



Housing Development, Mount Ambrose, Redruth, Cornwall

Archaeological Watching Brief



Historic Environment Projects

Report No

2014R024

Report Name

Housing development, Mount Ambrose, Redruth, Cornwall, Archaeological Watching Brief.

Report Author

Ryan P. Smith

Event Type

Watching Brief

Client Organisation

Gilbert and Goode Ltd

Client Contact

Mike Jeffs

Monuments (MonUID)

Fieldwork dates (From)

14/3/2014

(To)

24/3/2014

(Created By)

Ryan P Smith

(Create Date)

April 2014

Location (postal address; or general location and parish)

Field, adjacent to Highway Lane, Mount Ambrose, Redruth, Cornwall.

(Town - for urban sites)

Redruth

(Postcode)

TR15 1SE

(Easting) X co-ord

SW 71061

(Northing) Y co-ord

43180



Historic Environment, Cornwall Council is a Registered Organisation with the Institute for Archaeologists

Cover illustration

Looking east over the remnants of a cobbled surface from a demolished building constructed pre 1840.

© Cornwall Council 2014

No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without the prior permission of the publisher.

List of Figures

Figure 1: Location of site

Figure 2: Site extent

Figure 3: Tithe Map of Redruth (c1840) showing location of site (denoted by red line).

Figure 4: First edition of the Ordnance Survey 25 inch Map c1877, showing the removal of some field boundaries and buildings shown on the Tithe Map.

Figure 5: Second edition of the Ordnance Survey 25 inch map c1907, showing the complete removal of field boundaries within the larger enclosure.

Figure 6: Identified archaeological sites in proximity to the site.

Figure 7: An extract from the Redruth Tithe Map (c1840) showing the locations of features found during the watching brief.

Figure 8: Magnetometer Survey - Greyscale plot and interpretation (GSB 2012). The route of the gas main is shown as a dashed line.

Figure 9: View looking west across the site, towards the site entrance.

Figure 10: The lime/ash floor surface of the demolished cottage shown on the Tithe Map (looking south).

Figure 11: Ditch [113] and shallow ditch [111] once the topsoil had been stripped, view looking north east.

Figure 12: North west facing section of cut into hillside (possible trackway) [118]/[120].

Figure 13: Stone filled ditch [124], north east facing section.

Figure 14: Boundary ditch [126] looking south west

Project background

In July 2012, planning permission (PA12/06996) was submitted by CAD Architects Ltd on behalf of First Step Homes for the construction of 13 dwellings within an area of 0.49 ha on land adjacent to Highway Lane, Mount Ambrose, near Redruth, Cornwall (centred at SW71061 43180).

The development was the subject of a planning condition (PA12/06996), requiring that archaeological recording took place ahead of construction. Phil Markham (Historic Environment Planning Advice Officer, Cornwall Council) agreed the Written Scheme of Investigation (WSI), specifying the methodology for archaeological recording produced by Adam Sharpe (25/09/2012) (Appendix 1).

HE Projects was requested by Mr Derek Coyle of First Step Homes to provide a project design and an estimate for an archaeological rapid assessment and geophysical survey of the proposed site for new build at land off Mount Ambrose, Redruth (PA/12/06996). Overall the development would cover an area of approximately 0.49 Hectares (Figs 1 and 2).

A geophysical survey was carried out by GSB Prospection in October 2012 (GSB 2012) and a site visit was carried out in November 2012 by A. Sharpe, Senior Archaeologist, Historic Environment Projects (HE Projects) and a report produced for First Step Homes (Sharpe 2012).

Following the assessment stage HE Projects was commissioned by Mike Jeffs of Gilbert and Goode Ltd of St Austell, to undertake a programme of archaeological recording, ahead of the construction works (Figs 1 and 2).

Potential sites

The brief identified the potential for prehistoric, Romano-British, medieval and industrial sites to survive within the project area and for the survival of unrecorded buried archaeological remains and artefacts of all periods. Potential features hinted at by the geophysical survey were not revealed during the watching brief.

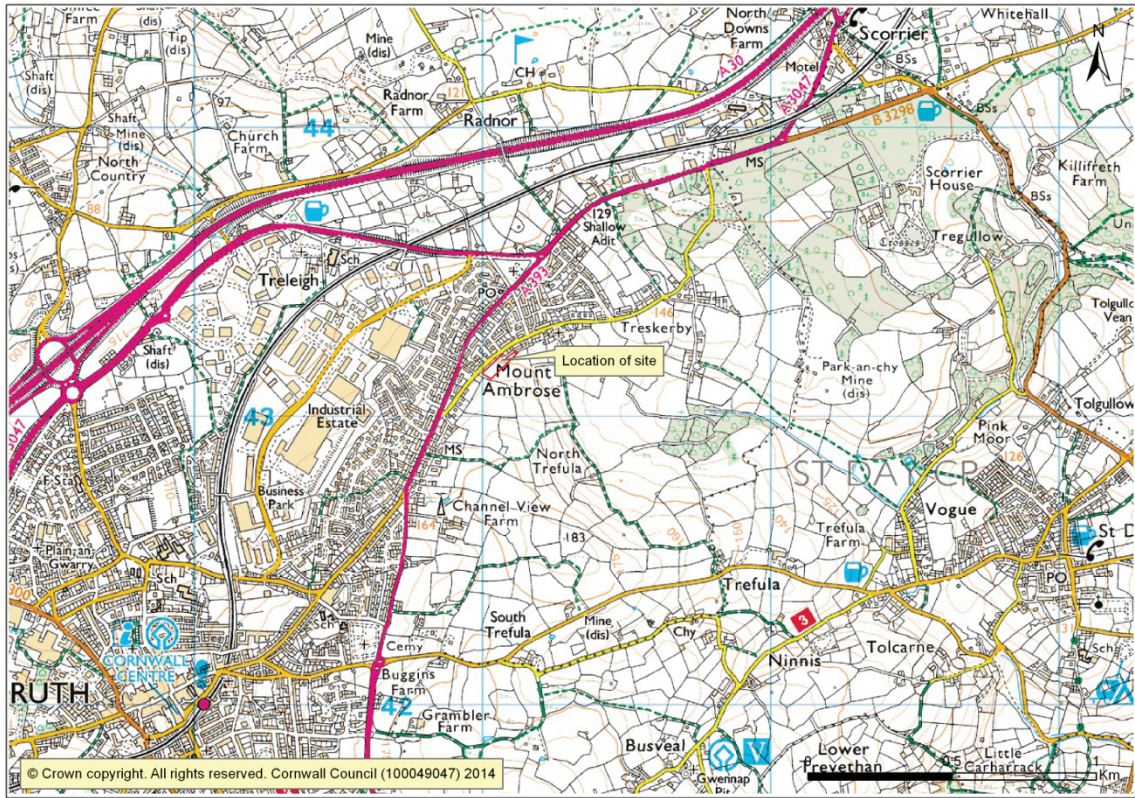


Figure 1: Location of site

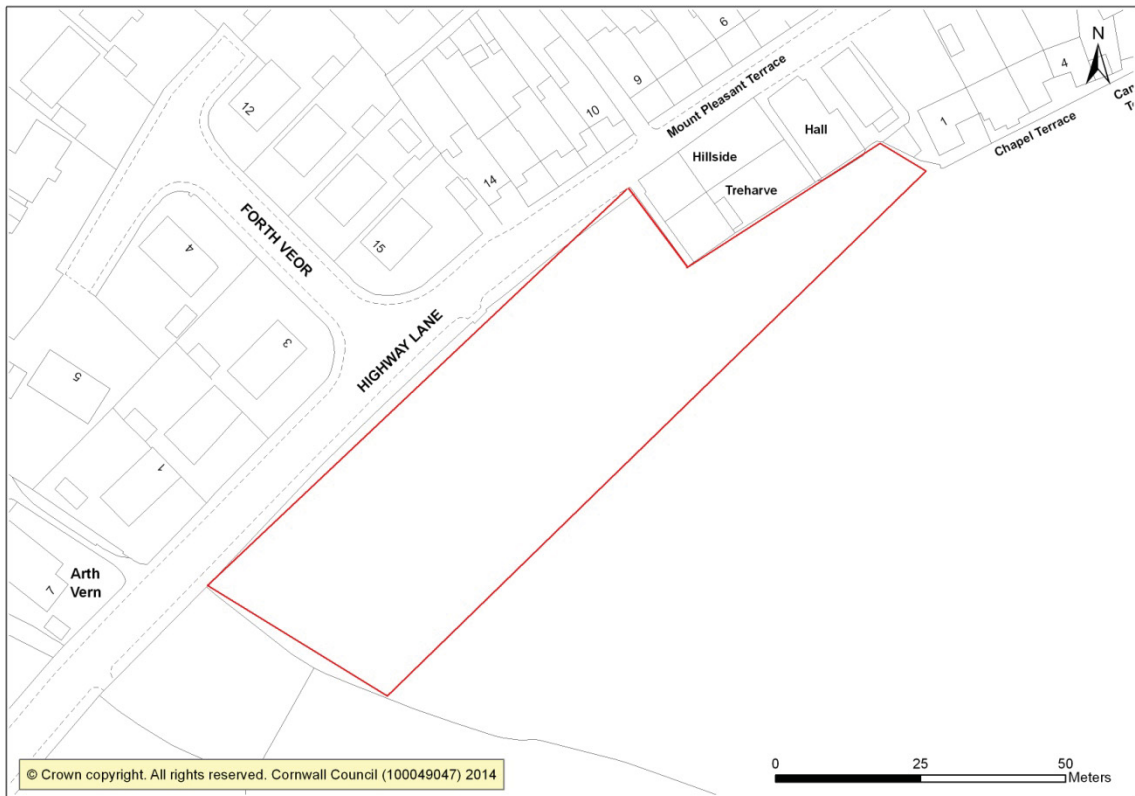


Figure 2: Site extent

Aims and objectives

The site specific aims identified in the model brief were to:

- Establish the presence/absence of archaeological remains.
- Determine the extent, condition, nature, character, date and significance of any archaeological remains encountered.
- To establish the nature of the activity on the site.
- To identify any artefacts relating to the occupation or use of the site.
- To provide further information on the archaeology of Mount Ambrose and the surrounding area from any archaeological remains encountered.
- To produce a report (this document) setting out the results of the archaeological watching brief, placing the information in its historical and landscape context.

Working methods

Field work

The archaeological field work was undertaken as a watching brief, observation of soil stripping operations being carried out under archaeological supervision. Stripping of the site was carried out using a 13 tonne excavator utilising a 1.8m toothless bucket (Fig 9). Contractors were required to strip the topsoil from the site because of contamination by arsenic, and the only area not completely stripped down to natural was a path across the southern section of the site, located above a high pressure gas main. Approximately 0.2m of topsoil was removed from this area, but due to the presence of the gas main, this area would have already been subjected to disturbance in recent history.

Where significant deposits were encountered, HE Projects were given the opportunity to excavate them by hand. Where necessary the detailed archaeological recording involved the production of plans (at a scale of 1:20) and section drawings (1:10) of the excavated features, recording of features using a continuous numbering system.

During the excavation several features were exposed matching those shown on the c1840 Tithe Map (Fig 3). These were recorded in accordance with the WSI. Ceramics associated with the late 18th century to late 19th century were prevalent within the mid west area of the site and samples were collected.

Location, setting and site history

The site is located at Mount Ambrose, near Redruth (SW 71061 43180), and consists of a polygonal area within the north-western part of an agricultural enclosure on the southern side of Highway Lane (Redruth Highway). Existing dwellings abutted the site to the north at its eastern end, and are not far to the west of its western end.

The site measures 0.49Ha in extent, averages 155m above OD and is on gently north sloping land.

The development area is situated in the eastern end of Redruth, within land that has been classified as 'Anciently Enclosed Land, Farmland Medieval' (Countryside Commission 1996). 'Anciently Enclosed Land' is land which has been settled since at least the medieval period and which often contains archaeological remains dating to prehistoric and medieval times.

The site is located near to the 19th century settlement of Redruth, in an area known as Mount Ambrose, a part of Redruth which saw the development of miners' smallholdings during the early 19th century, and which became increasingly urbanised during the latter part of the 19th century.

The site lies on the lower slopes of a north-facing hill in land characterised as having been enclosed during the post-Conquest period and associated with farming settlements

at Trefula to the south east and Treskerby to the east. These fields enclosed a block of remnant downland between North Trefula, Mount Ambrose and Treskerby which was enclosed to agriculture during the modern period.

The higher ground to the south of this end of Redruth may well have been unenclosed downland for much of prehistory, this being partially suggested by the place name 'Grambla' at South Trefula, which might indicate the site of a Neolithic (c 3900-3500 BC) chambered tomb. During late prehistory and into the Romano-British period (AD 43-410) enclosed settlements were established in the more fertile or more sheltered areas of this landscape, evidence suggesting that defended farmsteads were established at Cardrew, Treskerby, North Trefula and Park an Chy not far from Mount Ambrose.

Successor settlements were established off the high ground during the pre-Conquest period, these having names incorporating elements in Cornish (for example, as at Trefula, Treskerby or Treleigh) and as a result of the rapid development of miners' smallholdings during the late 18th century and of Redruth during the 19th century.

The 1st Edition of the Ordnance Survey 1" to a mile mapping, drawn up during the first decade of the 19th century, shows the very substantial changes which occurred within this part of the Cornish landscape from the later part of the 18th century into the early 19th century. The area to the east of Redruth was depicted as characterised by a network of roads and lanes, blocks of increasingly fragmented former downland improved to smallholdings, named mines and many individual single cottages fronting roads leading east out of the burgeoning settlement. Formerly large areas of open heathland, together with medieval farmland edging these roads, had been parcelled up into smallholdings by the rapidly-growing local mining population in order to supplement their at times uncertain incomes. Urban settlement was also beginning to develop, albeit in a piecemeal fashion.

The *Circa* 1840 Redruth Tithe Map shows that this process of urban development had moved on apace, and many of the cottages fronting Redruth Highway had, by this date become contiguous, the gaps between formerly isolated cottages becoming infilled as part of the expansion of the industrial settlement of Redruth along the edges of roads to its east and west.

The 1st Edition of the Ordnance Survey 25" to a mile mapping (Fig 4) showed that some of the boundaries which originally subdivided the fields to the south of Redruth Highway were subsequently removed, and that a Primitive Methodist chapel had been established to serve the spiritual needs of the occupants of this part of Redruth. Despite the speed at which miners' cottages were being built around Redruth, many parts of Mount Ambrose were still agricultural land at this date, however, the 2nd Edition of the Ordnance Survey 25" to a mile mapping (Fig 5) showed the total removal of any remaining field boundaries within the development area.

The late 19th century downturn in mining activity put a check on any further housing development along Redruth Highway for a considerable period, though as late 20th century aerial photographs show, urban infill in the form of individual bungalows and planned housing developments has taken place to the north of Redruth Highway in recent years.

The site walkover survey undertaken in 2012 revealed the existence of two areas of earthworks within the field, although the origin of these features was unclear. The magnetometer survey tentatively identified two sub-circular features within the eastern part of the site. Again, the identification of these features was unclear, though their form was suggestive either of prehistoric settlement features or alternatively undocumented mineshafts.

Map regression included within the 2012 survey report indicated that the area also includes a number of now-removed field boundaries documented on the *circa* 1840 Redruth Tithe Map, as well as a pair of buildings abutting the northern boundary of the site to the east of its centre point (Sharpe 2012).

Known archaeological sites (Fig 6).

The sites recorded in the HER near to the area of the development include:

Ref	Feature
MCO33145	Post-medieval nonconformist chapel
MCO22914	Treskerby – Iron Age enclosure – sub-rectangular earthwork, approximately 57m diameter externally
MCO35728	Post-medieval shaft? Possible remains of a shaft visible as a crop mark.
MCO33144	Post Medieval nonconformist chapel
MCO35733	Great North Downs – Post-medieval reservoir
MCO35729	North Trefula – Prehistoric enclosure (visible as a crop mark)

Table 1: HER record of monuments near the study area.

The parent bedrock underlying the application site consists of granite from the Carnmenellis Intrusion, whilst the soils are recorded as being of the Moretonhamstead series loams over granite. No superficial (drift) deposits are recorded by the British Geological Survey (BGS 2012).

Results

Between Friday 14th and Monday 24th March 2014, an archaeological watching brief was carried out on the site of a new housing development at Mount Ambrose, near Redruth, Cornwall (Fig 7).

Due to the reportedly high levels of arsenic within the topsoil around the site was to be stripped and removed by machine, until subsoil or natural material was encountered; it was then transported from the site for disposal.

The topsoil within the site comprised of two distinct grades of material, the north east and eastern perimeter of the field comprising a very dark black silty peaty material (115) with no stone inclusions, reaching a maximum depth of over 0.7m, this material only varied slightly within the fill of some of the ditches as a result of granite inclusions derived from the local geology.

The second type of topsoil (101) was present on the north west, west and south west areas of the site, and comprised a mid to dark brown loamy material containing sparse to common stone inclusions, the material comprised particulates from the decayed granite bedrock; in several parts of the site the soil was shallow, having a depth of less than 0.2m.

The materials from both types of topsoil were distinct in their appearance and clarity within the boundaries of the site, enhancing the appearance of features against the natural background materials, in particular the pale yellow sandy clay (102) and (109) a more reddish version of this. Excavation in the north east area of the site revealed solid granite bedrock at less than two metres in depth.

The geophysics survey carried out in 2012 identified two ovoid features (Fig 8) but neither of these two features was identified with certainty. The circular feature indicated to the south may have been [138]: an oval depression within the mixed natural [102] and [109], but due to its proximity to the high pressure gas main this was not fully uncovered. The northern geophysical anomaly was on a plateau adjacent to [118] and may have been the result of parts of several former field boundaries shown on the 1840 Tithe Map which formerly had a south-east to north-west alignment (Fig 3).

For clarity and to assist with interpretation the locations of the features identified have been given numbers and overlaid onto the Redruth Tithe Map of c1840 (Fig 7). A record and description of context numbers can be found in Appendix 2.

1. Field boundary [104]

This feature was observed in the baulk of a survey peg left *in situ*. Located at the base of a shallow slope, the cut [104] could be clearly seen in section. This feature appears to be the corner of a small field enclosure shown on the Tithe Map.

2. Cobbled surface (105)

The cobbled surface (105) measured approximately 4m x 3m and comprised smoothed granite cobbles embedded into the natural found on the site; a small area to the north of the cobbles comprised embedded gravel (106). The floor had been subject to disturbance and was covered by (101) and domestic rubbish which was found across the site.

3. Lime/ash floor (107) (Fig 10)

Apparently the floor surface (107), of one of the cottages shown on the Tithe Map. By 1877 the house had been demolished and the area appeared to have returned to agricultural use. The floor surface was covered by a mixture of demolition material (108) and material derived from the natural geology (102).

4. Ditch [110]

A shallow ditch [110], 0.65m in width and 0.1m deep, with smooth rounded sides which were well defined only in the area excavated in detail, this was filled by a layer similar to (101). This was located to the north of a larger and better defined ditch; the end of the ditch was not apparent and could have remained hidden by one of the baulks left by the contractor.

5. Shallow ditch [111] (Fig 11)

A shallow ditch [111] running parallel with ditch [113] for over 30m, and orientated north east, south west. Less than 0.35m in width and 0.1m deep, the ditch fill comprised (115) the black organic silty material found across this part of the site. The floor of the ditch was uneven and appeared to have been damaged by invasive roots; its upper edge was well defined, but excavation revealed a feature that would possibly have been considered natural had it not followed ditch [113] for a distance of over 30m. There is no indication of the presence of this feature in early mapping.

6. Ditch [113] (Fig 11)

A well-defined ditch [113] running south-east to north-west cut into the yellow natural (102), appears to be the remnants of a field boundary, filled with large granite stones (114), which were packed within (115) the dark organic material associated with topsoil across this area of the site. The stone may be the remnants from a field boundary deliberately demolished into the ditch, these being on top of a dark grey gritty material (112), probable the remains of natural silting by granules of decayed granite material from the surrounding geology. The ditch was 2.2m wide and 0.85m deep. The edges of the ditch were well defined, its sides were smooth and concave, with a U-shaped base. The gap between [111] and [113] averaged 2m throughout their course. There was no indication on the Tithe Map of the presence of either ditch [111] or [113], but it is likely to be associated with a removed boundary of post-medieval date.

7. Stone-lined ditch[116]

Measuring 0.9m wide, 19m in length and 0.2m deep, this ditch [116] was defined in the stripped surface by the presence of topsoil (117) a mixture of (101) and decayed granite. Small stones were found to be embedded in the edge and sides of the ditch, although there was evidence of erosion - some stones being found in the base of the feature. The stones were irregular in shape and less than 0.1m in width, with the exception of a large stone on the north west side of the excavation. The ditch appears to be the remains of a field boundary shown on the 1840 Tithe Map.

8. Large cut [118] (Fig 12)

Measuring 9m in width, heading north west from the baulk for approximately 11m, the northern edge [118] being more shallow in appearance and not well-defined. This part of the feature appeared to be cut into (102).. The feature was traceable to the south side [120], where the base was found to rise more steeply, this having a 45 degree angle, where it was associated with what appeared to be the possible remains of a retaining bank. The feature had a single fill (119)/(115): a black silty organic material with sparse stony inclusions. There were small pieces of modern pottery at

the base of the cut, sandwiched between the fill and the natural material. This feature appears to be on the same orientation as a trackway shown on the 1840 Tithe Map.

9. Ditch [112]

A shallow ditch [122] measuring 0.9m wide, 30m in length and 0.1m deep, the edges were shallow and curved, the feature being moderately well defined once the topsoil (101) had been stripped. The fill of the ditch (121) was a dark brown almost black silty material similar to (119), although containing more stony material. This ditch appears to be a further section of ditch [124], located further south within the site. This appears to be part of a field boundary shown on the 1840 Tithe Map (Fig 3) curving from the east and butting up against a field boundary orientated north west - south east, located on the eastern edge of the area under investigation.

10. Stone filled ditch [124] (Fig 13)

A ditch [124] containing large stones, which was similar in appearance to ditch [113], measuring 0.6m wide and 0.3m in depth. This ditch appears to be a continuation of [122]. The feature stopped abruptly adjacent to the area through which the high pressure gas main runs. The fill of the ditch (123) comprised; a dark brown almost black silt with some stone inclusions, the mix being very similar to fill (119).

11. Ditch [126] (Fig 14)

Located on the south-western edge of the site, adjacent to Highway Lane, ditch [126] measured 1.6m wide, and was less than 0.7m deep from the stripped surface. this being orientated north-west – south-east The fill of the ditch was a mid to dark brown loam (101), the primary fill being a dark grey gritty material (128), similar to (112), implying a process of natural silting, the ditch having remained open to the elements for a period of time prior to being infilled. Although visible at the edge of the site, ground conditions prevented its course being followed further. It appears to be at the same location as a boundary shown on the 1840 Tithe Map.

12. Ditch [134]

A shallow ditch [134] measuring 0.35m wide and being less than 0.1m deep, orientated north-east – south-west (downhill). Although relatively well-defined in the stripped surface, it was thought most likely to be a natural feature. The primary fill of the gully (135) appeared to be the dark grey gritty material also found filling [113] and [126].

13. Ovoid depression [138]

A shallow ovoid [138] depression within the pale yellow natural (102). Excavation of a section of the feature revealed a level surface which appeared to have been cut into the hillside from the west. Modern material was found within the basal fill (137), this being a mid to dark brown loamy material. Although the initial interpretations of the feature were a possible prospecting pit, activity related to early mining, or a platform, excavation of a section across it did not reveal any intrusion into the underlying ground surface which would indicate mining activity. It is possible that the activity associated with the excavation of the gas main might have already disturbed associated features. No further examination of the platformed area could be carried out due to the proximity of the high pressure gas main.

Pieces of pottery of varying periods (late 17th century – 20th century) was recovered from the topsoil across the site, reflecting post-medieval activity in the area. A single piece of flint was also recovered, but this was identified as belonging to a flint lock weapon (17th century onwards).

Conclusion

No major features were uncovered during the watching brief, and significant buried archaeological features were impacted upon by the development. However, those features which were uncovered were of interest as they confirm the pattern of post medieval enclosure and occupation related- activity which was suggested by the historic mapping.

References

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)

Ordnance Survey, 2007. *Mastermap Digital Mapping*

Tithe Map and Apportionment, c1840. *Parish of Redruth* (licensed digital copy at HE)

Publications

GSB Propection 2012. *Geophysical Survey at Mount Ambrose, Redruth*, Geophysical Survey Report 2012/71, Wood, Bradford

Sharpe A, 2012. *Mount Ambrose, Redruth, Cornwall: Archaeological assessment and geophysical survey*, Truro (Historic Environment Projects, Cornwall Council)

Websites

<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> British Geological Survey, Surface and sub surface geology Visible geology 1:50 000 scale

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

Project archive

The HE project number is **146355**

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Fal Building, County Hall, Treyew 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. Field plans and copies of historic maps stored in an A2-size plastic envelope (GRE809/1-9).
3. Electronic drawings stored in the directory ..:\Historic Environment (CAD)\CAD Archive\Sites M\Mount Ambrose 145355
4. Digital photographs stored in the directory ..:\Historic Environment (Images)\SITES.M-P\Mount Ambrose 146355
5. English Heritage/ADS OASIS online reference: cornwall2-176724

This report text is held in digital form as: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites M\Mount Ambrose WB 2014

Artefacts and environmental material retrieved during the project are stored at the HE Projects Finds Archive Store, Cardrew Industrial Estate, Redruth. The site code is MAWB14.

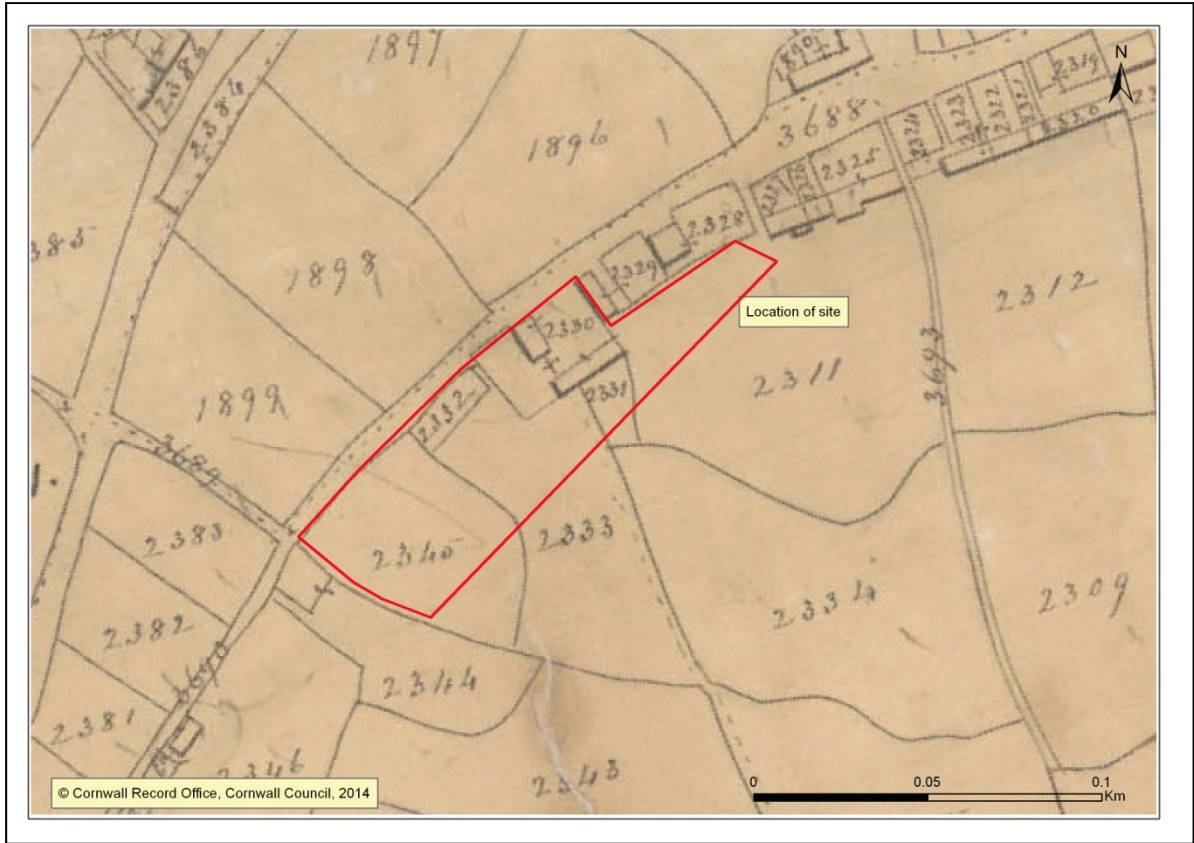


Figure 3: Tithe Map of Redruth (c1840) showing location of site (denoted by red line).

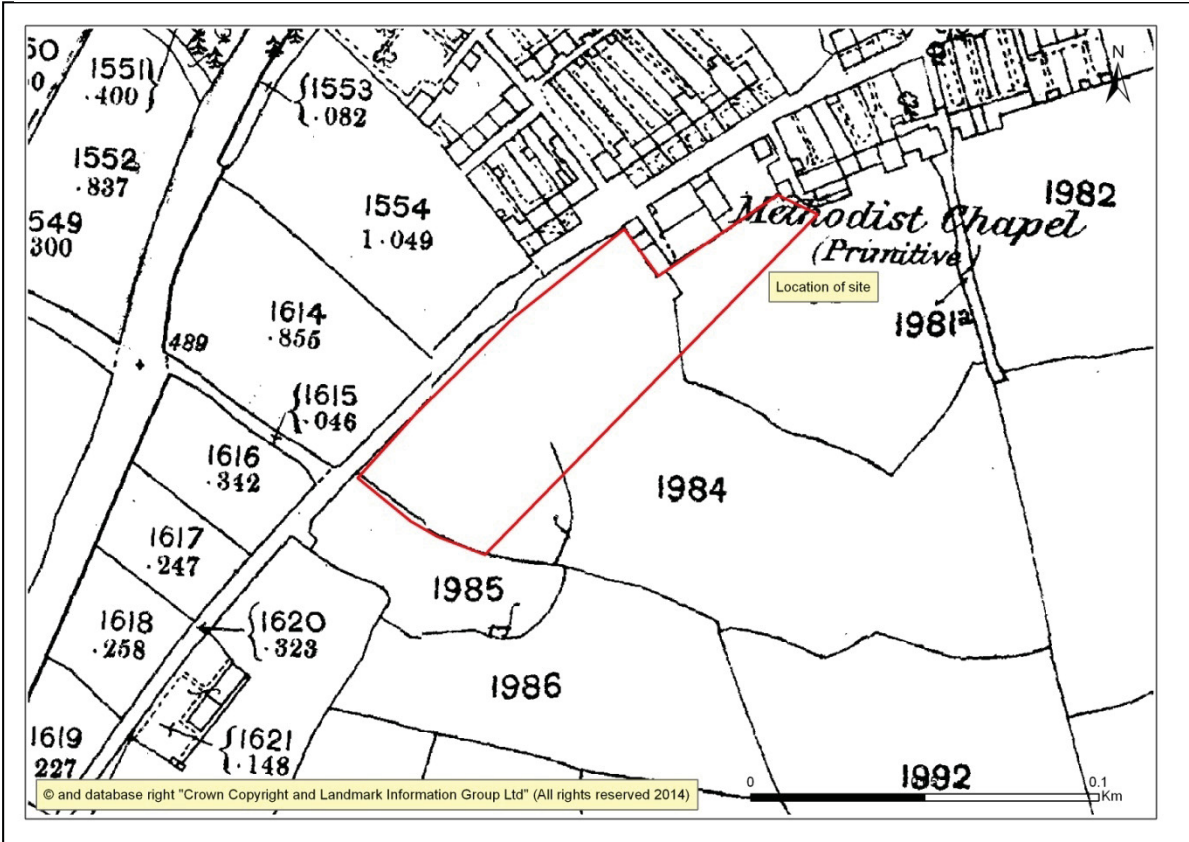


Figure 4: First edition of the Ordnance Survey 25 inch Map c1877, showing the removal of some field boundaries and buildings shown on the Tithe Map.

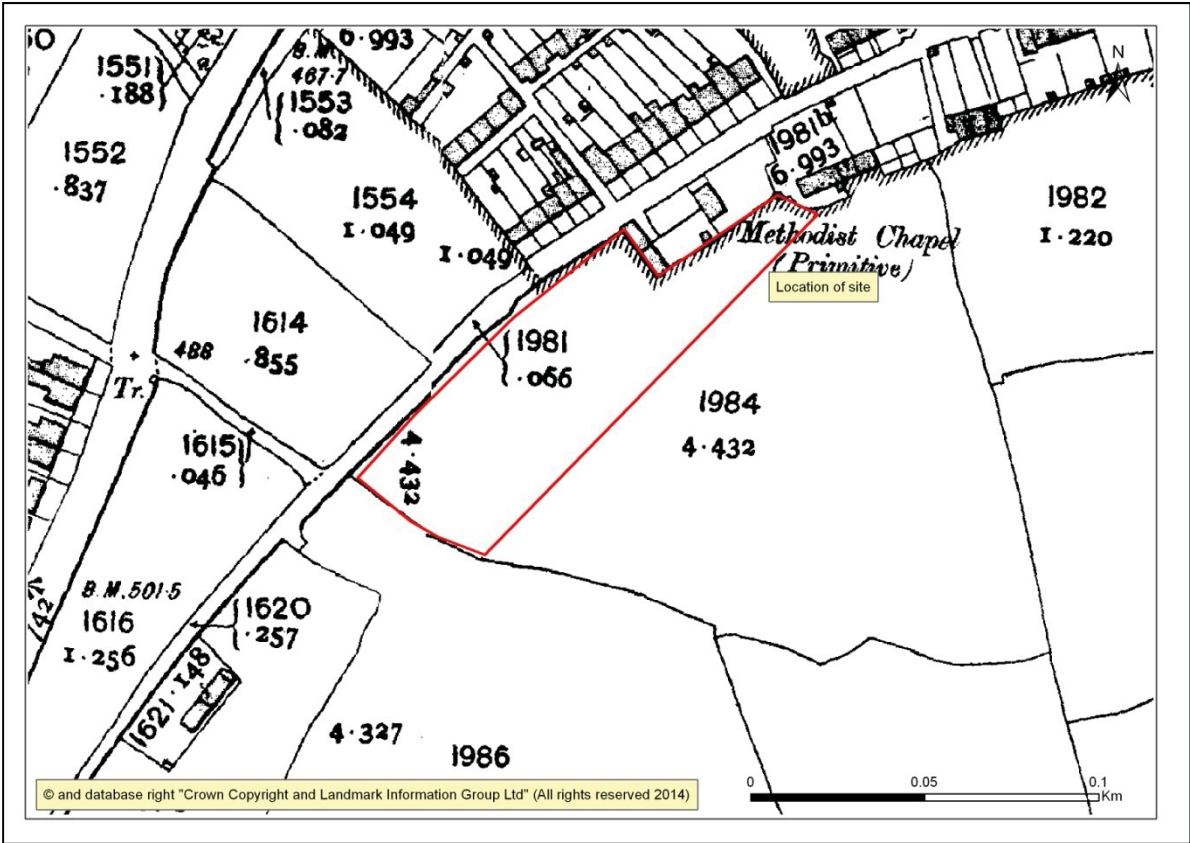


Figure 5: Second edition of the Ordnance Survey 25 inch map c1907, showing the complete removal of field boundaries within the larger enclosure.

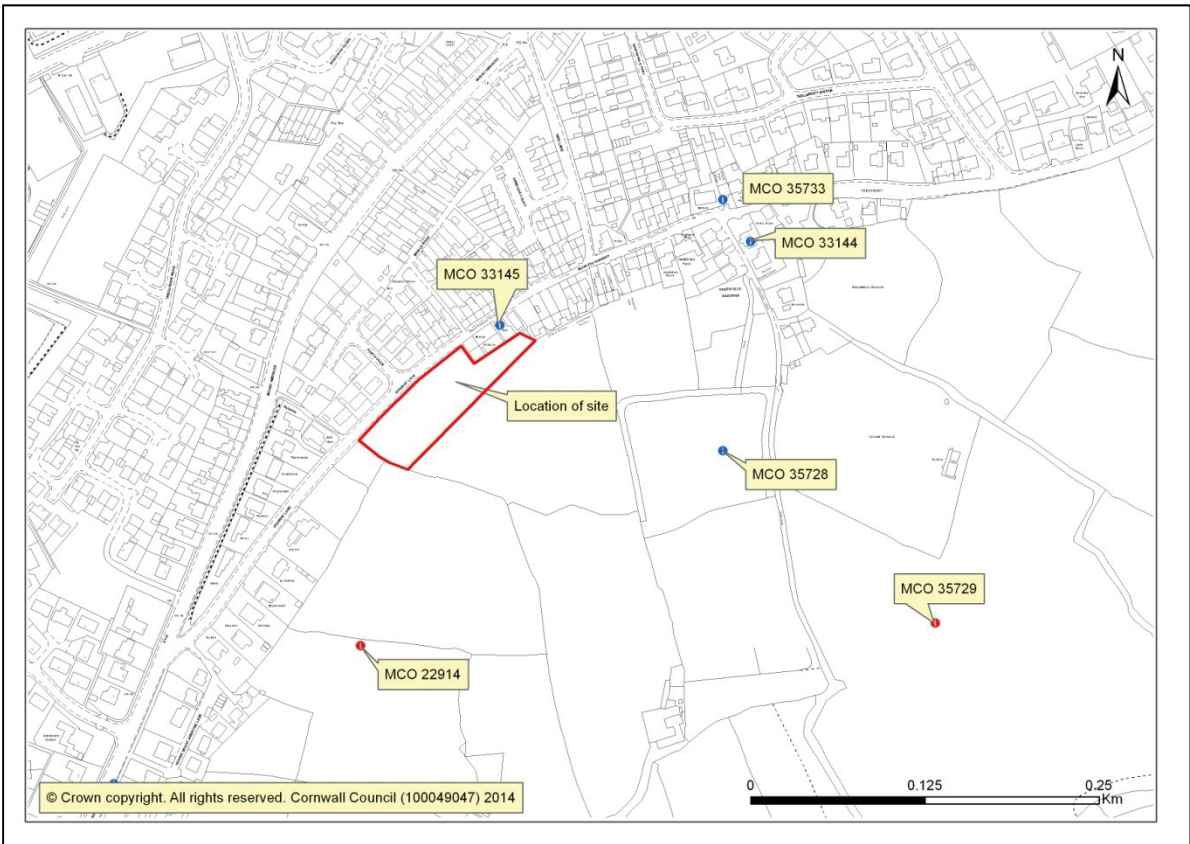


Figure 6: Identified archaeological sites in proximity to the site.

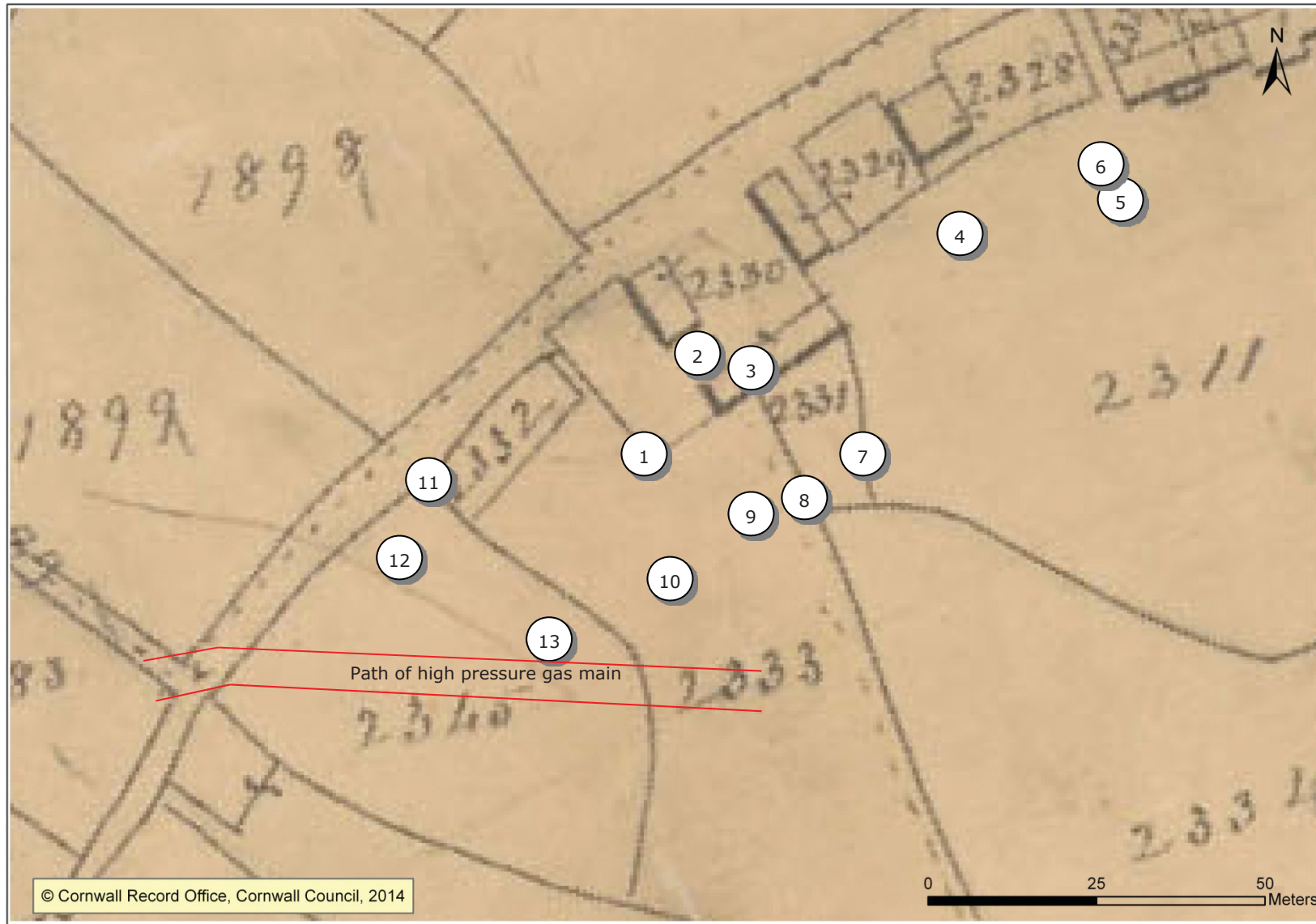


Figure 7: An extract from the Redruth Tithing Map (c1840) showing the locations of features found during the watching brief.

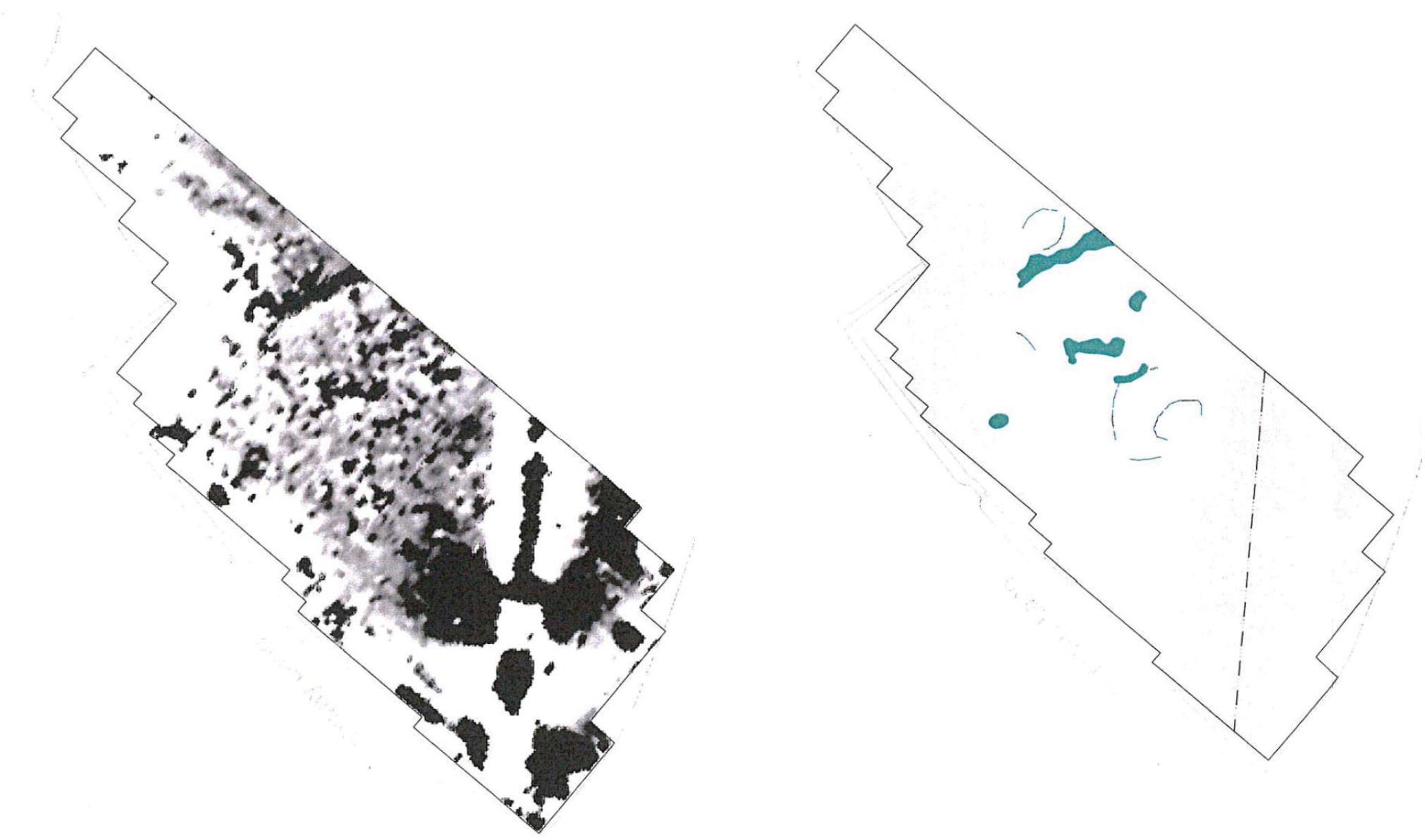


Figure 8: Magnetometer Survey - Greyscale plot and interpretation (GSB 2012). The route of the gas main is shown as a dashed line.



Figure 9: View looking west across the site, towards the site entrance.



Figure 10: The lime/ash floor surface of the demolished cottage shown on the Tithe Map (looking south).



Figure 11: Ditch [113] and shallow ditch [111] once the topsoil had been stripped, view looking north east.



Figure 12: North west facing section of cut into hillside (possible trackway) [118][120].



Figure 13: Stone filled ditch [124], north east facing section.



Figure 14: Boundary ditch [126] looking south west

Appendix 1: Written Scheme of Investigation Historic Environment Projects Cornwall Council



Mount Ambrose, Redruth: Written Scheme of Investigation for an archaeological watching brief during the construction of a housing development

Client: Gilbert and Goode Ltd.
Client contact : Mike Jeffs
Client tel: 01726 64800
Client email: m.jeffs@gilbertandgoode.co.uk

Project background

Historic Environment Projects were contacted in November 2013 by Mike Jeffs of Gilbert and Goode Ltd with a request for the costs of a watching brief during groundworks associated with the construction of a housing scheme at Mount Ambrose, Redruth, (PA/12/06996). A report on the potential impacts of the proposal (including the results of a geophysical survey) had been produced in November 2012 for First Step Homes (Sharpe 2012, Report number 2012R078).

As discussed with Mr. Phil Markham, this WSI is based on a standard brief issued by Historic Environment Planning Advice Officers (HEPAO), and would need to be approved by Mr. Markham, HEPAO (west), before any work could be undertaken on site.

Site description and summary history

The site at Mount Ambrose, Redruth is centred at SW 71061 43180 and consists of a single sub-triangular area within the northern part of an agricultural enclosure on the southern side of Highway Lane (Redruth Highway). Existing dwellings abut the site to the north at its eastern end, and are not far to the west of its western end.

The site measures 0.49Ha in extent, averages 155m above OD and is on gently north-sloping land. The field also includes a number of intriguing undulations.

The development area is characterised in the Cornwall and Scilly Historic Environment Record (HER) as 'Anciently Enclosed Land' – Farmland Medieval, that is land whose boundary arrangements were laid down during the medieval period.

The parent bedrock underlying the application site consists of granite, whilst the soils are recorded as being of the Moretonhamstead series loams over granite. No superficial (drift) deposits are recorded by the British Geological Survey.

The site lies on the lower slopes of a north-facing hill in land characterised as having been enclosed during the post-Conquest period and associated with farming settlements at Trefula to the south east and Treskerby to the east. These fields

enclosed a block of remnant downland between North Trefula, Mount Ambrose and Treskerby which was reorganised during the modern period.

The higher ground to the south of this end of Redruth may well have been unenclosed downland for much of prehistory, this being partially suggested by the place name 'Grambla' at South Trefula, which might indicate the site of a Neolithic (c 2800-3500 BC) chambered tomb. During late prehistory and into the Romano-British period (AD 43-410) enclosed settlements were established in the more fertile or more sheltered areas of this landscape, evidence suggesting that defended farmsteads were established at Cardrew, Treskerby, North Trefula and Park an Chy not far from Mount Ambrose.

Successor settlements were established off the high ground during the pre-Conquest period, these having names incorporating elements in Cornish (as at Trefula, Treskerby or Treleigh, for example) and as a result of the rapid development of miners' smallholdings during the late 18th century and of Redruth during the 19th century.

The 1st Edition of the Ordnance Survey 1" to a mile mapping, drawn up during the first decade of the 19th century, shows the very substantial changes which occurred within this part of the Cornish landscape from during the later part of the 18th century into the early 19th century. The area to the east of Redruth was depicted as characterised by a network of roads and lanes, blocks of increasingly fragmented former downland improved to smallholdings, named mines and many individual single cottages fronting roads leading east out of the burgeoning settlement. Formerly large areas of open heathland, together with medieval farmland edging these roads, had been parcelled up into smallholdings by the rapidly-growing local mining population in order to supplement their at times uncertain incomes. Urban settlement was also beginning to develop, albeit in a piecemeal fashion.

Circa 1840, the Redruth Tithe Map shows that this process of urban development had moved on apace, and many of the cottages fronting Redruth Highway had, by this date become contiguous, the gaps between formerly isolated cottages becoming infilled as part of the expansion of the industrial settlement of Redruth along the edges of roads to its east and west.

The 1st Edition of the Ordnance Survey 25" to a mile mapping showed that some of the boundaries which originally subdivided the fields to the south of Redruth Highway were subsequently removed, and that a Primitive Methodist chapel had been established to serve the spiritual needs of the occupants of this part of Redruth. Despite the speed at which miners' cottages were being built around Redruth, many parts of Mount Ambrose were still agricultural land at this date, however.

The late 19th century downturn in mining activity put a check on any further housing development along Redruth Highway for a considerable period, though as late 20th century aerial photographs show, infill in the form of individual bungalows and planned housing developments has taken place to the north of Redruth Highway in recent years.

A site walkover survey undertaken in 2012 revealed the existence of two areas of earthworks within the field, though the origins of these features was unclear. The magnetometer survey tentatively identified two sub-circular features within the eastern part of the site. Again, the identification of these features was unclear, though their form is suggestive either of prehistoric settlement features or alternatively undocumented mineshafts.

Map regression included within the 2012 survey report indicates that the area also includes a number of now-removed field boundaries documented on the *circa* 1840 Redruth Tithe Map, as well as a pair of buildings abutting the northern boundary of the site to the east of its centre point.

Project extent

The watching brief will be focussed on all areas of the development site within which groundworks associated with the housing development will take place, specific attention being paid to the two earthwork features and the areas within which the magnetometer survey suggested the presence of sub-circular features.

Aims and objectives

The site specific aims identified in the model brief are to:

Establish the presence/absence of archaeological remains.

Determine the extent, condition, nature, character, date and significance of any archaeological remains encountered.

To establish the nature of the activity on the site.

To identify any artefacts relating to the occupation or use of the site.

To provide further information on the archaeology of Mount Ambrose and the surrounding area from any archaeological remains encountered.

The project objective is produce a report setting out the results of the archaeological watching brief and placing them in their historical and landscape context.

Working methods

All recording work will be undertaken according to the Institute for Archaeologists *Standards and Guidance for Archaeological Investigation and Recording*. Staff will follow the IfA *Code of Conduct* and *Code of Approved Practice for the Regulation of Contractual Arrangements in Archaeology*. The Institute for Archaeologists is the professional body for archaeologists working in the UK.

Watching brief

All soil stripping should be carried out under archaeological supervision using a machine fitted with a toothless bucket. The soil will be stripped cleanly to a level at which archaeological features or layers can be expected to be revealed (i.e. top of the "natural"). Machines should not run over the stripped area until it has been examined by the site archaeologist. Following soil stripping, the area will be inspected by the archaeologist and any archaeological features or layers exposed in the stripped area will be carefully excavated by hand and archaeologically recorded by written description, plan and section and by photographic record as appropriate. The level of recording will be appropriate to the character/importance of the archaeological remains.

If complex and/or significant archaeological deposits are encountered then the archaeological requirements should be reviewed by the client, the Historic Environment Planning Advice Officer and HE Projects. In the event that remains cannot be preserved *in situ* then full-scale excavation may be required. A contingency should be allowed to record and analyse any significant archaeological remains uncovered during the stripping. The significance of the remains should be agreed between the client, the Historic Environment Planning Advice Officer and HE Projects.

Where necessary the detailed archaeological recording may include:

Excavation of archaeological features exposed in the stripped area and plotting them onto a base map.

Production of plans and section drawings of the excavated features and recording of features using a continuous numbering system.

Retrieval of artefacts.

Recording - general

Site drawings (plans, sections, locations of finds) will be made by pencil (4H) on drafting film; all plans will be linked to the Ordnance Survey Landline (electronic) map; all drawings will include standard information: site details, personnel, date, scale, north-point.

All features and finds will be accurately located at an appropriate scale. Sections will normally be drawn at 1:10 and plans at 1:20.

All archaeological contexts will be described to a standard format linked to a continuous numbering sequence.

Photography: scaled monochrome photography will be used as the main record medium, with colour digital images used more selectively and for illustrative purposes. This will include both general and site specific photographs. Photographs should have a scale and detailed ones should include a north arrow.

Drawings and photographs will be recorded in a register giving details of feature number and location.

Sealed/undisturbed archaeological contexts in the form of buried soils, layers or deposits within significant archaeological features (ditches and pits, etc) will be sampled for environmental evidence and dating material. In the event that significant organic remains are encountered, advice may be needed from Vanessa Straker (Regional Advisor for Archaeological Science).

Human remains

If human remains are discovered on the site the Historic Environment Planning Advice Officer and the Ministry of Justice will be informed. All recording will conform to best practice and legal requirements.

If human remains are uncovered, which require excavation, they will be will be excavated with due reverence. The site will be adequately screened from public view. Once excavated, human remains must not be exposed to public view.

If human remains are not to be removed their physical security will be ensured, by back filling as soon as possible after recording.

Treatment of finds

The archaeological fieldwork may produce artefactual material.

All finds in significant stratified contexts predating 1800 AD (e.g., settlement features) should be collected by context and described. Post medieval or modern finds may be disposed of at the cataloguing stage. This process will be reviewed ahead of its implementation.

All finds will be collected in sealable plastic bags which will be labelled immediately with the context number or other identifier.

Creation of site archive

To include:

Archiving of black and white photographs to HER standards. All monochrome photographs will be archived using the HE photo database.

Digital colour photographs (stored according to HER guidelines and copies of images made available to the client).

Preparation of finished drawings.

Completion of the English Heritage/ADS OASIS online archive index.

Archive report

A written report will include:

Summary

Project background

Aims and objectives

Methodologies

Location and setting

Designations

Site history

Archaeological results

Chronology/dating evidence

Significance

Conclusions

References

Project archive index

Supporting illustrations: location map, historic maps, plans, elevations/sections, photographs

A digital (PDF) copy of the report, illustrations and any other files will be held in the Cornwall HER. Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

Assessment/analysis

In the event that significant archaeological remains are uncovered, the structural and stratigraphic data and artefactual material will be assessed to establish whether further analyses and reporting are appropriate. The outline of the final report, and the work required to produce it will be determined in an updated project design.

In the event of significant remains being recovered (e.g., prehistoric or medieval artefacts) it may be appropriate to:

Consult with the Historic Environment Planning Advice Officer over the requirements for assessment, analysis and reporting.

Liaise with specialists (e.g. artefacts) to arrange for assessment of the potential for further analysis and reporting.

Arrange for specialist analyses, where appropriate.

Final publication

In the event of significant archaeological remains being recorded the scope and final form of the report will be reviewed; for example in addition to an archive report the results should be published in an academic journal (eg, *Cornish Archaeology*).

Archive deposition

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with HE standards.

The archiving will comprise the following:

All correspondence relating to the project, the WSI, a single paper copy of the report together with an electronic copy on CD, stored in an archive standard (acid-free) documentation box

A2 drawn archive storage (plastic wallets for the annotated record drawings)

Archive standard negative holders and archive print holders, to be stored in the HES system until transferred to the Royal Cornwall Museum.

All black and white photographs will be archived using captioned labels, appropriate record forms and location plans. Other photo records will be supplied with written captions and subject to appropriate batch archiving to be held in safe archival storage.

The project documentary archive will be deposited initially at ReStore PLC, Liskeard and in due course (when space permits) at either the Royal Cornwall Museum (if accompanied by artefacts) or at the Cornwall Record Office.

The results of the watching brief will be reviewed on completion with the HEPAO and the Client to establish whether these warrant a programme of further analysis and publication.

Timetable

The watching brief is anticipated to be commenced during January 2014 and to run for twelve weeks. HE will require at least two weeks notice before commencement of work, in order to enable us to allocate field staff time and arrange other logistics.

The archive report will be completed within 3 months of the end of the fieldwork. The deposition of the archive will be completed within 3 months of the completion of the archive report.

Monitoring and Signing Off Condition

Monitoring of the project will be carried out by Phil Markham, Historic Environment Planning Advice Officer. Where the Historic Environment Planning Advice Officer is satisfied with the archive report and the deposition of the archive written discharge of the planning condition will be expected from the local planning authority (LPA).

Monitoring points during the study will include:

Approval of the WSI

Completion of fieldwork

Completion of archive report

Deposition of the archive

Historic Environment Projects

Historic Environment Projects is the contracting arm of Historic Environment, Cornwall Council (HE). HE employs some 20 project staff with a broad range of expertise, undertaking around 100 projects each year.

HE is committed to conserving and enhancing the distinctiveness of the historic environment and heritage of Cornwall and the Isles of Scilly by providing clients with a number of services including:

Conservation works to sites and monuments

Conservation surveys and management plans

Historic landscape characterisation

Town surveys for conservation and regeneration

Historic building surveys and analysis

Maritime and coastal zone assessments

Air photo mapping

Excavations and watching briefs

Assessments and evaluations

Post-excavation analysis and publication

Outreach: exhibitions, publication, presentations

Standards



HE is a Registered Organisation with the Institute for Archaeologists and follows their Standards and Code of Conduct.

As part of Cornwall Council, HE has certification in BS9001 (Quality Management), BS14001 (Environmental Management), OHSAS18001 (Health, Safety and Welfare), Investors in People and Charter Mark.

Terms and conditions

Contract

The HE projects team is part of Historic Environment, Cornwall Council. If accepted, the contract for this work will be between the client and Cornwall Council.

The views and recommendations expressed will be those of the HE projects team and will be presented in good faith on the basis of professional judgement and on information currently available.

Project staff

The project will be managed by a nominated Senior Archaeologist (Adam Sharpe BA MifA) who will:

Discuss and agree the detailed objectives and programme of each stage of the project with the client and the field officers, including arrangements for health and safety.

Monitor progress and results for each stage.

Edit the project report.

Liaise with the client regarding the budget and related issues.

Work will be carried out by HE field staff, with assistance from qualified specialists and sub-contractors where appropriate.

Report distribution

Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

A digital copy of the report, illustrations and any other files will be held in the Cornwall HER and also supplied to the client on CD or other suitable media.

Copyright

Copyright of all material gathered as a result of the project will be reserved to the Historic Environment, Cornwall Council. Existing copyrights of external sources will be acknowledged where required.

Use of the material will be granted to the client.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

HE will ensure that all information arising from the project shall be held in strict confidence to the extent permitted under the Act. However, the Act permits information to be released under a public right of access (a "Request"). If such a Request is received HE may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

Health and safety statement

HE follows the Council's *Statement of Safety Policy*.

Prior to carrying out on-site work HE will carry out a Risk Assessment.

Insurance

As part of Cornwall Council, HE is covered by Public and Employers Liability Insurance.

Adam Sharpe BA MIFA

Senior Archaeologist

21/11/2013

Historic Environment Projects

Cornwall Council

Fal Building, County Hall, Treyew Road, Truro, Cornwall. TR1 3AY

Tel: 01872 323603 Fax: 01872 323811

Email: asharpe@cornwall.gov.uk

Appendix 2. Table of Contexts

Context Number	Type (Cut/Deposit /Build)	Description	Section Number
(101)	D	Topsoil. Dark brown, loose, loam/silt, sparse to common stone inclusions, the majority being decayed granite material; pottery dating from the mid 19 th to early 20 th century material present within the matrix of this material, which covers approximately 70% of the site surface, but gives way on the northern and eastern edges of the site to a darker, richer topsoil, which is both silty and deeper (115). The maximum depth of this material was 0.3m.	
(102)	D	A light yellow, loose, gritty coarse clay, this being the natural subsoil normally found directly beneath the topsoils within the site bounds; the natural within the site comprised either this material or (109). An exploratory trench on the eastern part of the site found the material to be less than 0.3m deep, giving way to a more loose yellow, more sandy material, which contained large granite stones; this had a depth of around 2m before granite bedrock was encountered.	
(103)	D	A dark brown loam, more compact than (101) and easy to trowel, which contained small stone inclusions, these having irregular sizes and being unsorted. This was the primary fill of [104], an old field boundary observed in a baulk.	1
[104]	C	The cut of a probable linear feature, possibly an old field boundary, which sits on top of (102), but does not appear to have been cut into the natural. The feature had a very distinct edge within the remaining baulk. The length of the feature was not known, but probably followed the base of the slope for 10 metres toward the north east.	1
105	B	A cobbled surface which appears to be the remains of an approach path to a building documented on the 1840 Tithe Map. This comprised medium-sized granite stones, which appeared rounded from extensive use; on the north side of the cobbled surface was a more compact gravel floor. The cobbles appear to have been set into soil. This area measured approximately 4m x 3m and was orientated NE-SW.	
(106)	D	A dark grey very compact coarse gravel floor, comprised of small stones compacted into the ground and found only on the NE side of (105). The gravel was irregular in size and	

		unsorted. Not seen in section and less than 1.5m square in area.	
107	B	The remains of a possible beaten lime/ash floor, measuring 5m + x 3m +, this being the only remains of the demolished house shown on the 1840 Redruth Tithe Map. The floor surface was not constructed of concrete and showed evidence of degradation and possible patching; there were also possible indications of a former wall partition. The floor surface had a NE – SW orientation, and was buried under 0.1m of waste material (108) within the area excavated.	
(108)	D	Waste material burying (107), comprising a mixture of debris and soil from the site; the debris comprised stone of various sizes, shapes and geological origins, topsoil, pottery/ceramics, small amounts of red brick and other unidentified materials. This material had a maximum depth of approximately 0.1m.	
(109)	D	A red/brown, compact to loose, coarse gritty material with some clays present, the second natural material within the site, more obvious on its NE adjacent to a removed field boundary, where it gives way to the pale yellow (102), or appears to have been subjected to leaching. This is a variant subsoil type, which may be more mineralised than (102) and underlies the darker and more organic topsoil (115).	
[110]	C	The cut of a linear feature, 3m long, 0.65m wide, and 0.1m deep. Filled by (101). The feature had good edge definition, although its origin could not be traced; it appeared to butt [113], though this relationship could not be clarified. Its path was curved and on the edge of the slope, and was cut into (102).	4
[111]	C	The cut of a linear feature, 30m long, 0.35m wide, and 0.1m deep. Filled by (115), The feature had rather poor edge definition, and appeared to run parallel to [113] for at least 30m from the eastern baulk. The feature had an uneven floor surface, which appear to have been subject to animal and plant action, creating pits and spurs within its profile.	6
(112)	D	A dark grey, very compact material, the primary fill of [113] and similar to material found at the base of another feature within the site (130) boundary. It contained small stone inclusions, these having irregular shapes and being unsorted, probably a result of water induced silting within the ditch [113] when it was open to the elements. The feature had a maximum depth of <0.15m.	8/10
[113]	C	The cut of a linear feature, 30m long, 2.4m wide, 0.5m deep. Filled by 114 (large granite stones), (115) topsoil from this area of the site, and (112). The feature had a well defined cut and good edge definition, with a U-shaped base; its edges were cut into	8/10

		(102). This boundary appears to be the border between (109) to its NE and (102) to the N. Not a field drain, and as stated in [111], runs parallel with [111], possibly the remains of a track boundary?	
(114)	D	Large granite stones, irregular shapes, in the process of decaying, deposited into [113] and surrounded by (115); they were not placed into the ditch but appeared to have probably been thrown or pushed into it, possibly from an old field boundary. The stones sat on top of (112) and were not found below this context, being easy to remove by hand.	
(115)	D	A dark black apparently organic-rich material, very silty, with no stone inclusions, but containing some ceramics and glass, although these were not sorted or found at any specific horizon within the material. This material was present on the NE and eastern parts of the site; its maximum depth was 0.7m, and it filled [113] and [118]/[120]. Very distinct from the more loamy (101) topsoil found elsewhere on the site.	8/10
[116]	C	The cut of a linear feature, approximately 19m in length, 0.9m wide and 0.2m deep. A stone-lined very shallow ditch/gully with a NW-SE orientation, possibly following a boundary shown on the 1840 Tithe Map. Very close to the large cut [118]/[120], and just visible on its edge. The sides of the feature contained stones not more than 0.20m in size embedded in the pale yellow natural (102). There were no indications of any water deposition of silt within the gully base. The base of the feature was even though a few stones had fallen onto it from the walls.	12
(117)	D	A mid brown, very loose, coarse gritty material, which appeared to be a mixture of (101) and small granite stone inclusions.	12
[118]	C	The north east side of a large feature, possibly the remains of a trackway as indicated in the 1840 Tithe map. The feature was 9m in width and located on the eastern edge of the excavation area. This side of the feature had a much shallower profile in the slope, its edge definition was more moderate with an angle of less than 30 degrees. In plan the edge is apparent with the topography of the site. Should be seen with [120]	14
(119)	D	See (115)	
[120]	C	The south western edge of a large 9m cut into the eastern part of the site, the edge was well defined. The edge was at a 45 degree angle to the horizontal and contained a large granite stone, this possibly being a remnant of a retaining wall; three other stones of similar size were removed along the same line within the site, the feature being orientated NE/SW and in the same general location as a field boundary shown on the	14

		1840 Tithe Map, but which had been removed by 1877. Interpreted as a possible trackway. The feature had an uneven base, which appeared to have been cut into (102) and (109).	
(121)	D	The fill of a shallow ditch [122], dark brown almost black in colour and similar to (115)/(119), it contains small stone inclusions, probably material deriving from the surrounding geology. Some large granite stones within the fill.	17
[122]	C	The cut of a linear feature, probably a small ditch, 30m in length, 0.9m wide, and 0.1m deep. Moderately well defined following topsoil stripping. The feature had very shallow sides, an uneven base and followed an, E-W orientation.	17
(123)	D	The dark brown almost black fill of a linear feature [124], similar to (119) but with a more gritty content; there were also stone inclusions within the material, most being less than 0.2m in size, though large stones were also present.	19
[124]	C	The cut of a linear feature, 30 metres long, 0.6m wide and 0.3m deep, with a NE-SW orientation, similar to the ditch on the NE side of the site [113]. This could be a deeper continuation of [122]. The steep sides were cut to a greater than 45 degree angle, and the feature was well defined following the stripping of the topsoil. The feature appeared to either stop where it had been cut through by the high pressure gas main trench, or alternatively returned up the slope in a SE direction. The feature was cut into the pale yellow natural (102).	19
(125)	D	Large granite stones of varying sizes within [124], possibly a deliberate back fill.	19
[126]	C	The cut of a linear feature 3m long visible, 1.6m wide, <0.30m deep. Filled by (127) and (128), with moderate edge definition once the topsoil had been stripped. Following a SE-NW orientation, it had a U-shaped base, with sides shallower than 45 degrees. Possibly a boundary feature shown on the 1840 Tithe Map.	21
(127)	D	A mid to dark brown silt with coarse sandy inclusions, and few larger stones, though containing pottery and glass. Similar to (101) and mixed with material deriving from the surrounding geology. 0.45m in depth.	21
(128)	D	The fill of [126], very similar to (127), but a more compact material with increased stone inclusions, these being unsorted and irregular.	21
(129)	D	See (102)	23
(130)	D	The fill within a possibly natural feature (no cut number), being a dark grey, very thick clay, compact in texture with some organic inclusions from vegetation roots.	23

(131)	D	A light yellow brown coarse sand mixed with soil, sat directly onto the natural (102)/(129).	23
(132)	D	A mid to dark brown sandy silt with some loam, this being remnants of the topsoil mixed with local geology, having sparse stone inclusions and some gritty patches.	23
(133)	D	See (102)	24
[134]	C	The cut of a linear feature, which, following topsoil stripping appeared as a well defined ditch. Excavation revealed a shallow uneven gully, with some indications of water-derived silting; the edges of the feature were poorly defined once excavation started, and it was found to have an uneven base and ill- defined edges near its base. Possibly a water worn gully and the result of natural erosion. The feature was cut into (102)/(129).	24
(135)	D	The fill of [134], a coarse grey gritty material similar to (112).	24
(136)	D	A fill within [138], a similar material to (109), being a mixture of the red (109) and pale yellow (102) natural subsoil combined with topsoil (101). The interface between this and the second fill of [138] was not well defined possibly the effects of the construction of the high pressure gas pipe here.	
(137)	D	A fill within of [138], this being a mid to dark brown loamy material, with sparse stone inclusions and some pottery and glass. Only a limited section of this material was excavated due to its proximity to the high pressure gas main. Appeared to be sat on (102).	26
[138]	C	A possible pit or platform, whose inner measurements appeared to be about 3.2m in width and something over 2m in length. The upper, outer lip of this hollowed area measured approximately 8m x 6m. The orientation of the feature was NW-SE, and the base of the cut was almost flat. This platform or pit was located close to one of the anomalies identified through geophysical survey. It had been cut into subsoil (102) to a maximum depth of 0.45m. It could not be ascertained for certain what this feature represented due to the limited area of it which could be excavated, but it was almost certainly not a prospecting pit, nor a rubbish pit. It might be related to an earlier field boundary or might have been created during the excavation of the gas main.	26

