Report No: 2013R053

Tresavean Estate, Lanner, Cornwall

Archaeological Watching Brief

Historic Environment Projects

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Client	**Halsall Construction on behalf of Coastline Housing Association**
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Acknowledgements

This study was commissioned by Matthew Grey, Halsall Construction and carried out by Historic Environment Projects, Cornwall Council.

The Project Manager was Adam Sharpe.

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

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.

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

Cover illustration

Topsoil stripping in progress, looking north across site towards the existing part of Tresavean Estate, Lanner.

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Abbreviations

HER	Cornwall and the Isles of Scilly Historic Environment Record
HE	Historic Environment, Cornwall Council
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OD	Ordnance Datum – height above mean sea level at Newlyn
OS	Ordnance Survey
BGS	British Geological Survey

1 Summary

HE Projects was commissioned by Matthew Grey, Halsall Construction, on behalf of Coastline Housing Association to undertake a programme of archaeological recording during ground works required for the construction of a new housing estate at Tresavean, Lanner.

The site lies within 'Anciently Enclosed' Land, a geophysical survey suggested very close proximity to remnants of a medieval/post-medieval field system and possible later mining features so there was a high potential for prehistoric and medieval sites to survive within the project area.

The fieldwork located and recorded ten pits that may be of prehistoric origin, two of which contained calcined bone. It is recommended that radiocarbon dates be sought to confirm the age of these pits and a specialist study made of the bone to determine its nature.

A pair of ditches and a single linear ditch were identified as most likely representing post-medieval field boundaries, the paired ditches being typical of a removed Cornish hedge. An enigmatic trackway running along the western boundary of the site was also recorded but its date was not determined.

The fieldwork was also able to demonstrate that the other main features identified by the geophysical survey were the result of modern ground disturbance and geotechnical exploration of the site.

No other features of archaeological interest were seen over the area of the site and it was concluded that the development would have very little or no impact on any significant buried remains apart from those noted above.

2 Introduction

2.1 Project background

HE Projects was commissioned by Matthew Grey, Halsall Construction on behalf of Coastline Housing Association to undertake a programme of archaeological recording during ground works in advance of the construction of 25 affordable dwellings adjoining the Tresavean Estate, Lanner (site centred at SW 72448 39688). The area examined was approximately 0.62 Ha (see Figs 1, 2, and 3).

Planning application (PA09/01042/F) for this was approved with a condition that an archaeological watching brief was carried out during the ground works phase of the building programme. Following a brief prepared by Phil Markham, Historic Environment Planning Advice Officer, a written scheme of investigation, outlining the methodology for archaeological recording was produced (08/04/13) by Adam Sharpe, Senior Archaeologist, HE Projects (Appendix 3). This was approved by Phil Markham and HE Projects was commissioned to undertake the work on 16th April 2013.

2.2 Aims

As set out in Mr. Markham's brief, the principal aims of the watching brief were:

- To establish the absence/presence of buried archaeological remains.
- To record archaeological features, layers and finds affected by the works.
- To establish the extent, condition, significance and character of the archaeological resource.
- To identify any artefacts relating to the occupation of the site.
- To gain further information about the archaeological potential of the area, through the recording of buried archaeological remains.

- The dissemination and publication of the results.
- The long-term conservation of the project archive in appropriate conditions.

2.3 Methods

The site soil strip was carried out under archaeological supervision using a machine fitted with a toothless grading bucket. The soil was stripped cleanly to a level at which archaeological features or layers were expected to be revealed, in this case the top of the natural geology. The area was then inspected by the archaeologist.

The area investigated was plotted onto a site plan (noting the locations of features and recorded profiles) at a scale of 1:500 based on an Ordnance Survey map of the same scale, being measured in from locatable fixed points on the ground which were also marked on the OS map, together with compass bearings, whilst archaeological features identified during the soil strip were planned at scales of 1:50 and 1:20. Sections through features were recorded at a scale of 1:10. Sample sections (noting the nature of soil depths, layers present, etc.) were also recorded across the site (Fig 3).

3 Location and setting

The site is on land recorded by the Cornwall and Scilly Historic Environment Record as being 'Anciently Enclosed Land' (AEL) of Medieval Farmland type. The Cornwall Landscape Assessment describes AEL as typically containing below ground archaeological material and features of variable date, including those from Bronze Age, Iron Age and Romano-British settlements and fields dating to when the land was originally cleared for use (Cornwall County Council 1996).

Identified archaeological sites

A number of sites in the vicinity of the study area were identified from the Cornwall and Scilly Historic Environment Record (Fig 2) and listed in Lawson Jones (2013). They included:

- A Bronze Age flanged axe head (MCO1714) was found at Treviskey some *circa* 400m to the ESE of the site.
- A partially extant field system (MCO35449) in the vicinity of Treviskey is considered to be of medieval origin (HBSMR) and is centred 150m east of the site.
- A field system consisting of ridge and furrow (MCO35446) in the vicinity of Treviskey Farm of probable medieval origin is centred 250m southeast of the site.
- The settlement of Treviskey some 400m to the ESE of the site is of medieval origin and was first recorded in 1319 (MCO17946).
- Treviskey mine (MCO12709) also known as East Tresavean lies some 250m to the east of the development area.
- East Tresavean mine (MCO39018) lies 125m to the south of the development site.
- A stamps engine house (MCO52596) sited on the dressing floors of the former East Tresavean mine is *circa* 270m SSW of the site.

Potential sites

A geophysical survey undertaken (in 2013) by Archaeophysica Ltd (Fig 4) together with a desk based assessment (Lawson-Jones 2013) identified a number of archaeological features which might be impinged upon by the development, including those relating to agricultural and mining activity. There was also the potential for prehistoric and medieval sites to survive within the project area, and the scope for the survival of previously unrecorded archaeological sites, organic remains, and artefacts of all periods.

Site description

The site is situated in a large field to the immediate south of the Tresavean Estate, Lanner, within Gwennap Parish. It slopes towards the north-west from 98m to 90m above Ordnance Datum. The field is currently utilised for grazing (Figs 1 and 2).

The soils are recorded as being Manod (Loam over Shale) overlying a bedrock geology consisting of Devonian interbedded slates and sandstones, of the Mylor Series that lies within the metamorphic aureole of the Carmenellis granite batholith. This area has also been heavily mineralised with several lodes containing both copper and tin trending NE/SW and NW/SE criss-crossing the land around the development site (BGS 352 Falmouth).

4 Archaeological results

4.1 General

Nine sections were recorded across the site five of which are presented here to illustrate the nature of the ground encountered (Fig 3). Details of the remainder are recorded in the site archive.

Section 1

Depth	Thickness	Description	Interpretation	Context
0m – 0.05m	0.05m	Grass, roots and topsoil	Topsoil	(32)
0.05m – 0.30m	0.25m	Grey-brown clay loam	Subsoil	(33)
0.30m – 0.32m	0.02m	Yellow, orange-brown clay.	Weathered natural clay above bedrock	(34)
At base of trench	-	Red, orange, yellow-brown rotten shillet bedrock	Degraded natural bedrock	(35)

Section 2

Depth	Thickness	Description	Interpretation	Context
0m – 0.05m	0.05m	Grass, roots and topsoil	Topsoil	(32)
0.05m – 0.15m	0.10m	Grey-brown clay loam	Subsoil	(33)
0.15m – 0.16m	0.01m	Orange, grey-brown clay	Weathered natural clay above bedrock	(34)
At base of trench	-	Red, orange, yellow-brown rotten shillet bedrock	Degraded natural bedrock	(35)

Section 3

Depth	Thickness	Description	Interpretation	Context
0m – 0.05m	0.05m	Grass, roots and topsoil	Topsoil	(32)
0.05m – 0.20m	0.15m	Grey-brown clay loam	Subsoil	(33)
0.20m – 0.25m	0.05m	Grey, yellow-brown clay.	Weathered natural clay above bedrock	(34)
At base of trench	-	Yellow, grey-brown rotten shillet bedrock	Degraded natural bedrock	(35)

Section 4

Depth	Thickness	Description	Interpretation	Context
0m – 0.05m	0.05m	Grass, roots and topsoil	Topsoil	(32)
0.05m – 0.25m	0.20m	Grey-brown clay loam	Subsoil	(33)
0.25m – 0.50m	0.25m	Yellow, grey-brown friable clay.	Subsoil	(36)
0.50m – 0.51m	0.01m	Yellow, orange-brown clay.	Weathered natural clay above bedrock	(34)
At base of trench	-	Yellow, grey-brown rotten shillet bedrock	Degraded natural bedrock	(35)

Section 30

Depth	Thickness	Description	Interpretation	Context
0m – 0.05m	0.05m	Grass, roots and topsoil	Topsoil	(32)
0.05m – 0.30m	0.25m	Grey-brown clay loam	Subsoil	(33)
0.30m – 0.60m	0.30m	Yellow, grey-brown friable clay.	Subsoil	(36)
0.60m – 0.62m	0.02m	Yellow, orange-brown clay.	Weathered natural clay above bedrock	(34)
At base of trench	-	Yellow, grey-brown rotten shillet bedrock	Degraded natural bedrock	(35)

It can be seen that the general nature of the soil profile did not vary greatly along the whole area though its depth did increase the further down slope the strip progressed. This is probably a reflection of soil movement reacting to gravity during ploughing. Very few artefacts were observed within the topsoil, only a few sherds of 19th/20th century Modern china (not collected) being noted.

4.2 Features

4.2.1 Pit [37]

Feature 7 identified on the geophysical survey (Lawson-Jones 2013) as a possible choked or capped shaft, proved to be a sub-circular pit of *circa* 3m diameter that had been infilled with several iron I-section beams or girders that had been bonded together with mass concrete. Though this initially resembled a crude attempt at capping a shaft, when the infill was further investigated and removed, the pit proved to be only 1.8m deep with an irregular bedrock bottom. There was no evidence for a shaft, so this is possibly just an attempt to bury scrap metal probably derived from the demolition of Tresavean Mill (Figs 3, 4, and 8).

4.2.2 Ditch [38]

Linear Feature 2 identified on the geophysical survey (Lawson-Jones 2013) which was thought to possibly be a mining feature proved to be a modern geotechnical investigation trench (Matthew Grey pers. comm.) so was not investigated further (Fig 4 and 14).

4.2.3 Ditch [39]

Linear Feature 3 identified on the geophysical survey (Lawson-Jones 2013) which was also thought to be a possible mining feature again proved to be a modern geotechnical

investigation trench (Matthew Grey pers. comm.) so was not investigated further (Fig 4).

4.2.4 Ditches [40] and [41]

Linear Feature 4 identified on the geophysical survey (Lawson-Jones 2013) as a possible removed field boundary proved to be a very ephemeral line of paired ditches, Ditches [40] and [41]. These two ditches, set approximately 1.5m apart, ran roughly west to east and were traced for a distance of *circa* 15m. They were separated by a band of weathered natural shillet (Figs 3, and 4).

The northernmost ditch [40] varied from 0.8m to 1.0m in width and was infilled with dark grey-brown clay containing flecks of charcoal. It reached a maximum depth of 0.3m and had a shallow U-shaped profile. The southernmost ditch [41] varied from 0.70m to 1.0m in width and was infilled with grey-brown clay with some charcoal flecks. It reached a maximum depth of 0.2m and had a shallow U-shaped profile. This boundary had been heavily truncated (and indeed totally removed in places) by subsequent activity within the field.

No dating evidence was obtained for this feature, though it probably represents a removed Cornish hedge of post-medieval date

4.2.5 Trackway 42

The fieldwork confirmed the existence of the trackway alongside the western field boundary of the site (Feature 1 on the geophysical survey) running roughly NNE to SSW. This consisted of a linear spread of large stony blocks averaging circa 0.30m in size that had been compacted into the decayed clay of the weathered bedrock (34). This foundation layer had then been covered with a heavily compacted layer of grey-brown clay with small stone and shillet fragments up to 0.10m thick. The track was *circa* 2m wide and was traced for a length of *circa* 80m. No dating evidence was obtained (Figs 3, 4, and 13), though this may represent a former mine access trackway.

4.2.6 Ditch [43]

This linear feature which lay at the southern end of the site was not identified on the geophysical survey (Lawson-Jones 2013) as it was obscured by the massive geophysical response given by Pit [37] which cut this feature near its mid point. The ditch ran in a roughly WNW to ESE direction and was traced for *circa* 35m. It had a U-shaped profile that reached a maximum depth of 0.40m and varied from 0.8m to 1m in width. It was infilled with dark grey-brown clay with flecks of charcoal.

Unfortunately the relationship between this ditch and trackway 42 was not determined as the area where they intersected was over-dug in the process of top soil stripping. No dating evidence was obtained for this feature (Figs 3, 4, 7, and 9).

4.2.7 Postholes [5], [6], [7] and [8]

At the southern end of the site, running parallel to the edge of trackway 42, some 5.0m east of the current hedge line, and 2.0m north of the western end of ditch [43] was a line of four postholes spaced approximately 2.0m apart. Two of these were sectioned. Posthole [6] had a steep sided U-shaped profile of 0.20m diameter, and was 0.10m deep while Posthole [7] had a similar profile, a diameter of 0.26m, and reached a depth of 0.15m. All the postholes were infilled with compacted red, grey-brown clay containing a few charcoal flecks. No direct dating evidence for these postholes was recorded (Fig 3) and their function is uncertain.

4.2.8 Pit scatter, consisting of Pits [9] to [27]

A series of ten pits were recorded running roughly north east to south west spread out along the eastern side of the site. All were of a similar nature in shape and form. There was no obvious pattern to their distribution though four pits (Pits [19], [21], [23], and [25] did seem to form a grouping at the centre of the spread. Considering that some of the pits occurred in close proximity to the baulk forming the limit of the development, it seems probable that more would be found within the field further to the south.

At the north east corner of the site (Figs 3 and 11) a couple of pits, Pits [9] and [11] were recorded.

4.2.9 Pit [9]

This pit was roughly oval in shape measuring 0.80m x 0.70m with its long axis orientated *circa* north to south (Figs 3, 5, 10, and 11). The pit had a bowl shaped profile with shallow concave sides and a rounded bottom, reaching a depth of 0.20m. The pit had been cut into the natural bedrock. On the south western side of the pit the bedrock had been heat-affected, turning it red-brown in colour. The fill consisted of very dark organic-rich black to grey-brown clay with numerous charcoal fragments and burnt stone, especially vein quartz Context (10). No artefacts were recorded and, as with similar pits found across the site, no dating is possible on currently available evidence.

4.2.10 Pit [11]

This pit lay *circa* 12m north of pit [9]. It was roughly circular in shape with a diameter of 0.70m (Figs 3, 5, and 10). The pit had a bowl shaped profile with a steep concave western side and convex eastern. It was flat bottomed. Cut into the natural bedrock, it reached a depth of 0.20m the north western side of which had been heat-affected, turning it red-brown in colour. The fill consisted of a very dark organic-rich black to grey-brown clay with numerous charcoal fragments Context (12). Burnt stone including a granite block and vein quartz was noted within it. Solid wood charcoal up to 2cm thick was recorded at the base of the pit. No artefacts were recovered.

A pair of intercutting pits was found close to the south western end of the eastern boundary of the site, Pits [13] and [15].

4.2.11 Pit [13]

This was roughly circular in shape with a diameter of 0.60m (Figs 3, 5, and 18). The pit had a bowl shaped profile with convex sides and a rounded bottom. Cut into the natural bedrock, it reached a depth of 0.08m the south western side of which had been heat-affected, turning it red-brown in colour. The fill Context (14), consisted of very dark organic-rich black to grey-brown clay with numerous charcoal fragments. There were few stone inclusions. No artefacts were recovered. The feature had been truncated on its north western side by the cutting of Pit [15].

4.2.12 Pit [15]

This was roughly circular in shape with a diameter of 0.70m (Figs 3, 5, and 18). The pit had a bowl shaped profile with the south eastern side being a shallow, slightly convex shape, whilst the northern side had a steeply sloping convex profile. Cut into the natural bedrock, it reached a depth of 0.12m, the whole of the western side of which had been heat- affected turning it red-brown in colour. The fill, context (16), consisted of very dark organic-rich black to grey-brown clay with numerous charcoal fragments. There were few stone inclusions. No artefacts were recovered. This feature cut Pit [13] on its south eastern side.

4.2.13 Pit [17]

This pit lay some 5.0m to the north east of Pit [15]. Oval in shape, it measured 0.80m x 0.60m with the long axis orientated north west to south east (Figs 3, 5, and 16). The

pit had an asymmetrical profile, its southern side having a shallow, slightly convex shape, whilst the northern side had a steeply-sloping convex profile. Cut into the natural bedrock, it reached a depth of 0.11m. The fill, context (18), consisted of very dark organic-rich black-brown clay containing numerous charcoal fragments and some burnt stone inclusions. No artefacts were recovered.

Lying roughly midway between pits [9] and [17], again close to the eastern boundary of the site was a grouping (Fig 6) of four pits: features [19], [21], [23] and [25].

4.2.14 Pit [19]

This pit lay at the southern end of the group close to the baulk that marked the eastern edge of the site (Figs 3, 5, 6, and 17). Oval in shape, it measured 1.30m x 1.0m with the long axis orientated north east to south west. The pit had a shallow U-shaped profile, the south western side being concave, the north eastern being convex. It had a slightly rounded base. Cut into the natural bedrock, it reached a depth of 0.15m. The fill, context (20), consisted of very dark organic-rich black-brown clay containing numerous charcoal fragments and some burnt stone inclusions. No artefacts were recovered.

4.2.15 Pit [21]

This small pit lay 4.0m to the north east of Pit [19]. Sub rectangular in shape, it measured 0.30m x 0.20m with the long axis orientated north west to south east(Figs 3, 5, 15, and 19). The pit had a U-shaped profile with steep, nearly vertical sides and was flat bottomed. Cut into the natural bedrock, it reached a depth of 0.15m. The fill, context (22), consisted of very dark organic-rich friable black-brown clay containing numerous charcoal fragments. Numerous identifiable fragments of calcined (burnt) bone were also present in the fill. No artefacts were recovered.

4.2.16 Pit [23]

This small pit lay 0.30m to the north of Pit [21]. Sub circular in shape, it had a diameter of 0.20m (Figs 3, 5, 15, and 19). The pit had a U-shaped profile with steep, nearly vertical sides and was flat bottomed. Cut into the natural bedrock, it reached a depth of 0.12m. The fill, context (24), consisted of very dark organic-rich friable black-brown clay containing numerous charcoal fragments. Numerous identifiable fragments of calcined (burnt) bone were present in the fill along with a few burnt stones. No artefacts were recovered.

4.2.17 Pit [25]

This pit was the northernmost member of this group, lying some 4.2m to the north of Pit [19]. Sub oval in shape, it measured 1.50m x 0.8m with its long axis orientated north west to south east (Figs 3 and 6). The pit had a shallow U-shaped profile with convex sides. It had a slightly rounded base. Cut into the natural bedrock, it reached a depth of 0.12m. The fill, context (26), consisted of grey-brown clay incorporating some flecks of charcoal and burnt stone. No artefacts were recovered.

4.2.18 Pit [27]

A further pit, Pit [27], was recorded 17m to the west of Pit [25]. It was not investigated further as it had been heavily tracked over and disturbed by the mechanical excavator, so its shape and the nature of its fill could not be fully determined. It appeared to be roughly similar in shape and size to Pit [9] and there was evidence that its fill was charcoal-rich, and contained burnt stone (Fig 3).

5 Conclusions/discussion

Though no direct dating evidence in the form of artefacts was recovered from these pits, it is probable that the scatters of these features across the site are likely to be the earliest features encountered.

Many examples of similar pit scatters have been found in Cornwall, including along the North Cornwall STW Pipeline (HES 2011) which have produced radiocarbon dates varying from the Neolithic through to the early medieval period, while similar pits from Tregarrick Farm, Roche produced calibrated radiocarbon dates ranging from (WK-14918) of 3790-3630 cal BC to (WK-14917) of 3650 – 3370 cal BC (Cole and Jones 2002), and those at Portscatho have produced dates ranging from of 3920- 3640 cal BC (WK-13258) to 3700 – 3380 cal BC (WK-13257) (Jones and Reed 2006). At Trenowah, near St Austell the fill of pit [40], one of a grouping of 13 pits, gave a date of 3330-2910 cal BC (WK-11935) (Johns 2008). It is hoped that radiocarbon dating will be undertaken, particularly for the two pits containing calcined bone, to provide dates for these features, since, in the absence of secure scientific dating, features with similar appearances can equally date to the later Neolithic, Early Bronze Age, and Early Medieval periods.

It is clear from the pit sizes, shapes, contents and the evidence for *in-situ* burning activity that these pits share common morphologies, and therefore were almost certainly created during the same period and are the result of a common activity. The nature of that activity is uncertain on present evidence, and the pits could equally have been produced as a result of cooking activities, mineral or metal working, pottery manufacture or the burial of cremated human remains.

The pairing of ditches [40] and [41] is typical evidence for a Cornish hedge type field boundary. This boundary (Feature 4 on the geophysical survey) is most likely to be of medieval or early post-medieval origin, and may be a continuation of the field system noted around the settlement of Treviskey (MCO35449 and MCO35446). It does not appear on the 1839 Gwennap Tithe Map, suggesting that it was probably removed at some time prior to this.

Ditch [43] also marks the line of a field boundary, and forms part of the same field system. This boundary was shown on the 1839 Gwennap Tithe Map, and occurs on the 1909 OS 25" mapping, so was removed at sometime subsequent to this.

There is no direct dating evidence for trackway 42 and its relationship to the field system was not determined. It does not appear on any of the historic maps examined, so probably predates the 1839 Gwennap Tithe map. It is possible that this track related to the operation of Tresavean Mine (MCO39018) which commenced its documented operations during the 18th century. This site lies to the south of the area examined. It is possible, however, that this trackway could be substantially earlier in date (Fig 2).

The archaeological watching brief was able to demonstrate that the other main features identified by the geophysical survey and assessment (Lawson-Jones 2013) (possible mining features 2 and 3 and possible shaft, feature 7) were the result of modern ground disturbance and geotechnical exploration of the site.

No other features of archaeological interest were seen over the area of the site, and no artefacts were collected. It was concluded that the development had very little or no impact on any significant buried remains apart from those noted above.

6 Recommendations

As this current project has demonstrated that early and potentially significant prehistoric features in the form of bowl shaped pits containing burnt material and bone survived below ground surface it is recommended that representative samples taken from them are processed in a further stage of analysis and study. This would involve

selecting material suitable for radiocarbon dating for the pit fills, especially those containing calcined bone. Specialists should also be commissioned to examine the bone to determine whether it is of human or animal origin, and the surviving wood to identify its species. A summary of the results of the watching brief including the results of the specialist analyses would be published as a short article in a suitable journal such as *Cornish Archaeology.*

Any decision about any further archaeological work appropriate to the material recovered from this site would be made by Phil Markham, HEPAO, in consultation with the developers.

7 References

7.1 Primary sources

Ordnance Survey, *c*1880. *25 Inch Map* First Edition (licensed digital copy at HE)

Ordnance Survey, *c*1907. *25 Inch Map* Second Edition (licensed digital copy at HE)

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Tithe Map and Apportionment, 1839. *Parish of St Gwennap (*licensed digital copy at HE)

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7.2 Publications

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Jones, A M, and Reed, S, 2006. By land, sea and air: an early Neolithic pit group at Portscatho, Cornwall, and consideration of coastal activity during the Neolithic, *Cornish Archaeology* **45**, 1-30.

Lawson-Jones, A. 2013. *Tresavean Estate, Lanner, Cornwall. Geophysical survey and Archaeological reporting.* HE Archive report 2013R011

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 **HEXQPR146251**

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

1. A project file and information file containing site records and notes, project correspondence and administration (HEXQPR146251).
2. Field plans and copies of historic maps stored in an A2-size plastic envelope (GRE 793/1-7).
3. Digital photographs stored in the directory: R:\Historic Environment (Images)\SITES.I-L\Lanner, Tresavean Housing Estate WB April 2013 HEXQPR146251
4. English Heritage/ADS OASIS online reference: cornwall2-155497
5. This report text is held in digital form as: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites T\Tresavean estate WB 2013 HEXQPR146251\Report

No artefacts were collected in the course of this project.

9 Appendix 1. Context list

Context no.	Area	Cut/ Build / Deposit	Description	Figure no.
1	-	-	Section Description	
2	-	-	Section Description	
3	-	-	Section Description	
4	-	-	Section Description	
5	South part of field	C/D	Posthole. Diameter of 0.26m, infilled with compacted red, grey-brown clay with a few charcoal flecks.	
6	South part of field	C/D	Posthole. Steep sided U shaped profile, 0.20m diameter and 0.10m deep. Infilled with compacted red to grey-brown clay with a few charcoal flecks.	
7	South part of field	C/D	Posthole. Steep sided U-shaped profile, a diameter of 0.26m and depth of 0.15m. Infilled with compacted red to grey-brown clay with a few charcoal flecks.	
8	South part of field	C/D	Posthole. Diameter of 0.26m, infilled with compacted red to grey-brown clay with a few charcoal flecks.	
9	NE part of site	C	Pit. Roughly oval in shape measuring 0.80m x 0.70m with the long axis orientated circa north to south. The pit had a bowl shaped profile with shallow concave sides and a rounded bottom. It reached a depth of 0.20m. On the south western side of the pit the bedrock had been heat-affected turning red-brown in colour.	
10	NE part of site	D	Fill of Pit [9]. The fill consisted of very dark organic rich black to grey-brown clay with numerous charcoal fragments and burnt stone, especially vein quartz, Context (10). No artefacts were recorded.	
11	NE part of site	C	This pit was roughly circular in shape with a diameter of 0.70m. The pit had a bowl-shaped profile with a steep concave western side and a convex eastern side. It was flat bottomed. It reached a depth of 0.20m, the north western side of which had been heat-affected turning red-brown in colour.	
12	NE part of site	D	Fill of pit [11]. Very dark organic rich black to grey-brown clay with numerous charcoal fragments. Burnt stone including a granite block and vein quartz was noted within it. Solid wood charcoal up to 2 cm thick was recorded at the base of the pit. No artefacts were recovered.	
13	SW edge of site.	C	Pit. Roughly circular in shape with a diameter of 0.60m. This had a bowl-shaped profile with convex sides and a rounded bottom. It reached a depth of 0.08m, the south western side of which had been heat-affected turning red-brown in colour. It had been truncated on its north western side by the cutting of Pit [15].	
14	SW edge of site.	D	The fill of pit [13]. Very dark organic-rich black to grey-brown clay with numerous charcoal fragments. There were few stone inclusions. No artefacts were recovered.	

Context no.	Area	Cut/ Build / Deposit	Description	Figure no.
15	SW edge of site.	C	Pit. Roughly circular in shape with a diameter of 0.70m. The pit had a bowl-shaped profile, its south eastern side being a shallow slightly convex shape, whilst the northern side had a steeply-sloping convex profile. Cut into the natural bedrock, it reached a depth of 0.12m, the whole of the western side of which had been heat affected, turning red-brown in colour. This pit cut Pit [13] on its south eastern side.	
16	SW edge of site.	D	The fill of pit [15]. Very dark organic rich black to grey-brown clay with numerous charcoal fragments and a few stone inclusions. No artefacts were recovered.	
17	SW edge of site.	C	Pit. Oval in shape, it measured 0.80m x 0.60m with the long axis orientated northwest to southeast. The pit had an asymmetrical profile, the southern side having a shallow, slightly convex shape, whilst the northern side had a steeply-sloping convex profile. Cut into the natural bedrock, it reached a depth of 0.11m.	
18	SW edge of site.	D	The fill of pit [17]. Very dark organic rich black-brown clay with numerous charcoal fragments and some burnt stone inclusions. No artefacts were recovered.	
19	SE part of site.	C	Pit. Oval in shape, it measured 1.30m x 1.0m with the long axis orientated northeast to southwest. The pit had a shallow U-shaped profile, the south western side being concave, the north eastern being convex. It had a slightly rounded base. Cut into the natural bedrock, it reached a depth of 0.15m.	
20	SE part of site.	D	The fill of pit [19]. Very dark organic rich black-brown clay with numerous charcoal fragments and some burnt stone inclusions. No artefacts were recovered.	
21	SE part of site.	C	Pit. Sub-rectangular in shape, it measured 0.30m x 0.20m with the long axis orientated northwest to southeast. The pit had a U-shaped profile with steep, near vertical sides, and was flat bottomed. Cut into the natural bedrock, it reached a depth of 0.15m.	
22	SE part of site.	D	Fill of pit [21]. Very dark organic rich friable black-brown clay with numerous charcoal fragments. Identifiable numerous fragments of calcined (burnt) bone were present in the fill. No artefacts were recovered.	
23	SE part of site.	C	Pit. Sub circular in shape, it had a diameter of 0.20m. The pit had a U-shaped profile with steep, near vertical sides and was flat bottomed. Cut into the natural bedrock, it reached a depth of 0.12m.	
24	SE part of site.	D	The fill of pit [23]. Very dark organic rich friable black-brown clay with numerous charcoal fragments. Identifiable numerous fragments of calcined (burnt) bone were present in the fill along with a few burnt stones. No artefacts were recovered.	

Context no.	Area	Cut/ Build / Deposit	Description	Figure no.
25	SE part of site.	C	Pit. Sub oval in shape, it measured 1.50m x 0.8m with the long axis orientated northwest to southeast. The pit had a shallow U-shaped profile with convex sides and a slightly rounded base. Cut into the natural bedrock, it reached a depth of 0.12m.	
26	SE part of site.	D	The fill of pit [26]. Grey-brown clay with some flecks of charcoal and burnt stone. No artefacts were recovered.	
27	SE part of site.	C	Pit. This was not investigated further as it had been heavily tracked over and disturbed by the mechanical excavator, so its shape and the nature of its fill could not be fully determined. It appeared to be roughly similar in shape and size to Pit [9] and there was evidence that the fill was charcoal-rich, and contained burnt stone.	
28	-	-	Section Description.	
29	-	-	Section Description.	
30	-	-	Section Description.	
31	-	-	Section Description.	
32	Across entire field.	D	Grass, roots and topsoil.	
33	Across entire field.	D	Grey-brown clay loam. Subsoil.	
34	Across entire field.	D	Yellow, orange-brown clay. Weathered natural clay above bedrock.	
35	Across entire field.	D	Yellow, grey-brown rotten shillet bedrock.	
36	Across entire field.	D	Yellow, grey-brown friable clay. Subsoil.	
37	SW side of field.	C/D	Feature 7 identified on the geophysical survey. A sub-circular pit of *circa* 3.0m diameter which had been infilled with several iron I section beams or girders that had been bonded together with mass concrete. Though this resembled a crude attempt at capping a shaft, when the fills were investigated further and removed, the pit proved to be only 1.8m deep with an irregular bedrock bottom.	
38	Across centre of field.	C	Linear Feature 2 identified on the geophysical survey. Modern geotechnical investigation trench (Matthew Grey pers. comm.) so was not investigated further.	
39	Across centre of field.	C	Linear Feature 3 identified on the geophysical survey. Modern geotechnical investigation trench (Matthew Grey pers. comm.) so was not investigated further.	

Context no.	Area	Cut/ Build / Deposit	Description	Figure no.
40	Across centre of field.	C/D	Linear Feature 4 identified on the geophysical survey. Part of a removed hedge boundary. Its northernmost ditch varied from 0.8m to 1.0m in width and was infilled with a dark grey-brown clay with flecks of charcoal. It reached a maximum depth of 0.3m and had a shallow U-shaped profile. No dating evidence was obtained for this feature.	
41	Across centre of field.	C/D	Linear Feature 4 identified on the geophysical survey. Part of a removed hedge boundary. The southernmost ditch [41] varied from 0.70m to 1.0m in width and was infilled with grey-brown clay with some charcoal flecks. It reached a maximum depth of 0.2m and had a shallow U -shaped profile. No dating evidence was obtained for this feature.	
42	Along western side of site.	B	Trackway running roughly NNE to SSW. This consisted of a linear spread of large stony blocks averaging circa 0.30m in size that had been compacted into the decayed clay of the weathered bedrock (34). This foundation layer had then been covered with a heavily compacted layer of grey-brown clay with small stone and shillet fragments up to 0.10m thick. The track was *circa* 2.0m wide and was traced for a length of *circa* 80m. No dating evidence was obtained.	
43		C/D	Ditch. Removed field boundary. The ditch ran in a roughly WNW to ESE direction and was traced for *circa* 35m. It had a shallow U-shaped profile that reached a maximum depth of 0.3m and varied from 0.8m to 1.0m in width. It was infilled with dark grey-brown clay with flecks of charcoal. No dating evidence was obtained for this feature.	

10 Appendix 2. Sample list

Context	Description	Quantity sampled
Pit [9]. Context (10)	Pit fill. Dark organic rich black to grey-brown clay with numerous charcoal fragments and burnt stone, especially vein quartz.	2 sample bags.
Pit [11]. Context (12)	Pit fill. Dark organic rich black to grey-brown clay with numerous charcoal fragments. Burnt stone including vein quartz was noted within it.	2 sample bags.
Pit [13]. Context (14)	Pit fill. Very dark organic rich black to grey-brown clay with numerous charcoal fragments and a few stone inclusions.	1 sample bag. 50% of fill.
Pit [15]. Context (16)	Pit fill. Very dark organic rich black to grey-brown clay with numerous charcoal fragments and a few stone inclusions.	1 sample bag. 50% of fill.
Pit [17]. Context (18)	Pit fill. Dark organic rich black-brown clay with numerous charcoal fragments and some burnt stone inclusions.	1 sample bag. 50% of fill.
Pit [19]. Context (20)	Pit fill. Dark organic rich black-brown clay with numerous charcoal fragments and some burnt stone inclusions.	1 sample bag. 25% of fill.
Pit [21]. Context (22)	Pit fill. Very dark organic rich friable black-brown clay with numerous charcoal fragments. Identifiable numerous fragments of calcined (burnt) bone were present.	2 sample bags. 100% of fill.
Pit [23]. Context (24)	Pit fill. Very dark organic rich friable black-brown clay with numerous charcoal fragments. Identifiable numerous fragments of calcined (burnt) bone were present. Few burnt stones.	2 sample bags. 100% of fill.

11 Appendix 3. Tresavean Estate, Lanner: WSI for an archaeological watching brief during ground works for a housing estate

Client :	Halsall Construction
Client contacts:	Matthew Grey, Rob Green
Client email:	matthew.grey@halsall.co.uk; Robert.green@halsall.co.uk
Client tel:	01726 807110

Site history

The site is located within a large field to the immediate south of Tresavean Estate, Lanner. It is positioned on a north-west facing slope at an approximate height of 90m above Ordnance Datum. The soil is recorded as being Manod (Loam over Shale) overlying a bedrock geology recorded as being Mylor Slates.

The proposed site is on land recorded by the Cornwall and Scilly Historic Environment Record as being 'Anciently Enclosed Land' (AEL), and of Medieval Farmland type. The Cornwall Landscape Assessment describes AEL as typically containing below ground archaeological material and features of variable date, including that from Bronze Age, Iron Age and Romano-British settlements and fields dating to when the land was originally cleared for use (1994, 142). Since at least the 1840s mining activity came to dominate the site setting, eventually impinging on the site itself. More recently following the decline of mining, associated features have been lost as surface features through landscaping etc., and the field has reverted to a green field site.

A geophysical survey undertaken by Archaeophysica Ltd together with a desk based assessment identified a number of archaeological features which might be impinged upon by the development, including those relating to agricultural and mining activity.

Project background

A field adjacent to the Tresavean Estate, Lanner is to be developed by Halsall Construction on behalf of Coastline Housing Association. The project area is located on the south-eastern edge of Lanner centred at OS grid reference SW 7244 3968. This site is on the development boundary of the village, set within what is currently agricultural land fringed by evidence for mining.

Planning application PA09/01042/F was submitted on the 3rd August 2009 and was for the erection of 25 affordable dwellings for rent and shared ownership. It is understood that this application has been approved with a number of conditions. The proposed condition 14 states:

No development shall take place within the area to be developed until the applicant has secured the implementation of a programme of archaeological recording based on a written scheme of investigation submitted to and approved by the Local Planning Authority.

Reason: To ensure that provision is made to record finds of archaeological interest in accordance with the requirements of PPS5 'Planning for the Historic Environment'.

A brief to guide archaeological work in advance of construction work and a letter recommending a requirement for an archaeological watching brief during ground works was prepared by Phil Markham, Historic Environment Planning Advice Officer, Cornwall Council, and was used as the basis for this WSI.

The Planning Authority Officer is Chantel McLennen.

Project extent

The project extent covers that area of current agricultural land adjacent to the Tresavean Estate Lanner proposed for the housing development.

Aims and objectives

As discussed with Mr. Markham, the site specific aims are:

- 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 the site 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.

Desk-based assessment

- A brief desk-based assessment was carried out to inform the fieldwork stage (Lawson Jones 2013).

Archaeological watching brief

The soil strip will 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 will not run over the stripped area until the archaeological works are complete. The area will then be inspected by an 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 photographic record as appropriate by an HE Projects archaeologist.

During the archaeological recording the archaeologist will identify and record any archaeological features that are revealed in the stripped area; the level of recording will be appropriate to the character/importance of the archaeological remains and the depth to which the area under investigation will subsequently be further excavated.

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 any significant archaeological remains which are uncovered during the stripping. The significance of the remains should be agreed between the client, the Historic Environment Planning Advice Officer and HE Projects. A contingency of five days for such excavation has been allowed for in the project cost breakdown as a guide, but the precise scope of any additional contingency works which might be required will need to be reviewed in the light of findings during the watching brief and agreed between the Historic Environment Planning Advice officer and the Client.

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).

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 paper copy and 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.

In the event of significant archaeological findings, a further stage of analysis and publication in a national journal will be required. The details of this phase of the project would be subject to the results of discussions with the Historic Environment Planning Advice Officer, would require a separate WSI and would require the determination of related additional costs.

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:

1. 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
2. A2 drawn archive storage (plastic wallets for the annotated record drawings)
3. Archive standard negative holders and archive print holders, to be stored in the HES system until transferred to the Royal Cornwall Museum.
4. 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.
5. 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.

6. 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 study is anticipated to be commenced during April 2013. 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*. For more specific policy and guidelines HE uses the manual *Health and Safety in Field Archaeology* (2002) endorsed by the Standing Conference of Archaeological Unit Managers.

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
08/04/2013
Historic Environment Projects
Cornwall Council
Kennall Building, Old County Hall, Station Road, Truro, Cornwall. TR1 3AY
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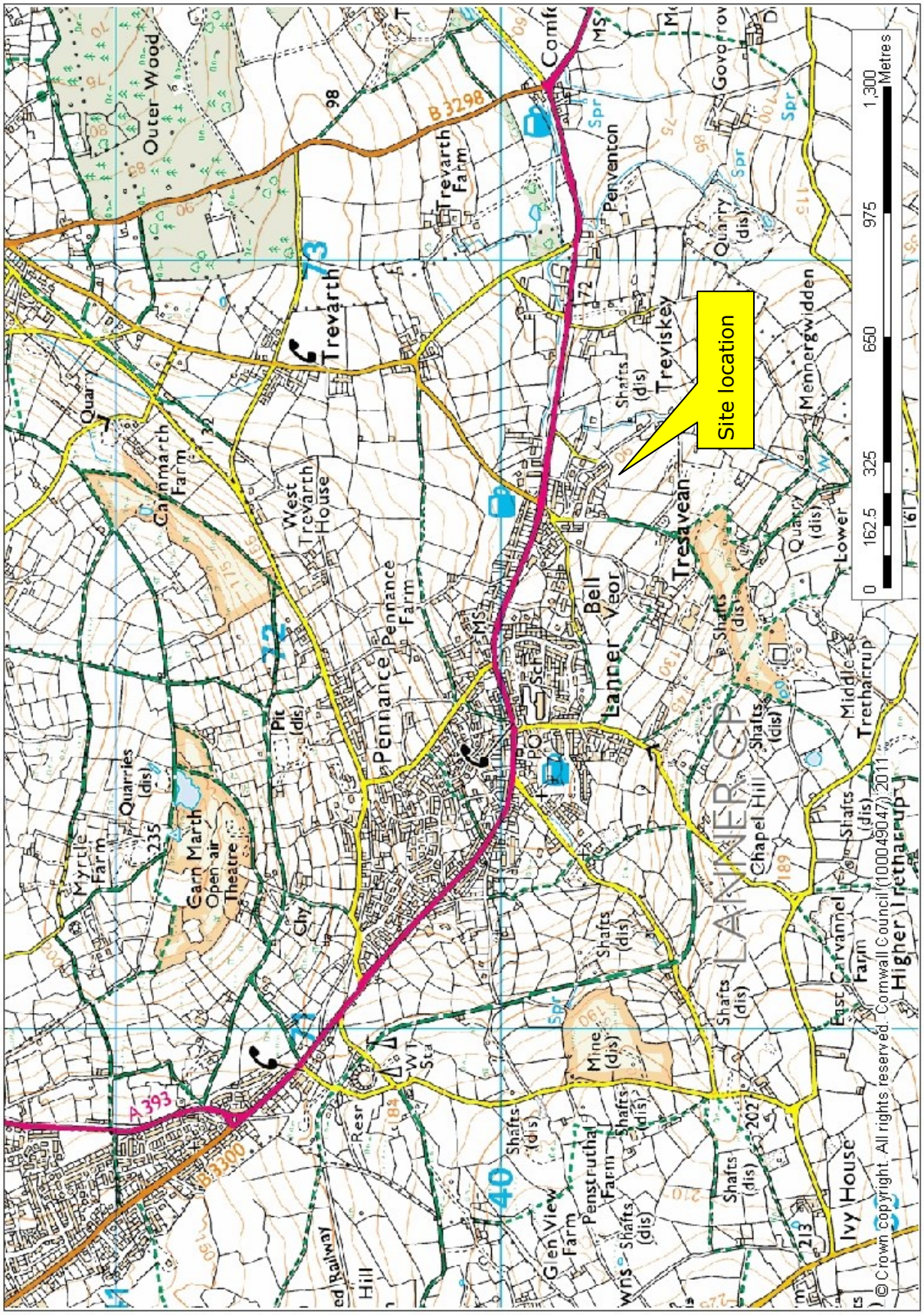

Figure 1. Tresavean Estate, Lanner, site location.

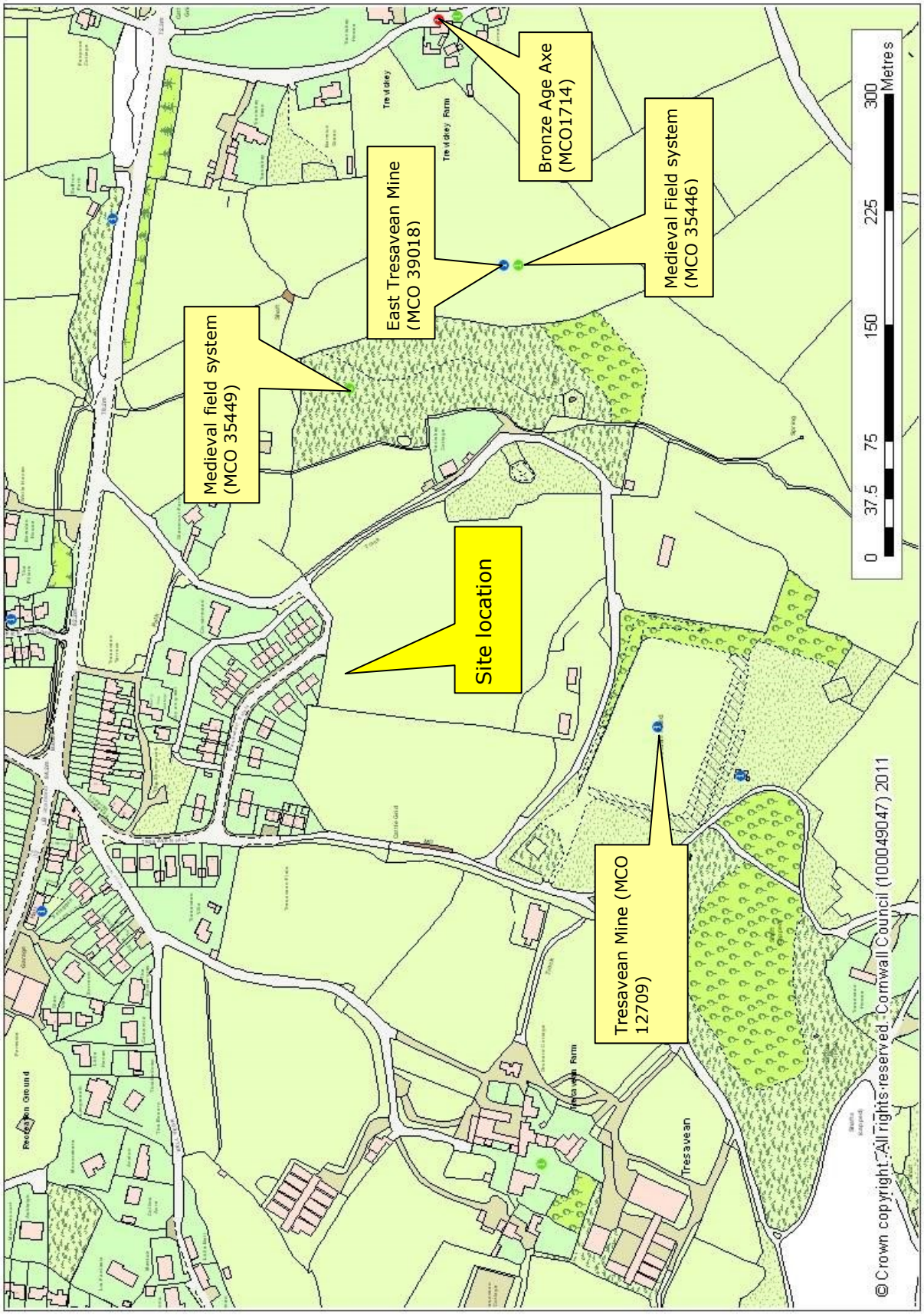

Figure 2. Site location showing relationship to known archaeological sites.

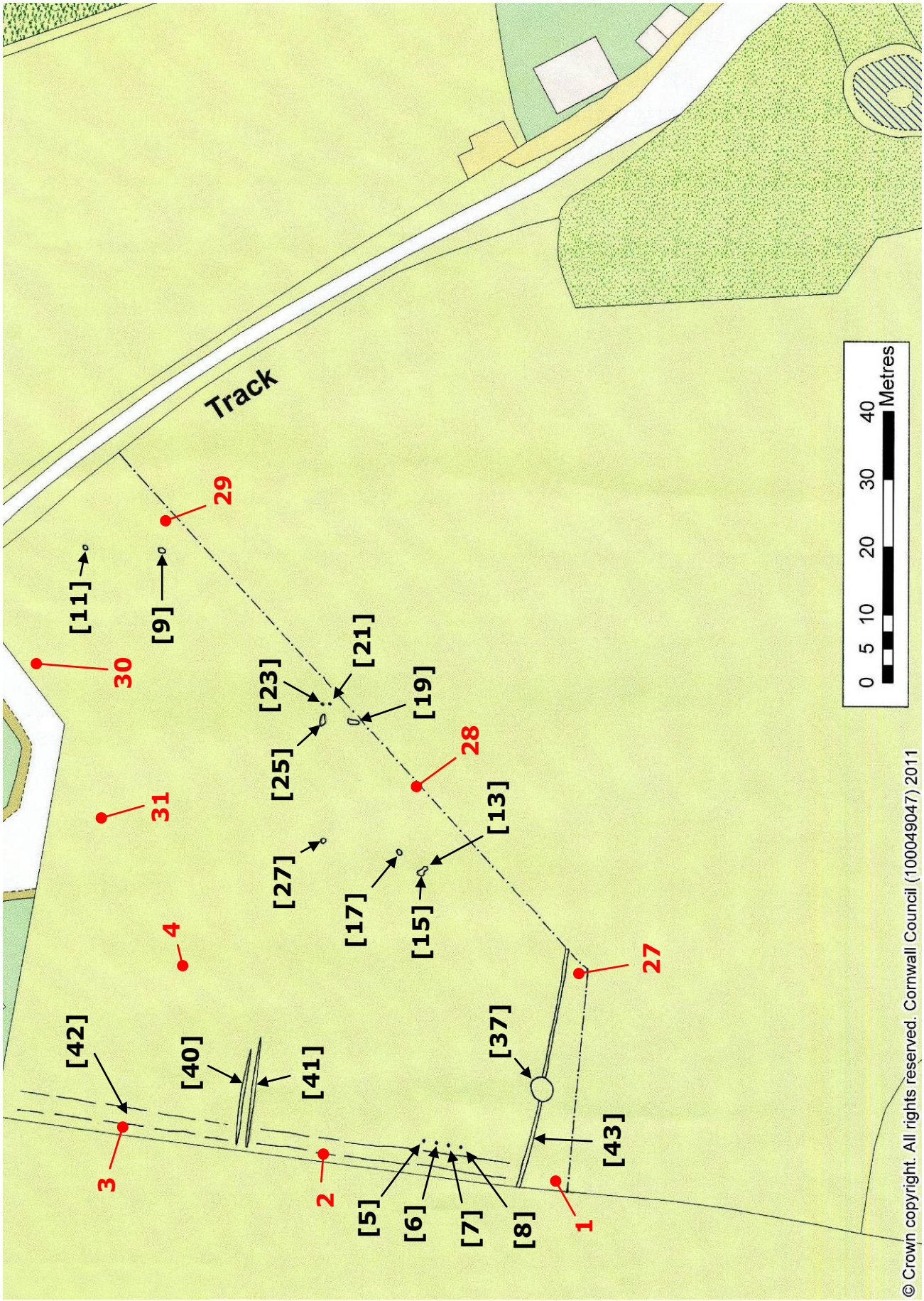

Figure 3. Site plan showing location of recorded features, and recorded soil profiles (in red).

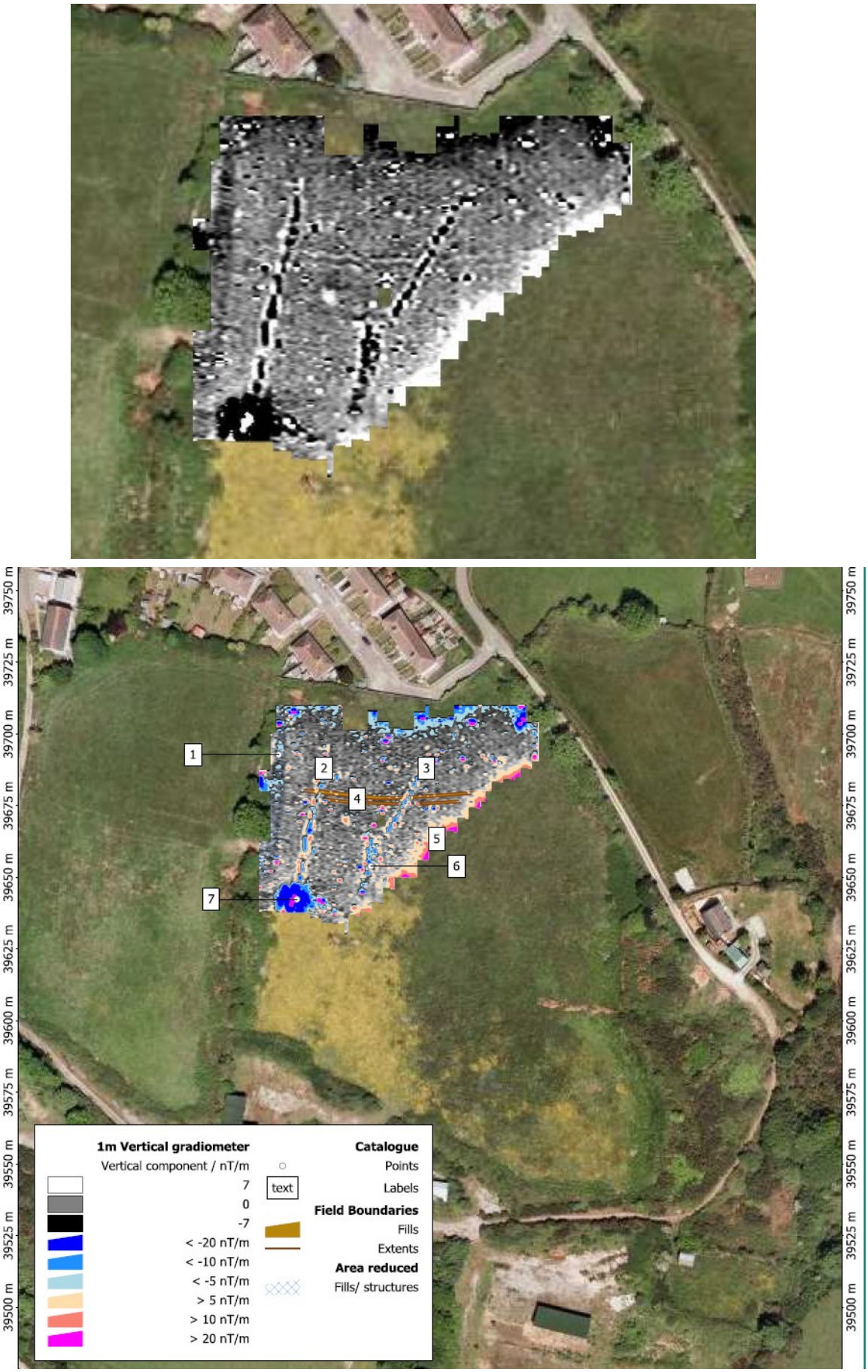

Figure 4. Geophysical survey identified sites as presented by ArchaeoPhysica Ltd. Top shows grey scale raw data, bottom shows identified sites (Lawson –Jones 2013).

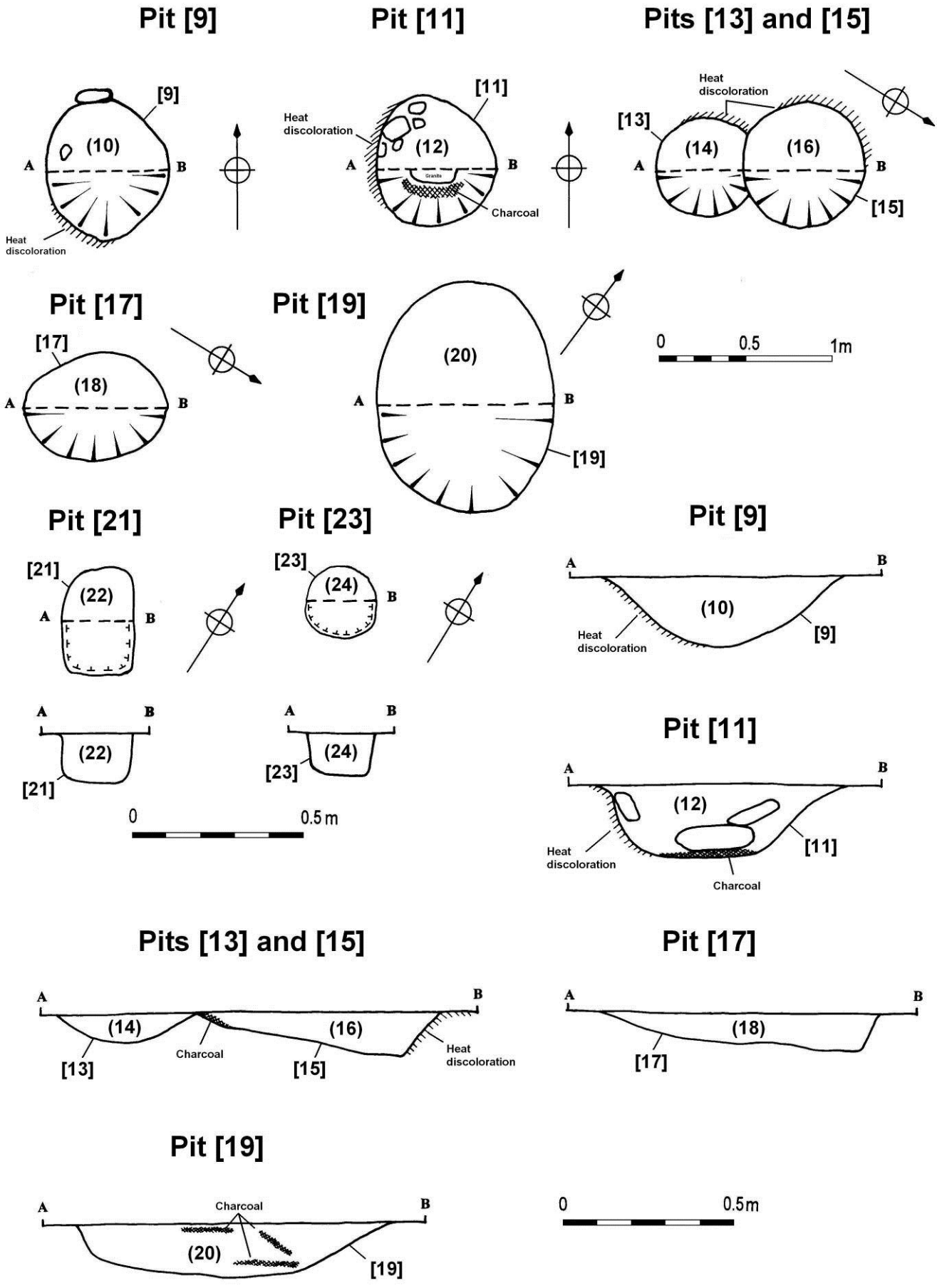

Figure 5. Excavated Pits. Plans and sections.

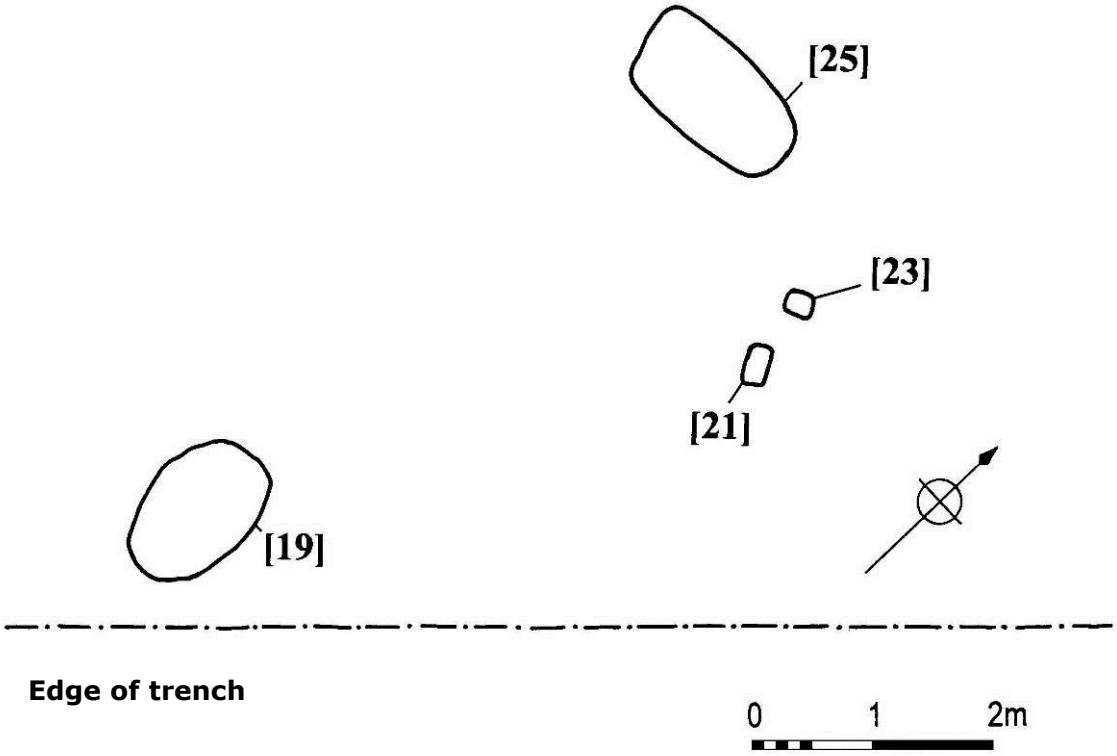

Figure 6. Pit group [19], [21], [23] and [25].

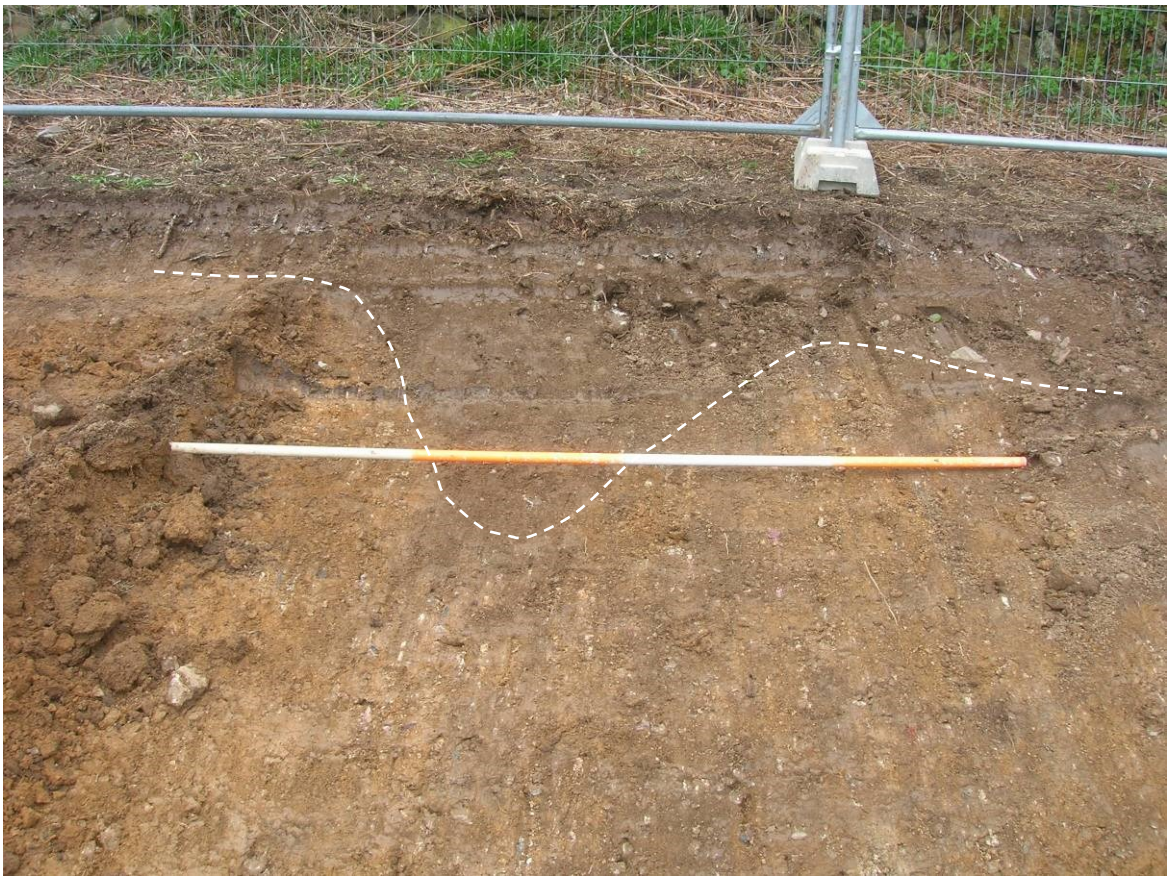

Figure 7. Field boundary ditch [43].

Figure 8. Fill of pit [37] showing concrete and steel beams probably derived from the demolition of the Tresavean mine mill buildingl.

Figure 9. Field boundary ditch (running bottom centre to top centre) [43] looking west.

Figure 10. Pit [9] in foreground, with Pit [11] at rear marked by ranging rods, view looking north.

Figure 11. Pit [9] half sectioned.

Figure 12. Pit [11] prior to sectioning.

Figure 13. Trackway [42] (spanned by ranging rod) view looking north.

Figure 14. Geotechnical trench [38], view looking north east.

Figure 15. Pits [21] and [23] prior to excavation.

Figure 16. Pit [17] prior to sectioning.

Figure 17. Pit [19] prior to excavation.

Figure 18. Pits [13] and [15] following half sectioning.

Figure 19. Pits [21] and [23] after excavation.