



Land north of 9, Plantation Lane, Hayle, Cornwall
Archaeological watching brief

Cornwall Archaeological Unit

Report No: 2017R059

Land north of 9, Plantation Lane, Hayle, Cornwall

Archaeological watching brief

Client	Mr. Martin Stemp
Report Number	2017R059
Date	13 September 2017
Status	Final
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Acknowledgements

This study was commissioned by Mr. Martin Stemp and carried out by Cornwall Archaeological Unit, Cornwall Council.

The Project Manager was Dr. Andy Jones. .

The views and recommendations expressed in this report are those of Cornwall Archaeological Unit 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.



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Cover illustration

One of the truncated walls revealed during the trenching for foundations on the site.

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Abbreviations

CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
CRO	Cornwall Record Office
EH	English Heritage
HER	Cornwall and the Isles of Scilly Historic Environment Record
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OD	Ordnance Datum – height above mean sea level at Newlyn
OS	Ordnance Survey

1 Summary

On the basis of the terms of an archaeological condition attached to a grant of planning permission (PA14/09661), CAU were commissioned to undertake a programme of archaeological recording during the groundworks phase of a small development adjacent to Foundry Farm, Hayle, Cornwall.

The site is adjacent to that of the former Harvey's Foundry, once Cornwall's premier beam engine foundry and mining machinery engineering works, and specifically to the site of the house and extensive outbuildings constructed by the family who established the Harvey's works at Hayle in the 1770s.

Trenching for the foundations of the new dwelling revealed the truncated walls of a previously undocumented building. A desk based assessment showed that the development site had been open ground since at least the 1790s, having since then been occupied as part of an area of fields and subsequently an orchard and lane and then a small yard adjacent to Foundry Lane. Whilst the building might have had an agricultural origin, there remains the possibility that it was part of the original foundry complex established in 1779. No artefactual evidence was retrieved which could indicate the function of the building or the period during which it was constructed and occupied.

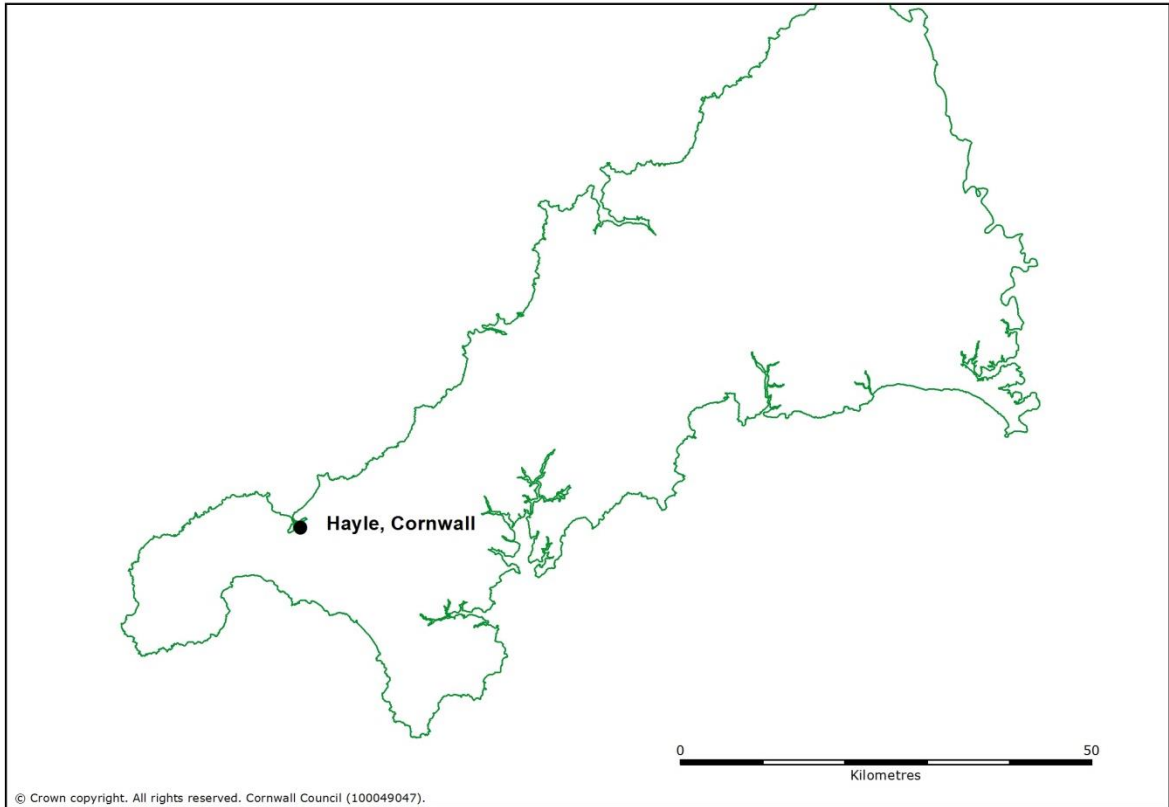


Fig 1. The location of Foundry Farm, Hayle, Cornwall.

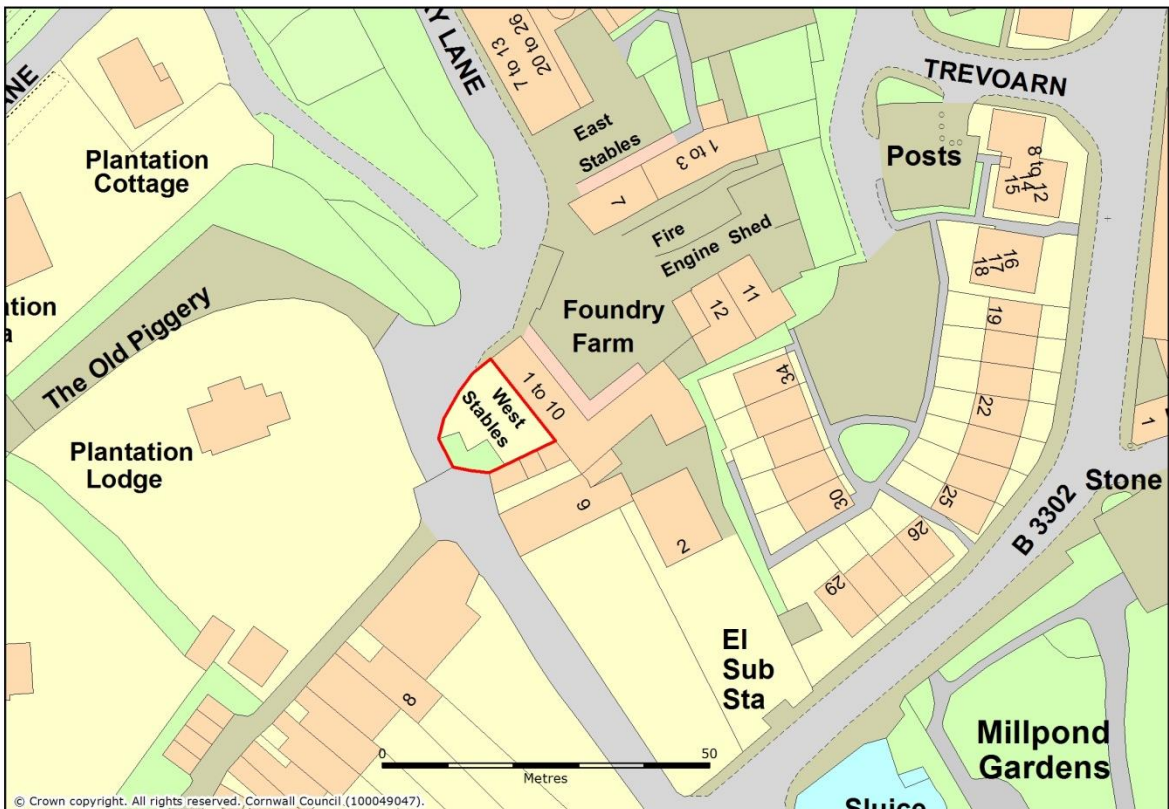


Fig 2. The extent of the development area off Foundry Lane, Hayle.

2 Introduction

2.1 Project background

CAU were commissioned by Mr Martin Stemp to undertake an archaeological watching brief during groundworks ahead of the construction of a dwelling set within an area of 0.02 HA at land to the north of No. 9 Plantation Lane, Hayle, Cornwall (see Figs 1 and 2). The site is within the Hayle Conservation Area and falls inside the boundary of the Cornwall and West Devon Mining Landscapes World Heritage Site.

The Development is subject to a Planning Condition (PA14/09661, decision dated 24/11/2014). Condition 7 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 which shall have been 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 aims and intentions of paragraph 128 of the National Planning Policy Framework 2012.

A WSI (Written Scheme of Investigation) was prepared by CAU (Jones 2017) in advance of the work (Appendix 1).

2.2 Aims and objectives

The principal aim of the study was to gain a better understanding of the character and potential of the archaeological resource by recording sites and features revealed by the preparation of groundworks ahead of construction.

The project objectives were:

- To ensure that the site works were carried out in such a way as to allow recording as set out in the Written Scheme of Investigation.
- To establish the presence/absence of archaeological remains and record archaeological features and deposits affected by the scheme.
- To determine the extent, condition, nature, character, date and significance of any archaeological remains encountered.
- To establish the nature of any identified activity on the site.
- To identify any artefacts relating to the occupation or use of the site.
- To deposit the archive (including any finds) with the relevant museum and disseminate the results of discoveries appropriately.

2.3 Methods

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

An archaeological watching brief was undertaken during the excavation of footings for the new bungalow. All archaeological features uncovered during the works were excavated and archaeologically recorded by written description, plan and section and photographic record.

The recording work was undertaken in accordance with the Written Scheme of Investigation (Jones 2017, Appendix 1).

3 Location and setting

The site is located immediately to the west of Foundry Farm, Hayle, adjacent to Foundry Lane at SW 55746 37029. The postcode for this area is TR27 4HD. The site is at 11m OD. Its immediate context consists of land formerly part of Carnsew in the ecclesiastical parish of St. Erth which was developed and operated as Harvey's Foundry between 1779 and 1903.

4 Designations

The site falls within the boundary of Area 2 (The Port of Hayle) of the Cornwall and west Devon Mining Landscapes World Heritage Site.

5 Site history

The development site is located within Hayle, not far to the east of the historic settlement of Carnsew which was first recorded in 1298, when it was spelt *Carndu*. The name is Cornish and contains the elements *carn* 'rock-pile or tor' and *du* 'black'.

In 1779, Gwinear blacksmith John Harvey moved to Hayle to set up a foundry and engineering works, employing 50 men by 1800 and specialising in the manufacture of mine steam engines and other machinery. His son Henry Harvey inherited the business, greatly expanding it and making Harvey's of Hayle an internationally respected firm, one of the largest anywhere in Cornwall, whose peak of influence and prosperity spanned the decades between 1820 and 1870 and which almost single-handedly influenced the development of the western section of Hayle, many of whose inhabitants they employed (in 1866 633 people worked for Harvey's). As a result of the family's activities the original foundry grew massively, as did the town and port of Hayle.

By 1880, however, the decline in Cornish mining had dramatically affected the fortunes of local foundries, most having closed. Harvey's diversified into shipbuilding and consolidated its coal importing and distribution business, as a result expanding its workforce to 1,200. The shipbuilding venture proved a failure, however, and the foundry business was run down, finally closing in 1903. Harvey and Co continued in business as a builder's merchants, merging with UBM in 1969. Although some significant foundry buildings survive, many were demolished following its closure, particularly during the 1970s.

The development area lies immediately adjacent to buildings associated with the foundry. To the east is the site of Foundry Farm, its stable block forming the eastern boundary of the development area. The original foundry established in 1779 was sited in the area between the later Foundry House and West Cornwall Railway (WCR) viaduct. By c1840 the foundry had spread to include Casting Shops, Stores, Offices, Retail Stores, Pattern Shop, Erecting Shop, Boiler Works, Smith's Shops, Pattern Store, and Transport section; across the Helston road to the south were the Hammer Mills, Boring Mill, Grist Mill and millpond; to the east were the White Hart Hotel, together with stables and dwelling houses also owned by Harvey's.

Identified archaeological sites

The Cornwall and Scilly Historic Environment Record (HER) identifies a number of sites in the vicinity of the study area. They include:

- A hillfort of Iron Age date (MCO40) located to the west of the development area.
- A post-medieval stable located to the south and east of the development area (MCO33191).
- A post-medieval foundry yard located to the east of the development area (MCO35091).
- HER Site ID 140792 House (just to the south of the development plot). The SMR entry reads: Late 18th/early 19th century. Rendered stonework with slate roof. Two storied, hipped symmetrical house with boundary walls related to the rest

of the Foundry Lane. A house is represented here on the 1791-6 map of Hayle, and seems never to have been extensively altered or extended. Part of the complex attached to Harvey's Foundry (and owned separately from the Foundry by the family,) it does not seem to have been exclusively or even generally used as the farmhouse probably before the later 19th century (on the split of the Harvey business in 1852 it was part of the Trevithick inheritance). In 1842 (Tithe Award) it was the home of Capt. John Vivian, the man who steered Richard Trevithick's steam carriage engine along the streets of London in 1802.

A map drawn up *circa* 1790 (CRO reference MMP51, extract used as Fig 3 in this report) shows the development site as being a short distance to the west of the former site of a house and outbuildings within an area of largely undeveloped land to the south of Penpol Pool, not far to the south-east of John Harvey's relatively newly-constructed foundry and lime kiln. Carnsew was shown as being jointly owned by *Sir John St. Aubyn Bart, H.M. Praed Esq and The Heirs of Hearle*. The development site was located near the eastern edge of a large open field.

An interpreted plan of this area dating to 1815 (CRO H 166/46, figure 1 in Smith and Buck 1995) labelled the building complex near the development site as *Harvey's House*, whilst elsewhere in this report it is noted that '*Henry Harvey c1790 built a house for himself with a lane and drive fronting onto the Helston Road and the Hammer Mills*'. Unfortunately this plan extract does not extend quite far enough to the west to cover the development site.

A slightly later plan dating to 1835 (CRO H 166/33, figure 2 in Smith and Buck 1995) showed this area to have been substantially redeveloped, the original house apparently having been extended and embellished with turrets, a large formal lawn to the south and other features; whilst one of the outbuildings had been retained, that originally to the east had been demolished. Many additional buildings had been constructed to the north of the house around a *Stable Yard* by this period. Immediately to the south of the house by this period were the *Hammer/Boring Mills*, an indication of the way in which the developing foundry was subsequently to encroach on the house. The plan extract covers only the eastern part of the site covered by the watching brief, but shows it as an undeveloped area immediately to the west of an L-shaped stable block.

The *circa* 1840 St. Erth Tithe Map (Fig 4) showed the development site to have partly overlain a large square agricultural enclosure separated from Harvey's stable block by a narrow lane. The enclosure (plot 30) was owned by The Trustees of Sir John St. Aubyn, the Rev. John Molesworth, the Rev. Edmund Rodd and Mrs. Sophia Praed, was leased and occupied by Henry Harvey Esq. and was described as an orchard.

A further plan dating to 1853 (CRO H 166/22/2, figure 3 in Smith and Buck 1995) shows how some further modification of the layout of the Harvey's House complex had taken place, but the principal change within this area had been the construction of the *Fitting Up Shops*, known locally as the *Coliseum*. Once again the site covered by the watching brief was shown as undeveloped.

By 1879 the OS 1st Edition 25" to the mile mapping (figure 4 in Smith and Buck 1995) showed a small number of changes to the layout of what had by that time become called *Foundry House*, the building shown to the north of the dwelling which appears to have been of late 18th century date having gained a series of extensions on its northern side. The *Central Erecting Shop* had been constructed to the west of the Coliseum in a formerly open space to the north-east of Foundry House. The development site formed a small-sub-triangular open plot backing onto the western wall of the L-shaped stable block and abutted to the west and north by Foundry Lane.

By 1903 the OS 2nd Edition of the 25" mapping (Fig 5) showed that Foundry House had been demolished in the 1880s together with all of its adjacent outbuildings, being replaced by an area labelled *New Yard* abutting the central erecting shop. The northern outbuildings around the stable yard survived at this date, however, and the

development site remained as an open subtriangular plot next to Foundry Lane. Smith and Buck's 1995 Trench 5 showed that the house was completely demolished down to bedrock.

The modern OS mapping show the shape of the plot had been slightly truncated by modifications to Foundry Lane. It is labelled *West Stables*. Both an RAF aerial photograph taken in 1946 and Cornwall Council Aerial mapping (Fig 6) dating to 2005 show the area as an open, grass-covered yard with some trees around its northern edge.

6 Watching brief results

See Figure 13.

The watching brief was undertaken during groundworks for the footings of the new dwelling on the plot (Fig 7). The work was undertaken on 31st July 2017. Some of the work to excavate the foundations had already taken place before the archaeologist arrived on site.

The material through which the foundation trenches were excavated consisted of a mixed mid to light greyish brown soil with frequent slate stone inclusions, concrete blocks and fragments of plastic. This material was very free-draining and had clearly been laid down in a single episode of un-compacted levelling fill. The underlying natural was exposed during some of the trenching operations – where seen this consisted of white to orange clayey material, assumed to represent a material possibly of an alluvial origin given the location of the site close to an original foreshore of a creek of the Hayle Estuary and its only limited elevation above modern high tide level.

The original ground levels within the site appeared to slope down to the north-east. The deposits exposed towards the stable block consisted of made ground, and the ground level within the development area was equivalent to the first floor level within the stables, indicating that the stables had been set into a terraced cut into the original ground surface.

The lower sections of two walls of an undocumented building were exposed in the foundation trenches. These had clearly been demolished down to a similar level across the site. The stone used in their construction was very similar to that used to build the nearby stable block, this being a honey-coloured siltstone which was probably locally derived. The building appears to have had a similar orientation to the nearby stable block, though its eastern part appeared to have had been overlain by the later building.

The consistency of the upper fill material and the incorporation into this of pieces of plastic and concrete blocks suggests a relatively recent single episode of backfill and levelling, probably during the period between the 1960s and 1980s. It seems likely that prior to the levelling episode the remains of the walling had been at or only just below the surface of this area.

Wall section 1.

See Figure 8.

A section of wall (1) was exposed close to the north-eastern edge of the plot. The wall was aligned south-west to north-east and was 1.0m high and 0.7m wide. It had been constructed of fair-faced randomly-coursed slatestone and quartz rubble bonded with yellowy-orange earth mortar incorporating occasional flecks of lime (probably rab mixed with locally-burnt lime). It seemed very probable that the walling had originally continued further to the north-east, but had been truncated by the construction of the stable block. The north-western face of this wall was exposed in a foundation trench running south-west across the site, where it met wall (2).

A measured south-west facing section across wall (1) showed it to have been buried under 0.75m of modern dumped material, the wall being at least 1.0m high. To the north-west of the wall (the interior of the building) excavation to 1.5m from surface,

cut through 0.5m of a dark greyish-brown silty clay (4), this being redeposited material which was not bottomed; the underlying natural ground was not revealed. On its south-eastern face, excavation to 1.5m from surface revealed the upper part of an external foundation cut [5] 1.7m wide at the top and 1.0m wide at its base; this had a sloping south-eastern edge which could be seen to have been excavated into a natural white to orange clay, assumed to represent the natural subsoil. This foundation trench was again filled with (4).

Wall section 2.

See Figures 9 and 10.

Wall (2) was exposed at the west end of wall (1). It was tied into wall (1) and lay at right angles to it, forming the south-east corner of the building. Wall (2) ran south-east to north-west, contemporary with and joining both wall (1) and wall (3) (see below). It measured 0.6m wide and was at least 1.1m high, identical to wall (1) in its build materials.

Wall section 3.

See Figures 11 and 12.

Wall (3) was located to the north-west of wall (2), was on the same alignment and clearly part of the same feature. It measured at least 1.0m high and 0.6m wide, was set into natural subsoil and was identical in build, dimensions and materials to wall (2).

A north-west facing section across wall (3) showed 1.0m of modern rubble and rubbish infill abutting its north-eastern face (the interior of the building), this material overlying (10): a redeposited natural orange/grey clay 0.3m thick, this in turn overlying (11), 0.1m of a dark greyish-brown topsoil which had the characteristics of a fine silty clay. To the south-west of the wall (the exterior of the building) cut [8] for the wall footing trench was 0.75m wide and 0.5m deep, and had been excavated into the natural ground surface. It had been infilled with (7): a mixture of broken slate and natural clay in a mid-brown silty clay matrix. The south-western edge of the construction cut [8] had been cut through (9): a very compact white/yellow clay representing the natural subsoil.

Apart from these two walls, little else was revealed during the watching brief, although the southern foundation trench for the new dwelling intersected a vertical cut through the natural near the south-eastern corner of the new building. Apart from the modern rubbish incorporated into the topmost fill, no artefacts were recovered during the watching brief.

7 Interpretation of results

The excavation for the footings of a new dwelling off Foundry Lane revealed evidence for a completely undocumented building. No artefactual material was recovered from the site during the watching brief which would assist in its dating, and the map regression undertaken to produce the historical summary (Section 4 in this report) showed that there are no indications of a building on this site on any map or plan post-dating 1790, since when the development site was either within an area of open fields, part of an orchard, or a small sub-triangular area adjacent to Foundry Lane. The building was evidently deliberately demolished down to its footing courses to clear the site on which it had been constructed, though in the event this plot was not re-used for other purposes until now. The demolition may have taken place during the construction of the Foundry Farm complex during the early decades of the 19th century, although it might have taken place prior to 1790.

The construction of the building of locally-derived stone rubble in random courses bonded by a weak lime/earth mortar clearly indicates a vernacular construction style using a locally-available building material. No formalised floors were found (although the depths for these was probably not reached), and given the absence of any artefacts

indicative of domestic occupation and the indications that this building would, pre 1790, have stood on the edge of an agricultural landscape, it seems possible that it was a field barn or similar; such a building might have been associated with the historic settlement of Carnsew. There is, however, an alternative possibility that it represents one of Harvey's original short-lived foundry buildings, which are known to have been constructed in the late 1770s in the general area later occupied by Foundry House and its outbuildings (Thomas and Watkins 2005).

Its date of construction is unknown, but it is almost certain that this would have been during the 18th century or earlier. The common orientation of the nearby stable block with this building might be fortuitous, but it is possible that the presence of the earlier building, or of a property boundary with which it was associated, might have determined the orientation of the western part of the stable block.

This building of pre-1790 date would have been sited close to what later became Foundry Lane, which might originally have been part of a historic track running close to the western side of the stream feeding the millpond to the south and heading north towards Carnsew Pool. The northern part of this route would have been considerably disrupted by the construction of the foundry complex, by the development of the railway and by the construction of Turnpike road leading the embankment heading to Penzance. Such a track would have been too small-scale to have been shown on early maps such as that produced by Joel Gascoyne in 1699.

The full extent of the building could not be established during the watching brief. Its north-eastern section was evidently truncated by the construction of Harvey's stable complex between 1805 and 1835 and its north-western end must lie outside the development area and was therefore not exposed. The building was at least 6.3m x 5.5m in plan and had been constructed on ground whose levels had already been partly levelled using imported fills. The nature of the upper levelling fills indicate that the remains of this building may well have relatively recently been exposed at surface by modern activities, but that it was subsequently re-buried.

8 References

Maps and plans

CRO MMP51, c 1790 map of Hayle
CRO H 166/46 1815 map of Hayle
St Erth Tithe Map and Apportionment c1840
CRO H 1616/20 1828 map of Hayle
CRO H 166/33 1835 map of Hayle
CRO H 166/22/2 1853 map of Hayle
CRO H 166/21 1887 map of Hayle
CRO H 166/48 1890 map of Hayle
Ordnance Survey 1st Edition 25" to a mile mapping, c1878
Ordnance Survey 2nd Edition 25" to a mile mapping, c1907
Ordnance Survey, revision to 25" map, c1930

Reports

Cahill, N. and CAU 2000, *Hayle Historical Assessment*, CAU report
Smith, J.R. 1993, *Foundry Square, Hayle: archaeological assessment*, CAU report 1993R014
Smith, J.R. 1999 *Harvey's Foundry, Hayle, Cornwall: archaeological assessment*, CAU report for Cornwall County Council
Smith, J.R. and Buck, C. 1995, *Foundry Square, Hayle, - an archaeological and historical evaluation*, CAU report 1995R043
Sturgess, J. and Thomas, N. 2001, *Harvey's Foundry, Hayle: historic buildings survey and archaeological evaluations*, CAU report
Sturgess, J. 2004, *Harvey's Foundry Farm Test Pits*, CAU report 2004R108

Websites

<http://www.heritagegateway.org.uk/gateway/> Online database of Sites and Monuments Records, and Listed Buildings

9 Project archive

The CAU project number is **146704**

The project's documentary, digital, photographic and drawn archive is maintained by Cornwall Archaeological Unit, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY.

Electronic data is stored in the following locations:

Project admin: \\Sites\Sites H\Hayle\Hayle, Foundry Farm 9 Plantation Lane\

Digital photographs: \\Historic Environment (Images)\Site E_H\Sites H\HAYLE\Hayle Foundry Farm WB 146704

Electronic drawings: \\Historic Environment (CAD)\CAD Archive\Sites H\Hayle Plantation Lane WB 2017

Historic England/ADS OASIS online reference: cornwall2-295659

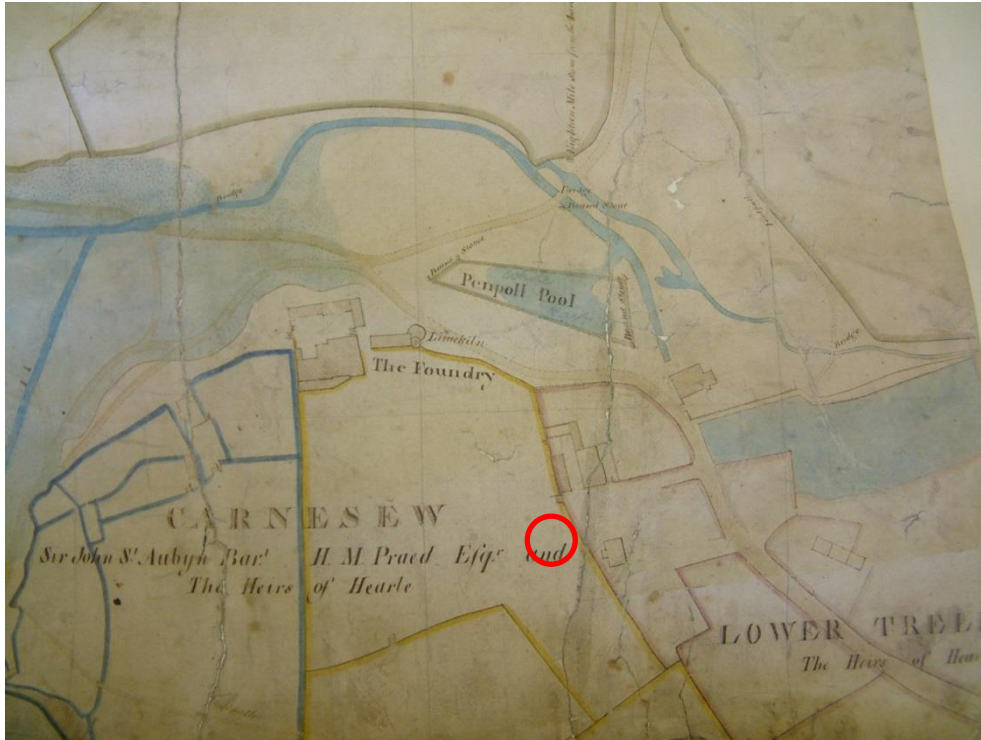


Fig 3. Extract from a 1791-6 map of Hayle (CRO MMP51). The location of the development is circled in red.



Fig 4. Extract from the circa 1840 St Erth Tithe Map. The location of the development, which straddles a lane and part of an orchard, is circled in red.

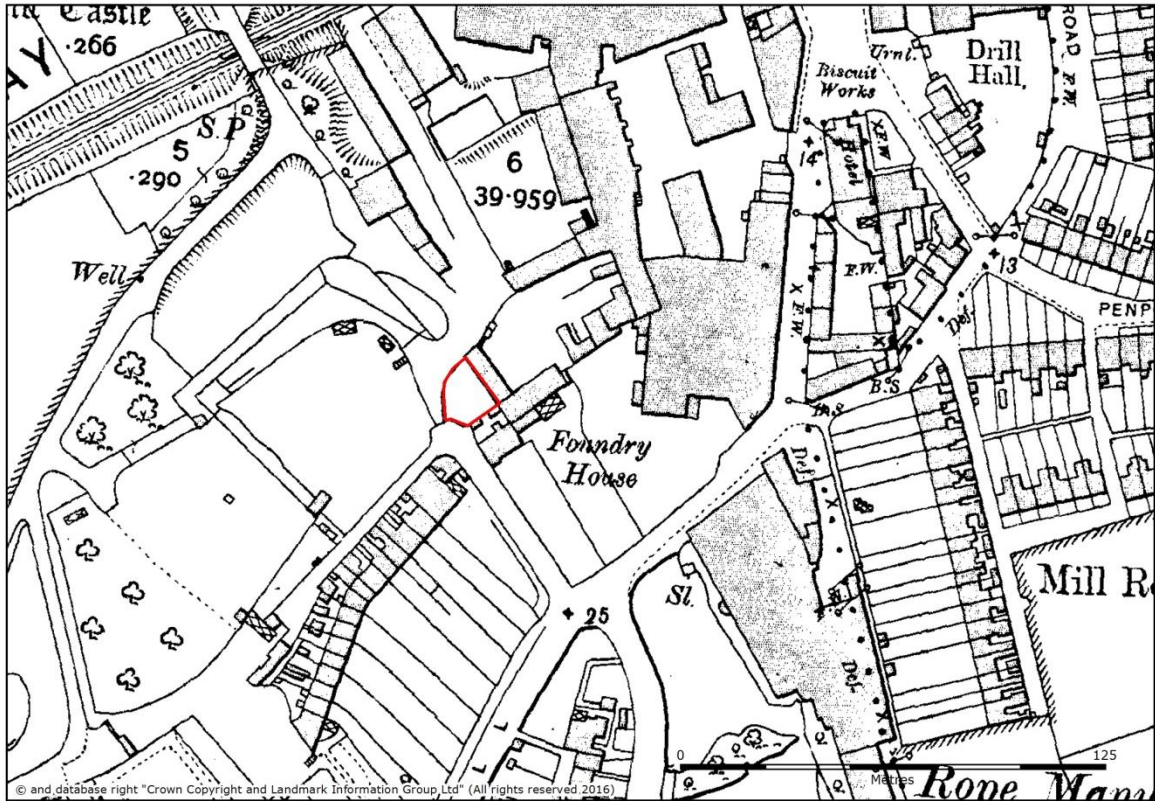


Fig 5. The area around Foundry House as shown on the 1908 25" mapping. The development area is shown in red.

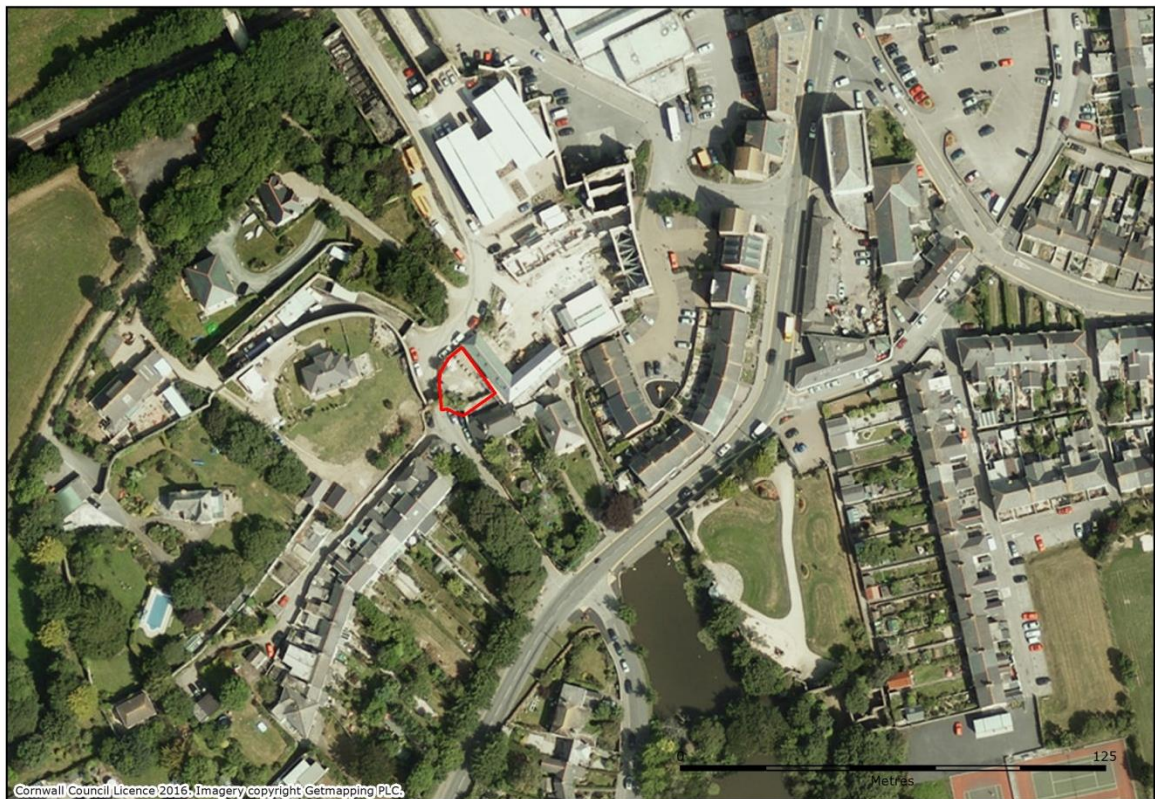


Fig 6. The development area around the site of Foundry House as shown on the Cornwall Council 2005 aerial mapping.



Fig 7. The development area showing the foundation trenches, with wall (3) exposed to the left. The stable block wall behind forms the eastern side of the plot.



Fig 8. The section through wall (1) looking north-east.



Fig 9. Wall (2) exposed in the foundation trench.



Fig 10. Wall (2), view looking south-east showing part of the north-east heading wall running to wall (1). Note the abundant plastic fragments in the covering fill material.



Fig 11. Wall (3) exposed in the foundation trench. View looking north-east.



Fig 12. Wall (3), view looking south-west showing how close to the surface of the yard area this truncated feature was.

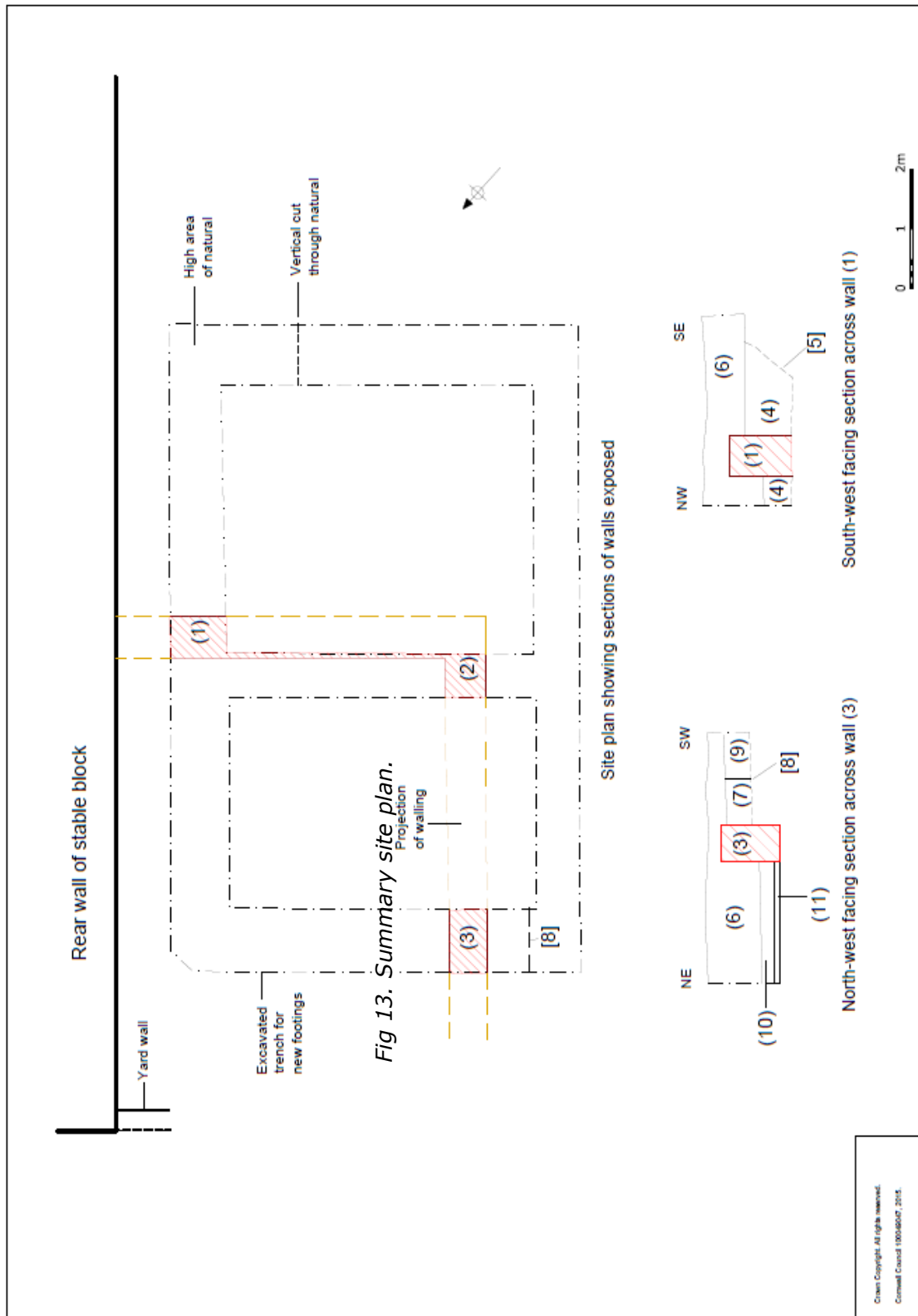


Fig 13. Summary site plan.

Fig 13. Summary site plan.

10 Appendix 1: Written Scheme of Investigation

Client: Louis and Mandy Stevens
Client contact: Louis and Mandy Stevens
Client tel: 01872 326848
Client email: astevens11@outlook.com
Planning Ref: PA14/09661

Project background

CAU were requested by Louis and Mandy Stevens by email dated 8/2/2017 to provide a schedule of costs and written method statement (WSI) to cover an archaeological watching brief during groundworks ahead of the construction of a dwelling set within an area of 0.02 HA at Foundry Farm, Hayle, Cornwall. The site is within the Hayle Conservation Area and is inside the Cornwall and West Devon Mining World Heritage Site boundary.

The Development is the subject to a Planning Condition. Condition 7 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 which shall have been 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 aims and intentions of paragraph 128 of the National Planning Policy Framework 201.2

This WSI is intended to provide a comprehensive statement on the standards necessary for the recording of archaeological deposits and stratigraphy uncovered during ground disturbance. It also includes an outline for the production of a report.

Site history

The proposed development site is located within Hayle, not far from the historic settlement of Carnsew which was first recorded in 1298, when it was spelt *Carndu*. The name is Cornish and contains the elements *carn* 'rock-pile or tor' and *du* 'black'. Carnsew is now part of the town of Hayle. The area is now surrounded by a number of post-medieval industrial sites. It is also situated to the south of the historic quay and Carnsew Pool.

Identified archaeological sites

A number of sites in the vicinity of the study area have been identified. They include:

- A hillfort of Iron Age date (MCO40) is located to the west of the development area.
- A post-medieval stable is located to the south and east of the development area (MCO33191).
- A post-medieval foundry yard is located to the east of the development area (MCO35091).

Aims and objectives

The principal aim of the study is to gain a better understanding of the character and potential of the archaeological resource by recording sites and features revealed by the preparation of groundworks ahead of construction.

The project objectives will be:

- To ensure that the site works are carried out in such a way as to allow recording as set out in this Written Scheme of Investigation.

- To establish the presence/absence of archaeological remains and record archaeological features and deposits affected by the scheme.
- To determine the extent, condition, nature, character, date and significance of any archaeological remains encountered.
- To establish the nature of any identified activity on the site.
- To identify any artefacts relating to the occupation or use of the site.
- To deposit the archive (including any finds) with the relevant museum and disseminate the results of discoveries appropriately.

Working methods

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

Fieldwork: watching brief

An archaeological watching brief will be undertaken during the round reduction works. The reduced areas should be excavated cleanly down to a level at which archaeological features or layers can be expected to be revealed (i.e., top of the "natural"). The area will then be inspected by an archaeologist and any archaeological features or layers exposed in the excavated area will be carefully excavated by hand and archaeologically recorded by written description, plan and section and photographic record as appropriate by a CAU archaeologist.

During the archaeological recording the archaeologist will:

- Identify and record any archaeological features that are revealed; 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 Senior Development Officer (Historic Environment) and CAU. **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 groundworks. The significance of the remains should be agreed between the client, the Senior Development Officer (Historic Environment) and CAU.

Where necessary the detailed archaeological recording may include:

- Excavation of archaeological features exposed in the excavated areas 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. A photographic register will be kept, giving feature number, location and direction of shot.
- 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 the Historic England Regional Advisor for Archaeological Science.
- If human remains are discovered on the site the Senior Development Officer (Historic Environment) and the Public Health will be informed. All recording will conform to best practice and legal requirements.
- If human remains are uncovered, which require excavation, they 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.

Fieldwork: photographic recording

Photographic recording will include colour photography using a digital SLR camera (with a resolution of 10 million pixels or higher). Black and white photography will be used to record significant archaeological features uncovered during the watching brief. This may be done through black and white digital images taken to archive standards or through conversion of colour digital images to black and white for archive storage.

CAU follows Historic England guidance on digital image capture and file storage (2015).

The photo record will comprise:

- General views.
- Significant archaeological features.

Methodology for the archive standard photography will be as follows:

- Photographs of details will be taken with lenses of appropriate focal length.
- Difficulties of back-lighting will be dealt with where necessary by balancing the lighting by the use of flash.
- A metric scale will be included in all views, except where health and safety considerations make this impractical.

Fieldwork: treatment of finds

The archaeological fieldwork may produce artefactual material.

- All finds in significant stratified contexts predating 1800 AD (e.g., settlement features) or those from later periods which are considered to be of significance should be collected by context and described. Post medieval or modern finds may be disposed of at the cataloguing stage.
- 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

Following review with the CAU Project Manager the results from the fieldwork will be collated as an archive. This will involve washing and cataloguing of finds, the indexing and cross-referencing of photographs, drawings and context records.

Any significant finds will be stored in a proper manner (being clearly labelled and marked and stored according to CAU guidelines).

All records (context sheets, photographs, etc) will be ordered, catalogued and stored in an appropriate manner (according to CAU guidelines):

- Digital colour photographs (stored according to HER guidelines and copies of images made available to the client).
- Black and white photographs (developed to include negatives, a contact sheet and digital copies).
- A detailed site description.
- Preparation of finished drawings.
- Completion of the Historic England ADS OASIS online archive index.

The photographic archiving will follow Historic England guidelines for Digital Image and Capture (2015).

(<https://www.historicengland.org.uk/images-books/publications/digital-image-capture-and-file-storage/>).

Archive report

The results from the watching brief will be presented in a concise report.

Copies of the report will be distributed to the Client and the local and main archaeological record libraries. A PDF copy of the report will be produced and deposited with the Historic Environment Record.

This will involve:

- producing a descriptive text;
- producing maps and line drawings;
- selecting photographs;
- report design;
- report editing;
- dissemination of the finished report;
- Deposition of archive and finds in the Royal Cornwall Museum, Truro.

The written report will include:

- A summary - a concise non-technical summary.
- Introductory sections - background, objectives, aims and methods.
- A site history - location and setting, designations, historic background
- The project results - factual description of the results of the various aspects of the project, chronology/dating evidence, interpretation
- Discussion and conclusion - Discussion of the results, significance, potential for further analysis, recommended mitigation measures, conclusion

- References
- Project archive index
- Appendix
 - A copy of the WSI
- Illustrations
 - General location plan.
 - Detailed location plans to link fieldwork results to OS map.
 - Selected plans and section drawings (as appropriate).
 - Finds drawings (if appropriate).
 - Photographs (if appropriate).

A Historic England/ADS online access to the index of archaeological investigations (OASIS) record will be made.

Archive deposition

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with CAU 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. The site archive and finds will initially be stored at CAU premises. In the event that significant artefacts are recovered these will be transferred to an accredited archive repository, for example the Royal Cornwall Museum (RCM) and their conditions for archives will be followed. In the event that there are no finds or they are retained by the owner, the documentary archive in due course shall be deposited with the Cornwall Record Office, but in the medium term will be stored at ReStore. All digital records will be filed on the Cornwall Council network.
4. Digital data will be stored on the Cornwall Council network which is regularly and frequently backed up.

CAU uses the following file formats for stored digital data:

- DOCX Word processed documents
- XLSX Spreadsheets
- PDF Exports of completed documents/reports/graphics
- JPG Site graphics and scanned information
- DNG or TIF Digital photographs
- DWG AutoCAD drawings, measured surveys
- MXD ArcView GIS (electronic mapping) data
- AI Adobe Illustrator graphics

Timetable

The study is anticipated to be commenced in 2017. CAU will require at least one weeks' notice before commencement of work, in order to allocate field staff 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 the Development Officer (Historic Environment). Where the Senior Development Officer (Historic Environment) is satisfied with the archive report and the deposition of the archive written discharge of the planning condition will be expected.

1. The SDO (HE) will monitor the work and should be kept regularly informed of progress.
2. Notification of the start of work shall be given preferably in writing to the SDO (HE) at least one week in advance of its commencement.
3. Any variations to the WSI will be agreed with the SDO (HE), in writing, prior to them being carried out.
4. If significant detail is discovered, all works must cease and a meeting convened with the client and the SDO (HE) to discuss the most appropriate way forward.

Monitoring points during the study will include:

- Approval of the WSI
- Completion of fieldwork
- Completion of archive report
- Deposition of the archive

References

Historic England 2015. *Guidance note on Digital Image Capture and File Storage*. Historic England, Swindon

Cornwall Archaeological Unit

Cornwall Archaeological Unit is part of Cornwall Council. CAU employs 20 project staff with a broad range of expertise, undertaking around 120 projects each year.

CAU 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



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

<http://www.archaeologists.net/codes/ifa>

Terms and conditions

Contract

CAU is part of 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 CAU 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 Andy Jones of CAU 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.

Andrew Jones, BA, PhD, FSA, MCIfA

Archaeologist Team Leader responsible for the origin and management and publication of a wide range of projects, in particular development-related assessments, evaluations and excavations. Major projects in recent years include excavation and publication of sites at Tremough, Scarcewater, Whitehorse Hill and Camelford School.

Andy has lectured widely and has been involved with the SWARF Neolithic and Bronze Age Group is a member of the South West Implement Petrology Group, A council member of the Royal Archaeological Institute and the Prehistoric Society and a Cornwall Archaeological Society committee member. He is a Member of the Chartered Institute for Archaeologists and a Fellow of the Society of Antiquaries.

Ryan Smith, BSc (Hons), PCIfA

Archaeologist Ryan Smith has worked on a variety of projects with the Cornwall Archaeological Unit. Projects undertaken have involved the excavations at Porthleven, the TEDC site in Truro and the Newquay Strategic Road Scheme, the evaluations of sites at St Tudy and Four Burrows, as well as a large number of watching briefs, including St Breock Downs, and Otterham Wind Farm.

Copyright

Copyright of all material gathered as a result of the project will be reserved to Cornwall Archaeological Unit, 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.

CAU 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 CAU may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

Health and safety statement

CAU follows Cornwall Council's *Statement of Safety Policy*.

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

Insurance

CAU is covered by Cornwall Council's Public and Employers Liability Insurance, with a policy value of £50m. The Council also has Professional Negligence insurance with a policy value of £10m.

Andy Jones

Principal Archaeologist

14/2/17

Cornwall Archaeological Unit

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