

# **Porthcurno Telegraph Museum**

## **Developing for the Future**

### **Historic Building Appraisal**



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## **Acknowledgements**

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**Front cover illustration: Eastern House with the Tunnels behind**

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1. Historic Environment Records
2. Listed Building Schedules
3. Index of Historic Building Appraisal photographs, with CD containing the photos



## 1 Summary

*The Historic Building Appraisal carried out for the proposed development scheme at Porthcurno Telegraph Museum has identified the core of the site - Eastern House and the Tunnels (both Listed Buildings) - as being of international significance, and the site's setting as making an important contribution to the significance of the heritage assets.*

*The overall architectural integrity of Eastern House survives and the Tunnels have retained their military appearance. Although it is located near to the site of an earlier structure, the Maintenance Block is of much more recent date and does not have any intrinsic architectural value.*

## 2 Background

Porthcurno Telegraph Museum is applying for Heritage Lottery Funding to improve its visitor experience and archive and learning facilities. Stage 1 approval has been received and a detailed funding bid is now being prepared.

As part of that process, a Planning and Listed Building Consent application is being submitted for alterations to the main museum building - the Edwardian, Grade 2 listed Eastern House - and the rebuilding of a redundant Maintenance Block.

Planning Policy Statement 5 requires that the application's Design and Access Statement include a description of the significance of the heritage assets, the contribution of their setting to that significance and the extent to which the proposal impacts on those assets.

In the light of this requirement, Historic Environment Consultant, Jeanette Ratcliffe, and Historic Building Consultant, Eric Berry, were commissioned to carry out a Historic Building Appraisal during July 2011.

## 3 Methodology

The Historic Building Appraisal involved three stages of work.

- Desktop assessment
- Site visit
- Report

The desktop assessment involved consulting the following easily available sources.

- 'The Site Survey' by Alan Renton (draft January 2011) – a desktop study of the properties owned and managed by Porthcurno Trust, including those impacted on by the development proposal, aimed at understanding their historical significance
- Long and Kentish architect's plans (existing and proposed) and draft Stage C Design Report, January 2011
- 1840 Tithe Apportionment Map
- 1880 and 1907 1<sup>st</sup> and 2<sup>nd</sup> series Ordnance Survey maps
- Historic Environment Record – Cornwall Council database of archaeological

sites

- English Heritage Listed Building Descriptions for Eastern House, the Tunnels and the Cable Hut (at the top of Porthcurno Beach)

The half-day site visit, conducted with Project Officer, Henrietta Boex, consisted of a walk over survey, annotating architect's plans and using digital colour photography to record the overall setting and the locations where alteration and rebuilding is being considered.

This report provides a non-technical summary of the results of the desktop assessment and site visit. It assesses the historical significance of the site and its setting, and the sensitivity of the different elements of the site.

## **4 Results**

### **4.1 Site and location (Figs 1 & 6)**

The site consists of three buildings that form Porthcurno Telegraph Museum (together with a late 1920s Cable Hut located further to the south).

1. Eastern House, together with its outbuildings
2. The Tunnels
3. The Maintenance Block

They are surviving elements of a previously larger complex, originally the Eastern Telegraph Company and, latterly, Cable and Wireless head quarters and training school.

Eastern House and the Tunnels are the present focus of the Museum's visitor experience, housing its exhibitions, collections, offices and archive stores. The northern part of the Maintenance Block is used as an office and store for materials and equipment, while the southern end consists of a lean-to for vehicles.

The site is located on the eastern side of Porthcurno Valley, near its seaward end. Eastern House and the Tunnels are terraced and cut into its eastern slope, while the Maintenance Block sits on the eastern side of the valley floor.

### **4.2 Historical development**

*(NB. The history of telegraphy at Porthcurno is described in The Site Survey and the Listed Building schedules. This section focuses on the historical development of the Museum site)*

Archaeological sites recorded in the vicinity of the Museum are shown on Figure 5, and listed below (See Appendix 1 for individual records).

MCO8691	Iron Age/Romano-British Round (Trendrennen)
MCO29199	19 <sup>th</sup> -20 <sup>th</sup> century telegraph Station
MCO41843	Mesolithic – Bronze Age Flint scatter & pottery find
MCO42256	Post–medieval telegraph station
MCO42257	World War 2 anti-aircraft battery
MCO42259	World War 2 anti-aircraft battery
MCO51650	World War 2 pillbox
MCO51651	World War 2 anti-aircraft battery
MCO51652	World War 2 pillbox
MCO55924	Late 1860s / early 1870s telegraph station (Zodiac House)
MCO55925	Late 19 <sup>th</sup> /early 20 <sup>th</sup> century telegraph station (tennis courts & changing rooms)
MCO55926	1896 telegraph station superintendent's house (Mercury House)
MCO55927	1904 telegraph station (Eastern House)
MCO55928	1940/41 Tunnels

Prior to 1860, there were no buildings on the Museum site or in the near vicinity - the nearest settlement was Rospletha Farm, above the valley, to the west. On the 1840 Tithe Map (Fig 2), the site is depicted as scrub and pasture fields, part of the medieval farmland associated with Trendrennen to the east.

From 1870, with the landing of the first submarine cables on Porthcurno Beach, the Eastern Telegraph Company started to build its station on land purchased from Trendrennen Estate.

The first station building (now known as Zodiac House) was located on the western side of the valley, with what appears to be an orchard planted in the valley-bottom field on opposite side of the road (Fig 3). On the 1880 OS map, two small enclosures attached to the southeastern corner of the field occupy the general site of the later Maintenance Block (Fig 3). In 1896, a three-storey villa (now known as Mercury House) was built northeast of Zodiac House to accommodate the Telegraph Station Superintendent.

By the time of the 1907 OS map the larger of the two enclosures has a small structure in its eastern corner, with a track way leading from there to Zodiac House (Fig 4). It also appears in pre-World War to 1955 photographs included in *The Site Survey*, as a low, insubstantial looking (wooden?) building with a pitched roof and some sort of construction against its southern gable end.

The 1907 map also shows the original part of Eastern House, it having been built in 1904 in order to accommodate additional cables and the expansion of training facilities. From 1906, as the result of the arrival of another cable, an extension was added to the north, shown as a still-unroofed structure on the 1907 map (Fig 4).

By World War 2, Porthcurno was recognised as the most important telegraph station in the British Empire and in 1941, in response to threat from German attack, two

tunnels were blasted into the valley side north east of Eastern House by Cornish miners and the whole (Cable and Wireless) communications operation was moved underground. As additional protection, anti-aircraft batteries, pillboxes and other defences were constructed around the beach and valley (Fig 5).

After the war, the telegraph station was refurbished and extended, with many additional accommodation and other buildings constructed to the west of the site and further up the valley.

Further extensions were added to Eastern House in 1950 (to the north), and in 1954 and 1962 (to the south). The five development phases of Eastern House are shown in Figures 6 and 7, together with the row of outbuildings constructed from 1952 at the rear of the building to house a stand-by generator and fuel store.

In 1970, the telegraph station closed, but Cable and Wireless' training school remained until 1993. The Maintenance Block appears to belong to that period, although part of the building may be earlier (the *Stage C Design Report* says it was built in the 1950s by the District Council as a maintenance depot). The earlier structure visible on this part of the site on the 1907 and in subsequent photographs no longer survives and may have been demolished to make way for the Maintenance Block.

After 1993, many of the modern buildings were dismantled or sold off and the remainder eventually transferred to the PK Trust to become Porthcurno Telegraph Museum in 1998.

### **4.3 Landscape setting**

The Museum site sits within a mixed setting of verdant scrub vegetation, covering the surrounding valley sides (and extending up towards fields on the valley top), and a built environment on the valley bottom of stark, white-rendered buildings and tarmac car parks (Fig 8).

### **4.4 Surviving historic fabric**

*(NB. A description of the architectural character of Eastern House and the Tunnels is contained in the Listed Building schedules. This section provides a general summary of surviving historic fabric).*

Eastern House (Fig 9) is a two storey, white-painted, concrete and metal building, under an asphalt roof - built to a standard telegraph company design. As described in Section 4.2 above, the building has been extended four times over the century since it has been in existence.

Externally, its appearance has remained generally unchanged since its final major extension in 1962, although all its windows have been replaced with modern Upvc frames as part of its recent use as a museum. Inside, original walling and features survive (such as decorative coving and parquet flooring), and there is also evidence of reorganisation, with internal spaces having been reconfigured through the removal of walling and insertion of partitions and false ceilings. The outbuildings behind Eastern House (Fig 11) appear to have undergone little change since being erected in the 1950s.

Lined with concrete block walling, with a timber-planked ceiling, the Tunnels have undergone little change since their original construction. Externally, in particular, they retain their utilitarian, military appearance, with (despite its camouflage paint) the concrete façade standing out starkly against the green, vegetated backdrop of the valley side (Fig 10).

The Maintenance Block (Figs 12 & 13) retains evidence for two phases of build – a larger, northern part of concrete block construction, with timber rafters and an asphalt roof, and a southern lean-to with corrugated iron doors and corrugated plastic over. On first inspection, it does not appear to incorporate any remains of the small building visible on the 1907 OS map and in subsequent photographs.

#### **4.5 Statutory designations**

The following elements of the Museum have been Listed as buildings of special architectural or historic interest.

- 505332 - Eastern House, Grade 2
- 505333 – Tunnels, Grade 2\*
- 505334 – Cable Hut, Grade 2

See Appendix 2 for the listing descriptions. NB. The Cable Hut is not included in this Appraisal.

#### **4.6 Significance of the heritage assets**

Eastern House and the Tunnels are of international significance as unique surviving elements of a global telegraphy station, which was the heart of the largest and most important telegraph station in the British Empire. They are a tangible reminder of the importance of communication to the success of the Empire and important to a full understanding of the technological and social significance of the communications revolution. (*Extracted from the Listed Building schedule – see Appendix 2*).

The Maintenance Block does not have any intrinsic architectural value, but has some historic significance in that it represents a surviving element of the final years of Cable and Wireless' operations at Porthcurno.

#### **4.7 Contribution of setting to significance**

The setting of the Museum has been strongly influenced by the historic use of Porthcurno as a telegraph station and therefore makes an important contribution to the significance of the heritage assets on the site.

The built environment in the vicinity of the Museum is dominated by the distinctive looking buildings that formed part of the telegraph station or Cable and Wireless' training school. There are some additions (eg new housing, the Beach Café and Council car park) associated with the more recent tourist trade, but the architectural appearance of these new builds has been influenced by the 'company style'.

Likewise, the largely undeveloped, vegetated nature of the surrounding valley side is the result of this land being or having previously been in telegraph company, and now PK Trust, ownership.

## **4.8 Sensitivity of the different elements of the site**

### **4.8.1 Eastern House (and outbuildings)**

Eastern House is the oldest building on the Museum site. The usual presumption in the case of historic buildings is that the earliest phases of fabric are more important than later ones. However, as the particular heritage value of this building relates to its specific function and purpose, such a presumption needs to be used with discretion.

Certainly, the stronger design elements are within the earlier part of the building. The later additions, however, were a necessary response to the expansion of the cable network and the telegraph company's role, and have acquired importance because of this. They relate to the building's evolving function.

The subsequent phases of build take their lead from the design of the original building, and the end result is an architecturally harmonious design that gives few external clues to the complex nature of its phasing.

The impact of any proposed changes to Eastern House will need to be assessed on the basis of its overall architectural integrity.

Aspects of the building's interest include the materials from which it was constructed and the way these were used, including internal and external finishes, and the archaeological information (eg blocked window openings) that the building retains.

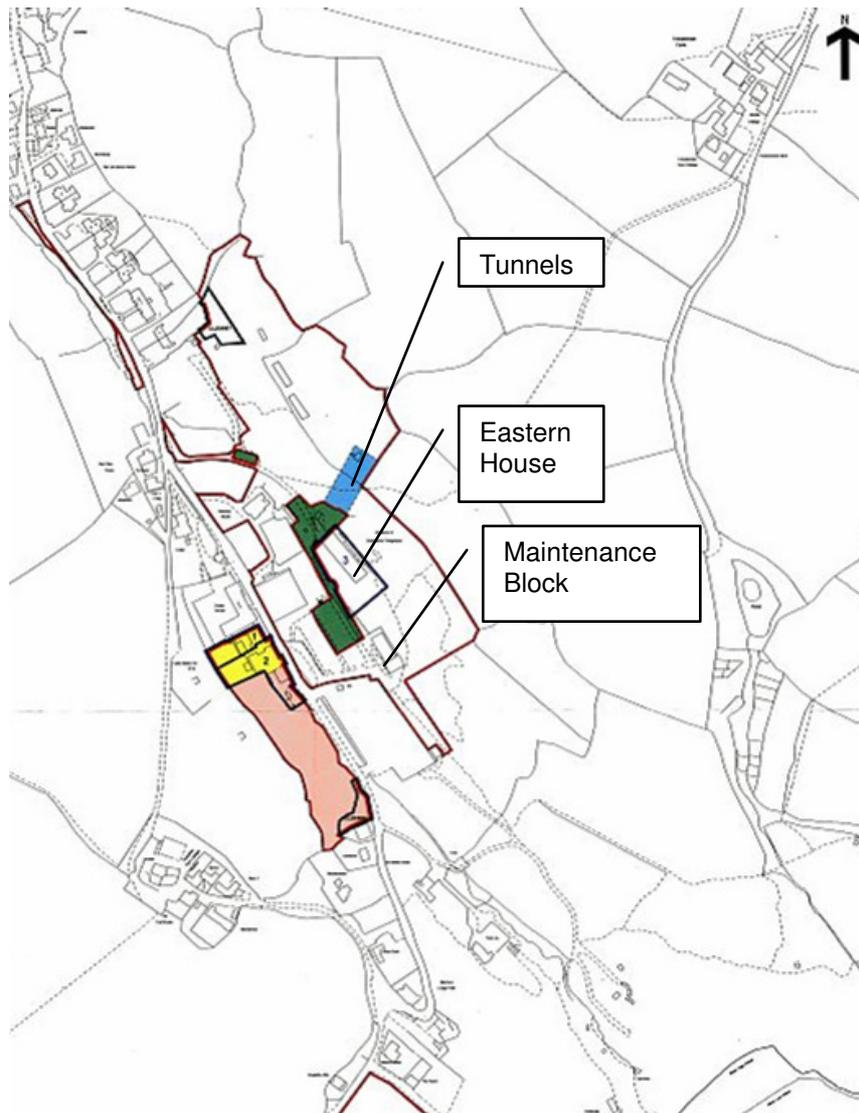
### **4.8.2 Tunnels**

The historically significant Tunnels are characterised by their strongly military appearance, particularly in terms of their external concrete façade, of which there is a currently uninterrupted view from the west. Any interruption of view or softening of appearance might compromise their stark military look.

### **4.8.3 Maintenance Block**

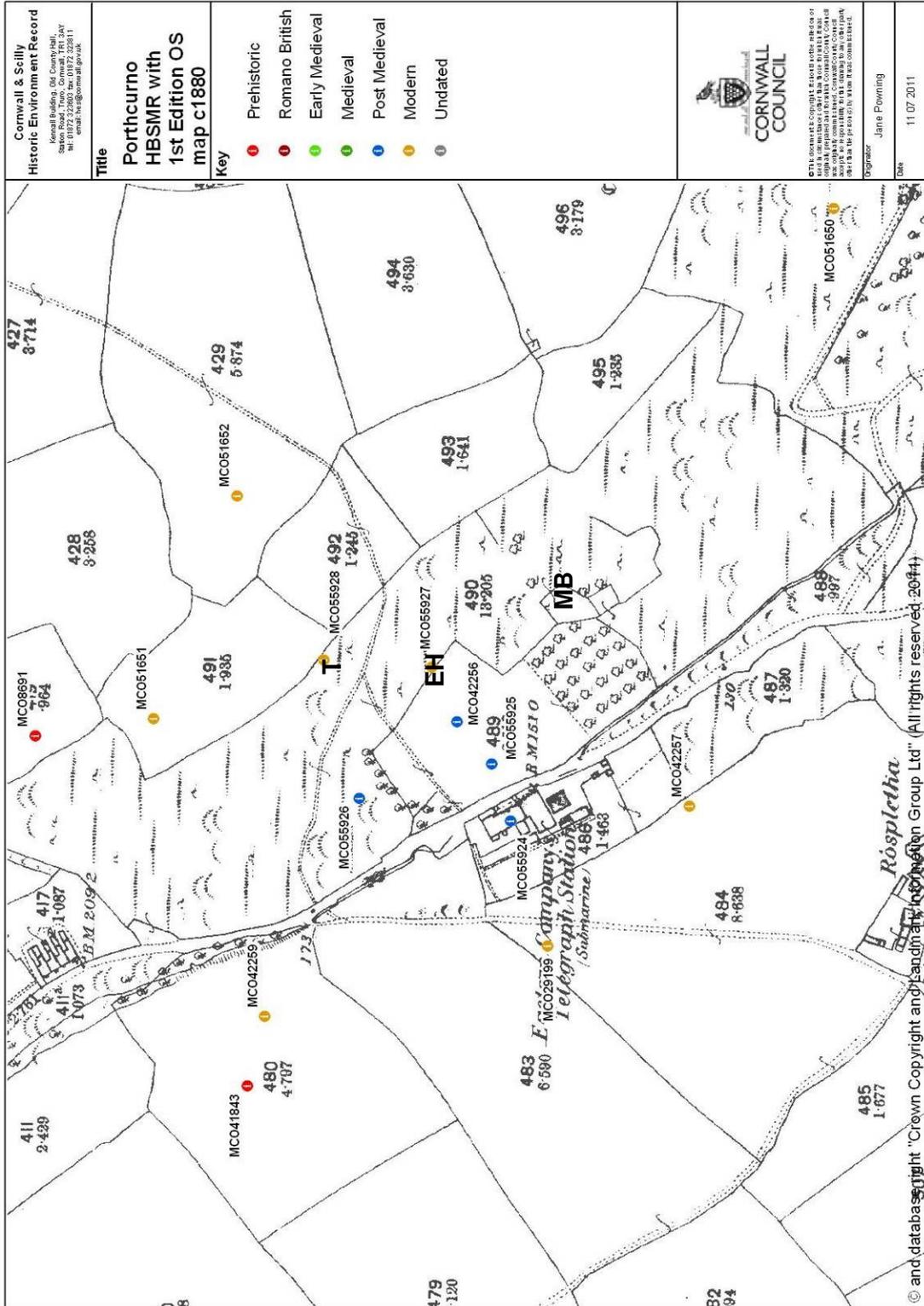
As the Maintenance Block is not considered to have any intrinsic historic architectural value, its alteration or replacement (with an appropriately designed new build) is unlikely to detract from the overall character of the Museum site.

There is a slight possibility that ground works for any new building may uncover remains of the earlier structure depicted at this site on the 1907 OS.

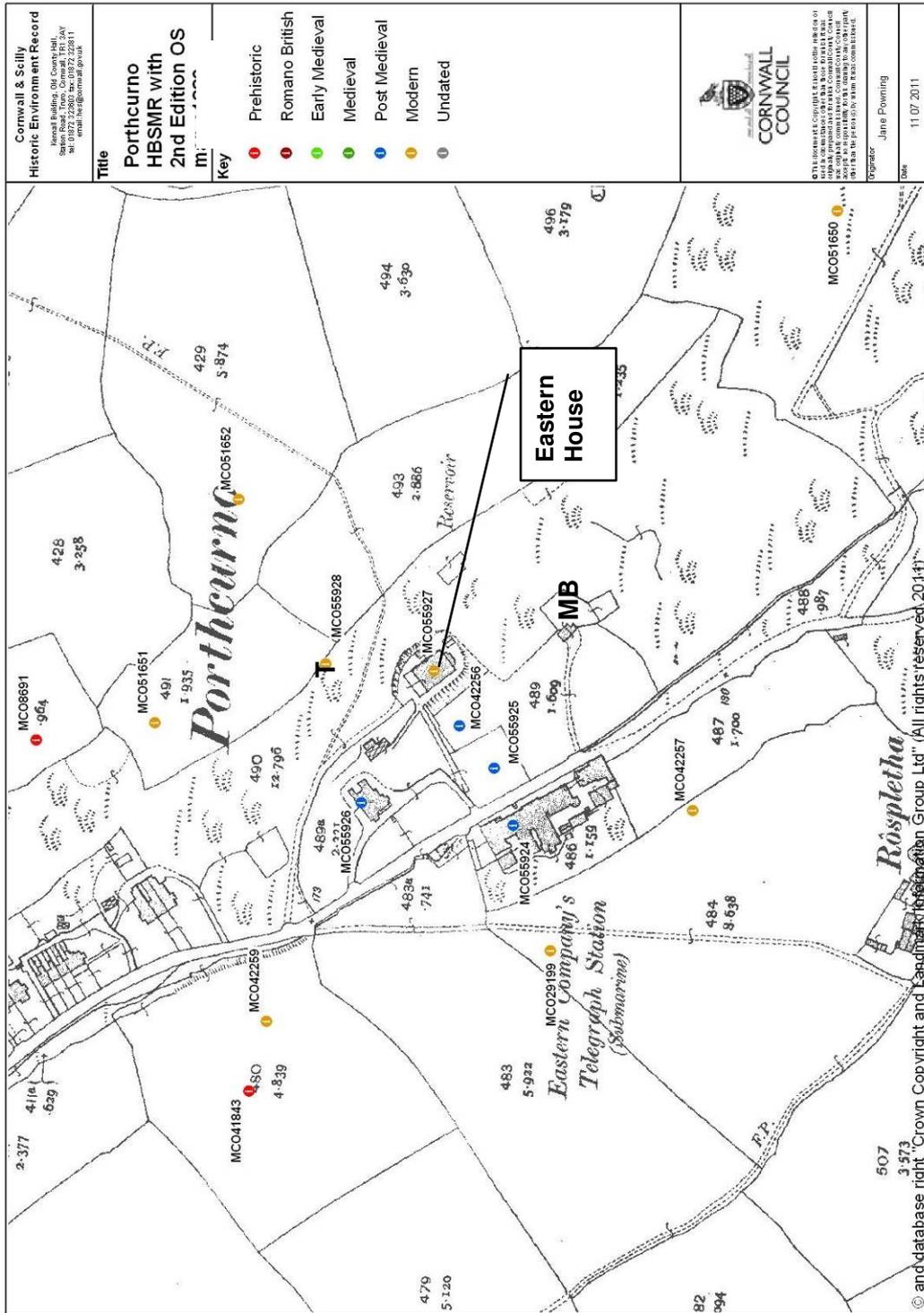


**Figure 1: Site location.** PK Trust holding, with location of Museum buildings affected by development proposal (Taken from Land Registry Title Plan)

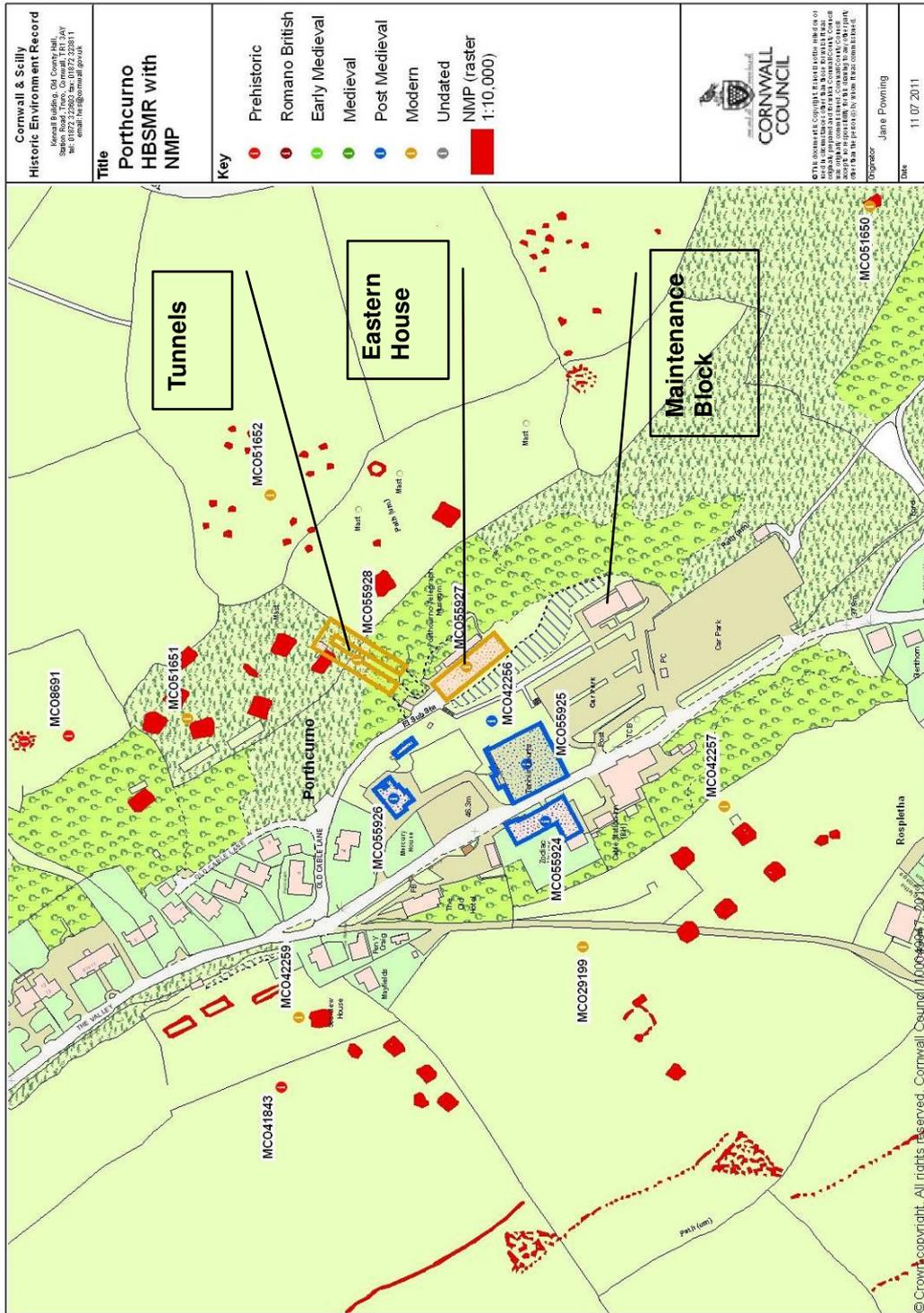


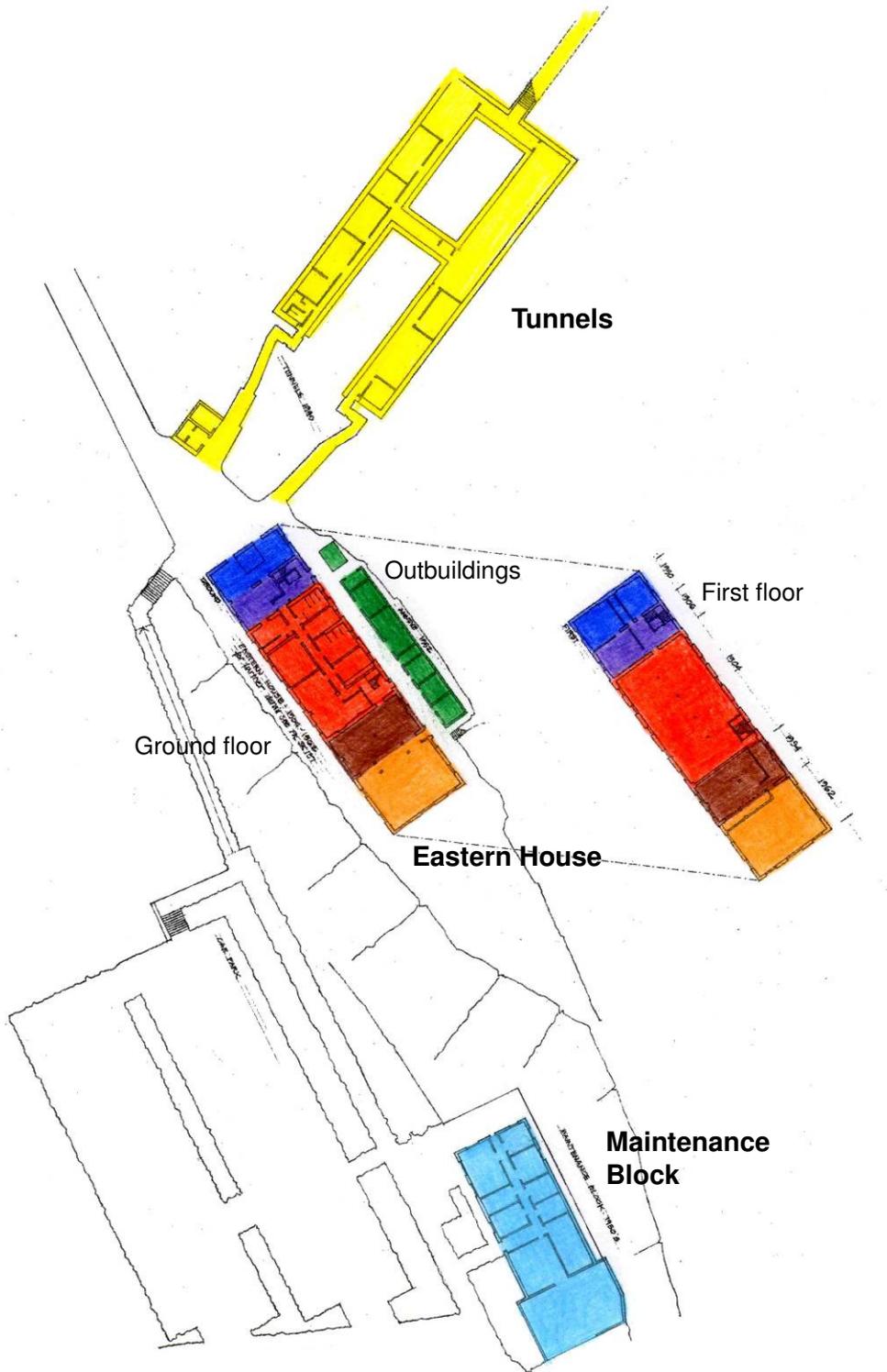


**Figure 3: 1880 1<sup>st</sup> Edition 1:2500 OS Map** (Historic Environment Record, Cornwall Council), showing location of later Tunnels (T), Eastern House (EH) and Maintenance Block (MB)

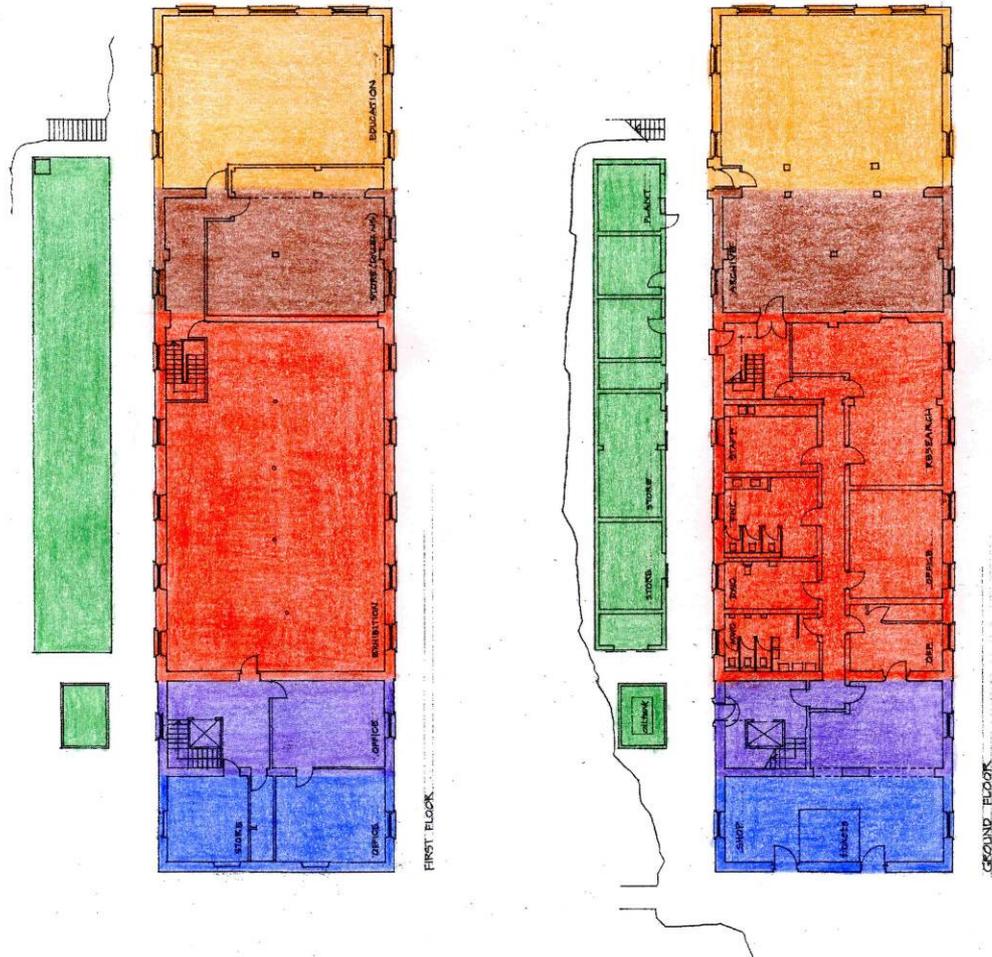


**Figure 4: 1907 2<sup>nd</sup> Edition 1:2500 OS Map** (Historic Environment Record, Cornwall Council), showing location of Eastern House and later Tunnels (T) and Maintenance Block (MB)





**Figure 6: Site plan (existing) showing key building phases:**  
Red -1904; Purple -1906; Yellow -1941; Blue - 1950; Green -1952; Brown -1954;  
Orange -1962; Turquoise - 1970s / 1980s (Long and Kentish architects base plan)



**Figure 7: Plan of Eastern House (existing), showing key building phases:**  
Red -1904; Purple –1906; Blue – 1950; Green –1952; Brown –1954; Orange –1962  
(Long and Kentish architects base plan)



**Figure 8: Porthcurno Telegraph Museum in its landscape setting**



**Figure 9: Eastern House – front (western) elevation**



**Figure 10: Entrance to the Tunnels & north elevation of Eastern House**



**Figure 11: Outbuildings behind Eastern House**



**Figure 12: Maintenance Block, from the northeast**



**Figure 13: Maintenance Block, from the south**