request, with anyone acting formally on your behalf.

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to:

The Property Ombudsman scheme (TPOs):
Tel: **01722 333306** E-mail: admin@tpos.co.uk
| Website: www.tpos.co.uk

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.

Complaints should be sent to:

Dan Berriman
Cornwall Consultants Ltd
Parc Vean House
Coach Lane
Redruth
Cornwall
TR15 2TT
E: help@cornwallconsultants.co.uk
T: **01209 313511**

You can also view our complaints procedure [here](#).

RESULT CLASSIFICATIONS FOR MORTGAGE

PASSED	Typically, acceptable to mortgage lenders.
FURTHER ACTION	Value/enjoyment may be affected, and action should be satisfied before mortgage proceeds.

APPENDIX D

TABLES 6.3 – 6.6 'CONTAMINATED LAND RISK
ASSESSMENT, A GUIDE TO GOOD PRACTICE'.
CIRIA REPORT C552. PUBLISHED 2001

Table 6.3 *Classification of consequence*

Classification	Definition	Examples
Severe	Short-term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health ("significant harm" as defined in DETR, 2000). Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem. (note: the definitions of ecological systems within Draft Circular on Contaminated Land, DETR, 2000).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer. Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the <i>Draft Circular on Contaminated Land</i> , DETR, 2000). Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (eg foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discoloration of concrete.

Table 6.4 *Classification of probability*

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it improbable that an event would occur even in the very long term.

Table 6.5 Comparison of consequence against probability

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table 6.6 Description of the classified risks and likely action required

Very high risk	<p>There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening.</p> <p>This risk, if realised, is likely to result in a substantial liability.</p> <p>Urgent investigation (if not undertaken already) and remediation are likely to be required.</p>
High risk	<p>Harm is likely to arise to a designated receptor from an identified hazard.</p> <p>Realisation of the risk is likely to present a substantial liability.</p> <p>Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.</p>
Moderate risk	<p>It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.</p> <p>Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.</p>
Low risk	<p>It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.</p>
Very low risk	<p>There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.</p>

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