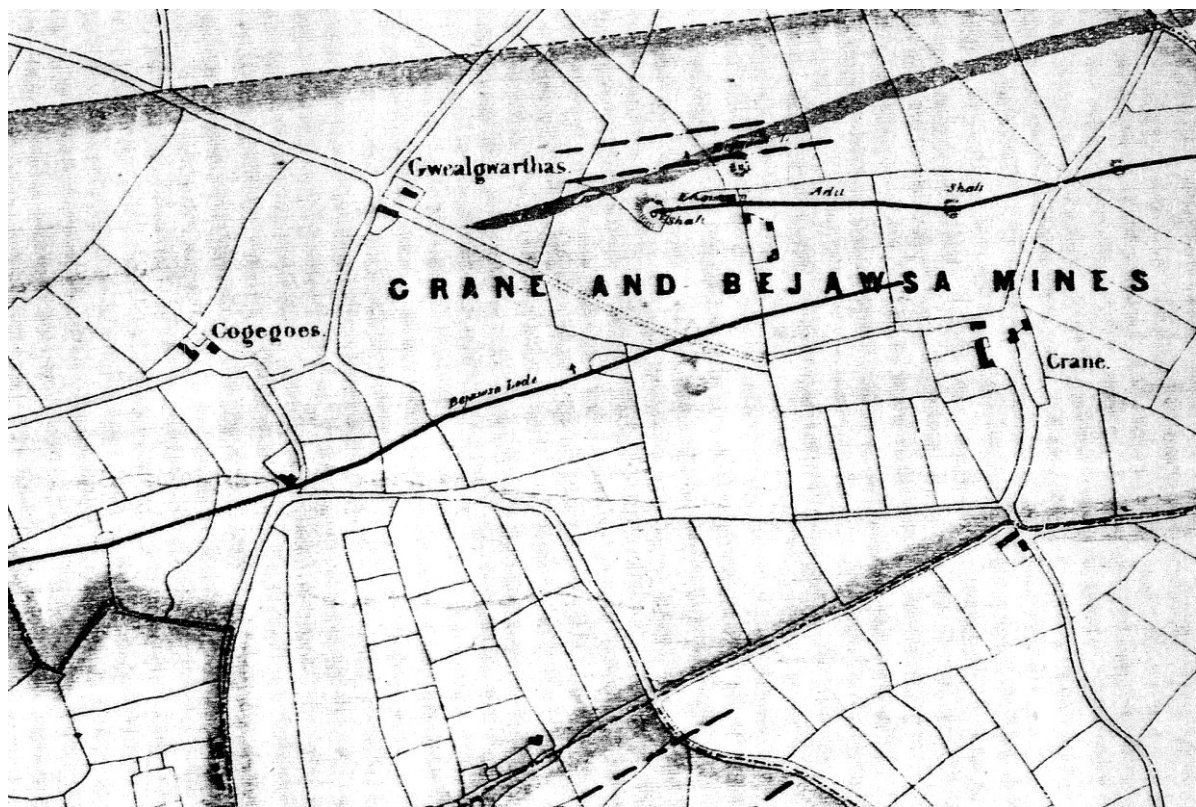




# Land at Treswithian, Camborne, Cornwall

## Archaeological Assessment





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## Archaeological Assessment

<b>Client</b>	<b>Poynton Bradbury Wynter Cole Architects</b>
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## **Acknowledgements**

This study was commissioned by Mr Tony Strike of PBWC Ltd and carried out by Historic Environment Projects, Cornwall Council.

The Project Manager was Andy Jones.

The views and recommendations expressed in this report are those of Historic Environment Projects and are presented in good faith on the basis of professional judgement and on information currently available.

## **Freedom of Information Act**

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## **Cover illustration**

Symons map of Camborne and Illogan Mining District, 1850.

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## **Abbreviations**

CRO Cornwall County Record Office

EH English Heritage

HER Cornwall and the Isles of Scilly Historic Environment Record

HE Historic Environment, Cornwall Council

NGR National Grid Reference

OS Ordnance Survey

WHS World Heritage Site

## **1 Summary**

The proposed development at Treswithian lies on the west side of Camborne immediately north-east of Cogegoes Farm and approximately 0.4km south of Treswithian at NGR SW 63655 39820. The area comprises two fields (a rugby and football field and a school sports field) and covers an area of approximately 5.5 hectares. Historic Environment Projects, Cornwall Council were commissioned by Mr Tony Strike of PBWC Ltd to carry out an archaeological assessment to support the planning application for the proposed development.

A total of 24 sites were identified during the desk-based assessment within and in close proximity to the development area. Included in these are sites associated with Crane and Bejawsa Mine which forms part of the World Heritage Site for Cornish Mining. There are no other designations within the development area. Two of the identified sites were classed as sites of National Importance (sites 18 and 22), seven sites were classed as sites of Regional Importance (sites 1, 3, 16, 16a, 17, 20, and 21) and the rest were classed as sites of Local Importance.

Archaeological sites identified during the assessment within the proposed development area are of Regional and Local importance. They include a post-medieval settlement site (site 1) and associated features such as tracks and field boundaries (sites 2 and 5-13) along with 19<sup>th</sup> century mining features including the site of an engine house (site 16a) and two mine shafts (sites 3 and 14).

Archaeological sites identified adjacent to the proposed development area include an Iron Age/Romano-British round (site 22) and find spots of both Iron Age and Neolithic date (site 17). These are of particular significance and may indicate the presence other related activity such as unenclosed settlement and field systems nearby and possibly within the assessment area itself. The site is also surrounded by medieval settlements (sites 18, 20 and 21) which suggest the likelihood of the remains of medieval field systems within the assessment area.

The recommendations in this report set out further work likely to be required to mitigate for the archaeological impact should the development proceed. This includes a geophysical survey to identify sensitive areas of the site. Subject to the results of the geophysical survey, controlled soil stripping/evaluation and excavation and/or an archaeological watching brief may be recommended to allow appropriate recording of buried remains. Disturbance to Cornish hedges should be avoided, but if unavoidable, recording of affected sections may be required, and careful reconstruction may be appropriate.



## **2 Introduction**

### **2.1 Project background**

Historic Environment Projects, Cornwall Council were commissioned by Mr Tony Strike of PBWC Ltd to carry out an archaeological assessment to support the planning application for a proposed development on land to the south of Treswithian, Camborne (Fig 1). The proposal is currently in the pre-application stage and the exact nature of the extent and impact of the development has not yet been revealed.

Following agreement of costs, a Written Scheme of Investigation (WSI) was prepared by Andy Jones. Following the approval of the WSI the archaeological assessment was carried out. This report presents the results of the work.

### **2.2 Aims**

The purpose of the assessment was:

- To identify and describe the archaeological resource.
- To assess the significance of the resource.
- To assess the possible impact of the proposal on the importance, integrity and character of the resource.
- To make recommendations for mitigation of the impact, which may include archaeological recording prior to and/or during the possible development.

### **2.3 Methods**

The archaeological programme followed two stages: desk-based assessment and reporting.

#### **2.3.1 Desk-based assessment**

During the desk-based assessment historical databases and archives were consulted in order to obtain information about the history of the site and the structures and features that were likely to survive. The main sources consulted were as follows:

- Cornwall and Isles of Scilly Historic Environment Record (HER)
- Early maps and photographs (see Section 7.1)
- Published histories (see Section 7.2)

#### **2.3.2 Reporting**

The site archive was collated. This included:

- Production of this report.
- Completion of an English Heritage OASIS form.

### **2.4 Location and setting**

The site lies on the western outskirts of Camborne approximately 0.4km south of Treswithian at NGR SW 63655 39820 (see Fig 1). It comprises two fields (a rugby and football field and a school sports field) and covers an area of approximately 5.5 hectares. A modern clubhouse lies on the eastern side of the rugby and football field and vegetation and scrub along the northern boundary of this field conceals former mining and quarrying activity. A footpath runs through the southern half of the eastern field and continues along the northern edge of the western field as a trackway which once led from a small settlement (Gwealgwarthas) located at the north-west corner of the western field.

The proposed development area is known to contain archaeological sites relating to post-medieval mining and a post-medieval settlement. It is also adjacent to an enclosed settlement of Iron Age/Romano-British date. The fields occupy a very gentle

north-west facing slope at heights of between 85-95m OD. The underlying bedrock is part of the Mylor slate formation, Metabasalt, originally igneous rocks formed by eruptions of silica-poor magma, later altered by low-grade metamorphism. A fine-grained or dense, extrusive igneous (volcanic) rock.

([www.cornwallinfocus.co.uk/geography](http://www.cornwallinfocus.co.uk/geography)).

### **3 Policies and Guidance**

The following section brings together relevant policies and guidance for the Historic Environment.

#### **3.1 National Planning Policy Framework 2012**

The following paragraphs within the above document frame planning policy relating to the Historic Environment:

**128** *In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.*

**129.** *Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.*

**132.** *When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II\* listed buildings, grade I and II\* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*

**133.** *Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:*

- *the nature of the heritage asset prevents all reasonable uses of the site; and*
- *no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and*
- *conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and*
- *the harm or loss is outweighed by the benefit of bringing the site back into use.*

**134.** Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

**135.** The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

**139.** Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.

## **3.2 2004 Cornwall Structure Plan**

### **Policy 1**

Development should be compatible with:

- The conservation and enhancement of Cornwall's character and distinctiveness;
- The prudent use of resources and the conservation of natural and historic assets;
- A reduction in the need to travel, whilst optimising the choice of modes, particularly opportunities for walking, cycling and the use of public transport;

Through developing the principles of Policy 1 it is intended to integrate environmental values with land use and transport policies, achieving patterns of development that reflect strong environmental protection and stewardship of resources.

### **Policy 2**

Throughout Cornwall, development must respect local character and:

- Retain important elements of the local landscape, including natural and semi-natural habitats, hedges, trees, and other natural and historic features that add to its distinctiveness;
- Contribute to the regeneration, restoration, enhancement or conservation of the area;
- Positively relate to townscape and landscape character through siting, design, use of local materials and landscaping.
- The conservation and enhancement of sites, areas, or interests, of recognised international or national importance for their landscape, nature conservation, archaeological or historic importance, including the proposed World Heritage Site, should be given priority in the consideration of development proposals.

## **3.3 Cornwall Council (former Kerrier District) Local Plan (1996 -2011)**

**Policy B.EN 1: Historic Heritage - Archaeology** Development that would significantly harm sites, buildings and other remains of archaeological and historic importance, or their setting, will not be permitted unless there is a need for the development and the benefits for the community outweigh the archaeological importance. Where it affects archaeology that is found to be of national importance, development will only be permitted if the remains can be preserved in-situ without significant harm to them and to their setting; where it affects other sites and on-site preservation is impracticable or unnecessary, the development should include excavation or recording of significant remains and a planning obligation to secure this will be sought.

**Policy B.EN4: Historic Heritage - Mining Remains** Development likely to significantly harm industrial archaeology, mining heritage, historical, industrial and mining buildings and sites, including former mineral railways, tramways, engine houses

and chimneys, will not be permitted unless the importance of the archaeology is outweighed by the benefit of the development to the community.

### **3.4 World Heritage Site**

#### **WHS POLICIES RELEVANT TO HISTORIC ENVIRONMENT SERVICE**

(Extracts from WHS Management Plan 2005-2010 pp150-152)

#### **ISSUE 4 – STRATEGIC FRAMEWORK**

*Policy 4c Planning authorities should ensure that new development protects, conserves and enhances the Site and its Setting.*

#### **ISSUE 5 – INCREASING PROTECTION**

*Policy 5c Local authorities and other agencies should make full use of the powers available to them for the protection and conservation of the Site.*

*Policy 5d There is a presumption against the removal of historic mine waste within the Site.*

#### **ISSUE 6 – PROTECTING THE SETTING**

*Policy 6 Developments outside the Site that will adversely affect the outstanding universal value will be resisted.*

#### **ISSUE 7 – SUSTAINABLE DEVELOPMENT**

*Policy 7a Sustainable heritage-led regeneration development will be encouraged and supported.*

*Policy 7b New development should add to the quality and distinctiveness of the Site by being of high quality design and respectful of setting.*

*Policy 7c There should be a presumption in favour of retaining and re-using historic buildings which are important components of the Site.*

*Policy 7d Proposals for the resumption of mining will be supported where they do not adversely affect the outstanding universal value of the Site.*

*Policy 7e Landscape, nature conservation and agri-environment management regimes should have regard for the authenticity and values of the Site.*

#### **ISSUE 8 – CONSERVATION AND MAINTENANCE OF KEY COMPONENTS**

*Policy 8a The conservation and continuing maintenance of the historic fabric of the Site should be undertaken to the highest standards to ensure authenticity and integrity.*

*Policy 8b The historic character and distinctiveness of the [WHS] mining landscape should be maintained.*

*Policy 8c Traditional materials and skills should be encouraged in the maintenance of historic fabric within the Site.*

*Policy 8d Where the historic fabric within the Site has been lost or compromised through non-authentic materials, inappropriate details and poor workmanship, historic character and detail will be re-introduced wherever and whenever possible.*

*Policy 8f Key moveable components should be preserved in situ unless relocation will conserve or enhance the outstanding universal value of the Site.*

#### **ISSUE 9 – ARCHIVES, COLLECTIONS AND DATA**

*Policy 9 Archives, collections and data concerning the Site should be curated, catalogued and conserved and made accessible to all.*

#### **ISSUE 11 – INCREASING INTELLECTUAL ACCESS**

*Policy 11c The values and significance of the Site should be communicated to a wide range of educational audiences.*

### **3.5 Hedgerow Regulations**

Under the current, 1997 Hedgerow Regulations, owners wishing to remove all or part of a hedgerow considered to be historically important must notify the Local Planning Authority (LPA). Criteria determining importance include whether the hedge marks a pre-1850 boundary, and whether it incorporates an archaeological feature. The LPA may issue a 'hedgerow retention notice' prohibiting removal.

## **4 Description of the resource**

### **4.1 Historic background**

The development site lies within an area surrounded by known prehistoric activity. Although there are no known prehistoric sites within the development site, plotting of cropmark features showing on aerial photographs by the National Mapping Project team (NMP) indicate the presence of Iron Age/Romano-British rounds (enclosed settlement sites) in the vicinity (see Fig 8). One of these rounds is located one field away to the west (site 22). The Cornwall and Scilly HER also records finds of both Iron Age and Neolithic date from the surrounding area (site 17). The presence of rounds suggests there is potential for the remains of similar enclosed settlements as well as unenclosed structures and settlement-related features to survive elsewhere in the landscape which may not have been detected by the NMP. There is also the potential for the survival of below-ground remains of earlier Bronze Age and Neolithic sites.

The landscape in the area is typified by small farming settlements with medieval or post-medieval origins along with their associated field systems. The western field is associated with the former post-medieval settlement of Gwealgwarthas, the southern half of which once stood within the north-west corner of this field (site 1). Other nearby medieval settlements include Crane (site 18), Bejawsa (site 20), Cogegoes (site 21) and Treswithian to the north. There is potential for survival of buried remains within the site associated with the post-medieval settlement of Gwealgwarthas (site 1) and remains associated with medieval and post-medieval field systems.

The settlement of Gwealgwarthas is first recorded in 1620. It has a Cornish name and contains the elements *guel* 'open field' and *guartha* 'summit, upper' (Padel 1985). A source dated 1629 refers to "two fields, called the two Gwealgwarthas lying in stitch meal" (Institute Of Cornish Studies 1987). It seems likely that the western field within the development area along with the field immediately to the north of it are the two fields referred to since they are listed as part of Gwealgwarthas in the Tithe Apportionment of c1840. The track and path (site 2) running east-west through the development area forms the original route between Gwealgwarthas and Crane. The settlement of Crane is first recorded as "Caervran" in 1260 (Gover 1948). The name is Cornish and contains the elements *ker* 'fort or round' and *bran* 'crow' (Padel 1985). It was an important medieval site (now built over) containing a manor house, a chapel and a stone cross (site 18).

A process of map regression helps understanding of the more recent landscape history of the site. Martyn's map of 1748 is not greatly detailed but shows the settlements of Crane, Bejawsa ('Bejosah') and Treswithian ('Treswithen'). The first available detailed map of the area is the Tithe map of c1840 (Fig 3). This shows the boundaries around the two fields (sites 5-13) as they exist today along with the track and path (site 2) giving access to Crane. The Tithe map also shows the settlement of Gwealgwarthas before it was demolished later in the 19<sup>th</sup> century. The Tithe Apportionment lists the property within the north-west corner of the site as a house and orchard (site 1) owned by Lady Basset and John St Aubyn and occupied by Henry Ivey. The 1841 census record lists three families living at Gwealgwarthas. Two of the heads of the families

were miners and the other was an agricultural labourer. The two fields within the development site are listed on the Tithe Apportionment as 'arable'.

Symons map of Camborne and Illogan Mining District dated 1850 (Fig 4) shows the extent of lodes, setts and mines in the area in the mid 19<sup>th</sup> century. The development site lies within the area of Crane and Bejawsa Mine. This copper and lead mine employed 50 people and stopped working in 1854 but restarted for a few years in 1860 (Collins 1912). The Bejawsa lode traverses the southern half of the site along which two shafts are documented (sites 14 and 15). An adit traverses the north-east part of the site where another shaft ('Engine Shaft') is marked (site 3). On the eastern edge of the shaft a building is shown which is likely to be an engine house (site 16a). Further to the south-east, and immediately bordering the site, a group of buildings are shown (site 16). These appear to have been mine buildings associated with Crane and Bejawsa mine. Symons map also shows that the settlement of Gwealgwarthas was still present in 1850.

The First Edition OS map of c1880 (Fig 5) illustrates the abandoned mine workings of the mid 19<sup>th</sup> century. The shafts (sites 3, 14 and 15) appear to have been filled or choked by this date and the northern part of the eastern field in the location of 'Engine Shaft' (site 3) is labelled 'Gravel pit', although this may just indicate spoil heaps associated with the earlier mining activity. All the field boundaries (sites 5-13), are shown unaltered since c1840 as is the track and path (site 2). A major change is that the settlement of Gwealgwarthas is no longer shown and had clearly been demolished at some point between 1850 and 1880.

The Second Edition OS map of c1907 (Fig 6) shows that no changes had occurred within the site since c1880 except the reduction in extent of the spoil heaps or 'Gravel pit' shown on the c1880 OS map.

During the 20<sup>th</sup> century the two fields have become sports fields (Fig 2). The eastern rugby and football field now has a modern clubhouse in its south-east corner and a hard core surface has been laid along the eastern edge of the field and part of the northern edge.

## **4.2 Historic Landscape Character (HLC)**

During 1994, the Cornwall Archaeological Unit carried out a map-based historic landscape characterisation across the whole of Cornwall, using existing field patterns and early map and place-name evidence among other systematic sources to characterise the landscape (Cornwall County Council 1996). This characterisation reflects the historic processes that have shaped the Cornish landscape and involved dividing the county into a series of zones, each of which reflects a particular set of historic processes and tends to contain a predictable range of archaeological sites and historic features. They also tend to share similar visible character, based on this history and those components.

The historic landscape character of the development site is mapped as Farmland Medieval to the south and Farmland Post-medieval to the north (see Fig 7). Farmland Medieval represents the agricultural heartland, with farming settlements documented before the 17<sup>th</sup> century AD and whose field patterns are morphologically distinct from the generally straight-sided fields of later enclosure. This Landscape Character Type has either medieval or prehistoric origins. In this HLC Type, remains of prehistoric settlement and activity are increasingly being discovered through geophysical survey, archaeological watching briefs, and excavations. Smaller undetected buried deposits or artefacts could also be present here.

Farmland Post-medieval is land that has been enclosed in the 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> centuries, usually from land that was previously Upland Rough Ground and often medieval commons. As with Farmland Medieval in this HLC type remains of prehistoric settlement and activity are increasingly being discovered through geophysical survey, archaeological watching briefs, and excavations.

### 4.3 Identified sites

Full descriptions of each of the sites which may be affected by the proposed scheme can be found in the site gazetteer (**Appendix**) alongside individual recommendations for further work.

A total of 24 sites were identified within and adjacent to the assessment area during the desk-based assessment (see Fig 9).

In outline the principal archaeological sites identified can be summarised as:

Prehistoric sites: **sites 17** (finds spot) **and 22** (Iron Age/Romano-British round).

Medieval sites: **sites 18, 20, 21** (settlement sites) **and 23** (field boundary).

Post-medieval sites: **sites 1** (settlement site), **2** (track), **5, 6, 7, 8, 9, 10, 11, 12 and 13** (field boundaries).

19<sup>th</sup> century sites: **site 19** (recreation ground).

19<sup>th</sup> century mining sites: **sites 3** (mine shaft), **4** (spoil heap), **14, 15** (mine shafts), **16** (mine buildings), **16a** (Engine house) **and 24** (mine workings).

## 5 Assessment of importance

### 5.1 Designations

There are no Scheduled Monuments, Listed Buildings or designated areas within the assessment area. However, Crane and Bejawsa Mine site along with its engine house (site 16a) forms part of the World Heritage Site for Cornish mining. In addition, the 'Cornish hedges' or boundary banks of the fields making up the site are considered 'important' under the historic criteria of the Hedgerow Regulations. All are recorded on the c1840 Tithe Map.

### 5.2 Significance of identified sites

Of the sites which have been identified in this report the most significant of those located within the development area are the post-medieval settlement of Gwealgwarthas (site 1) and the sites related to Crane and Bejawsa Mine (sites 3, 14 and 16a).

Of the sites located adjacent to the development area the most significant are; an Iron Age/Romano-British round (site 22), prehistoric finds spots (site 17), the medieval settlement of Crane (site 18), Bejawsa (site 20), Cogegoes (site 21) and the 19<sup>th</sup> century mine buildings (site 16).

Sites which are of national importance (or equivalent) (A) are: **Sites 18 and 22**

Sites which are of regional importance (B) are: **Sites 1, 3, 16, 16a, 17, 20, and 21.**

Sites which are of local importance (C) are: **Sites 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 23 and 24.**

Although **site 22** (an Iron Age/Romano-British round) lies outside the assessment area its presence in the vicinity is of particular significance and may indicate the presence other related activity such as unenclosed settlement and field systems nearby and possibly within the assessment area itself.

### 5.3 Potential for other archaeological sites in the study area

Within the assessment area there is potential for the presence of below-ground remains associated with Iron Age/Romano-British and prehistoric sites of other dates. There is also the potential for below-ground survival of medieval and post-medieval landscape features such as field boundaries.

Because the assessment area is set within the heart of an early mining district remains of features associated with early mining may be present below ground.

There is potential for the survival of below-ground mining features associated with Crane and Bejawsa Mine and also the settlement of Gwealgwarthas.

## 6 Recommendations for mitigation

### 6.1 Geophysical survey

A geophysical (magnetometer) survey is recommended for the whole of the proposed development area. This would allow the identification of any buried sites not visible on the ground or on the NMP plot from aerial photographs, allowing sensitive ground to be identified as closely as possible.

Following the completion of the geophysical survey, a Written Scheme of Investigation (WSI) should be prepared and agreed to establish and direct a programme of mitigating archaeological work. This should follow a Brief set by Cornwall Council's Historic Environment Advice Team, which would set out the scope of any further work required. It may include the elements outlined below.

### 6.2 Evaluation trenching of geophysical survey anomalies

An archaeological evaluation may be recommended by the Historic Environment Advice Team for areas where significant geophysical survey results have been identified and which remain proposed for ground disturbance in the final scheme design. Evaluation trenching would help characterize the buried archaeological resource by identifying the date of features and their level of preservation below ground.

### 6.3 Close design of proposed works to reduce impact

The archaeological assessment indicates that careful design of the proposed development to avoid or reduce particular impacts should be considered;

- **Gwealgwarthas (Site 1)** Disturbance (through groundworks) of the north-west corner of the western field might be avoided.
- **Shaft and Engine house (sites 3 and 16a)** Disturbance (through groundworks) in this area of the eastern field might be avoided.
- **Field Boundaries (Sites 5-13)** Disturbance (through works such as gateway opening or widening) of the fabric of the upstanding elements of the historic field system, the hedge banks still in use as field boundaries, should be avoided or minimised to reduce loss of early features and of their contribution to HLC.
- **Other significant archaeological remains** Should the recommended geophysical survey indicate any other significant archaeological sites or features, measures to avoid impact on these could be considered.

### 6.4 Controlled soil stripping/ archaeological watching brief

The requirements for a Controlled soil stripping (direction by an archaeologist of mechanical topsoil and subsoil stripping) stage would be set out in a brief from Cornwall Council's Historic Environment Advice Team. It is possible that this would be recommended in the areas of sites 1, 3 and 16a. This would provide for preservation by record of buried archaeological features or artefacts, and would also allow identification of any further recording or other needs such as wider excavation or sampling. In other areas where narrow trenches or small areas of ground disturbance are proposed, an archaeological watching brief during groundworks may be required.

### 6.5 Excavation

In the event that the controlled stripping leads to the identification of significant archaeological features, a formal stage of excavation may be appropriate in advance of



any ground disturbance. This could include sites 1, 3 and 16a or in areas where features of high significance are found during the geophysical survey or evaluation.

## 6.6 Boundary recording and reconstruction

Any of the historic field boundaries or parts of these disturbed by the site works may require recording in cross-section. Where sections of boundaries are to be taken down to allow access for construction vehicles, sections through them should be drawn at a suitable scale. Boundaries should also be sampled for buried soils and palaeoenvironmental evidence if considered appropriate by the recording archaeologist. If possible boundaries so disturbed should be re-instated using original or similar local rubble stone, and in the existing style.

## 6.7 Analysis and presentation of findings

The results of the mitigating archaeological recording outlined above should be compiled and analysed, and significant findings should be presented as required, with publication to professional standards as appropriate.

# 7 References

## 7.1 Primary sources

- Ordnance Survey, c1880. *25 Inch Map* First Edition (licensed digital copy at HE)
- Ordnance Survey, c1907. *25 Inch Map* Second Edition (licensed digital copy at HE)
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- Symons map of Camborne and Illogan Mining District, 1850 (paper copy at HE)
- Martyn, T, 1748. *New and accurate map of the county of Cornwall from actual survey* (1 inch to the mile), (paper copy at HES)
- Institute Of Cornish Studies, 1987. *Place-Names Index*
- Air photographs (RAF. 1946. 3G/TUD/210/5149&50. and RAF. 1954. F22/540/1266/41-43.)

## 7.2 Publications

- Collins, J H, 1912. *Observations on the west of England Mining Region* Truro
- Cornwall County Council, 1996. *Cornwall Landscape Assessment 1994*. Report prepared by CAU and Landscape Design Associates. Cornwall County Council
- Dines, H.G. 1956 (1988 reprint). *The metalliferous mining region of south-west England: Volume One*, British Geological Survey, HMSO
- Gover, J E B, 1948. *Placenames of Cornwall*. Typescript held by the Courtney Library, RCM
- Padel, O J, 1985. *Cornish Place-Name Elements*. The English Place-Name Society, Nottingham

## 7.3 Websites

- <http://www.heritagegateway.org.uk/gateway/> English Heritage's online database of Sites and Monuments Records, and Listed Buildings

# 8 Project archive

The HE project number is **146210**

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration.
2. English Heritage/ADS OASIS online reference: cornwall2-137367

This report text is held in digital form as: ..\HE Projects\Sites T\Treswithian assessment 2012\Treswithian assessment report 2012

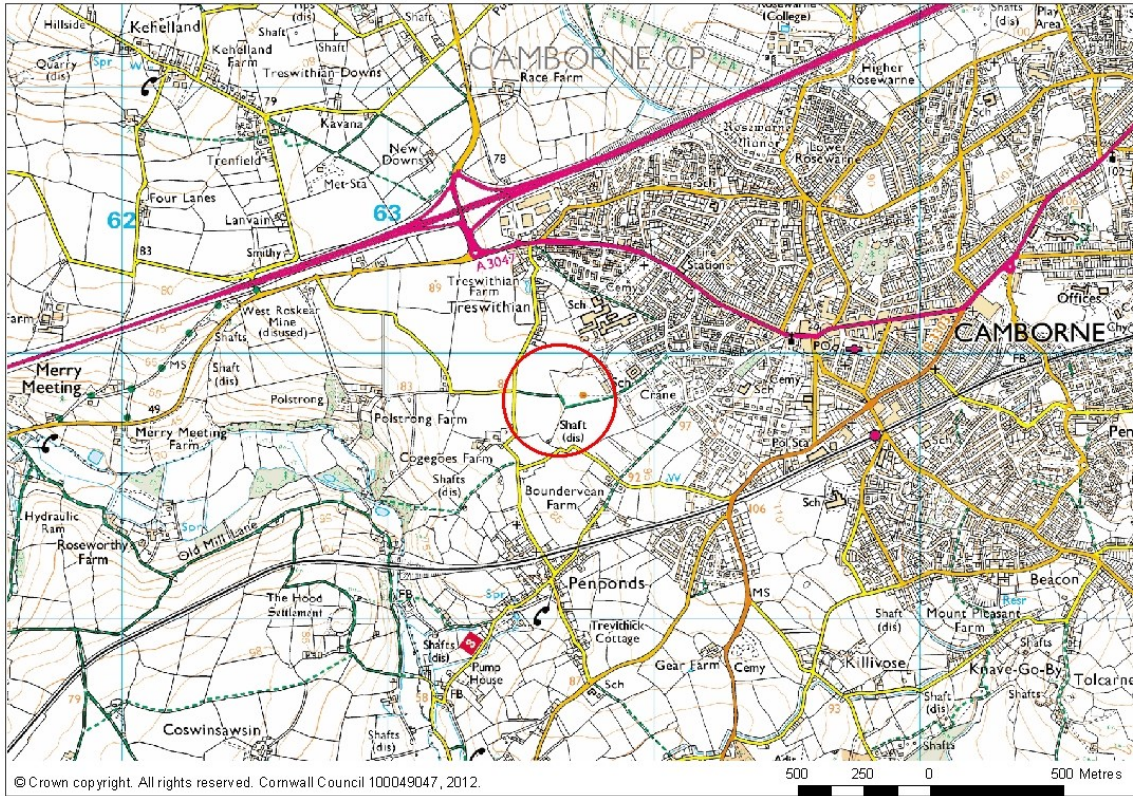


Fig 1 Location map



Fig 2 Aerial photograph (2005)

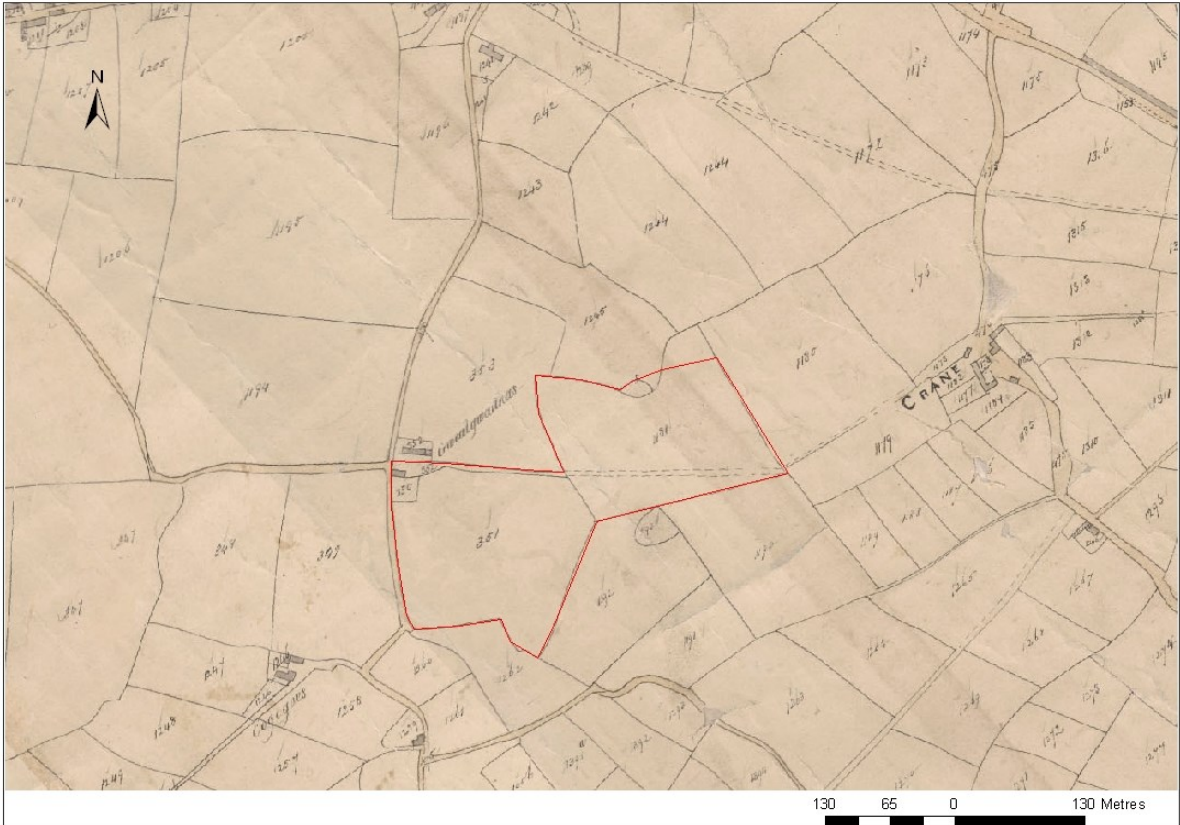


Fig 3 Tithe Map, c1840

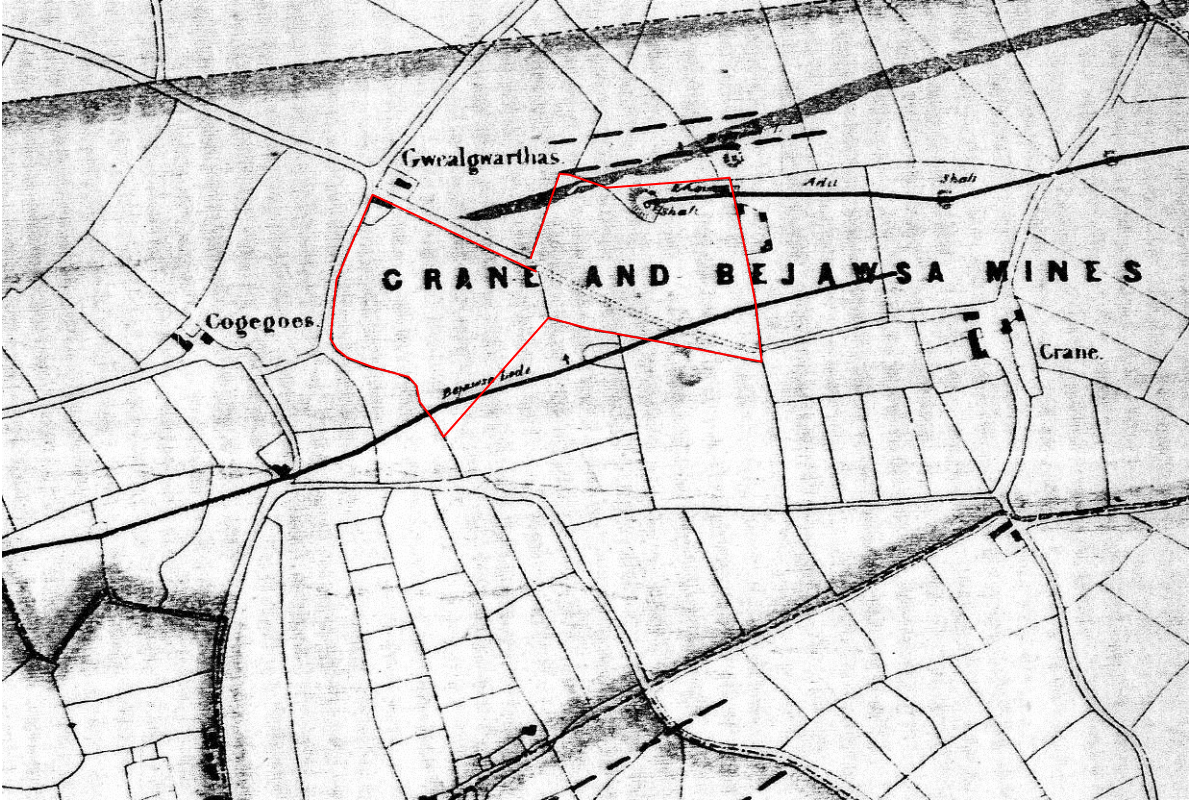


Fig 4 Symons map of Camborne and Illogan Mining District, 1850

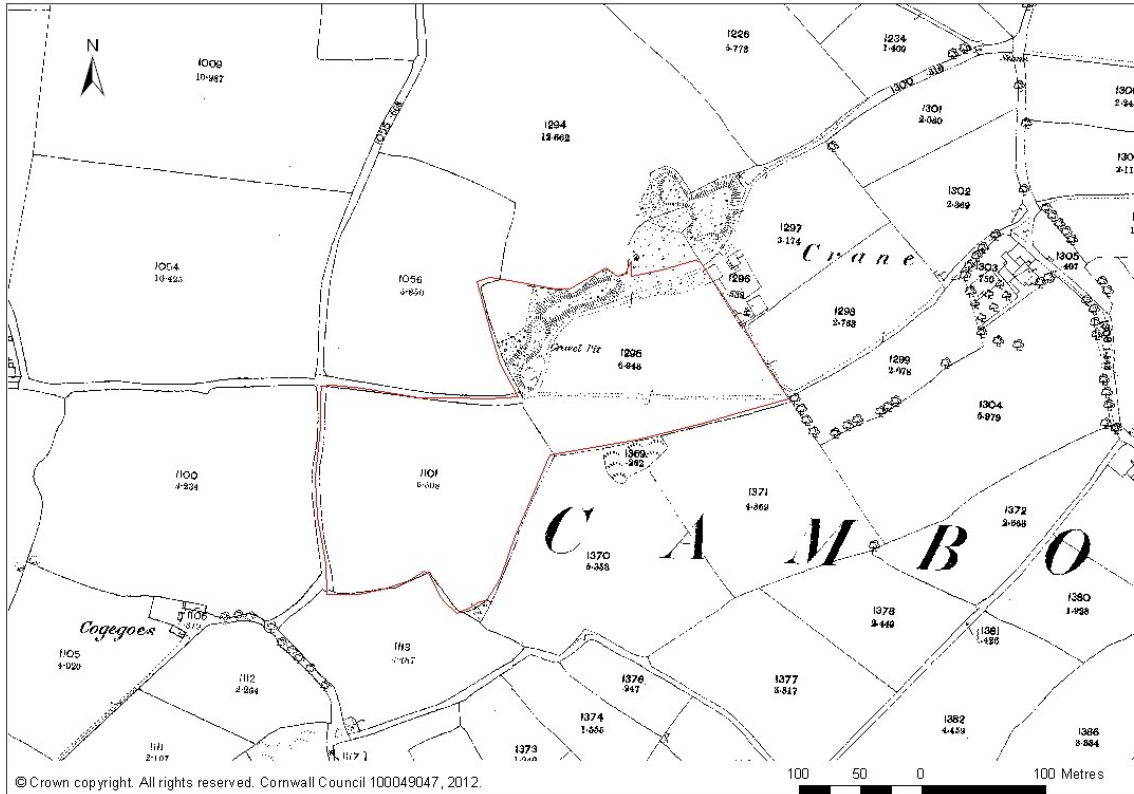


Fig 5 First Edition of the Ordnance Survey 25 Inch Map, c1880

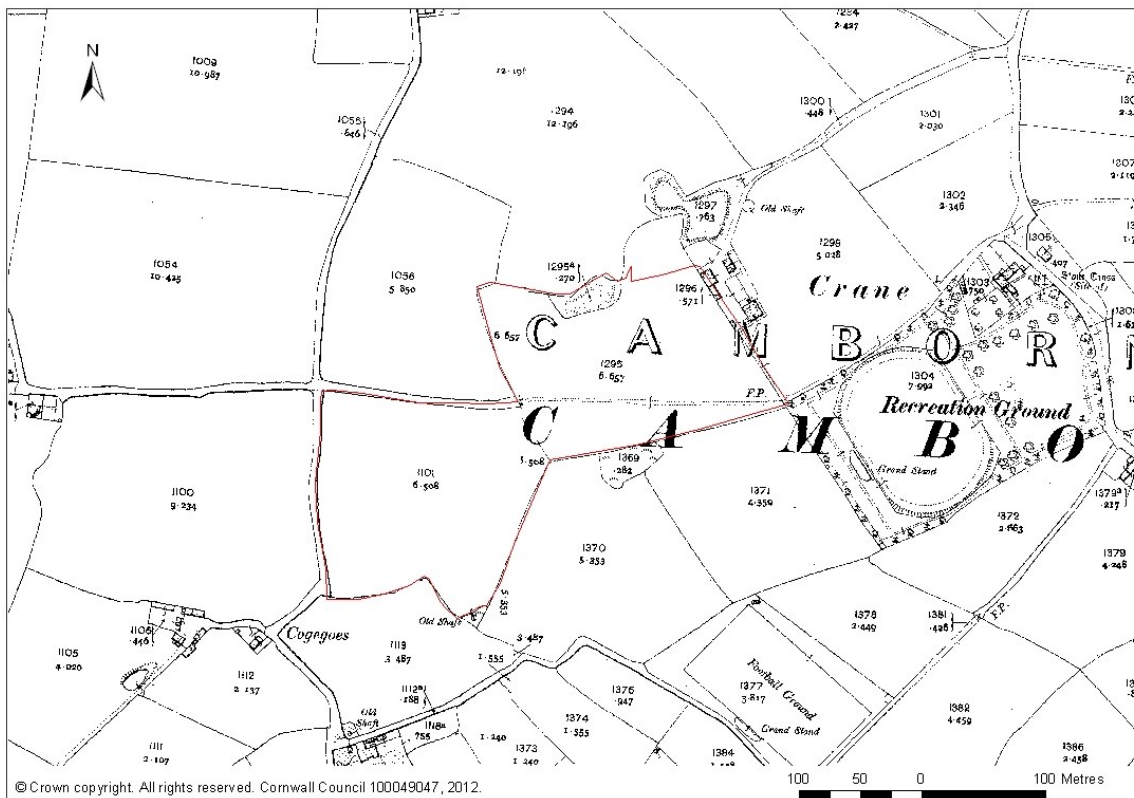


Fig 6 Second Edition of the Ordnance Survey 25 Inch Map, c1907

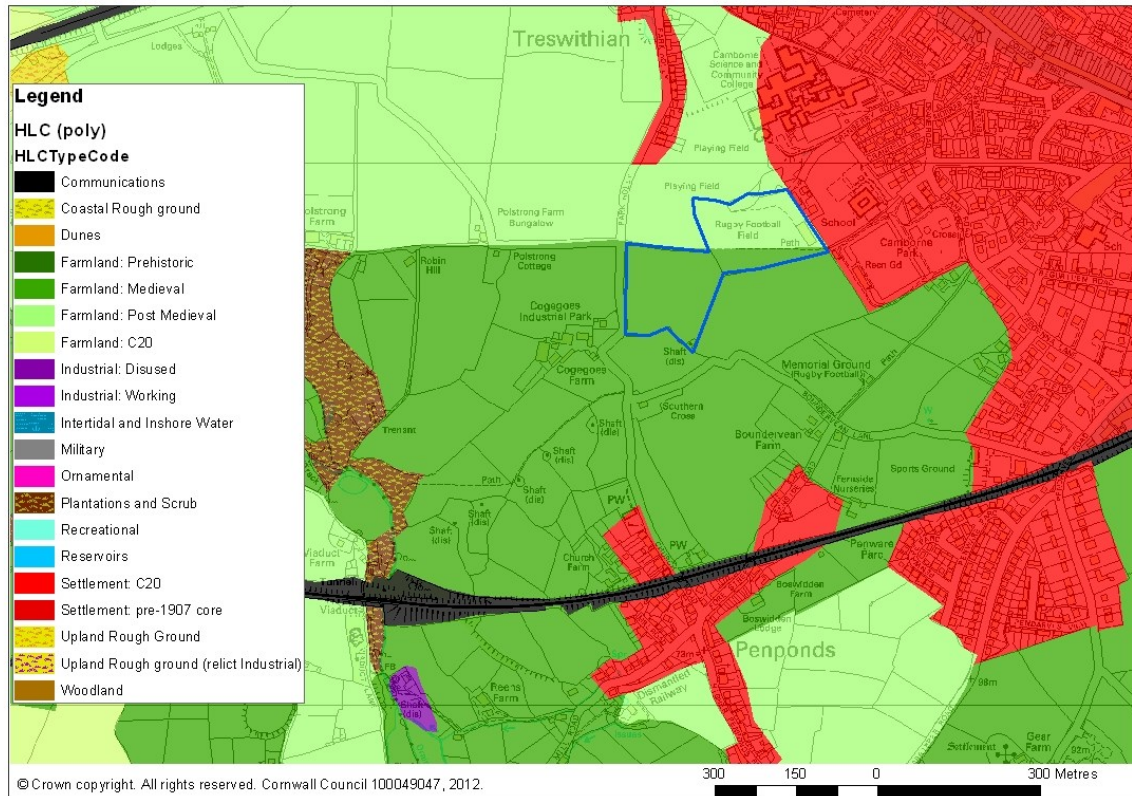


Fig 7 Historic Landscape Characterisation (HLC)

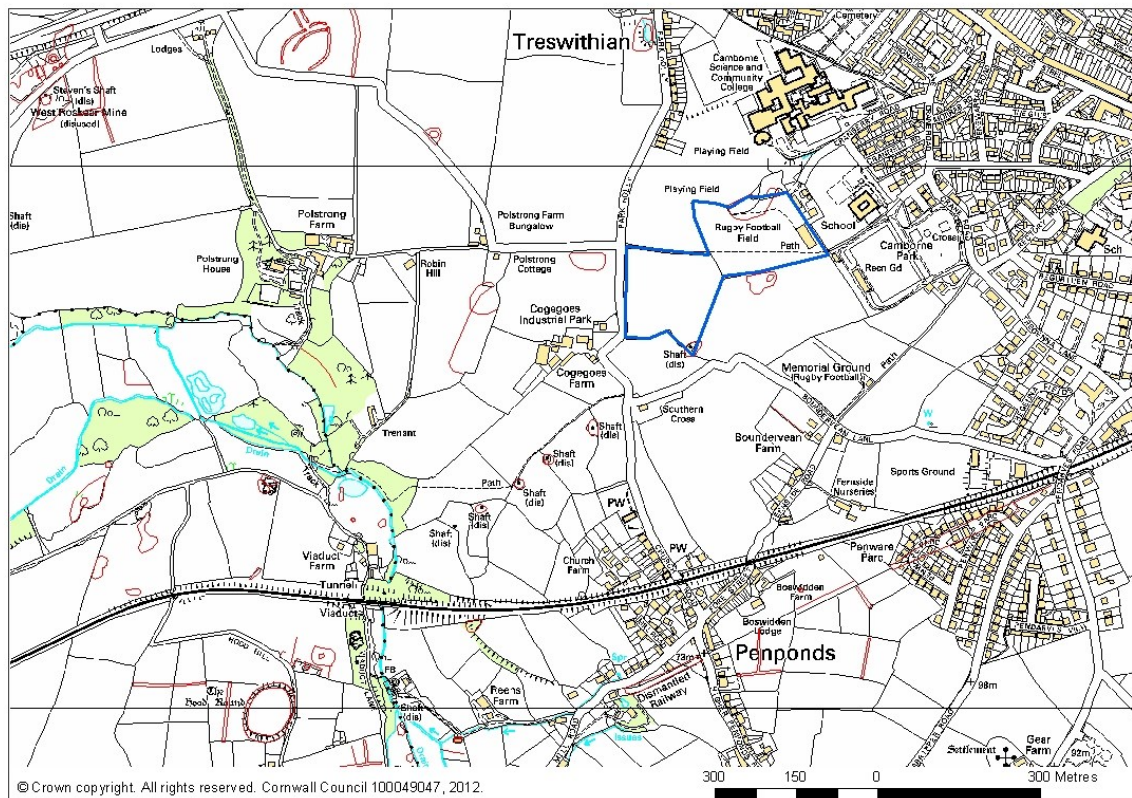
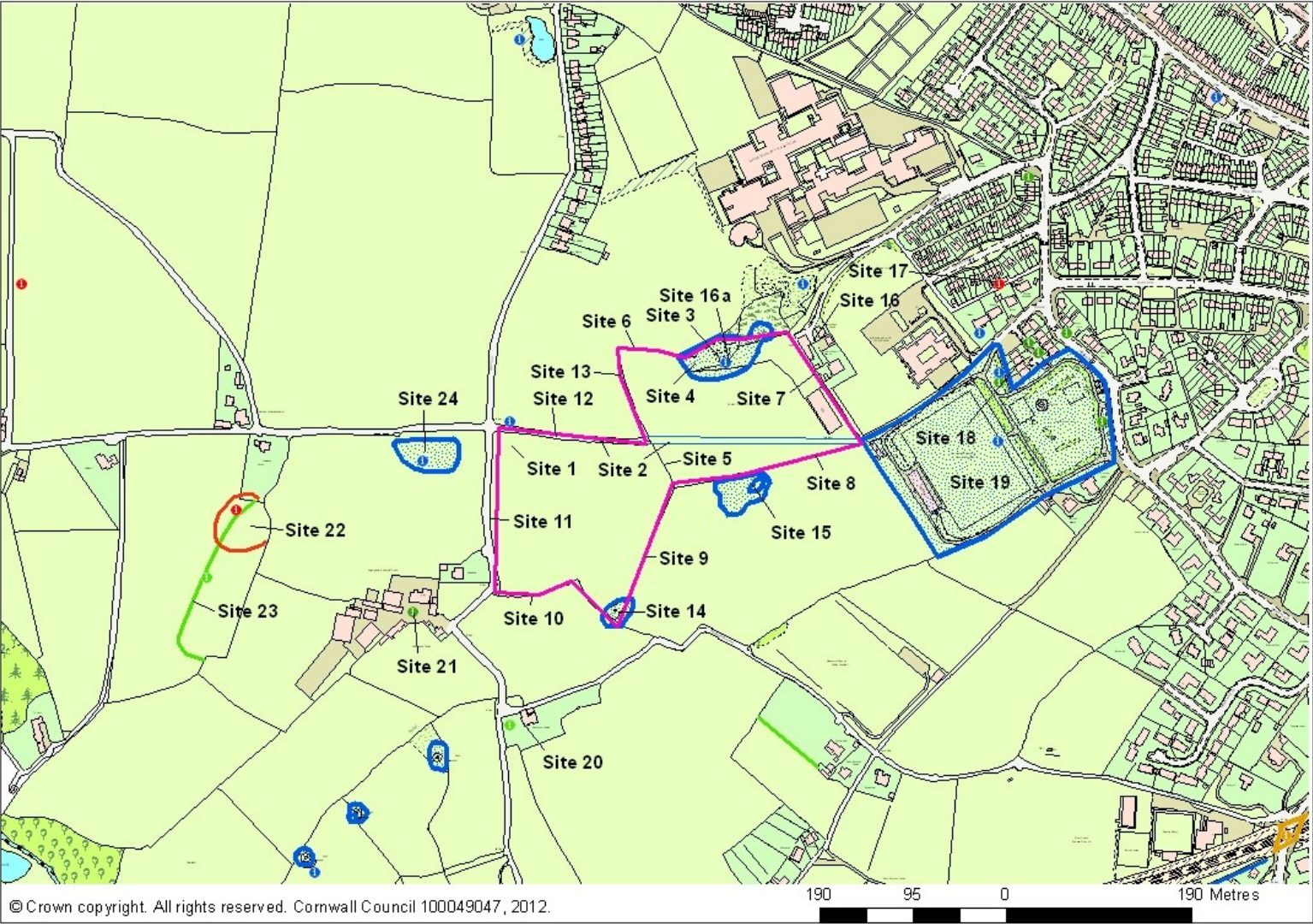


Fig 8 National Mapping Programme (NMP) plot



*Fig 9 Sites location map*



## 9 Appendix: Gazetteer of sites

Site No.	HER record No.	Site Type	Form	Description	NGR Easting	NGR Northing	Grade	Date	Recommendations
1	MCO14666	Settlement	Docum entary	The settlement of Gwealgwarthas is first recorded in 1620 (Institute Of Cornish Studies, 1987). The name is Cornish and contains the elements <i>guel</i> 'open field' and <i>guartha</i> 'summit, upper' (Padel 1985). A source dated 1629 refers to 'two fields', called the two Gwealgwarthas lying in stich meal. (Institute Of Cornish Studies 1987). The Tithe Award records two houses at a crossroads but these buildings had been destroyed by c1880. The site of one of the houses lies within the development area.	SW 63495	39841	B	1620-1880	A geophysical survey of the whole development area should be undertaken. In the event of groundworks taking place, this area should be part of a controlled archaeological strip.
2	-	Track	Extant	A footpath runs through the southern half of the eastern field and continues along the northern edge of the western field as a trackway which once led from a small settlement (Gwealgwarthas) located at the north-west corner of the western field to Crane manor.	SW 63492 To SW 63853	39849  39841	C	1620-present	A geophysical survey of the whole development area should be undertaken. In the event of groundworks taking place, this area should be covered by an archaeological watching brief.
3	-	Mine shaft	Docum entary	A mine shaft 'Engine Shaft' associated with Crane and Bejawsa Mine is shown at this location on Symons map dated 1850 with associated shaft walling and an engine house (site 16a).	SW 63712	39923	B	19 <sup>th</sup> century	A geophysical survey of the whole development area should be undertaken. In the event of groundworks taking place, this area should be part of a controlled archaeological strip.
4	MCO36620	Gravel pit	Docum entary	A gravel pit is marked at this location on the c1880 1st Edition OS map. It is visible on air photographs (RAF. 1954. F22/540/1266/43.) and was plotted as part of the NMP.	SW 63699	39921	C	19 <sup>th</sup> century	A geophysical survey of the whole development area should be undertaken.
5	-	Boundary and track	Extant	A modern track now runs alongside a field boundary shown on the Tithe map of c1840	SW 63654	39819	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should

Site No.	HER record No.	Site Type	Form	Description	NGR Easting	NGR Northing	Grade	Date	Recommendations
									be accompanied by an archaeological watching brief.
6	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63636	39934	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
7	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63833	39881	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
8	-	Boundary and track	Extant	A modern track now runs alongside a field boundary shown on the Tithe map of c1840	SW 63745	39814	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
9	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63642	39735	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
10	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63541	39687	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.

Site No.	HER record No.	Site Type	Form	Description	NGR Easting	NGR Northing	Grade	Date	Recommendations
11	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63476	39776	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
12	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63557	39841	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
13	-	Boundary	Extant	A field boundary shown on the Tithe map of c1840.	SW 63557	39841	C	Post-medieval-modern	It is recommended that early boundaries should remain <i>in situ</i> . Any disturbance should be accompanied by an archaeological watching brief.
14	-	Mine shaft	NMP plot	This is one of a line of seven shafts which are marked on the c1880 OS map. The shafts are visible on air photographs (RAF. 1946. 3G/TUD/210/5149&50. and RAF. 1954. F22/540/1266/41-43.) and were plotted as part of the NMP.	SW 63608	39664	C	19 <sup>th</sup> century	A geophysical survey of the whole development area should be undertaken. In the event of groundworks taking place, this area should be covered by an archaeological watching brief.
15	-	Mine shaft	NMP plot	This is one of a line of seven shafts which are marked on the c1880 OS map. The shafts are visible on air photographs (RAF. 1946. 3G/TUD/210/5149&50. and RAF. 1954. F22/540/1266/41-43.) and were plotted as part of the NMP.	SW 63748	39796	C	19 <sup>th</sup> century	Outside the development area.
16	-	Mine buildings	Extant	This group of buildings appears to have been part of Crane and Bejawsa Mine during the mid	SW 63818	39930	B	19 <sup>th</sup> century	Outside the development area.

Site No.	HER record No.	Site Type	Form	Description	NGR Easting	NGR Northing	Grade	Date	Recommendations
				19 <sup>th</sup> century (shown on Symons' map of 1850) They have since been converted to dwellings and collectively are known as 'Lower Crane Manor'.					
16a	-	Engine house	Docum entary	A structure on the eastern edge of 'Engine Shaft' is shown at this approximate location on Symons' map of 1850. It seems likely that this is the location of an engine house for Crane and Bejawsa Mine.	SW 63712	39923	B	19 <sup>th</sup> century	A geophysical survey of the whole development area should be undertaken. In the event of groundworks taking place, this area should be part of a controlled archaeological strip.
17	MCO1285 MCO1823 MCO333 MCO334	Find spots	Docum entary	Prehistoric hammerstone found at Rosewarne.  Find of a possible Neolithic whetstone at Weeth.  A gold stater of the Dobunni tribe was found in Camborne in 1865. The exact find-spot is not known.  Neolithic implements found in Camborne and now in Camborne museum include an axe and possible axe fragment, a possible whetstone, a rubber and possible rubber, and a possible pounder.	SW 64000	40000	B	Prehistoric  Neolithic Iron Age  Neolithic	No recommendations
18	MCO14141  MCO11139  MCO9915	Settlement  Manor house  Chapel	Docum entary	The settlement of Crane is first recorded as "Caervran" in 1260 (Gover 1948). The name is Cornish and contains the elements <i>ker</i> 'fort, a round' and <i>bran</i> 'crow' (Padel 1985). Older buildings at Crane, including the remains of the house were destroyed in 1960.  The manor house complex at Crane was largely demolished in 1900, after a fire in 1895. Parts of the complex survived until 1960, when the remainder was demolished  The ruins of a medieval chapel attached to the manor	SW 64029	39939	A	Medieval-20 <sup>th</sup> century	Outside the development area.

Site No.	HER record No.	Site Type	Form	Description	NGR Easting	NGR Northing	Grade	Date	Recommendations
	MCO5156	Medieval cross		complex at Crane were destroyed c1855 to make way for a cottage.  A cross now in Camborne churchyard was formerly sited at Crane, Camborne where it was in use on a well head along with another cross. Both crosses were rescued and removed to the churchyard c1896					
19	MCO56319	Recreation ground	Extant	The Recreation ground at this location was established in the late 19 <sup>th</sup> century and appears on the c1907 OS map.	SW 63952	39831	C	Late 19 <sup>th</sup> century-present	Outside the development area.
20	MCO13351	Settlement	Extant	The settlement of Bejawsa is first recorded as "Bosowesowe" in 1397.	SW 63512	39560	B	Medieval-present	Outside the development area.
21	MCO14040	Settlement	Extant	The settlement of Cogegoes is possibly first recorded as "Codhangan" in 1392 (Institute Of Cornish Studies 1987). The name is Cornish and contains the element cos 'wood' and an unknown second part (Padel 1985).	SW 63399	39667	B	Medieval-present	Outside the development area.
22	MCO36687	Settlement (round)	NMP plot	A univallate curvilinear enclosure, 60m by 50m, is visible as a cropmark ditch on air photographs and was plotted as part of the NMP. The eastern side of the enclosure is fossilised in the line of the existing field hedge. It is likely to be an Iron Age/Romano-British round (settlement site).	SW 63231	39758	A	Iron Age/Romano-British	Outside the development area.
23	MCO36618	Boundary	NMP plot	Two field boundaries are visible as ditches (one surviving only as a cropmark) on air photographs and were plotted as part of the NMP. The boundaries lie within Medieval Farmland and are likely to be medieval in origin.	SW 63192	39717	C	Medieval	Outside the development area.
24	MCO36622	Mine workings	NMP plot	A mound, 70m x 40m, is visible on air photographs and was plotted as part of the NMP. It is likely that it is a spoil tip associated with a shaft	SW 63407	39819	C	19 <sup>th</sup> century	Outside the development area.