



APPROVED SITE INVESTIGATIONS LTD
DUCHY BUSINESS CENTRE
WILSON WAY
POOL
REDRUTH
CORNWALL
TR15 3RT

Tel: (01209) 204744 Fax: (01209) 204766
Email: admin@asiconsultancy.co.uk
www.asiconsultancy.co.uk

Professional, Efficient Solutions

CONTAMINATED LAND SURVEY (PHASE 1)

SITE:
THE CHALET
HOMEFIELD
CROFTHANDY
ST. DAY
REDRUTH
CORNWALL
TR16 5JB

CLIENT:
MR S. WICKS
HOMEFIELD
CROFTHANDY
ST. DAY
REDRUTH
CORNWALL
TR16 5JB

Our Ref: A1150 P1/JW

Date: 09th March 2016

Planning Ref: PA15/10999

OS Grid Ref: SW 7363/4203

Index

1.	Introduction	P.4
2.	Summery and Objectives	P.4
3.	Definition of Contaminated Land	P.5
4.	Site Description	P.6
4.1	Site Location, Population, Historic/Current Site Use, Site Proposals, Notes	P.6
4.2	Details of Additional Site Investigation Reports	P.6
5.	Site History	P.7
6.	Visual site inspection	P.8
6.1	Site Layout	P.8
6.2	Site Plan	P.9
6.3	Surrounding Area	P.10
7.	Environmental Setting	P.10
7.1	Geology	P.10
7.2	Mining Information	P.10
7.3	Hydrogeology	P.10
8.	Homecheck Professional Report Information	P.11
8.1	Surface Water Features	P.11
8.2	Potential Pollution Sources	P.11
8.3	Known Pollution Incidents	P.11
8.4	Discharges to Water	P.11
8.5	Contaminated Land Register	P.11
8.6	Current Industrial Land Use	P.12
8.7	Past Industrial Land Use	P.12
8.8	Flooding	P.13

8.9	Radon Affected Zones	P.13
8.10	Water Abstraction	P.13
8.11	Ground Stability Findings	P.13
9.	Preliminary Environmental Risk Assessment/Conceptual Model Showing Potential 'Source-Pathway-Receptor Linkage' Modes	P.14
9.1	Potential Onsite Contamination Sources: Current & Past	P.14
9.2	Potential Offsite Contamination Sources: Current	P.15
9.3	Potential Offsite Contamination Sources: Past	P.15
10.	Conclusions & Recommendations	P.16
11.	Notes	P.18
12.	Annexes	P.19
	Annex 1 - Environmental Report	
	Annex 2 - Site Photographs	
	Annex 3 - Mine Search	
	Annex 4 - References & Planning Procedure Guide	

1. Introduction

Following consultation and instruction from Mr. Chris Strike of RA Design on behalf of his client, Mr S. Wicks, ASI was commissioned to conduct a Phase 1 Contaminated Land Survey for the following site.

Site locality: The Chalet, Homefield, Crofthandy, St. Day, Redruth, Cornwall.
End-use: Proposed replacement dwelling and retention of annex.

This report has been compiled utilising historical and current Ordnance Survey map information, non interpretive environmental report information, British Geological Survey maps and historical mine search reporting (where applicable). Additional data sources have been referenced in conjunction with an onsite inspection of the property and associated land.

2. Summary & Objectives

The objective of the Phase 1 Contaminated Land Survey is to identify potential health risks associated with the site locality and its former utilisation. To comply with current government legislation and Local Authorities planning requirements, a conceptual model needs to be defined for the site area to highlight potential pollution pathways. The conceptual model is a representation of the three-dimensional site characteristics and interaction with the surrounding environment, which identifies all possible receptors, potential contamination and contaminant migration pathways, and shows the possible relationships between them (potential pollutant linkages), taking into account the current and proposed uses of the site.

This report has been compiled in accordance with the Contaminated Land Report 11 (CLR 11 - Model Procedures) and the British Standards Institute (BSI) 10175:2011 Investigation of Potentially Contaminated Sites (Code of Practice), and should be submitted to the relevant Council Authority for assessment.

Map & Street Plan Showing Location Of Site



OS Licence: 100045900 Crown copyright 2016



OS Licence: 100045900 Crown copyright 2016

3. Definition Of Contaminated Land

The legal definition of contaminated land (from Section 78A(2) of Part IIA of the Environmental Protection Act 1990) is:

'...any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

(a) significant harm is being caused or there is the significant possibility of such harm being caused; or

(b) pollution of controlled waters is being, or is likely to be, caused...'

A key element of the Part IIA regime is the Source-Pathway-Receptor pollutant linkage concept. The meaning of each element is as follows:



Without the clear identification of all three elements of the pollutant linkage, land cannot be identified as contaminated land under the regime. Contaminating substances may include:

- metals and metallic compounds e.g. cadmium, arsenic, lead, nickel, chromium
- organic compounds e.g. oils, petrol, solvents
- gases e.g. methane, carbon dioxide, hydrogen sulphide

Typical causes of land contamination include previous industrial or commercial usage, mining, and the land filling of waste. Land can also become contaminated due to its proximity to contaminated areas. However, contamination does not occur solely as a result of human activities and land can be 'contaminated' as a result of its natural state. For example, elevated levels of arsenic in soil can result from the weathering of natural rocks and minerals.

4. Site Description

4.1 Site Location, Population, Historic/Current Site Use, Site Proposals, Notes

Location: The proposed site is situated within a rural area at OS Grid Ref: SW 7363/4203.

Closest Population Centre: Crofthandy, Redruth.

Historic/Current Site Usage: From circa 1880 the site is shown to lie within and bordering mining land, comprising of extensive spoil heaps, with sporadic mine workings (shaft burrows) within proximity to the property.

The OS map of 1970 shows all former mine waste ground to have been removed from the mapping data. From circa 1986-87 the OS records indicate occasional trees within the site bounds. No further relevant information exists subsequent to this period.

Please note that no buildings or structures are shown on the available mapping records at this site locality, however we believe that a residential development comprising of a small bungalow, wooden chalet, garage and amenity land have been in existence for approximately 30-40 years.

Site Proposals: Replacement dwelling within the footprint of the current wooden chalet, retention of the existing annex and associated garden amenity land.

Please refer to section 6: Visual Site Inspection (including sub-sections 6.1: to 6.3) and Annex 2: Site Photographs for further information.

Notes: The site lies within a World Heritage Site (WHS). WHS are defined in World Heritage Convention as 'places of outstanding universal value from the point of view of art, history, science or natural beauty'.

4.2 Details of Additional Site Investigation Reports

The following historical mine search report has been produced for this site locality: Metalliferous Mining Search conducted by Cornwall Consultants Ltd, ref: RJH/LAS/CMS/116435, dated 29th February 2016.

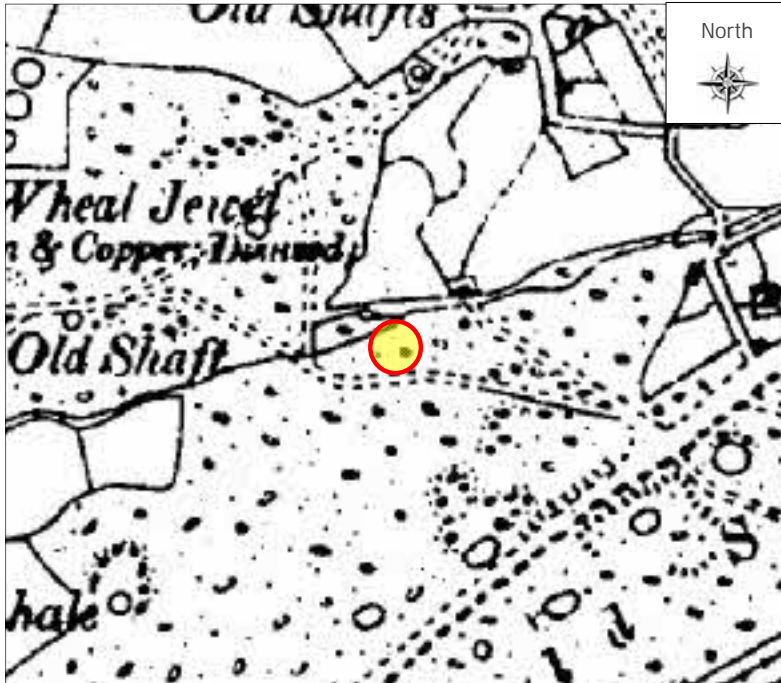
Abbreviated report findings: The site lies upon the boundary of two major copper mines known as Wheal Jewel to the north and Carharrack Mine to the south. Metalliferous lode zone mineralisation is indicated bordering the site and within the property bounds to the south. Extensive areas of mining waste tips encroach beneath the entire property area.

In addition, potential mining features are suspected within the boundary of the site, of which have been identified through aerial photography.

Please refer to Annex 3: Historic Mine Search for full details.

5. Site History

Historical OS Map of 1908



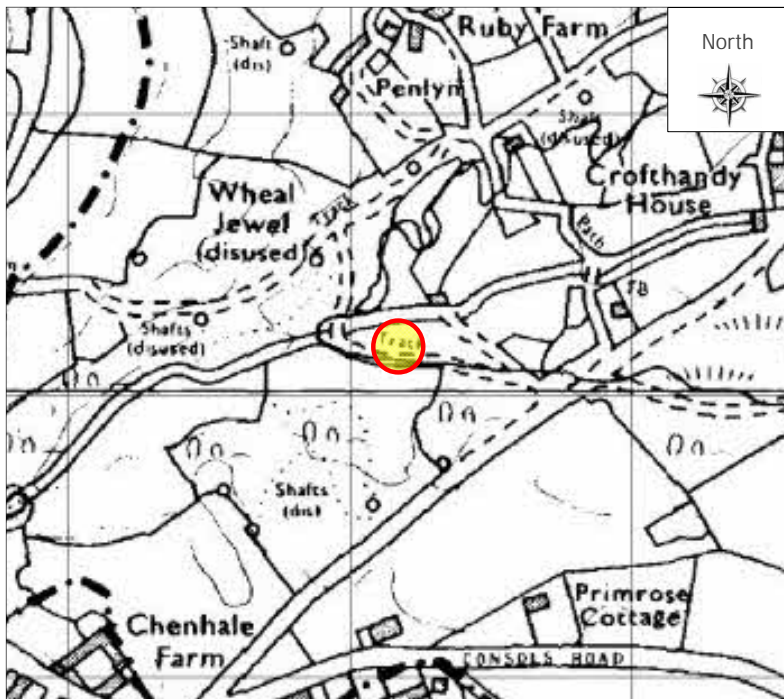
The historical Ordnance Survey (OS) map of 1908 shows the site area (marked in yellow) as lying within mining land comprising of spoil heaps and workings.

Wheal Jewel Mine is shown to lie to the north-west of the site, with Carharrack Mine to the south.

A line of mine shafts (shown by circles) is shown to the south-west with sporadic shafts throughout the general locality.

Historic Ordnance Survey Map copyright 2016 Landmark Information Group
Dated 1908. Survey scale: 1:10,560

Historical OS Map of 1974



The OS survey map of 1974 shows all former mine waste to have been removed from the mapping records.

Little notable change has occurred to the surrounding landscape with the exception of sporadic residential dwellings lying throughout.

Additional OS map data referenced: 1880 1:2,500, 1:10,000 & 1:10,560 series to present day.

No further relevant details are available.

Historic Ordnance Survey Map copyright 2016 Landmark Information Group
Dated 1974. Survey scale: 1:10,000

6. Visual Site Inspection

A walk over survey of the site was conducted on the 24th February 2016, with the weather conditions at the time of the survey being dry. The site was observed from within and outside of its boundaries (where possible) to identify any areas of concern on or adjacent to the property. Any items of note were photographed and recorded.

6.1 Site Layout

The proposed application area consists of an irregular shaped plot of land estimated at 3136m². Current and proposed access to the property can be made from an unnamed lane located toward the south of the site, which in-turn shares access with neighbouring properties.

At the time of the walkover survey, the approach to the site was recorded to be comprised of an approximately triangular tract of primarily open and semi-landscaped amenity land with existing access lane situated toward the north-east boundary. We understand from the client that septic tanks belonging to the property lie within this area of the site.

Toward the central (western) extent of the property the land opens out to a partially gravelled yard and parking area. Two storage containers were noted at this section of the site.

A single small bungalow (to be retained) was noted toward the south-west, with neighbouring wooden chalet (to be replaced) situated immediately to the north-west of the chalet. Located to the rear of the buildings a single garage was recorded, of which is currently being utilised for the storage of domestic items. The location and layout of the buildings currently forms a central, enclosed garden amenity area for the property, with a single small greenhouse located within.

Lying to the rear of the garage, within the far western extent of the site an additional area of open grassed amenity land was observed.

A stream, of which connects to a pond further to the west of the property, was noted to run within the site boundary, entering the site from the western boundary and continuing in an east-north-east direction toward neighbouring land.

Following the survey, no notable contamination features such as unbunded fuel storage tanks, olfactory odours, staining, or suspect areas that could have a detrimental impact upon the application area were recorded. However, historic records have shown the land to have once been overlain by extensive mine spoil heaps, of which has to be considered within the conceptual site model.

The ground profile was recorded as sloping marginally from the east to the west and becoming generally level toward the central extent of the site.

Please refer to section 6.2: Site Plan and Annex 2: Site Photographs for further details.

6.2 Site Plan

<p>Proposed Site Plan</p>	<p style="text-align: center;">North</p>
	<p>SITE:</p> <p>Replacement dwelling at: The Chalet Homefield Crofthandy St. Day Redruth Cornwall TR16 5JB</p>
	<p>Site Inspection Date:</p> <p>24th February 2016</p>
	<p>Site Inspected by:</p> <p>Mr J.R Williamson</p> <p>Position:</p> <p>Site Investigation Manager</p>
<p>Plan drawn and copyright to R A Design.</p>	
<p>Notes:</p> <ul style="list-style-type: none"> • Not to scale, for diagrammatic purposes only. • Site area indicated in red. • Course of stream indicated in blue. • Site access indicated by the green arrow. • Site perimeter estimated at 370m. • Site area estimated at 3136m². 	

6.3 Surrounding Area

North	Open field.
East	Neighbouring residential property & land (Wingle Tang).
South	Tract of overgrown scrubland, open field.
West	Tract of overgrown scrubland.

7. Environmental Setting

7.1 <u>Geology</u>	<p>The geological survey map (British Geological Survey 1:50 000 series, sheet 352) shows the site as lying within sedimentary bedrock comprising of both Metamudstone, Metasandstone and Hornfelsed (heat altered) Slate and Siltstone of the Porthtowan Formation and Mylor Slate Formation respectively. These formations were emplaced during the Devonian Geological Period.</p> <p>Metalliferous lode zones (metalliferous minerals that in-fill a fissure or vein within a rock formation) that have the potential to introduce elevated heavy metal levels into the surrounding ground horizon are indicated within and in proximity to the site.</p>
7.2 <u>Mining Information</u>	<p>The site is indicated to lie within the former lease boundaries of the Wheal Jewel and Carharrack Mines (land owned by the mining companies for the extraction of metalliferous minerals).</p>
7.3 <u>Hydrogeology</u>	<p>Geological records indicate that the property is sited over rocks that can form minor aquifers of intermediate permeability. These can be fractured or potentially fractured rocks, which do not have a high permeability, or other formations of variable permeability including unconsolidated deposits. Although these aquifers will seldom produce large quantities of water for abstraction, they are important both for local supplies and in supplying base flow to rivers.</p> <p>Overlying soils classification: Soils of intermediate leaching potential. (Environment Agency : Policy & Practice for the Protection of Groundwater/ Groundwater Vulnerability of Cornwall & Devon/ 1:100,000).</p>

8. Homecheck Professional Report Information - within 250m radius of site

See Annex 1: Environmental Report For Reference Details

<p>8.1 <u>Surface Water Features</u> (reference page 3)</p>	<p>The environmental report indicates that there are surface water features within 250m of the site locality.</p>	
<p>8.2 <u>Potential Pollution Sources</u> (reference pages 4 - 6)</p>	<p>Registered landfill sites</p> <p>Waste transfer</p> <p>Local Authority landfill sites (HC Ref: 1. W 189m)</p> <p>Historic landfill site (HC Ref: 2 & 3. NW 65m, W 195m)</p>	<p>None</p> <p>None</p> <p>Yes</p> <p>Yes</p>
<p>(reference pages 7 & 8)</p>	<p>Integrated pollution control (IPC) regulations</p> <p>Control of major accident hazards</p> <p>Storage of hazardous substances</p> <p>Explosive sites</p> <p>Radioactive Substances Register</p>	<p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p>
<p>8.3 <u>Known Pollution Incidents</u> (reference pages 7 & 10)</p>	<p>The environmental report has indicated that there is 1 known pollution incident located within 250m of the site.</p> <p>Prosecution relating to authorised processes. (HC Ref: 10. WNW 197m)</p>	
<p>8.4 <u>Discharges to Water</u> (reference pages 7 & 8)</p>	<p>There is 1 identified discharges to water located within 250 metres of the site.</p> <p>(HC Ref: 5. NW 102m)</p>	
<p>8.5 <u>Contaminated Land Register</u> (reference page 5)</p>	<p>Contaminated land register entries & notices</p> <p>Contraventions</p>	<p>None</p> <p>None</p>

<p>8.6 Current Industrial Land Use</p> <p>(reference pages 12 & 13)</p> <p>PCA Potentially Contaminated Area Ref No.</p> <p>There are 0 identified 'current industrial land use' within 250m of the property.</p>	<p>None identified</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------

<p>8.7 Past Industrial Land Use</p> <p>(reference pages 12 & 13)</p> <p>PCA Potentially Contaminated Area Ref No.</p> <p>There are 3 identified 'past industrial land uses' within 250m of the property.</p>	<p>PCA 18, 20 Mining & quarrying (On site, south-east 175m)</p> <p>PCA 19 Railways (south-east 171m)</p>
<p>(reference pages 12 & 13)</p> <p>PIL Potentially Infilled Land Ref No.</p> <p>The Environmental Report has indicated that there are 2 recorded PIL area within 250m of the property.</p>	<p><u>Non-water</u></p> <p>PIL 16, 17 Unknown filled ground (on site, south-east 175m)</p>

<p>8.8 Flooding (reference pages 14 - 16)</p>	<p>The site is indicated to be affected by surface water flooding within 25m of the site area.</p> <p>Further information relating to flood risk zones can be located on the Environment Agency web site.</p>
<p>8.9 Radon Affected Zones (reference page 17)</p>	<p>The site lies within a potential radon affected area, it is indicated that over 30% of homes are above the action level.</p> <p>Radon is a natural gas found in soil and rocks. It has no colour, taste or smell. Levels vary from country to country, region to region and from house to house in the same street. In open spaces, when radon mixes with air, it is quickly diluted into the atmosphere. When air containing radon gas rises from the soil and rocks beneath your property it is possible it may migrate internally, primarily through cracks in floors, walls and gaps around service pipes.</p> <p>Generally a membrane of 300 micrometre (1200 gauge) polyethylene sheet (correctly installed) will be adequate to stop radon migration. Possible prevention measures may require the installation of an active radon ventilation system. We would recommend that advice is obtained from the Local Authorities regarding monitoring & protection.</p>
<p>8.10 Water Abstraction (no reference)</p>	<p>The environmental report has not identified any water abstractions within 250 metres of the site locality.</p>
<p>8.11 Ground Stability Findings (reference page 18)</p>	<p>Moderate potential for natural ground instability. Further action recommended by the British Geological Survey.</p> <p>Ground stability report recommended by Landmark.</p>

9. Preliminary Environmental Risk Assessment/Conceptual Model: Showing Potential 'Source-Pathway-Receptor Linkage' Modes

POTENTIAL SOURCE	
See tables below - Identified contamination sources.	
POTENTIAL PATHWAY	
Inhalation of dust & soil particles, inhalation of vapours, direct ingestion of soil & dust particles, dermal absorption (soil exposure), private water abstraction, ground water, aquifers, consumption of fruit & vegetables, radon gas (ground source migration pathways).	
POTENTIAL RECEPTOR	
Humans, vegetables & fruit, ecosystems, animals, water resources (groundwater & surface).	

9.1 Potential 'Onsite' Contamination Sources: Current & Past

See section 7.1 & 8.9 - Geology and Radon Affected Zones for additional information.

CURRENT/PAST CONTAMINATION SOURCES : ONSITE		(1,2,3) number of entries/features identified HC - Homecheck Ref	Om (onsite)
POTENTIAL CONTAMINATION SOURCE	POTENTIAL CONTAMINANTS & PATHWAY LINKAGE		POTENTIAL RISK TO RECEPTORS
Local geology	Naturally occurring heavy metal contaminants: potential migration via soil, water, air (dust). Probability: likely due to site lying within mineralised zone, identified lode zone within and in proximity to site via mine search data. (Ref: BGS 1:50 000 series, sheet 352).		Medium/high
Potential radon affected area	Radon gas migration within buildings: potential migration via air. Probability: likely, over 30% of homes above action level. Full radon protective measures are necessary.		High
Unknown filled ground (1) HC Ref: 16	Heavy metal contaminants, probable mine spoil: potential migration via soil, water, air (dust). Probability: likely due to former mining activity.		Medium/high
Mining & quarrying (1) HC Ref: 18	Heavy metal contaminants, probable mine spoil: potential migration via soil, water, air (dust). Probability: likely due to former mining activity.		Medium/high

9.2 Potential 'Offsite' Contamination Sources: Current

See Section 8.6 - Current Industrial Land Usage for additional information.

CURRENT CONTAMINATION SOURCES : OFFSITE		(1,2,3) number of entries/features identified HC - Homecheck Ref	Increasing distance from site (m)
POTENTIAL CONTAMINATION SOURCE	POTENTIAL CONTAMINANTS & PATHWAY LINKAGE		POTENTIAL RISK TO RECEPTORS
None identified	None identified		None identified
Please note commercial business activities that are considered to be of negligible human health risk are not included within the conceptual site model.			

9.3 Potential 'Offsite' Contamination Sources: Past

See Section 8.7 - Past Industrial Land Usage for additional information.

PAST CONTAMINATION SOURCES : OFFSITE		(1,2,3) number of entries/features identified HC - Homecheck Ref	Increasing distance from site (m)
POTENTIAL CONTAMINATION SOURCE	POTENTIAL CONTAMINANTS & PATHWAY LINKAGE		POTENTIAL RISK TO RECEPTORS
Historic landfill sites (3) HC Ref: 1,2 & 3	Land fill gas (LFG): potential migration via air Probability: Potential exists due to proximity of landfill to sites.		Low/medium (NW 65m, W 189m, W 195m)
Railways (1) HC Ref: 19	Fly/bottom ash, hydrocarbons, heavy metals, PAHs: potential migration via soil, water. Probability: unlikely due to distance from site zone.		Low (SE 171m)
Unknown filled ground (1) HC Ref: 17	Heavy metal contaminants, probable mine spoil: potential migration via soil, water, air (dust). Probability: unlikely due to distance from site zone.		Low (SE 175m)
Mining & quarrying (1) HC Ref: 20	Heavy metal contaminants, probable mine spoil: potential migration via soil, water, air (dust). Probability: unlikely due to distance from site zone.		Low (SE 175m)

10. Conclusions & Recommendations

Having conducted an on-site inspection and research of the available environmental data for the site locality, we can conclude that the potential risks associated to contamination sources within the proposed site area has been identified as ranging from low to high risk.

For determinations relating to possible source contaminants within and in proximity to the site, please refer to section 9: Preliminary Environmental Risk Assessment/Conceptual Model Showing Potential Source-Pathway-Receptor Linkage Modes.

As potential risks have been established, we have the following recommendations to make with regards to the sites development.

Soil Horizon

A contamination risk has been attributed to the soil horizon at the site locality due to the site lying within the lease boundary of the former Wheal Jewel and Carharrack Mines, with the site once being overlain by mine waste.

Further consideration should be given to inferred lode zone mineralisation (tracts of ground containing potential heavy metals) indicated within the southern extent of the site and within proximity to the property (see section 4.2 - Details of Additional Site Investigation Reports).

Where metalliferous land occurs, the possibility for heavy metal contamination exists. The risk from onsite contaminants would be via an excess of heavy metal concentrations within the soil horizon. Heavy metal contaminants can be detrimental to human health generally over long term exposure periods, with the degree of risk being dependent upon the level of identified contaminants.

We would therefore advise that a preliminary soil sampling investigation is undertaken within the proposed garden localities of the site to assess the level of potential heavy metal contaminants (deemed to be the areas of highest risk). This should be in the form of a Phase 2 Site Investigation report. Should this demonstrate that the site is not contaminated then no further works will be required.

If the additional Phase 2 reporting demonstrates that the site is at risk, further reporting and additional testing may be required by the Local Authority and in certain circumstances the Environment Agency before the site can progress.

We do not recommend that water samples be obtained due to all potable water being supplied via mains water supply. Should high levels of contamination be identified, we would consider it advisable to install contaminant resistant PE/Barrier water supply pipes set within suitable ducting.

On completion of the Phase 2 on-site testing works and in conjunction with the proposed site layout, a Phase 3 Remediation Strategy Report will be required to demonstrate how the site can be safely developed in respect of the end users.

Please note that a Phase 4 Site Verification and completion inspection will be required upon finalisation of all building works. This will be issued upon completion of the development works in order to establish that the Phase 3 recommendations have been satisfied.

Radon Gas

We would recommend that due to the site lying within a potential radon affected zone, where over 30% of homes are above the action level, that as a precautionary measure radon gas venting protection be incorporated within any new building designs proposed for the site. Such measures would require the installation of a passive system such as a radon proof membrane with adequate under floor ventilation to disperse possible radon gas migration, or an active ventilation system (see section 8.9 Radon Affected Zones).

Land Fill Gas (LFG)

We would recommend that due to the site lying within proximity to a former historic landfill site that an appropriately prepared LFG report is produced for the development by a suitably qualified consultant. The report will include information on the potential for LFG to migrate offsite and to recommend appropriate remedial measures should they be required.

Excess Soil Disposal

Due to government legislation on landfill waste, should excess soil be removed from the site area through the construction process, any removal of material off site must be by a licensed haulier and disposed of at an accredited waste disposal facility.

Unexpected Contamination

Should unrecorded contamination be encountered during the sites development phase in the form of buried tanks, unknown buried waste material, olfactory odours or obvious pollutants, we would advise that all works must stop within the suspect area and contact with ourselves and the local authorities be established before work is initiated within the area of concern.

Following the above recommendations, we have no further comments to make within the scope of this report.

11. Notes

1. The conclusions and recommendations sections of this Phase 1 Contaminated Land Survey relates to the form and extent of development outlined herein for this specific property only and they should not be taken as suitable for any other form or extent of development within the boundaries of this property without further consultation with Approved Site Investigations Ltd.
2. This report only relates to the area defined in the attached environmental report.
3. The report should not be used in any way in connection with adjacent properties.
4. In respect of the archival mining report (if supplied) and the environmental report (Landmark data), the information is subject to the limitations and terms as defined in those reports. The supplier cannot guarantee the accuracy or completeness of the data provided, nor does the supplier guarantee to identify all the factors that may be relevant.
5. Approved Site Investigations Ltd cannot be held liable for contamination sources that may be introduced to the site, either within, or outside of the site boundaries subsequent to the writing of this contaminated land survey report.
6. This report is confidential to the named client(s) and we have no liability toward any person not party to commissioning this report.
7. This report may not be reproduced or distributed to third parties without our prior permission other than to directly facilitate the sale or development of the property concerned.

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.

Approved Site Investigations Ltd

Approved Site Investigations Ltd



Verified by:

Mr. J.R Williamson
(Managing Director)
HND, Dip CSM (Industrial Mining Geology)

12. Annexes

- Annex 1 - Environmental Report
- Annex 2 - Site Photographs
- Annex 3 - Mine Search
- Annex 4 - References & Planning Procedure Guide

Annex 1 - Environmental Report



Contamination Risk FURTHER ACTION

Professional Opinion

In the opinion of Argyll Environmental Consultants, this report requires Further Action. Please refer to the Professional Opinion page and Section 1 for further information.



Flood Risk: IDENTIFIED

Refer to Section 2 for further information

Conveyancer Guidance

We consider there to be a risk of flooding within 50m of the search centre. Please refer to Section 2 for further information.



Radon: IDENTIFIED

Refer to Section 3 for further information



Ground Stability: IDENTIFIED

Refer to Section 4 for further information



Other Influential Factors:

Refer to Section 5 for further information

Environmental Constraints: None Identified

See Section 5a

Report issued for the property at
Homefield
Crofthandy
St. Day
REDRUTH
TR16 5JB

Report Reference
80359695_1_1

National Grid Reference
173660 42030

Customer Reference
A1150_HCP

Report Date
16 February 2016

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 £60,000 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

FURTHER ACTION

The Homecheck Professional report dated 16th February 2016 and reference 80359695_1_1, A1150_HCP has been prepared for

Homefield
Crofthandy
St. Day
REDRUTH
TR16 5JB

A review of the available historical map data has identified that the centre of the search is located on or within 25 metres of unknown filled ground.

The data examined in this risk assessment indicates that there may be a potential source of contamination which may have implications for the property.

In our opinion, there is the potential that the property could be described as "contaminated land" as defined by Part 2A of the EPA 1990.

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



Next Steps

A re-review of the report can be requested if you have further information relating to the site. See below for instructions on how to submit this and for further information.

Submit Further Information and Request a Re-Review

In completing this report Argyll Environmental Ltd have undertaken a review of data made available to them. No site inspection, further enquiries or investigation of ground conditions has been completed as part of this assessment.

1) In order to potentially revise the risk assessment provided, additional information will need to be reviewed. This could include:

NHBC, LABC or Premier Guarantee Certificates where contaminated land cover has been provided.

Local Authority Environmental Health Department: obtain recent information regarding relevant details under the Council's Part 2A strategy including, any past industrial land uses, pollution incidents/records of contamination, past site investigations/remediation, and any other concerns regarding ground conditions on and adjacent to the property.

Local Authority Planning Department: obtain information on the development of the property (i.e. a summary planning history) identifying any existing reports/information on any environmental conditions attached to planning permissions (e.g. a site investigation or remediation work) confirming that these conditions have been satisfied.

Petroleum Licensing Officer / Trading Standards Department: for information on a property with potential bulk fuel storage (i.e. former petrol filling station) obtain information to confirm if there are any records held including details of storage tank numbers, volumes, dates of integrity testing, details of any past leakages or spills and subsequent decommissioning of former storage tanks.

If you have obtained any of the above further information and would like to take advantage of our free re-review service, please send it to helpdesk@landmark.co.uk or alternatively by post to Customer Services, Landmark Information Group, Imperium, Imperial Way, Reading, Berkshire RG2 0TD.

Any relevant information will be reviewed within 2 working days and a revised risk assessment opinion issued. (Note: a time charge will be discussed in advance for any significant volumes of information).

2) If you do not have any additional information and require Argyll Environmental Ltd to carry out further enquiries, the inclusive cost (including provision of a follow-up report) will typically be £250+VAT. This cost includes the Authority's own search fees and may take around 10-20 working days dependant on the Authority's response time. Please email: helpdesk@landmark.co.uk or phone Customer Services on 0844 844 9966. An invoice will be forwarded to you upon completion.

3) After the above enquiries, if further information is still required to address the potential contamination issue on site, a Sampling Investigation Report could be considered. This report includes a site visit, soil sampling and a quantitative risk assessment. The cost is dependent on location, scope and timescale and is usually completed within 15-25 working days. Please email helpdesk@landmark.co.uk with your specific requirements.

If you have any questions please don't hesitate to contact us on 0844 844 9966 or helpdesk@landmark.co.uk.

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	Yes	Yes	1b
Potentially Contaminative Activities	No	Yes	Yes	1c
Known Pollution Incidents	No	Yes	Yes	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	Yes	No	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	Yes	4b



Section 5: Other Influential Factors

Other Influential Factors	Result	See Section
Environmental Constraints	No	5a



Site Location



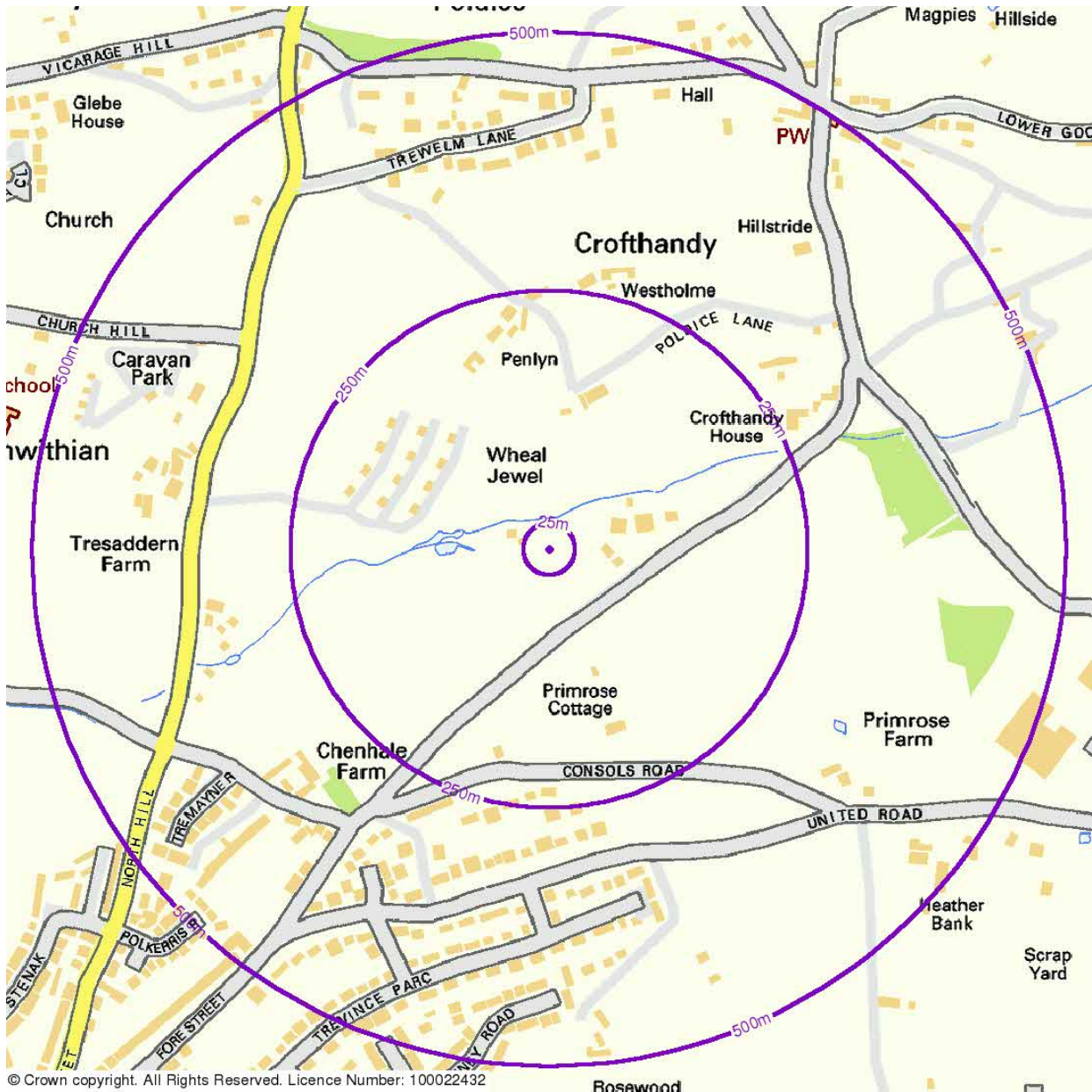
Aerial Photograph

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.





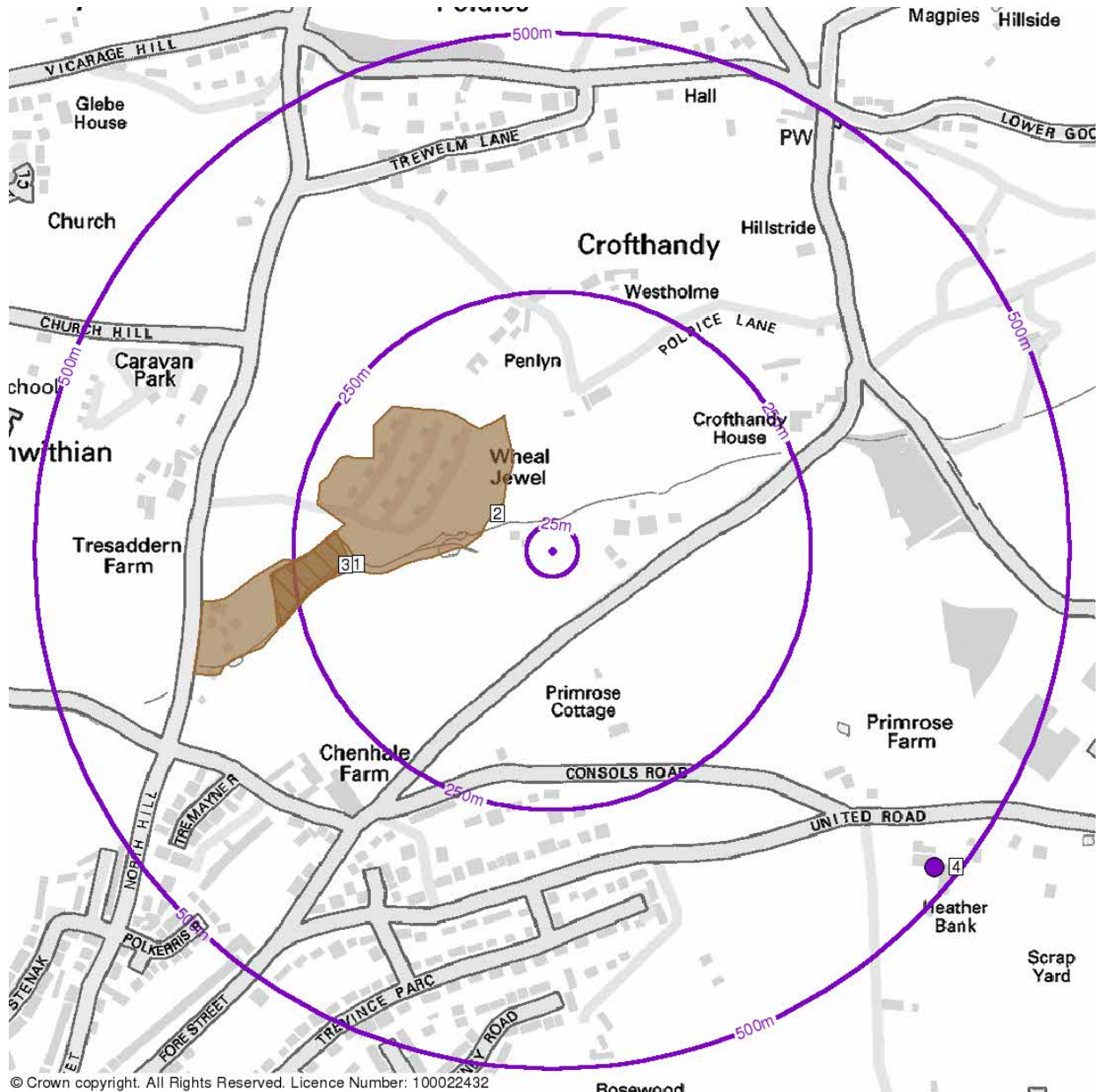
Section 1: Contamination Risk Findings

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.



© Crown copyright. All Rights Reserved. Licence Number: 100022432

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: 35	Pound Caravan Site, Carharrack, Redruth / Wheal Jewell	Last Reported Status: Unknown Waste Text: Mine Fill (Heavy Metal Contamination) Date of Closure: Not Supplied Boundary Quality: Good Positional Accuracy: Positioned by the supplier	189m	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	4
Kerrier District Council	- Has no landfill data to supply	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: Pound Caravan Site Reference: EAHLD08092	Pound Caravan Site, Carharrack, Redruth	Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial and Household 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	65m	2
3	Name: Pound Caravan Site Reference: EAHLD08284	Wheal Jewell Gypsy Site - Pound Caravan Site, Crofthandy, St. Day, Cornwall	Specified Waste Type: Not Supplied 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	195m	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

4	Name: T Wave & Sons Reference: WM/2/ 9/ 19	Heatherbank United Road St Day REDRUTH Cornwall TR16 5HT	Site Category: Scrapyard Licence Status: Operational as far as is knownOperational Record Date: 1st November 1996 Max Input Rate: Very Small (Less than 10,000 tonnes per year) Boundary Quality: Not Supplied Positional Accuracy: Manually positioned to the address or location	479m	2
---	-----------------------------------------------	----------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------	---

Registered Waste Transfer Sites

No factors identified for this property

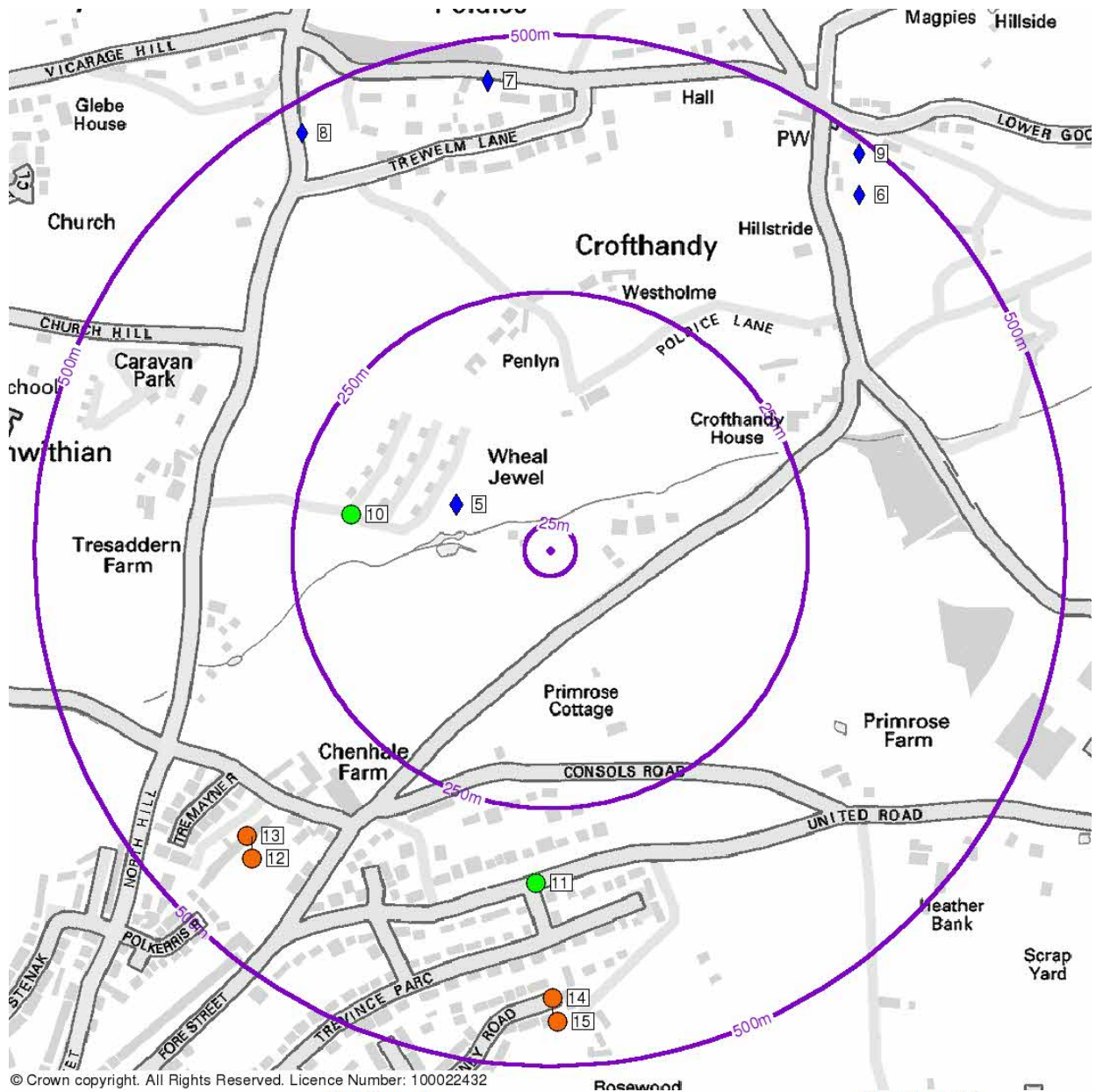
Next Steps

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.



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?	Yes

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

5	Name: Cornwall County Council Reference: Nra-S w-3436	Gypsy Site At Wheal Jewel St Day Redruth Cornwall	Type: Sewage Discharge Discharge Type: Sewage Discharges - Final/ Treated Effluent - Not Water Company Property Type: Other Tourist/Short Stay Accommodation Discharge Environment Type: Freshwater Stream/River Receiving Water: St Day Stream Status: Not Supplied Date of Issue: 19th December 1991 Positional Accuracy: Located by supplier to within 100m	102m	2
6	Name: Mr R Gazzard Reference: Nra-S w-5878	Chy Lowen (Plot 1) Lower Goongumpus Lane Crofthandy St Day Redruth Cornwall	Type: Sewage Discharge Discharge Type: Sewage Discharges - Final/ Treated Effluent - Not Water Company Property Type: Domestic Property (Single) Discharge Environment Type: Land/Soakaway Receiving Water: Soakaway Status: Not Supplied Date of Issue: 2nd August 1993 Positional Accuracy: Located by supplier to within 100m	457m	2

Map ID	Reference	Location	Details	Distance	Contact
7	Name: Mr H N & Mrs T Liggat Reference: 301022	Trewelm Crofthandy St Day Redruth Cornwall Tr16 5pr	Type: Sewage Discharge Discharge Type: Sewage Discharges - Final/ Treated Effluent - Not Water Company Property Type: Domestic Property (Single) Discharge Environment Type: Land/Soakaway Receiving Water: Soakaway Status: Not Supplied Date of Issue: 8th October 1999 Positional Accuracy: Located by supplier to within 100m	460m	2
8	Name: Mr A J Lawer Reference: NRA-SW-6878/1	Land At Poldice St Day REDRUTH Cornwall	Type: Sewerage Discharge Discharge Type: Sewage Effluent Discharge- Treated Effluent Property Type: Wooden Containers Discharge Environment Type: Land/Soakaway Receiving Water: Licence Status: Lapsed, Revoked Or Cancelled Status: Not Supplied Date of Issue: 27th September 1994 Positional Accuracy: Located by supplier to within 100m	472m	2
9	Name: Mr K Palmer Reference: 300831/S a	5 Chapel Terrace Crofthandy St Day Redruth Cornwall Tr16 5jq	Type: Sewage Discharge Discharge Type: Sewage Discharges - Final/ Treated Effluent - Not Water Company Property Type: Domestic Property (Single) Discharge Environment Type: Land/Soakaway Receiving Water: Soakaway Status: Not Supplied Date of Issue: 20th October 1998 Positional Accuracy: Located by supplier to within 100m	488m	2

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

Next Steps

If you would like any further information in respect of the above findings we recommend that you contact the relevant Local Authority or the Environment Agency/Natural Resources Wales, their contact details can be found in the 'Useful Contacts' section of this report. Further Information is also available in the 'Useful Information' section.

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?	Yes

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

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

10	Reference: Not Supplied	Wheal Jewell Travellers Site St Day	Details: Dumping packaging and plasterboard on a site without a WML - Suspended jail sentence & Community order served Hearing Date: 19th October 2007 Prosecution Verdict: Guilty Positional Accuracy: Manually positioned within the geographical locality	197m	2
11	Reference: Not Supplied	United Road St Day REDRUTH Cornwall TR16 5HT	Details: EA News Release 26/06/1997 Burning tyres and wheels in breach of the company's licence. Hearing Date: 26th June 1997 Prosecution Verdict: Guilty Positional Accuracy: Manually positioned to the road within the address or location	323m	2

Environmental Pollution Incidents

12	Reference: 674788	Not Supplied	Incident Type: Pollution Incident - Environmental Impact - Air: Significant Incident Incident Date: 29th April 2009 Positional Accuracy: Located by supplier to within 10m Pollutant Type: Atmospheric Pollutants And Effects: Landfill Odour	402m	2
13	Reference: 621409	Not Supplied	Incident Type: Pollution Incident - Environmental Impact - Air: Significant Incident Incident Date: 15th September 2008 Positional Accuracy: Located by supplier to within 10m Pollutant Type: Atmospheric Pollutants And Effects: Landfill Odour	404m	2

Map ID	Reference	Location	Details	Distance	Contact
14	Reference: 621265	Not Supplied	Incident Type: Pollution Incident - Environmental Impact - Air: Significant Incident Incident Date: 14th September 2008 Positional Accuracy: Located by supplier to within 10m Pollutant Type: Atmospheric Pollutants And Effects: Landfill Odour	451m	2
15	Reference: 673134	Not Supplied	Incident Type: Pollution Incident - Environmental Impact - Air: Significant Incident Incident Date: 23rd April 2009 Positional Accuracy: Located by supplier to within 10m Pollutant Type: Atmospheric Pollutants And Effects: Landfill Odour	457m	2

Prosecutions Relating to Controlled Waters

No factors identified for this property

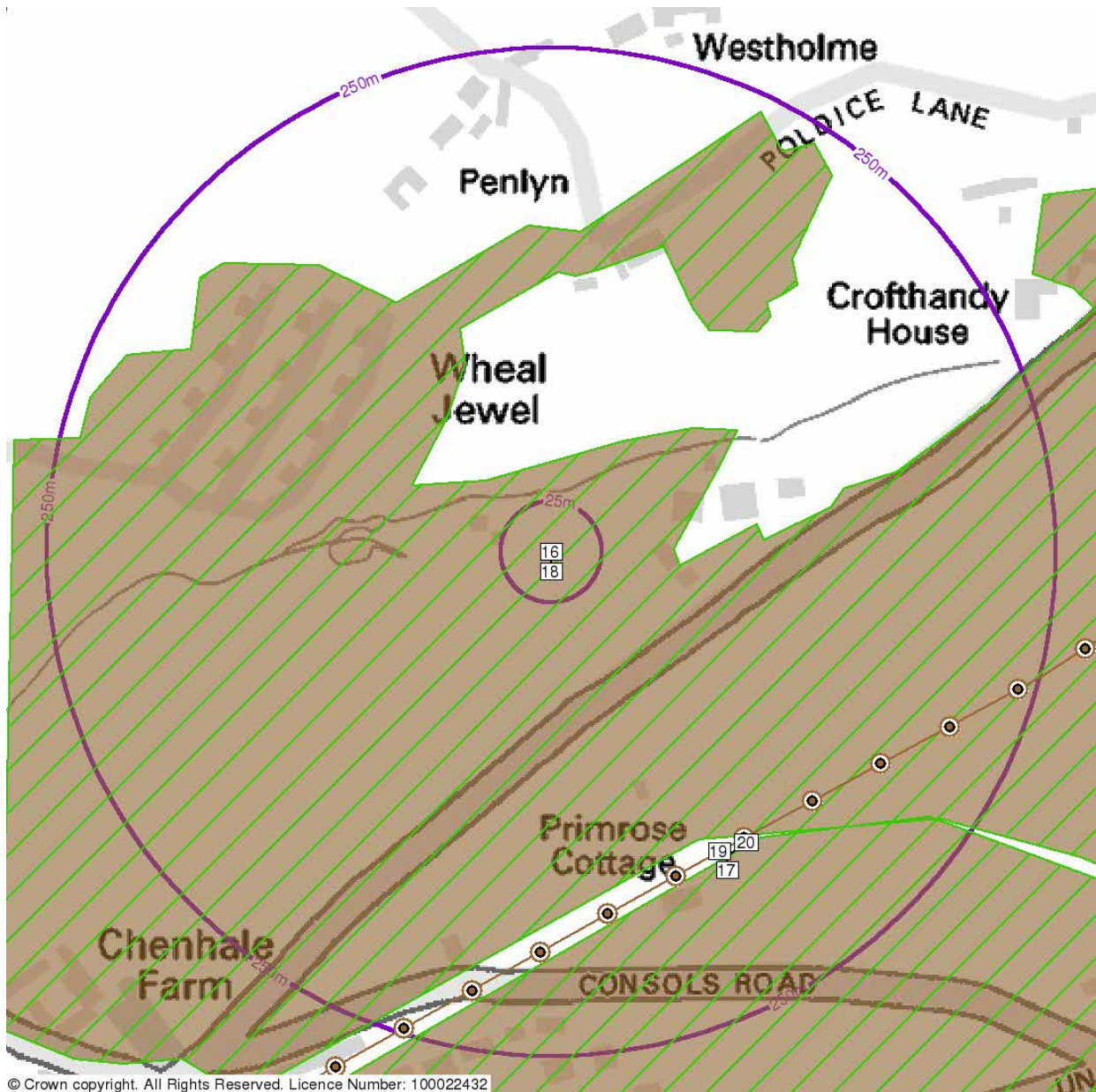
Next Steps

If you would like any further information in respect of the above findings we recommend that you contact the relevant Local Authority or the Environment Agency/Natural Resources Wales, their contact details can be found in the "Useful Contacts" section of this report. Further information is also available in the "Useful Information" section.



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

No factors identified for this property

Former Marshes

No factors identified for this property

Potentially Infilled Land (Non-Water)

16	Not Supplied	Not Supplied	Unknown Filled Ground (Pit, quarry etc) Map Published Date: 1992	0m	-
17	Not Supplied	Not Supplied	Unknown Filled Ground (Pit, quarry etc) Map Published Date: 1993	175m	-

Potentially Infilled Land (Water)

No factors identified for this property

Potentially Contaminative Industrial Uses (Past Land Use)

18	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	0m	-
19	Not Supplied	Not Supplied	Class: Railways Map Published Date: 1888 - 1908	171m	-
20	Not Supplied	Not Supplied	Class: Mining & quarrying general Map Published Date: 1888	175m	-

Historical Tanks And Energy Facilities

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 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.



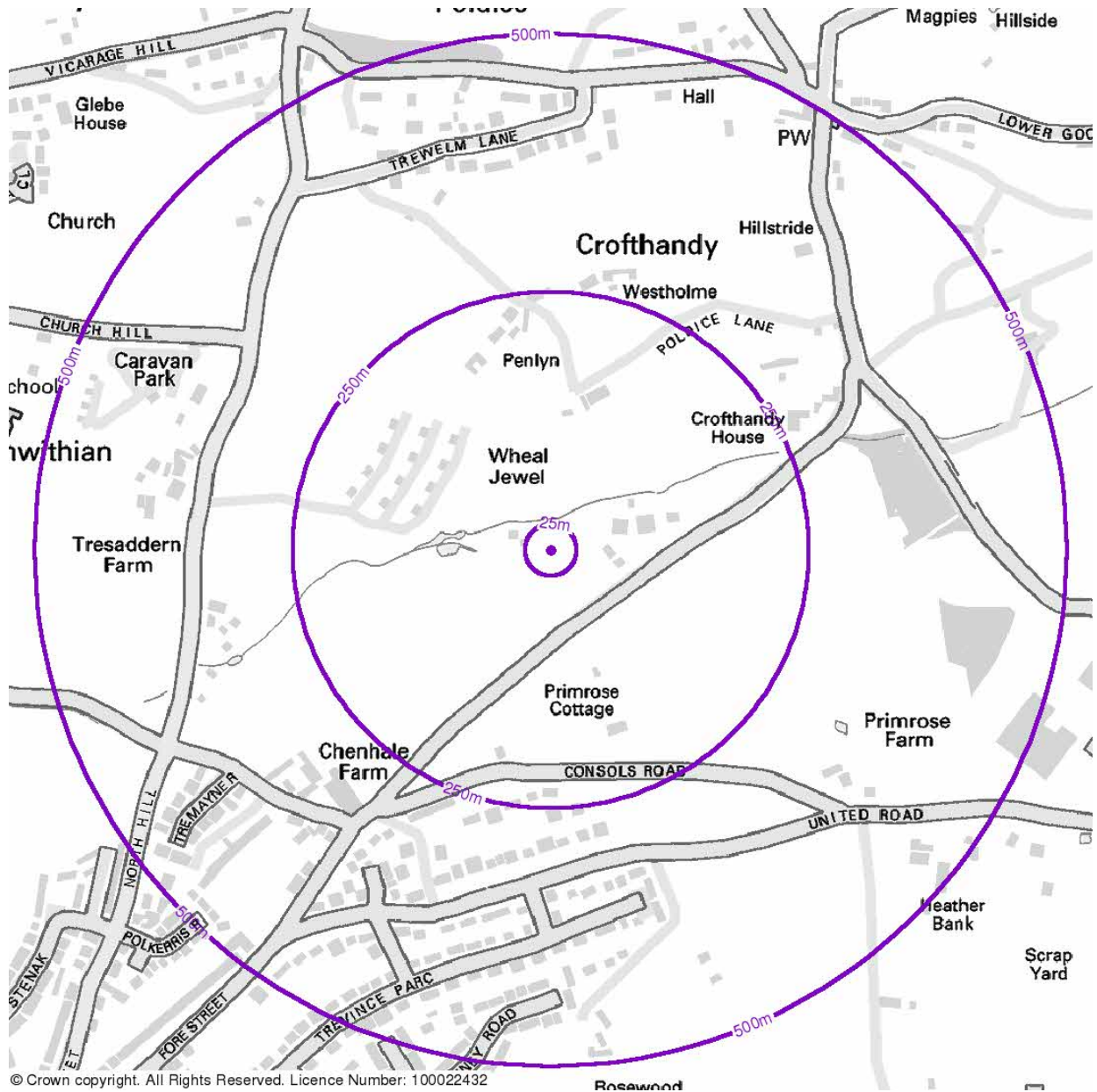
Section 2: Flood Findings

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



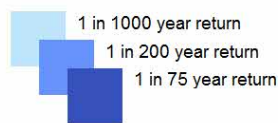
Section 2a and 2b: River and Coastal Flood Map

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.

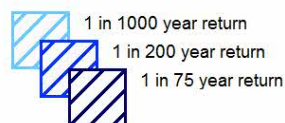


© Crown copyright. All Rights Reserved. Licence Number: 100022432

River Flooding



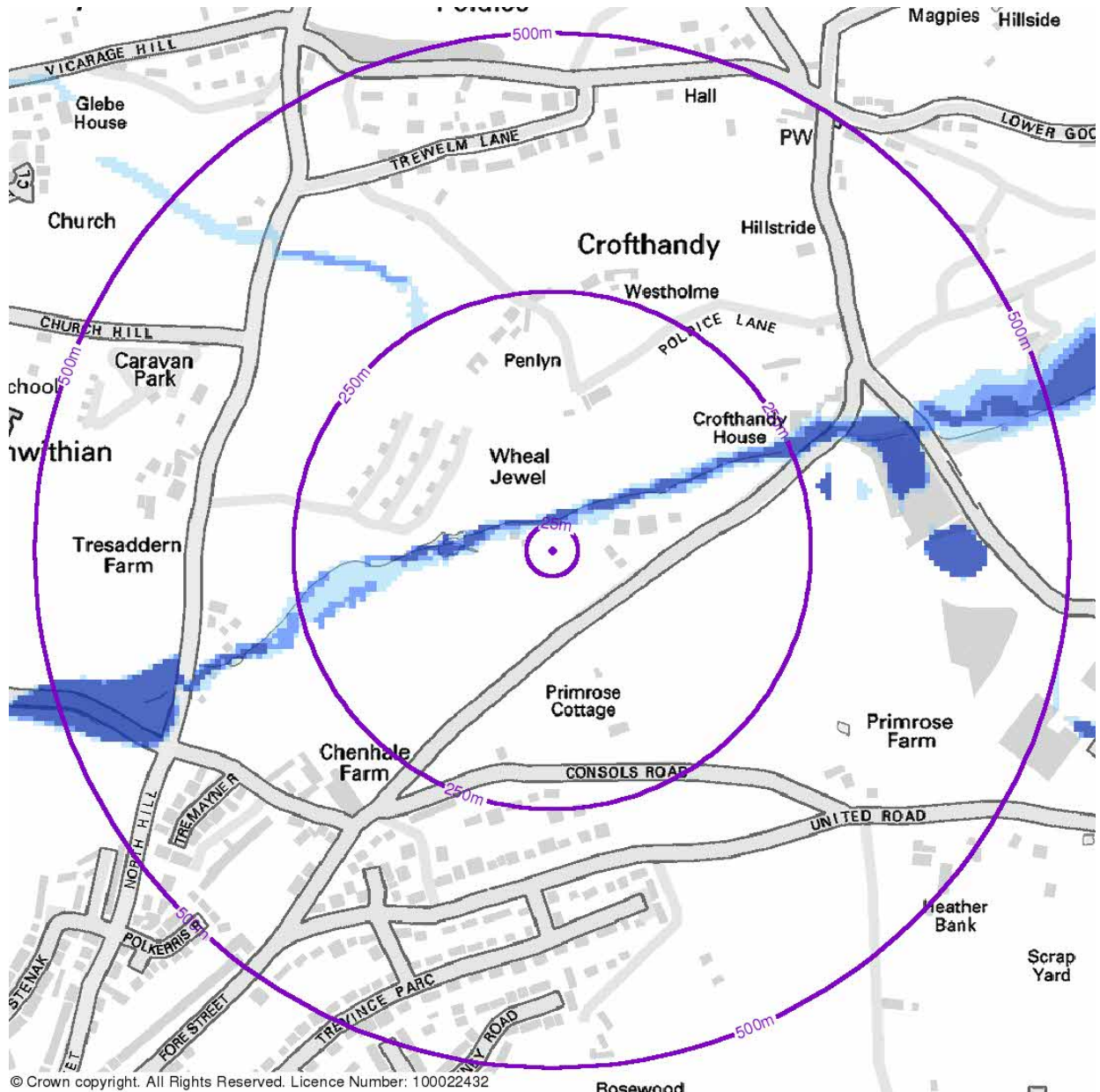
Coastal Flooding





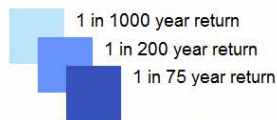
Section 2c: Surface Water Flood Map

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.



© Crown copyright. All Rights Reserved. Licence Number: 100022432

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 Homecheck Professional 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 2008-2016



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 within 25m of 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 area within 25m of 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?	Moderate	-
<p>Comment: The British Geological Survey has assessed the area of search as having moderate 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.</p>		

Next Steps

This section has highlighted that ground stability is an area of concern, meaning that your property may be affected by subsidence or land-heave. If you would like any further information in respect of the above findings we recommend that you purchase our Ground Stability Report. Please contact your Search Provider or our Customer Services Team on 0844 844 9966 or email helpdesk@homecheck.co.uk.



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?	No

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

Ancient Woodland

No factors identified for this property

Areas of Outstanding Natural Beauty

No factors identified for this property

Boundaries - National Parks

No factors identified for this property

Country Parks

No factors identified for this property

Environmentally Sensitive Areas

No factors identified for this property

Local Nature Reserves

No factors identified for this property

Marine Conservation Zones

No factors identified for this property

National Nature Reserves

No factors identified for this property

Forest Parks

No factors identified for this property

National Parks

No factors identified for this property

National Scenic Areas

No factors identified for this property

Nature Improvement Areas

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

World Heritage Sites

No factors identified for this property

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
-----------------------------------------------------	--------------------	-------------------------------------

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 - 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
------------------------------------------------------------	--------------------	--------------------------------------------------

Contact 5 - Kerrier 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
------------------------------------------------------------	--------------------	--------------------------------------------------

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
--------------------------------------------------------------------	------------------------------------------	----------------------------------------------------

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:



THE
COAL
AUTHORITY



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. EI 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/515>. 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.

Landmark Standard Terms and Conditions

Full Terms and Conditions can be found on the following link: <http://www.landmarkinfo.co.uk/Terms/Show/515>

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.

Copyright Statement

The data supplied for this Homecheck Professional report falls under the following copyrights: © Landmark Information Group and/or its Data Suppliers 2016; © Environment Agency and database right 2016; © Copyright 2016 Natural Resources Wales. All rights reserved ; ©Experian Ltd 2016; Produced in whole or in part under licence from, and based in whole or in part from copyright material of © Thomson Directories Limited; © The Coal Authority owns the copyright to this data and the coal mining information used to produce it; © Peter Brett Associates LLP 2016; © Ofcom copyright 2016; © Natural England 2016 material is reproduced with the permission of Natural England, <http://www.naturalengland.org.uk/copyright>; Contains Ordnance Survey Data. Ordnance Survey Licence number 100022432 Crown Copyright and Database Right 2016; © HS2 Ltd and licensed under the Open Government Licence.



Search Code

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Landmark Information Group Ltd, Imperium, Imperial Way, Reading, Berkshire, RG2 0TD. Telephone: 0844 844 9966, Fax No: 0844 844 9980, email: helpdesk@landmark.co.uk which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered firms maintain compliance with the Code.

The Search Code:

- Provides protection for homebuyers, sellers, 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.

The Code's core principles

Firms which subscribe to the Code will:

- Display the Code logo prominently on their search reports.
- Act with integrity and carry out work with due skill, care and diligence.
- 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 all search services comply with the law, registration rules and standards.
- Monitor their compliance with the Code.

COMPLAINTS

If you have a query or complaint about your search, you should raise it directly with the firm, and if appropriate ask for your 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 compensation of up to £5,000 to you if it finds that you have suffered actual loss 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.

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

You can get more information about the PCCB from www.propertycodes.org.uk

PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE



Search Code

COMPLAINTS PROCEDURE

If you want to make a complaint, we will:

- Acknowledge it within 5 working days of its 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:

Head of Customer Relations
Landmark Information Group Ltd
Landmark UK Property
Imperium
Imperial Way
Reading
RG2 0TYD

Telephone: 0844 844 9966

E-mail: 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, E-mail: admin@tpos.co.uk.

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

Annex 2 - Site Photographs

Photograph 1.



View: north-west

Looking to site access lane from unnamed road, with neighbouring property to the right of image.

Photograph 2.



View: north-west

Continuation of access lane to site.

Photograph 3.



View: west-north-west

Garden amenity area located toward the east of existing dwellings.

Photograph 4.



View: west

Garden amenity area to the east of dwellings and location of septic tanks.

Photograph 5.



View: west

Looking to central site area, with proposed replacement dwelling toward the centre of image.

Photograph 6.



View: south

Storage containers located within parking area of site.

Photograph 7.



View: west

Parking area of site, with bungalow to remain undeveloped to the left of image and dwelling for replacement toward centre of image.

Photograph 8.



View: north-west.

Parking area of site, with neighbouring land beyond.

Photograph 9.



View: south

Bungalow to remain undeveloped

Photograph 10.



View: south-west

Existing dwelling for redevelopment.

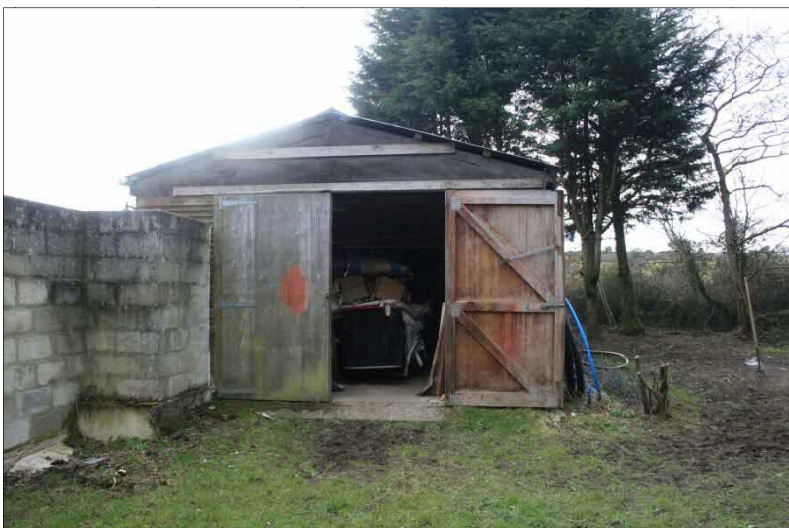
Photograph 11.



View: south-west

Amenity land to the rear of the dwellings.

Photograph 12.



View: south

Existing garage to the rear of dwelling.

Photograph 13.



View: east

Rear elevation of the proposed dwelling for redevelopment.

Photograph 14.



View: north-north-west

Central amenity area located to the rear of the dwellings, with the garage to the left of image.

Photograph 15.



View: north-west

Central amenity area looking to garage.

Annex 3 - Mine Search



Our Ref: RJH/LAS/CMS/116435

29th February 2016

Approved Site Investigations Ltd
Duchy Business Centre
Wilson Way
Pool
RED RUTH
Cornwall
TR15 3RT

Dear Sirs

MINING SEARCH: METALLIFEROUS MINERALS

Re: Homefield, Crofthandy, St Day, Redruth, Cornwall TR16 5JB
NG Ref: SW 7362 4204

We thank you for your request of 15th February. Accordingly, we have carried out a Mining Search on the above property and are able to report as follows.

Introduction

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

Mining Activity

The property is situated in an area where considerable historic metalliferous mining activity has taken place. It lies on the boundary of the former lease boundaries of two major copper mines known as Wheal Jewel to the north and Carharrack Mine to the south. These mines were active during the eighteenth and nineteenth centuries until about 1860.

Mineralisation in the locality occurs in planar structures (lodes) which occupy former fissures in the slate and granite bedrock. The lodes, which generally course in an east-northeast to west-southwest direction, vary in width from 1 metre up to several metres and are either vertical or inclined at angles usually steeper than 50° from the horizontal. These lodes were worked by means of shafts sunk from surface with horizontal tunnels (levels) driven at vertical intervals away from the shafts along the lode. The payable ore was then extracted from between the levels.

The available abandoned mine plans of Wheal Jewel are poor and do not appear to show the full extent of the underground workings. There are no available plans of Carharrack Mine. Not until 1872 did it

became a legal requirement for metal mines to keep accurate and up-to-date plans of the underground workings and to deposit these with the Mining Record Office upon abandonment. However, this did not apply to mines that employed less than 12 people working underground and neither did it require mines to survey any older workings that were inaccessible or unused after 1872. As a result, most of the older workings and smaller mines remain poorly recorded.

The majority of the recorded activity at Wheal Jewel was concentrated on Wheal Jewel South Lode which courses in an east-northeast to west-southwest direction and is inclined steeply to the north-northwest at an angle of 70°. This is inferred from the recorded workings to pass 30 metres northwest of the property boundary. The principal shaft on this lode is Tremayne's Shaft, which lies 90 metres north of the property. This shaft follows the inclination of the lode to a total depth of approximately 300 metres. The shallowest recorded working is the drainage level (adit) at an approximate depth of 55 metres.

Two other parallel lodes, inclined down at an angle of 55° (from the horizontal) are recorded to be present to the south of Wheal Jewel South Lode. These are named as Tin Lode and Copper Lode and lie to the northeast of the property boundary. These were accessed from Skinner's Shaft, which lies 80 metres northeast of the property. These lodes are shown on a district mining map (dated 1845) to end 50 metres northeast and over 10 metres east-northeast of the property boundary. However, based on the recorded workings it is inferred that these lodes would crop out further south than represented on the 1845 map and close to the mine lease boundary between the two mines. This 1845 map also shows the northernmost lode of Carharrack Mine passing through the southeastern part of the property, with a shaft close to the southern boundary of the property. However, there are no mine plans for Carharrack Mine and the extent of the workings along this lode is not known. It is believed that this lode is very steeply inclined or vertical.

The early Ordnance Survey maps (dated 1880 and 1908) show extensive areas of mine waste tips which encroach beneath the entire property.

The aerial photographs of this area (dated 1951) show extensive sections of disturbed land within these waste tips and adjoining areas which probably represent unrecorded mining features. Also the Cornwall National Mapping Project shows other anomalous features within the southeast section of the property. These are indicative of possible shafts.

Discussions

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

Conclusions

Based on the available documentary evidence, we are unable to provide an assurance that the property will not be affected by subsidence caused by historic extractive mining. It is recommended that a Mining Investigation be carried out to determine whether or not shallow mine workings exist beneath the property. This investigation may involve the excavation of trenches or drilling of boreholes in order to provide the detailed information on ground conditions required to either eliminate or accurately assess the risks posed.

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

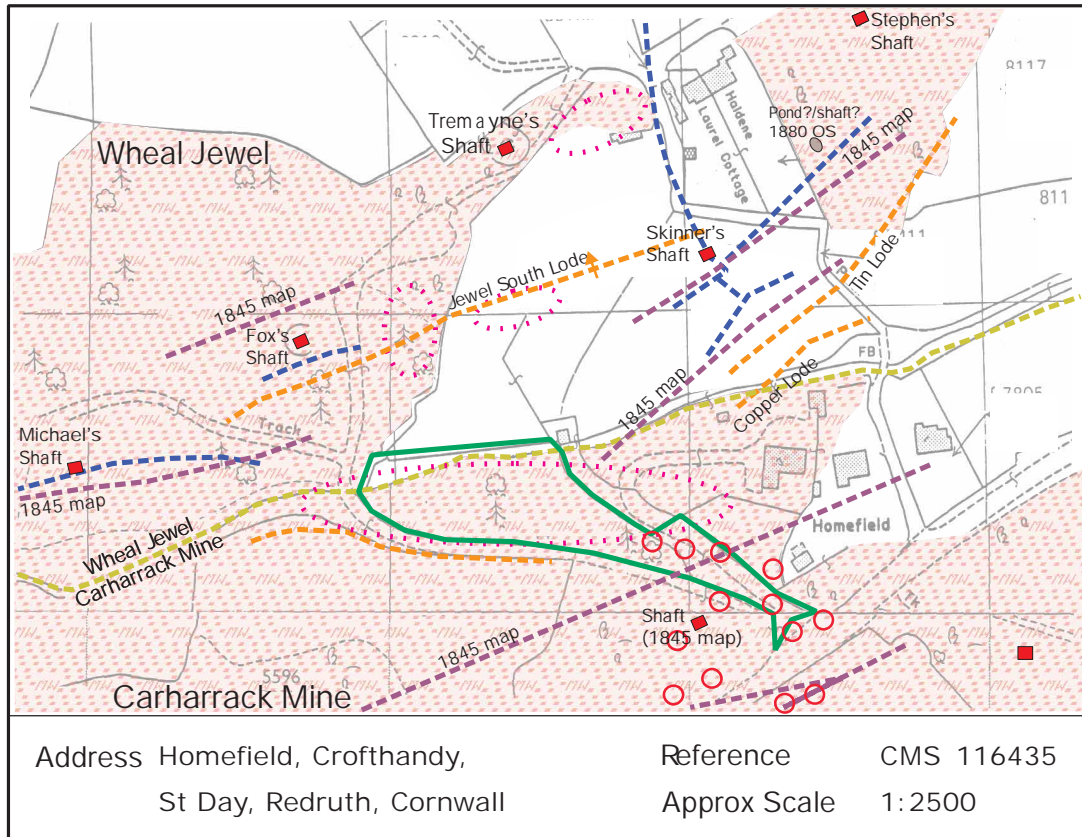
Limitations

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

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

Yours faithfully
for Cornwall Consultants Limited

Mr D Berriman, BSc (Hons)
Managing Director



- Property boundary
- Recorded lode
- Inferred lode outcrop
- Inferred lode outcrop zone
- Adit
- Crosscourse
- Elvan dyke
- Shaft
- Mine waste
- Air photo anomaly
- Cornwall National Mapping Project anomaly

Please note:

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

Annex 4 - References & Planning Procedure Guide

References:

AGS: Association of Geotechnical & Geoenvironmental Specialists, (2003)

British Standards Institution, 1999, BS 5930:1999 Code of Practice for Site Investigations

British Standards Institute 2011, 10175: Investigation of Potentially Contaminated Sites (Code of practice)

CIRCA Report C552 Contaminated Land Risk Assessment, A Guide To Good Practice (2001)

DEFRA/EA (2004) Model Procedures for the Management of Contaminated Land, R&D Publications CLR11

DEFRA/EA (2002) Contaminants in Soil: Collation of Toxicological Data Intake Values for Humans, R&D Publications SGV 1

DEFRA/EA (2002) Potential Contaminants for Assessment of Contaminated Land, R&D Publications CLR8

DEFRA/EA (2002) Soil Guideline Values for Arsenic Contamination, R&D Publications CLR8

DEFRA/EA (2002) CLR Report No10, The Contaminated Land Exposure Assessment Model (CLEA):

DEFRA/EA (2012) Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance

Dines, H.G. The Metalliferous Regions of South West England (2 Vols)

Environment Agency (January 2006) Development and Flood Risk 2004/05

Environment Agency (2004) CLR Report No 11 Model Procedures for the Management of Land Contamination

Environment Agency, Policy & Practice for the Protection of Groundwater/ Groundwater Vulnerability of East Cornwall/ 1:100,000

ICRCL - Interdepartmental Committee for the Redevelopment of Contaminated Land (1976-1990) Various Publications, HMSO

Magic Website, Multi-Agency Geographic Information for the Countryside.

National Planning Policy Framework ,2012

NHBC/EA (2008) - Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66

Remedial Treatment for Contaminated Land Vol. III – Site Investigation and Assessment, Special Publication 103

Selwood E.B, Durrance E.M, Bristow C.M,(1998): The Geology of Cornwall

Steeds, J.E, Slade, M.W : Technical Aspects of Site Investigations. Vol 1 (of 2) Overview

Maps & Plans:

Dines, H.G. Composites

Get mapping: Aerial Photographs

Jenkin, A.K.H

Ordnance Survey Maps/historical & current



General Planning Procedure Chart

PHASE 1 Desktop Site Report (Contaminated Land Survey)

Environmental survey listing site history
Identify any contaminants of concern/conceptual model
Mine search (historic survey)
Walk-over survey

Submit planning application & desktop report



PHASE 2 Site Investigation & Risk Assessment

Ground investigations often in the form of:
Soil sampling, trenching investigation/drilling
Undertake risk evaluation & recommendations
Proceed to Phase 3 should contamination be identified

Submit report for approval



PHASE 3 Remediation Strategy

Remediation strategy report for the development of the site

Submit report for approval



PHASE 4 Site Monitoring

Monitor site development
Verification of remedial works





ASI Core Services:

- ✓ Non Interpretive Environmental Reports
- ✓ Contaminated Land Surveys (Phase 1)
- ✓ Soil & Water Analysis Reports (Phase 2)
- ✓ Land Remediation Reports (Phase 3)
- ✓ Site Verification & Completion Reports (Phase 4)
- ✓ Drilling & Ground Profiling Investigations
- ✓ Trenching & Foundation Inspections
- ✓ Shaft & Mining Feature Securing Works
- ✓ Historic Mine Searches (arranged upon request)

Our client commitment is to provide you with:

- Professional, efficient solutions.
- To liaise with you at each step of your project.
- Provide competitive pricing tailored to your site requirements.

Please contact us for further information on:

Tel: 01209 204744

Fax: 01209 204766

Email: admin@asiconsultancy.co.uk

Website: <http://www.asiconsultancy.co.uk>