



Pendennis Headland Footpath Works, Cornwall Archaeological Watching Brief



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Archaeological Watching Brief

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Acknowledgements

This study was commissioned by Cormac and carried out by Cornwall Archaeological Unit, Cornwall Council.

The Project Manager was Antony Angove, with fieldwork undertaken by Carl Thorpe.

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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Abbreviations

CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
HE	Historic England
HER	Cornwall and the Isles of Scilly Historic Environment Record
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OS	Ordnance Survey

1 Summary

Cornwall Archaeological Unit (CAU) was commissioned by Cormac to undertake a programme of archaeological monitoring and recording, in the form of a watching brief, during ground disturbance for footpath improvement works on the Pendennis headland. The works were located within the Scheduled area

Groundworks, at nine different locations within the Scheduled area were carried out with an archaeologist in attendance to record any features exposed during the ground disturbance. Fieldwork was undertaken in November and December 2020, in wet and windy weather conditions.

No archaeological features or artefacts were revealed.

2 Introduction

2.1 Project background

Cornwall Archaeological Unit (CAU) was commissioned by Richard Keast of Cormac to undertake an archaeological watching brief, during ground disturbance for footpath improvement works on the Pendennis Headland, Falmouth, Cornwall (SW 825 317; Fig 1). The site is a Scheduled Monument (SM 10552, 1012134), and is an English Heritage property.

The footpath improvements required ground disturbance within the Scheduled area and therefore required Scheduled Monument Consent.

2.2 Aims

The principal aim of the watching brief was to gain a better understanding of the character and potential of the archaeological resource.

The project objectives are as follows:

- Obtain an archaeological record of features exposed during the works.
- Recover any artefacts revealed during the works.
- Produce a report on the results of the archaeological recording and supervision.
- Produce an entry to the Historic England/ADS OASIS online national database of archaeological projects.

2.3 Methods

The full details of the recording methodology are outlined in the accompanying Written Scheme of Investigation (WSI) written by Cornwall Archaeological Unit (Appendix 1). The WSI also includes a background to previous recording on the headland and assessment of the potential impact of the works of the affected heritage resource. All recording work was undertaken according to the Chartered Institute for Archaeologists Standards and Guidance for Archaeological Investigation and Recording (CIfA 2014a; 2014b; 2014c).

This archaeological watching brief covered nine separate areas on the Pendennis Headland (A1-A9). The groundworks were undertaken by the footpath improvement team undertaken using hand tools. The groundworks involved the installation of replacement handrails, additional steps and wooden posts. Hedging causing trip hazards within sections of pathway was removed.

Fieldwork was undertaken over several visits to site in November and December 2020.

3 Location and Setting

Pendennis Headland is located on the south eastern side of the town of Falmouth, with Pendennis Point jutting out into the Carrick Roads (centred at SW 823 318). The project involves work at number of different locations across the headland (Fig 1).

Pendennis Castle is the dominant feature of the headland. The ground upon which the Castle lays forms a relatively flat plateau varying in height between 54m to 56m OD. The underlying geology consists of Devonian interbedded sandstones, and argillaceous rocks of the Portscatho Formation (BGS sheet 352).

The name 'Pendennis' is derived from the old Cornish pen, 'headland', and dinas, 'fort' (Padel 1985), the 'fort on the headland. The Pendennis headland was connected to the mainland by a narrow neck of land and is likely to have been an Iron Age promontory fort or cliff castle (Johns 1992).

The castle and its twin, St Mawes Castle on the opposite side of the Fal Estuary, were built between 1539 and 1543 as part of Henry VIII's national defence policy.

The castles were utilitarian artillery towers reinforced by the waterline blockhouses at Little Dennis and St Mawes, their purpose was to protect the mile-wide inlet of Carrick Roads.

Between 1597 and 1599, following a review of the defences by Sir Walter Raleigh during the hostilities with Spain, the Henrician keep was strengthened by the addition of the Italianate bastioned enceinte designed by the military engineer Paul Ivey.

The defences and armaments at Pendennis were periodically upgraded in time of war. By the time of World War 1 the main long range defences of Pendennis were at Half Moon Battery, first constructed c1793, situated south of the Castle, facing seawards and working in tandem with the long-range battery at St Anthony Head.

In 1956 coastal defence was abandoned and the Castle given to the Ministry of Public Buildings and Works (now English Heritage). Pendennis Castle is part of Scheduled Monument No: SM 10552, HA 1012134, DCO184: Pendennis Peninsula Fortifications.

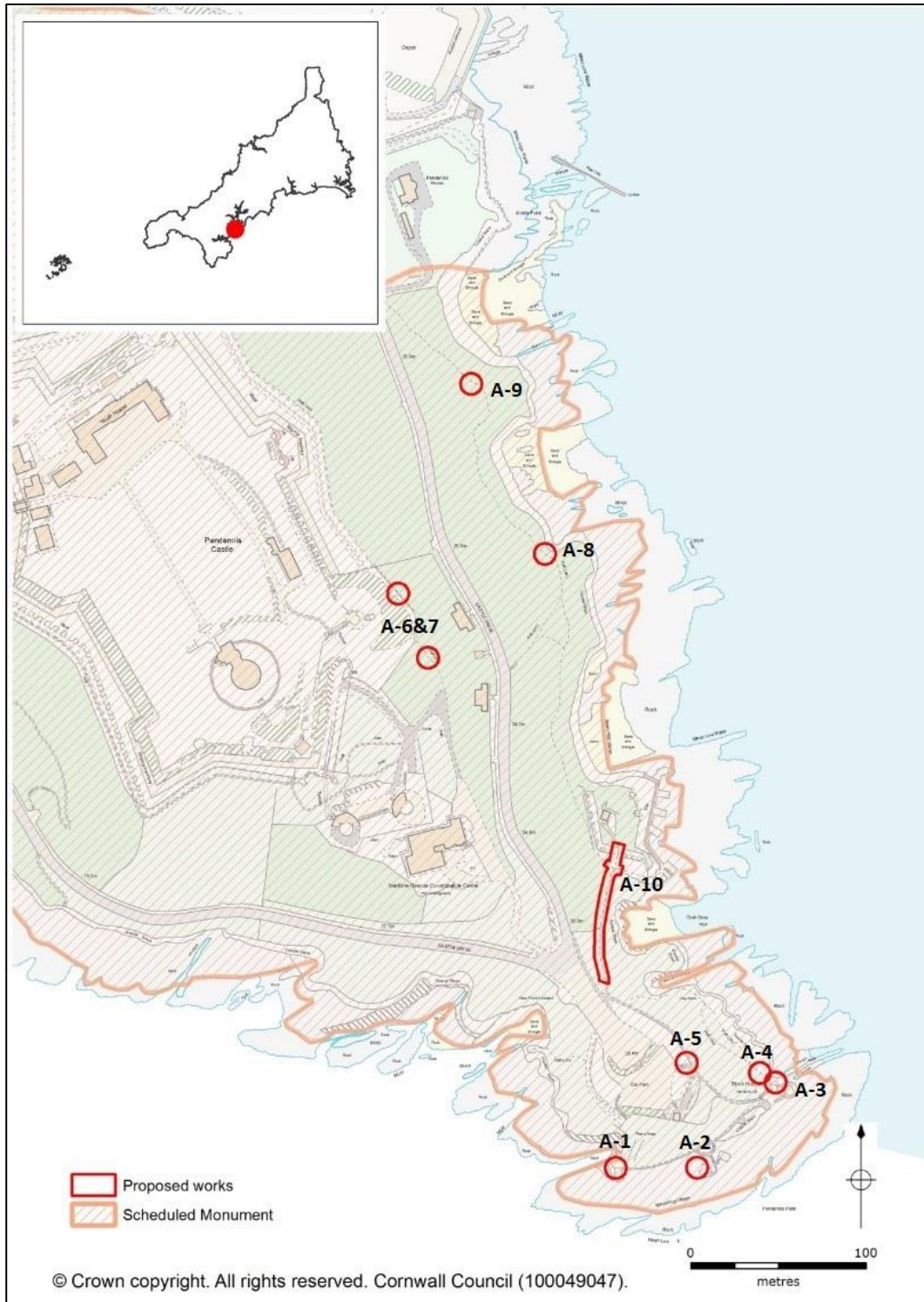


Fig 1 Location map, showing areas of footpath improvements.

4 Archaeological results

No archaeological features or finds were recorded during footpath improvement works (Table 1, Fig 2-12). There were no footpath improvement works undertaken within Area A-10. Each of the areas is stratigraphically described from top to bottom in Table 1.

Area	OS Prefix	Easting	Northing	Dimensions (Length x width x depth)	Description
A-1	SW	82643	31500	1.3m x 1m x 0.1m	Installation of two additional steps. 0.05m of grass, roots and topsoil overlying 0.02m of grey-brown clay loam and 0.03m of yellow, grey-brown clay. Slate bedrock encountered at base of the trench. 0.03m of concrete exposed, which was the original path surface (Fig 2 and 3).
A-2	SW	82693	31500	0.06m x 0.06m x 0.3m	Replacement of damaged handrails Three holes (0.3m deep) drilled into a concrete base. (Fig 4 and 5).
A-3	SW	82731	31548	0.5m x 0.25m x 0.10m	Installation of two additional steps. 0.05m of grass, roots and topsoil overlying 0.05m of grey-brown clay loam. Solid slate bedrock lay at the base. (Fig 6 and 7).
A-4	SW	82731	31552	0.4m x 0.35m and 0.4m	Installation of two wooden posts. 0.02m of grass, roots and topsoil overlying 0.05m of grey-brown clay loam. This overlay 0.03m of dark brown clay, 0.2m of red-brown clay with slate fragments, and 0.1m of rotten slate bedrock.

A-5	SW	82681	31561	1m x 0.5 x 0.15m	Repair of eroded path surface. 0.05m of grass, roots and topsoil overlying 0.05m of grey-brown clay loam and 0.05 rotten bedrock fragments. Solid slate bedrock lay at the base.
A-6	SW	82533	31789	1m x 0.5 x 0.1m	Removal of hedging causing a trip hazard and repair 6 steps. 0.1m of compacted grey-brown clay that formed the surface of the path.
A-7	SW	82521	31825	1m x 0.5 x 0.1m	Removal of hedging causing a trip hazard and repair 6 steps. 0.1m of compacted grey-brown clay that formed the surface of the path. (Fig 8 and 9).
A-8	SW	82603	31853	8 postholes - 0.4m x 0.4m x 0.4m 1 posthole - 0.4m x 0.4m x 0.4m	Installation of 8m post and rail fencing along section of collapsed cliff. 0.05m of grey-brown compacted clay (the surface of the path), overlying 0.2m of red-brown clay with slate fragments and 0.15m of rotten bedrock. (Fig 10-12).
A-9	SW	82547	31964	0.35m x 0.35m x 0.4m	Replacement of timber footbridge. 0.15m of compacted grey-brown clay, overlying 0.15m of yellow-brown clay and 0.1m of red-brown clay with slate fragments.

Table 1. Description of excavation on the Pendennis Headland.

5 Discussion

The watching brief provided an opportunity for an assessment of the archaeological potential in the nine areas where groundworks took place as well as establishing ground conditions within the monitored areas.

However, no buried archaeological deposits were revealed, or artefacts recovered from the groundwork areas.

6 References

CIfA, 2014b. *Standard and guidance for an archaeological watching brief*, CIfA, Reading

CIfA, 2014c. *Standard and guidance for archaeological excavation*, CIfA, Reading

CIfA, 2014d. *Code of Conduct*, CIfA, Reading

Johns, C, 1992. *Pendennis Headland. Historical Credentials, Current Condition and Future Potential of the Defences 1540-1956*, CAU, Truro

O J, 1985. *Cornish Place-Name Elements*, Nottingham, English Place-Name Society
Ordnance Survey, 2021. MasterMap Topography.



Fig 2 A-1 pre groundworks.



Fig 3 A-1 post installation of steps.



Fig 4 A-2, pre groundworks.



Fig 5 A-2, completed installation of steps.



Fig 6 A-3, pre groundworks.



Fig 7 A-3, completed installation of steps.



Fig 8, A-7, pre groundworks.



Fig 9 A-7, completed installation of steps.



Fig 10 A-8, pre groundworks.



Fig 11 A-8, post hole for timber fencing.



Fig 12 A-8, completed timber fencing.

Appendix 1: Written Scheme of Investigation

Pendennis Headland Footpath Works Watching Brief

Client: Cormac

Planning ref (if appropriate): n/a

Project background

This document sets out a Written Scheme of Investigation (WSI) by Cornwall Archaeological Unit (CAU) for a programme of archaeological investigation at Pendennis Headland, Falmouth (SW 825 317).

The WSI has been requested by Historic England's (HE) Inspector of Ancient Monuments (IAM) to support Scheduled Monument Consent (SMC) for proposed footpath works on Pendennis Headland, a Scheduled post-medieval defensive promontory fort (DCO184; National List: 1012134), the finest in the country (Fig 1). The IAM has stated that:

All of the proposed works locations fall within the boundary of Scheduled Monument No. 1012134 Pendennis Peninsula Fortifications and prior Scheduled Monument Consent (SMC) will need to be obtained before the works can be carried out. The works will improve public access around the outer edges of the monument where the path follows the coastline and allow people to better appreciate the complex of coastal defences at Pendennis. Although the proposed works are small-scale they all lie within an area of high archaeological potential subject to legal protection under the Ancient Monuments & Archaeological Areas Act 1979. Where the proposed works involve breaking the ground, for instance the supports for the replacement footbridge or postholes for new fencing, it will need to be subject to archaeological supervision and recording, so that any finds encountered are dealt with correctly....

....The application should be supported by as much detail as possible on the proposed works including details of the proposed archaeological supervision and recording where groundworks are taking place.... The archaeologist's Written Scheme of Investigation (WSI) should accompany the application.... I am looking for a proportionate response that will adequately cover the monitoring of groundworks and recording of any finds arising.



Figure 1: site location map

Site history

Pendennis Castle (centred at SW 823 318) lies on the south eastern side of the town of Falmouth within the parish of the same name (Fig 1). It is situated on a prominent headland, Pendennis Point, that juts out into the Carrick Roads. The ground upon which the Castle lays forms a relatively flat plateau varying in height between 54m to 56m OD. The underlying geology consists of Devonian interbedded sandstones, and argillaceous rocks of the Portsatho Formation (BGS sheet 352).

The name 'Pendennis' is derived from the old Cornish *pen*, 'headland', and *dinas*, 'fort' (Padel 1985), the 'fort on the headland'. The Pendennis headland was connected to the mainland by a narrow neck of land and is likely to have been an Iron Age promontory fort or cliff castle (Johns 1992).

The castle (NGR SW 824 318) and its twin, St Mawes Castle on the opposite side of the Fal estuary, were built between 1539 and 1543 as part of Henry VIII's national defence policy. The castles were utilitarian artillery towers reinforced by the waterline blockhouses at Little Dennis and St Mawes, their purpose was to protect the mile-wide inlet of Carrick Roads.

Between 1597 and 1599, following a review of the defences by Sir Walter Raleigh during the hostilities with Spain, the Henrician keep was strengthened by the addition of the Italianate bastioned enceinte designed by the military engineer Paul Ivey.

The defences and armaments at Pendennis were periodically upgraded in time of war. By the time of World War 1 the main long range defences of Pendennis were at Half Moon Battery, first constructed c1793, situated south of the Castle, facing seawards and working in tandem with the long-range battery at St Anthony Head.

In 1956 coastal defence was abandoned and the Castle given to the Ministry of Public Buildings and Works (now English Heritage). Pendennis Castle is part of Scheduled Monument No: SM 10552, HA 1012134, DCO184: Pendennis Peninsula Fortifications.

Previous work

The area under investigation has previously been the subject of a number of surveys and recording projects including assessment (Johns 1992), a conservation plan (Linzey 2000), evaluation (Johns 1997), and watching briefs Johns (1998; 2000). This has informed the rest of this section.

Historic Landscape Character (HLC)

The HLC of the headland is 'Recreational' (Cornwall County Council 1996).

Known archaeological sites

A number of sites recorded in the Cornwall and Scilly Historic Environment Record (HER) are located close to the proposed works. These include with reference to the proposed works (see Project Extent, below; largely from south-west to north-east with the exception of 10):

1 Install two additional steps.

MCO62494 – C17 tunnel. According to popular belief there is a tunnel leading from Pendennis Castle to a sea cave near Pendennis Point, by which route the future King Charles II left the castle following his sojourn in 1646.

MCO62492 – C16 platform. A fort enclosing a sea battery to the north-east of the blockhouse is shown on Norden's map of 1600. Lilly's survey of 1715 is the first to specifically identify a battery at the southern seaboard, identified as 'Shepherd's Cove Platform'.

2 Replace damaged handrail.

MCO42225 – Post-medieval searchlight battery. Three searchlight emplacements together with an engine room, ancillary buildings and a searchlight observation post were erected at Pendennis Point in 1894 and

were used in both World Wars. The searchlights were used in conjunction with the Half Moon Battery in Pendennis Castle. Today, little remains of the site except concrete bases and it is thought that the engine room is buried beneath the car park.

MCO53469 – World War Two anti-aircraft battery. Site of a 2 x 40mm bofors light anti-aircraft guns.

MCO62499 - C20 searchlight emplacement. In 1901 a single defence electric light was erected at Pendennis Point. The searchlight, in tandem with two on St Anthony Head supplemented the fixed lights at Middle Point and St Mawes which provided an illuminated area over the minefield.

3 Install two additional steps and extend handrail.

MCO25058 - C16 fort. Little Dennis. The blockhouse on Pendennis Point is thought to pre-date the construction of Pendennis Castle by perhaps a year. It is believed to have originally been a somewhat cruder tower than we see today, more akin to the blockhouses of Dartmouth, particularly Dartmouth Castle and Bayards Cove Castle. The blockhouse may also have been designed and built by Thomas Treffry of Fowey who was responsible for the work at Bayards Cove and later as the 'person in charge' of the construction of St Mawes Castle. The archaeological evidence implies that the blockhouse began life in 1538 with three internally splayed seaward facing gun ports, probably closed by externally hung wooden shutters. Between 1542 and 1544 during the construction of Pendennis Castle, the enfilade of ports was replaced by a single externally splayed embrasure of identical design to those on the first gun floor of the artillery castle and a curved parapet from the same source.

The castles of Pendennis and St Mawes are the only 'Device' castles built on hilly sites. The remainder along the south coast are surrounded by flat land or sea. This presented unique problems for the fortress designers. This inherent weakness may have been addressed by augmenting the forts with strong sea batteries. To achieve this the flanks of the blockhouse seem to have been extended with long masonry curtains on the east and south sides from which heavy guns could command the navigable channels and Falmouth Bay.

The Norden plan of 1600 depicts one gun mounted on the roof of the blockhouse firing through an embrasure, flanked on either side at ground level by open sea batteries. The retired walls of the sea batteries allowed them to be flanked from the blockhouse roof as if by a bastion. This arrangement is repeated in the Grand Sea Battery at St Mawes.

The gun defence of Pendennis Castle was updated in 1627, but these weapons were in a dreadful state by the time they were finally needed in the Civil War. As the Royalist forces consolidated their position in retreat in March 1646, the sea batteries adjacent to the blockhouse received the armament which was to see them through a lengthy siege. The critical lower battery was almost certainly stocked with arms and powder in this period. The blockhouse very probably served some function in the lower fort after the war, either as a magazine, which might explain the blocking to the Henrician port removed by His Majesty's Office of Works in 1928, or even more likely as a 'war shelter' for the gun detachment. During their unpicking of the Henrician fabric, the Office of Works opened up the two earlier inwardly splayed embrasures.

No guns are mentioned by Lilly in connection with the blockhouse, although the adjacent sea batteries bristled with large calibre weapons. Lilly may have considered the building part of the Blockhouse Long Platform, so some form of armament here should not be ruled out.

After the Revolutionary War with France the Packet Service was taken over by the Navy. The blockhouse was then used as a magazine for the storage of powder from the packets. The use of the blockhouse as a magazine continued until 1828 when a new road enabled powder to be taken from the landing at Crab Quay up to the castle magazines.

In 1846 the Commanding Engineer described the 'old blockhouse': 'the walls...appear to be good...the present lead roof...has been partially stolen'. No use is mentioned for the building on the 1866 appropriation table when its sole function seems to be to augment the butts of the volunteer rifle range. Postcards of the time suggest that when the ranges were silent the west glacis was used as a public pleasure ground, the blockhouse providing a backdrop as a romantic ruin.

The first mention of the present name of the blockhouse, Little Dennis, appears in the 1943 Fort Record Book for Falmouth Fire Command (21).

MCO62488 – C19 target shelter and butts. In 1995 a subterranean cell at the butts position near Little Dennis was exposed by wave action. The cell is almost certainly a shelter for soldiers charged with scoring and changing targets.

4 Install two wooden posts either side of the eroding section of cliff edge and attach cliff edge warning signs.

MCO62513 – World War Two gun emplacement. During World War Two the beach defence at Pendennis Castle was augmented by two 60-pdr field guns. One of these, 'No 1,' was sited somewhere in the eastern sector.

5 Repair eroded path surface at bottom of steps. Install additional step if required.

MCO25070 – C16 shot furnace. Norden depicts a small sloping roofed structure with chimney at the high end set behind a platform. This may have been a C16 shot furnace.

6 and 7 Remove ~10m redundant edging trip hazard and make good. Repair missing and damaged timber risers on two short flights of steps. Approx. 6 steps to be repaired. Remove remaining handrail.

MCO62500 – C20 searchlight emplacement. Towards the end of 1902, one of the lights at Middle Point was moved to this new emplacement below One Gun Battery on the glacis of the fort. However, by 1904 this site had been replaced.

MCO62375 – C16 bastion. Norden, in a plan of 1600, shows a demi-bastion whose north flank is pierced by two embrasures and a postern providing access to the lower battery penetrating the south face.

MCO62382 – World War One observer corps post. The concrete cell at Pendennis is an early post, probably built during the First World War.

8 Install 8m post and rail fence along section of collapsed cliff edge.

MCO62465 – C19 firing points. A rifle range on the East Glacis for the training of volunteers is shown on the 1866 Ordnance Survey. The butts were located beside the Henrician blockhouse and firing points were placed at various ranges at points along the east shore.

MCO62473 – World War Two gun store. An undated sketch plan in the Fort Record Book for Middle Point 6-pdr battery indicates the layout of Middle Point Camp serving 442 Coast Battery Royal Artillery. A Nissen hut on this site is described as a gun store.

MCO62461 – C16 enclosure. An enclosure with gardens is first indicated on a plan of 1600 occupying the bluff between Middle Point and Crab Quay. A revetted platform is also shown by the Buck Brothers in their engraving of 1734.

9 Replace timber pedestrian footbridge and cut back encroaching vegetation along adjoining sections of path.

MCO56294 – World War One zig zag trenches. At least four sections of First World War date zig-zag trenches, dug for training purposes, are visible in the wooded slopes immediately east of Pendennis Castle.

MCO10696 – Post Medieval garden. Christian Lilly's map of Pendennis Castle in 1715 shows what appears to be gardens on the NE slopes of Pendennis Point.

10 Path leading from car park down to Crab Quay Battery. Clear encroaching vegetation and overhanging trees. Remove accumulated organic matter from the surface. Re-grade the surface with suitable fall to shed surface water and install sealed surface.

MCO25079 – Post Medieval battery. Crab Quay battery first constructed in the C17-C18 and was re-used in the later C19. Searchlight platforms and cranes for submarine mines, and a mine layer's store, were installed in the early C20.

MCO25069 – Post Medieval battery. The battery known as Crab Quay platform with a rectangular building used as a store, is marked on Christian Lilly's plan of Pendennis Castle in 1715.

MCO62479 – World War Two stores. An undated sketch plan in the Fort Record Book for Middle Point 6-pdr battery indicates the layout of Middle Point Camp serving 442 Coast Battery Royal Artillery. A building on this site is described as 'Q' stores.

MCO60756 – Post Medieval storehouse. A building at Crab Quay, possibly a storehouse, is recorded on the 2nd edition OS map to the south of Crab Quay Battery.

MCO6561 – Iron Age cliff castle. The place-name Pendennis indicates the site of a promontory fort or cliff castle. The most likely location for a rampart would be across the south-eastern tip of the headland.

Potential archaeological sites

Pendennis castle is believed to be the site of an Iron Age/Romano-British cliff castle, and the site of an important post-medieval fortification containing remains of nearly 500 years of occupation and activity. Remains associated with any of these periods and features might be expected within the SM.

Project extent

The project involves a number of works at different locations across the headland (Fig 2).

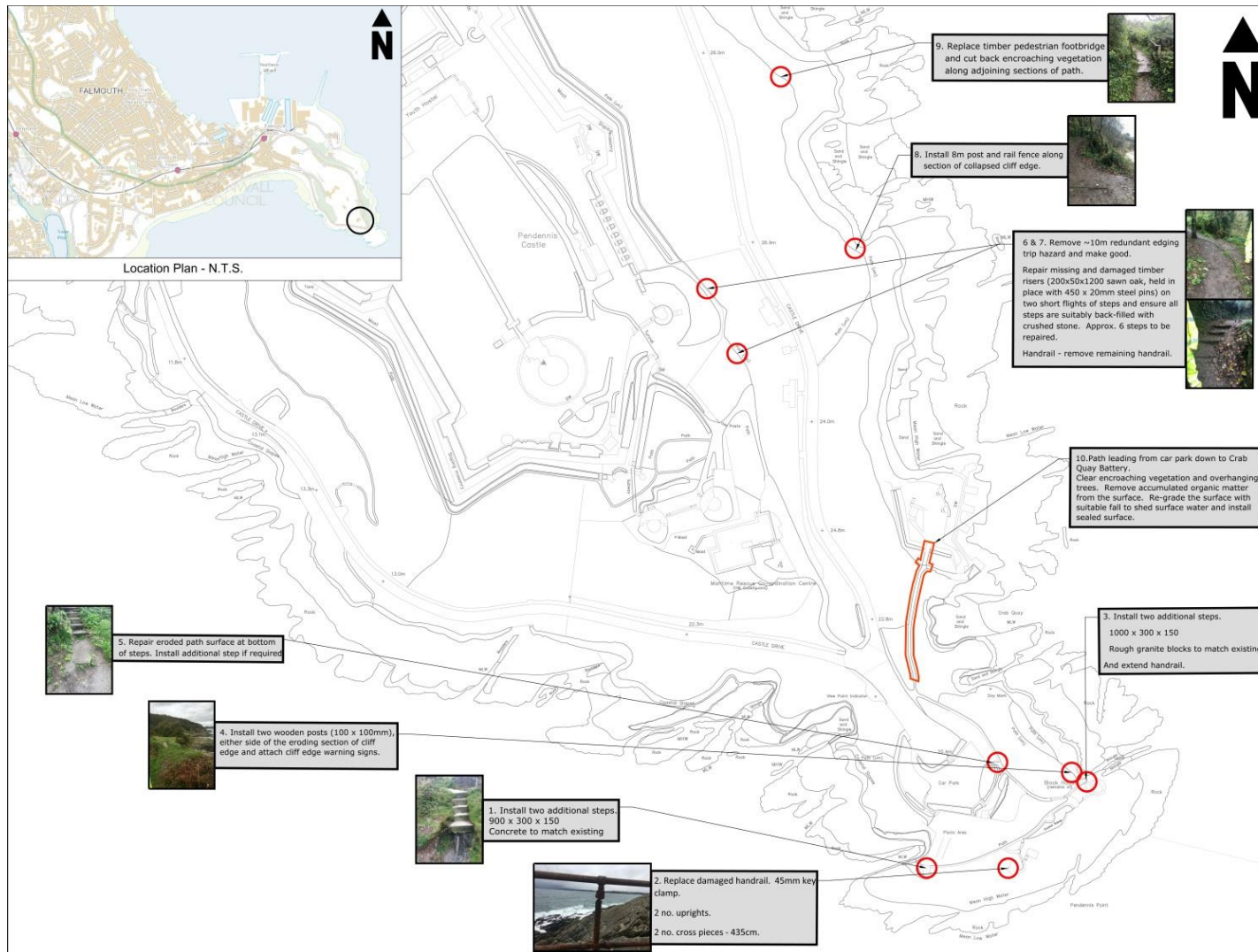


Fig 2: Overview of site works (drawing CT1900154/PH/001 rev A © Cormac

Aims and objectives

The principal aims of the project are to:

- Monitor groundworks.
- Undertake archaeological recording as necessary during these works.

The objectives are to:

- Obtain an archaeological record of features exposed during the works.
- Recover any artefacts revealed during the works.
- Produce a report on the results of the watching brief.
- Produce an entry to the Historic England/ADS OASIS online national database of archaeological projects.

Working methods

All recording work will be undertaken according to the Chartered Institute for Archaeologists (CIfA) guidance (CIfA 2014a; 2014b; 2014c; 2017). Staff will follow the CIfA *Code of Conduct* (2014d). The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

Creation of the physical and digital archive

Following review with the CAU Project Manager the results from the fieldwork will be collated as an archive.

This will involve the following.

- All finds, etc., will be washed, catalogued, and stored in a proper manner (being clearly labelled and marked and stored according to CAU guidelines).
- All records (drawings, context sheets, photographs, etc.) will be ordered, catalogued and stored in an appropriate manner (according to CAU guidelines).
- Any black and white negative film will be catalogued and deposited with the site archive.
- Colour digital images taken as part of the site archive will be either converted from colour to black and white negative film and added to the site archive, or deposited with the Archaeology Data Service (ADS).
- Completion of the Historic England/ADS OASIS online archive index.
- All correspondence relating to the project, the WSI, and a single paper copy of the report, stored in an archive standard (acid-free) documentation box.
- Drawn archive storage (plastic wallets for the annotated record drawings).
- Additional digital data (survey, external reports, etc.)

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 project archive will be deposited initially at ReStore PLC, Liskeard and in due course (when space permits) at Cornwall Record Office.
- Digital data will be stored on the Cornwall Council network which is regularly and frequently backed up.
- Digital data (CAU reports, external reports, survey data, geophysics data, digital photographs, etc.) forming part of the site archive will be deposited with the ADS.

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

Pre-fieldwork

In advance of the fieldwork CAU, will discuss and agree with the client:

- Working methods and programme.
- Health and Safety issues and requirements.
- Transfer of Title for artefacts.
- Obtaining an accession number from the appropriate archive repository.

Fieldwork: watching brief

The IAM has advised that a watching brief is required on the site during groundworks to satisfy the SMC. This work will be guided by CIfA's guidance on undertaking watching briefs (CIfA 2014b).

All groundworks will be undertaken under archaeological supervision. This will include the excavation of footings or postholes, or other activities which would result in the lowering of the present site levels. Should archaeological features or deposits be revealed, excavation will be halted and the exposed features cleaned up by hand to determine their significance prior to their recording. The client will allow reasonable time for the excavation and recording of any features thus revealed. Where a temporary stop of work is required the site archaeologist will request this via the client and the IAM.

Recording

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.
- Site drawings (plans and sections) will be made by pencil (4H) on drafting film; 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.
- All archaeological contexts will be described to a standard format linked to a continuous numbering sequence.
- Photographic recording will comprise colour photography using a digital SLR camera. Photographs will include a record of significant features and general working shots. A metric scale, site and context identifier, and a north arrow where appropriate, will be included in all record shots.

Treatment of human remains

- If human remains are discovered within an archaeological context on the site Historic England, the client, the AIAM, and Public Health, Cornwall Council will be informed.
- Should any be found, the presumption is that they will be excavated, removed and treated in accordance with Historic England guidance, updated as ethics and standards evolve in this highly sensitive area of archaeological practice.
- If it is not considered practical to satisfactorily guarantee preservation *in situ* the remains will be excavated. This may involve widening the groundwork areas to ensure that all human remains are excavated.
- A coroner's license must be obtained from the Ministry of Justice before any remains are disturbed.
- Any consents or licenses required will be obtained on behalf of the client by CAU.
- 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 backfilling as soon as possible after recording.

Treatment of finds

The fieldwork is likely to produce artefactual material. The following recording and retention policies will be followed:

- In the event that objects containing precious metal(s) are encountered, the coroner will be informed as per the provisions of the Treasure Act 1996.
- Significant finds in stratified contexts will be plotted on a scaled base plan or with a Leica GPS unit and recorded as small finds.
- All finds will be collected in sealable plastic bags which will be labelled immediately with the site code, the context number or other identifier, the type of material, and the finder's initials. The only exception to this policy will be that large assemblages of modern (post-1800) material may be representatively sampled.
- Modern (post-1800) finds may be disposed of at the cataloguing stage. This process will be reviewed ahead of its implementation.

Treatment of samples

The fieldwork may produce environmental samples. The following collection, recording and processing policies will be followed:

- Sealed/undisturbed archaeological contexts in the form of buried soils, layers or deposits within significant archaeological features that have the potential to contain palaeoenvironmental evidence and/or material suitable for scientific dating will be sampled.
- Where bulk samples are taken a minimum of 40 litres will be sampled from these deposits where feasible.
- In the event that significant organic remains are encountered, advice may be sought from the Historic England Regional Advisor for Archaeological Science.
- All samples will be described to a standard format linked to a continuous numbering sequence.
- Bulk samples will be processed using flotation with appropriate mesh sizes.

Reporting

The results from the project will be drawn together and presented in a concise report. The scope of the report will be dependent on the scale and significance of the results from the project.

The findings will be presented in a concise archive report.

The report will include the following elements:

- Summary
 - Project background
 - Aims and objectives
 - Methodology
 - Location and setting
 - Site history
 - Archaeological results
 - Chronology/dating evidence
 - Conclusions
 - References
 - Project archive index
- Supporting illustrations: location map, historic maps, plans, elevations/sections, photographs

Timetable

The study is anticipated to commence during March 2019. CAU will require at least 2 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 Historic England HARPO.

- The HARPO will monitor the work and should be kept regularly informed of progress.
- Notification of the start of work shall be given preferably in writing to the HARPO at least one week in advance of its commencement.
- Any variations to the WSI will be agreed with the HARPO, in writing, prior to them being carried out.
- If significant detail is discovered, all works must cease and a meeting convened with the client and the HARPO 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

CIfA, 2014a. *Standard and guidance for archaeological field evaluation*, CIfA, Reading

CIfA, 2014b. *Standard and guidance for an archaeological watching brief*, CIfA, Reading

CIfA, 2014c. *Standard and guidance for archaeological excavation*, CIfA, Reading

CIfA, 2014d. *Code of Conduct*, CIfA, Reading

CIfA, 2017. *Standard and guidance for historic environment desk-based assessment*, CIfA, Reading

Cornwall County Council, 1996. *Cornwall landscape assessment 1994*. A report prepared by Landscape Design Associates and Cornwall Archaeological Unit

- Historic England 2015. *Guidance note on Digital Image Capture and File Storage*, Historic England, Swindon
- Johns, C, 1992. *Pendennis Headland. Historical Credentials, Current Condition and Future Potential of the Defences 1540-1956*, CAU, Truro
- Johns, C, 1997. *Fortress Falmouth Pendennis Peninsula Fortifications. Project 9: Excavation and Recording of Blockhouse Long Platform Phase I Evaluation Excavation*, CAU, Truro
- Johns, C, 1998. *Fortress Falmouth Pendennis Peninsula Fortifications. Archaeological Watching Briefs for Projects on Carrick District Council's Property at Pendennis Headland*, CAU, Truro
- Johns, C, 2000. *Fortress Falmouth Pendennis Peninsula Fortifications. Project 9: Crab Quay Battery Phase II Conservation Works*, CAU, Truro
- Linzey, R, 2000. *Fortress Falmouth: A conservation plan for the historic defences of Falmouth Haven* (2 Vols), English Heritage, 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 Sean Taylor 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 CAU field staff, with assistance from qualified specialists and sub-contractors where appropriate. All staff will follow CAU's Health and Safety Policy and work in accordance with a site-specific risk assessment.

The project team is expected to include:

Sean Taylor, Senior Archaeologist

Educational and Professional qualifications

BA (Hons) 1996, Archaeology and Environmental Studies, University of Wales (Lampeter)

Elected as a full Member of the Chartered Institute for Archaeologists (MCIfA) in 2014

Employment history

I have been a professional archaeologist for 22 years. After working for a variety of commercial archaeological organisations in the South West I joined Cornwall Archaeological Unit in December 2000. I am currently an Archaeological Projects Officer, managing and undertaking a wide range of projects.

Key experience

I have experience in running a range of projects from inception through to publication. These include, in particular, development-related assessments, evaluations, watching briefs, and excavations. Projects have also included landscape surveys and GIS-based characterisation.

Major excavation projects include: Scarcewater Bronze Age to Romano-British site, Camelford School Iron Age site, Brownie Cross medieval tin-smelting site, Truro Eastern District Centre Neolithic to medieval site. Recent evaluations have included the Duckpool Romano-British industrial site for the National Trust and a major programme of trenching along the proposed route of the new A30 corridor to the north of Truro. I have undertaken various projects on the Isles of Scilly including the St Agnes Higher Town excavations. GIS-based projects include the Bristol Channel and Severn Estuary Historic Seascapes Characterisation project for Historic England.

Key skills and knowledge

I am an experienced practitioner of archaeology in Cornwall and am particularly interested in prehistoric to early medieval settlement and industry. I have extensive experience of the management, supervision, and practice of excavation, and the survey and illustration of excavations and landscape. I am an experienced user of GIS for large projects. I have a flexible and client-based approach to projects without compromising on quality. I hold a CSCS card.

Ryan Smith, BSc (Hons), PCIfA (7391)

Field Archaeologist Ryan Smith has worked on a wide variety of projects for the Cornwall Archaeological Unit since 2012.

Following a career in the RAF, Ryan gained a BSc (Hons) First Class in Archaeology in 2012 from Plymouth University. Ryan holds a current First Aid certificate and CAT scan certificate and has recently attained his PFCO (Permission to Fly Commercial Operations) for drone operations. Ryan is proficient in the use of Leica GPS /GNSS, CAD and QGIS.

Ryan has worked as a site supervisor on several larger excavations including Porthleven, Newquay Strategic Route and Hayle Viaduct, all of which were revealed to be multi period sites.

As a member of a team or as a sole worker has been involved in many smaller excavations, watching briefs, evaluations and site surveys around the county, these being as wide-ranging as the excavation of the Romano-British smelting works at Duckpool, the renovation of the Church cross at St Maybn church, evaluation trenching on Gwithian dunes, the excavation of the remains of an engine house at South Crofty and the recent two year research excavation project at Tintagel Castle. Ryan is currently monitoring the impacts of the upgrading of the footpath network and the installation of the new high level footbridge at Tintagel Castle; he has recently completed work on the excavation of a multi-period site on the outskirts of Penzance.

Ryan has a particular interest in the application of digital technologies to archaeological recording and interpretation.

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 this Written Scheme of Investigation will be reserved to Cornwall Archaeological Unit, Cornwall Council. It may only be used/reproduced with permission from Cornwall Archaeological Unit.

Existing copyrights of external sources will be acknowledged where required.

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 site-specific 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.

Sean Taylor

Senior Archaeologist

26/3/2020

Cornwall Archaeological Unit

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