

Please note that this Heritage Statement was undertaken for a previous design and does not reflect the current application.

Relevant recommendations are reflected and documented in the Design Report.



Access Proposals at Maker Heights Maker-with-Rame, Cornwall

Heritage Statement



Access proposals at Maker Heights, Maker-with-Rame, Cornwall

Heritage Statement

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The Project Manager was Jo Sturgess.

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.

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Abbreviations and acronyms

AGLV	Area of Great Landscape Value
AONB	Area of Outstanding Natural Beauty
CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
CMP	Conservation Management Plan
Gaz	site number in the Maker Heights draft CMP gazetteer
HE	Historic England
HER	Cornwall and the Isles of Scilly Historic Environment Record
HLC	Historic Landscape Character
LCA	Landscape Character Area
LPA	Local Planning Authority
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OS	Ordnance Survey
PAS	Portable Antiquities Scheme
RCT	Rame Conservation Trust
SSSI	Site of Special Scientific Interest

1 Summary

Maker Heights is a former military site, set on the Rame peninsula, which has played an important role in the defence of Plymouth. It is a nationally important site containing a relatively unspoilt collection of Listed and Scheduled fortifications and military works including five late 18th century redoubts, a late 18th century barrack block and an undesignated World War Two heavy anti-aircraft battery. These fortifications are of outstanding military significance which is enhanced by their dramatic and largely unaltered setting, their relationship to the wider group of historical defences surrounding Plymouth and their varied communal uses from the 1920s onwards.

In January 2022, Cornwall Archaeological Unit (CAU) was commissioned by Rame Conservation Trust (RCT) to undertake a Heritage Impact Assessment to support a proposed planning application for reconfiguring and extending the main car park and formalising access routes within the campsite at Maker Heights.

The main car park is located about 200m from the site entrance, adjacent to some reconstructed Nissen huts. When the car park is at capacity it leads to *ad hoc* parking which causes erosion of vegetation and landscape impact and can lead to site safety issues. RCT would like to extend the car park behind the Nissen huts onto an area where a derelict ground-source heat pump is located and also change its layout.

During periods of bad weather, the campsite access is subject to rutting and erosion. RCT wish to establish a single, appropriately surfaced, route for access within the campsite to minimise vehicular damage. This will utilise an existing route, apart from a short new end section. RCT would also like to create a one-way system, using an existing track for exit, to reduce conflict with traffic using the main access road.

It is proposed that the surfacing for the new car park and the campsite access will be placed on to the existing ground surface so there will be no direct impacts on the buried heritage resource. The potential physical impacts are therefore assessed as **positive/substantial** or **positive/moderate**. However, if ground disturbance proves necessary, and topsoil needs to be removed to provide a firm foundation for the track and/or car park, it is suggested that an archaeological watching brief should be undertaken during the works.

The main visual impact of the new car park will be on the setting Redoubt No 1 (NHLE 1004254) and that of the new campsite access on the undesignated World War Two Heavy Anti-Aircraft Battery. Providing suggestions for mitigation by design are put into effect, the visual impacts of these proposals are assessed as **positive/substantial** or **positive/moderate**.

- Historic England have advised that Scheduled Monument Consent will not be required, but that they wish to be consulted as part of the planning process.
- The campsite has already trialled use of a flexible reinforcement ground mat to reduce erosion, but in high traffic areas this has been unsuccessful. Outside the main campsite access track, where traffic is much reduced, this option should continue to be considered if erosion becomes a problem elsewhere.
- RCT have explored, but rejected, the option of moving the waste bins closer to the Nissen Huts because of the visual impact, smells, potential attraction to rats and access for the collection lorries. The bins could be contained in wooden 'hideaway' boxes, which might be more effective than planted screening, but temporary/moveable wooden fence screening should also be considered.
- There is an existing low earthen bund, some 15m long by 0.7m high, along the eastern side of the car park. This could be extended to screen the view from the Barrack Block and Redoubt No 2, etc. The bund could be seeded with gorse which occurs naturally at Maker Heights, perhaps a hedging variety like *Ulex europaeus* could be used.
- The eastern side of Redoubt No 1, closest to the car park, is quite overgrown. If this could be cleared and tidied it would be a heritage gain which would enhance to setting of the Redoubt.

- As it is proposed that the ground will not be disturbed it is unlikely that an archaeological watching brief will be required, but the works should be recorded in the Site Log. If ground disturbance proves necessary, for example, if hardcore is used for the campsite access and topsoil needs to be removed to provide a firm foundation for the track, then an archaeological watching brief will be required.

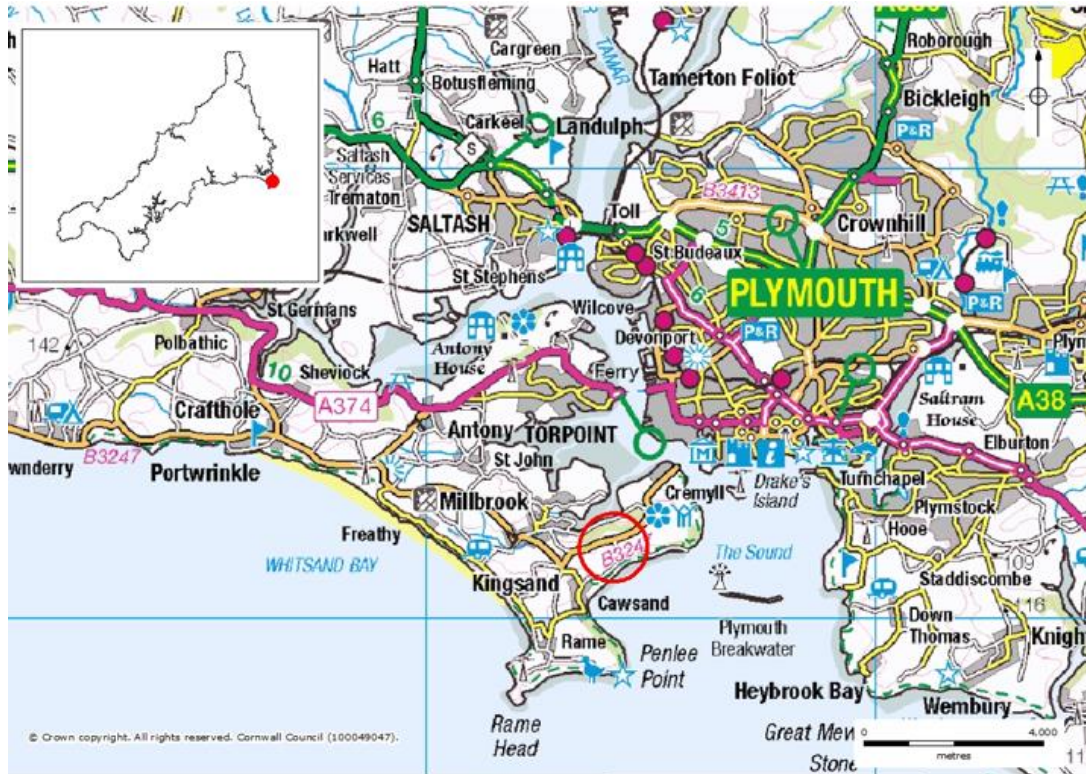


Fig 1 Location map.

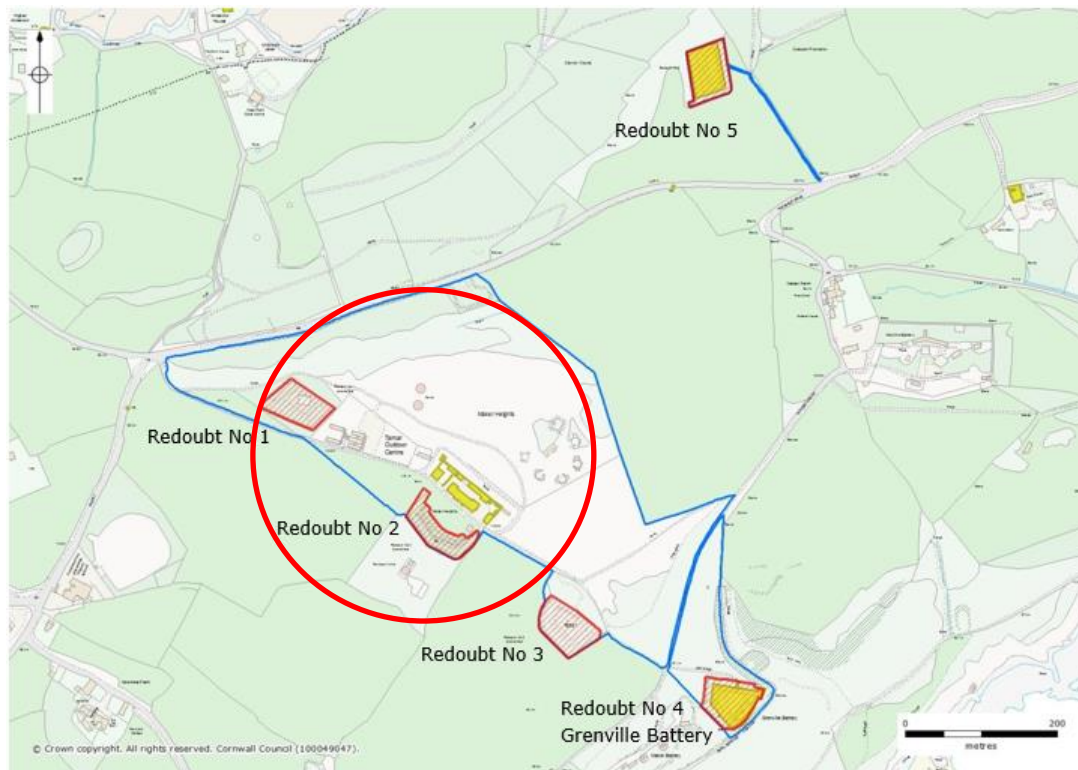


Fig 2 Map of Maker Heights showing Scheduled Monuments hatched in red and Listed Buildings, shaded yellow and the HIA study area circled in red.

2 Introduction

2.1 Project background

This Heritage Statement presents the results of a Heritage Impact Assessment (HIA) which was commissioned by Rame Conservation Trust (RCT) in January 2022 to support a planning application for improving access at Maker Heights.

The planning application will consist of two proposals: one for reconfiguring and extending the site's main car park and the other for formalising access routes within the campsite.

2.2 Methodology

2.2.1 Policy and guidance

This Heritage Statement takes account of various relevant aspects of national and local planning policies and guidance including:

- Government guidance on conserving and enhancing the historic environment;
- The National Planning Policy Framework (NPPF) (2018) – specifically policies for 'conserving and enhancing the historic environment' (paragraphs 184-202)
- The Cornwall Local Plan (2016) – specifically policy 24;
- The Rame Peninsula Neighbourhood Development Plan 2017–2030 – specifically policies 6 and 9;
- The Ancient Monuments and Archaeological Areas Act (1979);
- The Planning (Listed Buildings and Conservation Areas) Act (1990); and
- The Hedgerow Regulations (1997).

2.2.2 Scope

This assessment is focussed on heritage assets identified within the proposal areas themselves (hereafter referred to as 'site 1' (car park reconfiguration and extension, see Figure 4 for location) and 'site 2' (campsite access route, see Fig 5 for location). The assessment also identifies relevant heritage assets within a wider 0.25km buffer around these sites and considers potential impacts upon designated heritage assets within this wider area (hereafter referred to as the 'study area').

2.2.3 Aims

The primary aims of this study are to assess the following:

- the resource of identified heritage assets, both designated and non-designated, within the study area that are relevant to the site;
- the potential for non-designated heritage assets within the site, including any demonstrably of equivalent significance to designated assets;
- the significance of the identified and potential heritage assets and resource within the site;
- the impacts of the proposal upon the significance of heritage assets and the settings of designated heritage assets within the study area; and
- appropriate measures for mitigating impacts upon the heritage assets and resource within the study area.

2.2.4 Desk-based assessment

This study was undertaken in accordance with the Chartered Institute for Archaeologist's (CIfA) guidance on undertaking desk-based assessment (CIfA 2017).

Significance

In determining the significance of heritage assets CAU have followed guidance issued by Historic England (English Heritage 2008). The following criteria have been used to measure significance:

- Evidential – 'the potential of a place to yield evidence about past human activity';
- Historical – 'derives from the ways in which past people, events and aspects of life can be connected through a place to the present';

- Aesthetic – ‘derives from the ways in which people draw sensory and intellectual stimulation from a place’; and
- Communal- ‘derives from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory’.

Settings

In evaluating aspects of the settings of heritage assets CAU have followed Historic England’s guidance on the subject (2017).

Sources

During the desk-based assessment historical databases and archives were consulted in order to obtain information about the history of the site and study area and the structures and features that were likely to survive. The main sources consulted were as follows:

- Cornwall and Scilly Historic Environment Record (HER); accessed via the Heritage Gateway.
- The National Heritage List for England (a searchable database of designated heritage assets, excluding conservation areas).
- Cornwall Council’s mapping service for Conservation Areas.
- GIS data accessible to CAU.
- Early maps, records, and photographs (see Section 7.1).
- Published histories (see Section 7.2).
- The Maker Heights draft Conservation Management Plan (Cornwall Archaeological Unit 2020).

2.2.5 Site visit

A site visit was undertaken on Monday 14 March 2022 by Charlie Johns. This involved a meeting with members of RCT to discuss their proposals and walk over the site. A basic photographic record was made of the areas affected by the proposed works and the site was viewed from Wringford Down.

3 Heritage resource

This section presents a summary of the historical development of the study area, provides detail of designated and non-designated heritage assets that have been identified, identifies potential heritage assets that may lie within the site, and reports on previous archaeological work in the study area.

3.1 Location and setting

Maker Heights is located within the civil parish of Maker-with-Rame on the Rame peninsula in the far south east of Cornwall on the western bank of the river Tamar, south east of the village of Millbrook and north of Kingsand (centred at SX 4351 5140) (Fig 1). It falls within in the local authority area of Cornwall Council and was within the former Caradon District Council area until 2009.

Maker Heights is the highest point of the Rame Peninsula, lying within the CA22 South East Cornwall Plateau Landscape Character Area (LCA) as defined by the Cornwall and Isles of Scilly Landscape Character Study prepared by Cornwall Council.

Because of its elevated position there are long distance panoramic views from Maker Heights which provide its dramatic setting. These include Cawsand Bay to the south-east, Plymouth Sound to the east and Millbrook Lake and Hamoaze to the north-east as well views of farmland, rolling hills, woods, Plymouth and Dartmoor beyond.

The underlying geology is mapped as Lower Devonian sandstones, siltstones and slates which form shallow hard rock soils with sandy raw soils on marine levels. The coastal zone comprises slate to the west and extensive sandy beaches to the east.

The existing car park, some 200m from the main site entrance, is a wide gravelled area to the north and east of the reconstructed Nissen huts, about 50m long by 30m wide and enclosed by a post and wire fence.

Site 1, the proposed new car park area, which includes disabled parking, is a rectangular area behind (on the north side of) the Nissen huts measuring approximately 51m long by 34m wide with a 6m wide access strip along the eastern edge of the existing car park leading on to the campsite access track to the north (see Fig 4 for location and proposals).

Site 2, the proposed formalised campsite access route, is an existing north west / south-east orientated track approximately 200m long by 4m wide with a branch to the new car park area to the south and a bend some 40m long to the north east at the end. The eastern end of the track is already a metalled surface and it is proposed that this will be the exit route for the proposed one-way system (see Fig 5 for location and proposals).

3.2 Historic Landscape Character

The Cornwall & Scilly Historic Environment Record (HER) maps the Historic Landscape Character (HLC) of the main part of the study area as 'Post-medieval Enclosed Land', defined as 'land enclosed in the 17th, 18th and 19th centuries, usually from land that was previously Upland Rough Ground and often medieval commons, generally in relatively high, exposed or poorly-drained parts of the county.'

However, the presence of early medieval field systems (Gaz 40) within the study area to the north of the World War Two heavy anti-aircraft battery (Gaz 44a-44h) might suggest that this land is Anciently Enclosed Land that was altered in the post-medieval period rather than land which was enclosed from Upland Rough Ground.

Redoubts Nos 2 and 3 (Gaz 4 and 32) are located in 'Modern Enclosed land', defined as 'mainly Anciently Enclosed Land or Post-medieval Enclosed Land whose field systems have been substantially altered by large-scale hedge removal in the 20th century. It also includes, however, 20th century intakes from rough ground, woodland and marsh'.

3.3 Designated heritage assets

(See Fig 15 for the location of sites listed in the CMP Gazetteer and Appendix 1 for relevant gazetteer entries (CAU 2020)).

3.3.1 Scheduled Monuments (SM)

There are no Scheduled Monuments within the car park and its proposed extension (site 1) or within the proposed new access (site 2).

There are three Scheduled Monuments within the study area (Figs 2 and 3):

- Two 18th century batteries and part of a third at Maker Heights called **Redoubt No 1, Redoubt No 2 and Redoubt No 3** (CO 832; NHLE 1004254; Gaz 1, 4 and 32); and
- Redoubt No 1 includes the **Royal Observer Corps Orlit Type B Observation Post** (Gaz 1a) and **Cold War Royal Observer Corps Observation Bunker** (Gaz 1b).

There are two more Scheduled Monuments outside the study area (Figs 2 and 3):

- Battery and Royal Commission fortification called **Grenville Battery** (CO 831; NHLE 1003114; Gaz 34) (also Listed); and
- Battery with Royal Commission fortifications called **Redoubt No 5** at Maker Heights (CO 833; NHLE 1004255; Gaz 57) (also Listed).

All are described as at High Risk on the Historic England Heritage at Risk (HAR) Register (Historic England 2021):

3.3.2 Listed Buildings (LB)

There are no Listed Buildings within the car park and its proposed extension (site 1) or within the proposed new access (site 2) (Fig 3).

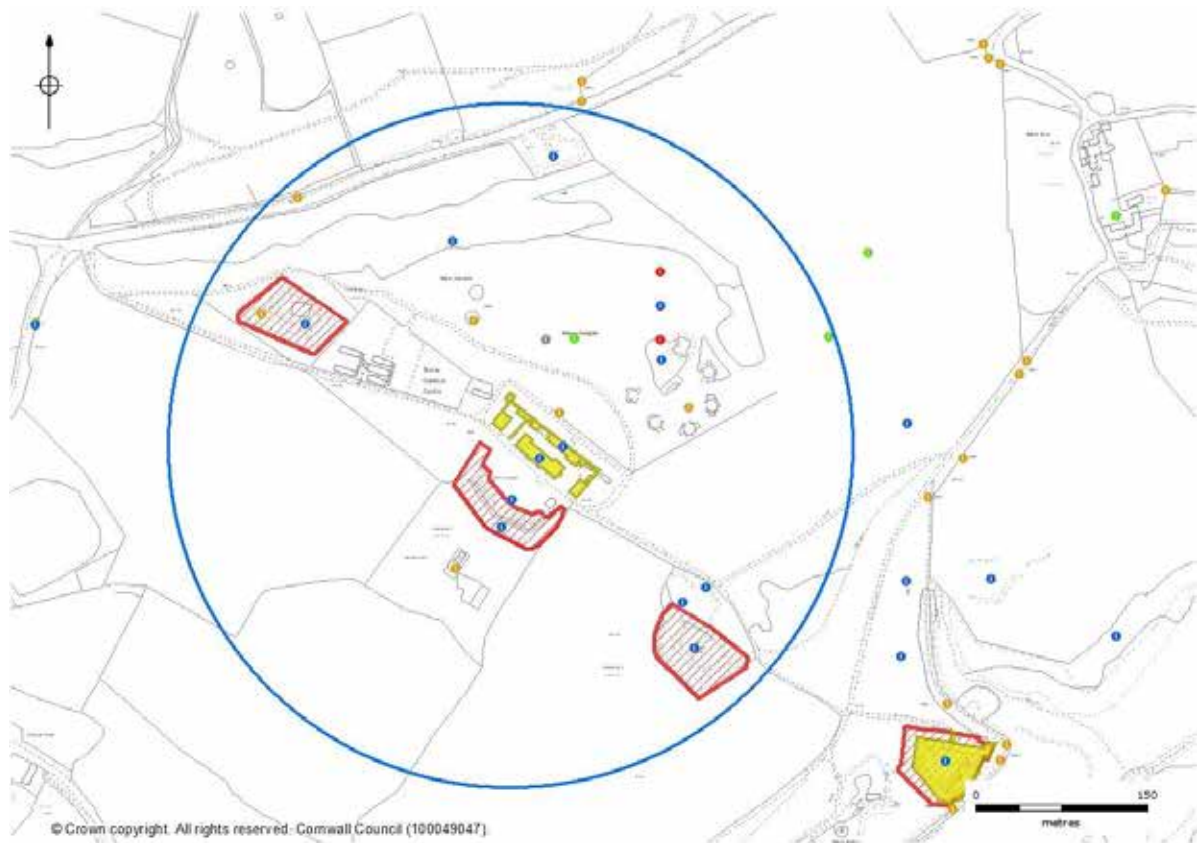


Fig 3 The study area circled in blue with Scheduled Monuments hatched in red and Listed Buildings shaded yellow.

There are four Grade II* Listed Buildings within the study area, all at High Risk on the HAR Register:

- **Barrack Block**, Maker Heights Barracks (Grade II* NHLE 1375582; Gaz 28);
- **Guard House, Boundary Wall and attached ancillary buildings**, Maker Heights Barracks (Grade II* NHLE 1329099; Gaz5-30);
- **The Coal Yard** (Grade II* NHLE 1329099; Gaz 5); and
- **The Barrack Store** (Grade II* NHLE 1329099; Gaz 6).

There are two more Listed Buildings outside the study area:

- **Grenville Battery** (Grade II NHLE 1160076; Gaz 34) (also Scheduled); and
- **Redoubt, 5** (Grade II NHLE 1140689; Gaz 57).

3.3.3 Conservation Area

Maker Heights lies in close proximity to Kingsand and Cawsand Conservation Areas.

3.3.4 Registered parks and gardens (RPG)

Maker Heights lies in close proximity to Mount Edgcombe, a Grade I Registered Park and Garden (NHLE 1000134).

3.4 Other designations

3.4.1 Area of Outstanding Natural Beauty (AONB)

Areas of Outstanding Natural Beauty (AONBs) were brought into being by the National Parks and Access to the Countryside Act of 1949. The Countryside and Rights of Way Act 2000 strengthened the conservation and management of AONBs in partnership with local authorities. Maker Heights is within the Rame Head section of the Cornwall Area of Outstanding Natural Beauty (AONB): <http://www.cornwall-aonb.gov.uk/ramehead>.

Rame Head AONB (including Maker Heights) sits within a designated Area of Great Landscape Value (AGLV).

3.4.2 Heritage Coast

There are 43 designated Heritage Coasts in England and Wales, covering about one-third of the coastline. Maker Heights forms part of Rame Heritage Coast.

3.4.3 Sites of Special Scientific Interest (SSSI)

Sites of Special Scientific Interest have been notified for both biological and geological interest. SSSI's in close proximity to Maker Heights include:

- SSSI site name: Kingsand to Sandway Point SSSI AREA: 6.282359;
- SSSI site name: Plymouth Sound Shores and Cliffs SSSI AREA: 44.288178;
- SSSI site name: Rame Head and Whitsand Bay SSSI AREA: 161.061518; and
- SSSI site name: St John's Lake SSSI AREA: 266.432762.

3.5 Non-designated heritage assets

(See Fig 15 for CMP Gazetteer site locations).

The sites of two former Nissen huts lie within the existing car park to the east of the reconstructed huts (Gaz 3a). Within the north west part of the proposed car park extension (site 1) a former defensive bank (Gaz 46) is shown on the 1946 RAF aerial photograph (Fig 16). The date of the former earthwork is uncertain, but it is possibly part of what was called 'The Old Fort' in early references.

The route of the proposed access track (site 2) passes through the site of a former WWII gun laying radar mat (Gaz 41) associated with the HAA Battery and a cut or bank feature associated with it (Gaz 37a). This was a large octagonal earthwork (c110 metres in diameter) located to the north-west of the HAA Battery (Site 44) and can be seen on the 1946 RAF aerial photograph (Fig 16). The proposed access track also crosses the remains of possible early medieval field systems (Gaz 40, MCO44860 and MCO44843) to the north-west and north-east of the HAA Battery, a former defensive bank (Gaz 46), the site of a former trackway (Gaz 58). The north-east end of the proposed access track lies in close proximity to a possible prehistoric round and prehistoric occupation site (Gaz 45 and 43)

The following non-designated heritage assets are located within the wider study area:

- A prehistoric occupation site/findspot (Gaz 43).
- The possible site of an Iron Age or Romano-British round (Gaz 45).
- Four Romano-British metal-detecting finds from the site have been reported to the Portable Antiquities Scheme (PAS).
- An early medieval field system (Gaz 40).
- An early medieval well.
- Site of a medieval or early post-medieval windmill (Gaz 60).
- A post-medieval fort (alleged).
- A post-medieval quarry (Gaz 38).
- Another post-medieval quarry (Gaz 33).
- An 18th century well (Gaz 2; NGR SX 43351 51520).
- The 'West Nissen Huts' (Gaz 3a; SX 43340 51477) – five reconstructed Nissen huts built in the late 20th century which are used for camping facilities and a café and were built on the same footprint as a group of five WWII Nissen huts, with two outlying huts on the site of the present car park.
- The surviving eastern and demolished Nissen huts (Gaz 3b; SX 43427 51449) - comprising one surviving original Nissen hut and the sites of three detached huts.
- WWII fuel storage tanks (Gaz 35a and 35b; NGR SX 43434 51519, SX 43438 51541) circular, concrete lined pits with a surrounding concrete retaining wall which was cast between corrugated iron sheeting.
- A series of 'cut/bank' features around the Heavy Anti-aircraft Battery which were identified from 1940s aerial photographs as a part of the NMP (Gaz 37a, 37b).
- WWII gun laying radar mat (Gaz 41)- large octagonal feature.
- Plymouth 9 WWII Heavy Anti-Aircraft Battery (Gaz 44a-44h).
- Historic tracks (Gaz 58).

- Main historic entrance road (Gaz 58a)
- A modern marker-post.
- A modern sewage works south of Redoubt No 2 (Gaz 59).

3.6 Chronological summary

3.6.1 Prehistoric (c10,000 BC–AD 43) and Roman (AD 43–410)

A flint scatter was recovered from near the 'old fort' on Maker Heights in the 19th century (Gaz 43) and comprised 'almost all the recognised forms of smaller implements such as flints, scrapers, knives, sling bullets etc, with cores and many fractured pieces (Brent 1886, 59). These have since been dated to the Mesolithic period (12,000–6,000 BP): few other coastal finds from this period have been found between Maker Heights and the Helford Estuary, making the south coast of Cornwall a high priority for future research (Berridge and Roberts 1986; Johns *et al* 2019).

A semi-circular stone bank (Gaz 45) detected during ploughing may be the remains of an Iron Age or Romano-British round (Sheppard 1974a, 67). A round is an Iron Age or Romano-British settlement enclosed by a bank and ditch.

Four metal-detecting finds from the site have been reported to the PAS: a Roman copper alloy finger ring (PAS id 526968); a modern cast of an Iron Age stater (PAS id 516636); a silver Roman coin (PAS id 516637); and a Roman copper alloy brooch (PAS id 516638).

3.6.2 Medieval (AD 410–1540)

The settlement of Maker is first recorded in c1000 (Gover 1948, 231). The name is Cornish and contains the element *magoer* meaning 'wall, ruins or remains' (Padel 1985, 156). There is a possibility that the place-name 'Maker', Cornish *magoer* meaning 'wall, ruins or remains' may derived from the possible round described above.

The HER records the remains of possible early medieval field systems (Gaz 40) to the north-west and north-east of the heavy anti-aircraft battery; these are visible on 1946 RAF air photos (see Fig 16) and were plotted by the National Mapping Programme (NMP).

Field-name evidence suggests that a corn-grinding windmill once stood on Maker Heights (Gaz 60). This could date to the medieval or the early post-medieval periods. A map of 1730 shows two fields called 'Great Windmill' and 'Little Windmill'. The fields were merged when the military fortifications were built on the Heights the early 1780s (Douch *nd*, 14; Thomas 1974, 23; Sheppard 1974b; CRO ME/2402).

3.6.3 Post-medieval (AD 1540–1900)

The strategic position of Plymouth, vital to the defence of the South West and the Channel Coast and supporting a major naval dockyard, led to the development of extensive and complex systems of fortification in the surrounding areas including the Rame Peninsula. Many of these systems owed their design and construction to periods of political unrest within Europe, or to specific threats of invasion, both real and imagined. Their development can also be seen as a response to the sometimes rapidly changing nature of warfare. Plymouth is one of four locations in England where there has been continuity of fortification over at least five centuries and, of these, it has the greatest concentration of 18th and 19th century forts and batteries. A total of 216 sites encompassing a wide range of dates were investigated by the survey of the historical defences of Plymouth (Pye and Woodward 1996). This provided an inventory of the historical defensive works in and around Plymouth in order to promote awareness of this historical resource.

Fortification of Maker Heights in the later 18th century

The defences at Maker Heights were constructed as part of a great network of structures which was gradually erected and expanded to protect the Royal Navy dockyard which was first established in 1690. The site chosen was in the deep water provided by the Hamoaze to the west of Plymouth rather than in the existing, but shallower anchorage of the Cattewater (Oxford Archaeology 2016, 20).

The site was strategically important because the classic method of assaulting a dockyard was not by bombardment from the sea but attack on the landward side by a force

disembarked some distance away. Plymouth Dock and its Ordnance Yard were defended on the eastern side by a bastioned trace but were vulnerable to bombardment by an enemy landing at Cawsand on the Cornish side of the Tamar. In August 1770 Lt Col Roy, then surveyor-general of the coasts for the Board of Ordnance noted that Maker Heights entirely commanded the Dockyard and should be secured (Evans 1999, 44–5).

After the outbreak of the American War of Independence in 1775 attention turned again to the strategic importance of Maker Heights. Batteries had already been built on the south side of Barnpool and at Kingsand, from which the Amherst Battery could cover the beaches at Cawsand. During the war a large fort called Bulwarks was built on the spur at Cawsand which commands the bay and the valleys leading from the beach. A redoubt on the hill at Cremyll, where the obelisk now stands, covered the beach there with its associated musketry lines. Regiments of foot and militia were already encamped on the Heights when, in August 1779, a Franco-Spanish invasion fleet anchored in Cawsand Bay. Although the fleet withdrew without attacking, three or four regiments of foot and militia were stationed on the Heights for each of the next three summers and it was they who built the five new earthwork redoubts on the Heights (Woodward 1990, 13). To support these troops a redoubt and a musketry position were built covering the landing place at Cremyll from which they would have to withdraw to the Dockyard if they were driven off the heights (Woodward 1998, 21).

The inspiration for these and other improvements to the defences was the survey carried out by Lt-Col Matthew Dixon, Royal Engineers in 1779. He had recommended a new defensive system based on redoubts to strengthen and cover Dock Lines and ships or hulks anchored to cover the waterways. It was Lt-Col Dixon who was responsible for strengthening the defences of Cawsand Bay and Maker Heights (Woodward 1990, 13). The earthwork redoubts thrown up after 1779 were four-sided and irregular in shape because it was necessary to adapt them to the uneven ground on Maker Heights (Woodward 1998, 27). The original line of redoubts was hidden from view but spanned the entire ridge of Maker Heights. The defence ran south-east to north-west, with redoubts along its course which would not have been seen from the sea, the bay, or the steep valley below. The redoubts were designed to protect the land in front and between them and were manned by soldiers who could go out and cut off an invasion in the valley below at its narrow point.

During the next ten years the defences on Maker Heights were improved by rebuilding the two redoubts on either flank, known as No 4 (overlooking the sea) and No 5 (covering the road from Millbrook to Cremyll, and from Cawsand via Four Lanes End), with stone revetments (Woodward 1990, 14). A proposal by the Duke of Richmond, then Master-General of the Ordnance, to build two large forts, one on Maker Heights and one near Antony, was defeated in Parliament by the casting vote of the Speaker in 1786 (Woodward 1998, 21). Slightly later plans survive in the National Archives from 1781–83 detailing much larger proposals for a great bastioned 'star' fort for Maker Heights together with outlying redoubts to replace the temporary redoubts (Oxford Archaeology 2016, 21–2).

In 1783 peace with France was finally concluded and a change in government brought the Duke of Richmond to the office of Master-General of the Ordnance. Richmond was an important figure who pushed for a major investment in the defences of Plymouth and Portsmouth and for widening the lines of fortification around these dockyards. Various plans appear to have continued to be developed for the Star Fort and outlying bastions (Saunders 1989; Oxford Archaeology 2016, 22–3; Fig 6).

These rectangular redoubts had stone-revetted scarps and deep ditches but little provision for self-defence other than a drawbridge and a loop-holed gorge wall. The full proposals for the fort would have been hugely expensive and they were defeated in parliament in 1785–6 although plans continued to be developed for the rest of the decade. Plans in the National Archives from 1789 show schemes for works to the redoubts and in them there is a mention in the Parliamentary Proceedings for the Lords and Commons from 1790 of works continuing at Maker. There appears to have been questions asked why works at Maker were continuing when the main scheme had been dropped

and the response was that the works only covered two redoubts (Oxford Archaeology 2016, 23).

The Barracks Complex has previously been thought to have been constructed between 1804 and 1808) (e.g., Pye and Woodward 1999; Oxford Archaeology 2016). However, a note written in the top left hand corner of the 1882 plan of Maker Heights states that '*From the records it appears that these Barracks were built between 1784 and 1787 but the exact year is not known*' (WO78/2975), while Evans (1999, 60), provides evidence that the Barracks were built in 1797 and that in February 1800 the Barracks was reported as accommodating 300 men and 50 horses. The Barracks Complex is first shown on a map of proposals for Maker Heights dated 1789. The construction of the Barracks Complex with its perimeter wall immediately to the rear of Redoubt meant that the Redoubt and the Barracks formed a self-contained defensible fort.

Nineteenth century additions to the Maker Heights fortifications

During the French Revolutionary wars beginning in 1793, and later the Napoleonic Wars ending in 1815, the defences of Plymouth were progressively improved in detail and a sixth redoubt on Maker Heights was built at Empacombe overlooking St John's Lake (Woodward 1998, 21). Redoubt No 6 was built to directly overlook and protect the 'vittalling' Victualling place for Naval ships — 'The King's Brewhouse' at Southdown.

Following the final defeat of Napoleon at the battle of Waterloo in 1815 there followed 40 years of peace and in common with the rest of the military establishment investment in improvements to defences was severely limited (Oxford Archaeology 2016, 24).

There were periods of alarm at French military intentions in 1847 and 1851–2 but these somewhat spurious panics were at least partly spurred by vested interests in the British establishment, and they did not result in major programmes of improvements to the defences in Plymouth. Indeed, during the Crimean War (1853–6) Britain and France were allies (*ibid*, 24).

The mid-19th century did, however, see the start of a period of rapid military technological development which did bring genuine dangers of the existing defences being rendered obsolete. Much larger guns were being developed and the application of steam power to war ships removed many of the limitations on sailing ships, thus considerably reducing the obstacle that the English Channel had once been to an invading force (*ibid*, 24).

A report on the defences of Plymouth by the Committee of Harbour Defences in September 1844 noted that upon Maker Heights, Redoubts Nos 5 and 6 were said to be in good repair and the dilapidated Nos 1, 2 and 3 were to be 'immediately established in the event of war'. A significant development was that No 4 Redoubt was to be armed as a coast defence battery, eventually with 68-pounder and 10-inch guns (Woodward 1998, 37–8).

An 1845 plan of existing and proposed work at Maker Heights shows two substantial caponiers at the north-west and south-east corners of the barracks perimeter wall (Gaz 30) (Douet 1998, fig 70). In the final event, only a smaller version of the north-west caponier (Gaz 8) was built at the same time as several other buildings in this area, during a phase of expansion to the barracks complex (Oxford Archaeology 2016).

In 1858 the eminent military engineer William Jervois proposed a new barracks for 1000 men at Maker and a battery of field artillery to act as a reserve to defend both the Anthony Line and Cawsand Bay. These proposals were not, however, implemented. The invasion panic of 1859 by France, under Napoleon III, led the Prime Minister Lord Palmerston to establish a major investigation into the state of the nation's defences (The Royal Commission on the Defence of the United Kingdom) (Kinross 1994). The report of this commission, in February 1860, recommended a colossal building programme particularly to improve the defence of key installations such as the Royal dockyards (*ibid*, 24).

The report recommended that the largest financial investment should be at Plymouth although the vast projected cost of the overall programme of works meant that 15 of the planned forts at Plymouth were dropped to save money. A ring of 18 new land forts were constructed however to protect Plymouth and Devonport Dockyard as well as six new

coastal batteries and numerous other works. In addition, the new forts were armed with powerful new types of guns which had a far greater range than previous weapons (*ibid*, 25).

Many of the new forts were to the north and east of the city, far from Maker Heights but there were also some works on the western defences in Cornwall. These include Scraesdon and Tregantle Forts (which each slightly pre-dated the 1860 commission report) to the west of Maker as well as a smaller fort at Cawsand and a battery at Polhawn. The Royal Commission of 1860 also recommended a new defensible barracks for 300 men at Maker and the repair and strengthening of the existing redoubts. This was not, however, undertaken (*ibid*, 25).

During the 1860s, the 3rd Brigade Royal Artillery, consisting of 5–7 batteries, was based at Plymouth with its headquarters in Granby Barracks, Devonport. Batteries or detachments were stationed at Maker Barracks, Drake's Island and Bovisand (Woodward 1998, 95).

In 1867 it was recommended that a further three 10-inch RMLs (rifled muzzle-loading guns) should be mounted on No 4 Redoubt overlooking Cawsand Bay, this was approved in 1872. In 1877 the Committee revised its approval and recommended instead two of the latest 12.5-inch 38-ton RML guns, although they were not emplaced until 1887. This represented the first move of the rearmament of the coast defences with heavier RML guns, which was not completed until the 1890s (Woodward 1998, 73, 89, 91).

In 1870 Napoleon III was defeated in the Franco-Prussian War and for a time this removed any remaining fear of invasion. The works to arm and complete Palmerston's forts slowed as a result but the continuing rapid pace of military development, together with the growth of Germany's and Italy's navies meant that new programmes of rearmament were soon launched. Works at Maker Heights included the mounting of two 12.5-in RML guns in No 4 Redoubt and then in 1887 a review of coastal defences led to a major programme of improvements. A new position called Maker Battery was established and the two recently mounted guns at No 4 Redoubt were relocated here (*ibid*, 26).

In 1887, one of the recommendations of the Stanhope Committee, which was reviewing the defences of the United Kingdom, was the need for quick firing (QF) and machine guns (MG) as part of the defences of the Port. Between 1895 and 1910, 4.7-inch and 4-inch QF guns with interrupted screw breeches were proposed for Grenville and other batteries. Later these early QF guns were replaced by a network of 12-pounder QF guns, which were the standard anti-motor torpedo boat in WWI and at the beginning of WWII. By 1895 pairs of 6-inch breech loading (BL) guns had been replaced at Maker Heights, by 1911, these and the 6-inch guns at Maker Heights were considered superfluous and placed in reserve (Woodward 1990, 35–6).

Hawkins Battery was constructed in 1893 on the north-east side of the Maker group, armed with high-angle 9-inch RML guns to attack enemy ships off Whitsand Bay. Raleigh Battery was constructed at this time, also located to the east of the Maker group, armed with two 10-inch 29 ton BL guns. An improved breech system was used in the 6-inch BL guns emplaced in Maker Battery (as well as elsewhere) between 1900 and 1905. In c1900 there was a Position Finder (PF) station at Maker, this was one of a group of PF stations to provide ranges and bearings to targets via telephone and later by electric dials.

3.6.4 Modern (AD 1901–present)

World Wars One and Two

World War Two (WWII) brought the new threat of attacks from enemy aircraft and full-scale airborne invasion. A ring of heavy anti-aircraft (HAA) batteries was established in a ring around Plymouth to provide defence against high level bombing. This included a battery at Maker which initially had 3.7-in guns and later in the war the number of guns here was increased to six (Oxford Archaeology 2016, 26).

CAU have identified that there was a Gun Laying Radar Platform to the north-west of the HAA Battery, more commonly called a 'GL mat' (site 41). The feature is visible as a faint

octagonal outline on an 1946 aerial photograph (Fig 16). The standard design for the system was an octagonal mat of wire spread over the ground or raised on stilts with a diameter of 65 yards. CAU measured the feature on GIS and it almost exactly fits the measurements, and it was added it as a new gazetteer entry in the CMP.

A survey of WWII HAA batteries across the country indicated that since the end of the war 81.4% of the total number of sites constructed had been removed or destroyed; 5.6% of those surveyed were complete or near complete (Anderton 2000). A site retaining a large proportion of its original fabric, such as that at Maker Heights, is therefore a rare survival and is considered to be of National significance.

After WWII the ring of HAA batteries was maintained for several years although at this stage there was not a clearly defined potential enemy and the limited strategic planning was still based on the threat from conventional weapons. The Berlin Crisis of 1948 brought into focus the perceived threat from the Soviet Union and in 1949 the Air Council approved a plan for improving the country's air defences. In the early 1950s this evolved into the ROTOR radar system which included the construction of a series of observation posts manned by the Royal Observer Corps (ROC). One such post (a standard Orlit 'B' post) was constructed at Maker Heights in c1951-2 within one of the 18th century redoubts. These posts continued the role of the ROC to spot approaching enemy aircraft and communicating a warning of potential danger, but the facilities were rooted in the previous conflict rather than those of a war with atomic bombs (Oxford Archaeology 2016, 26).

The dangers of nuclear fallout, spread over a huge area, were only gradually appreciated after the start of the Bikini Atoll atomic bomb tests in 1954 and following this the key focus of civil defence was to provide as much warning as possible, both of an attack and of the subsequent spread of fallout. The existing communication infrastructure of the ROC was ideal for this and it was decided in 1956 to construct a series of buried, radiation-proof ROC monitoring posts, frequently alongside the existing (and already obsolete) Orlit posts. One such buried post (known as Millbrook) was constructed at Maker, opening in December 1960 (Subbrit.org) adjacent to the Orlit 'B' post (*ibid*, 27).

The underground posts were constructed across the country in a remarkable grid of over 1500 structures with each post c8 miles apart from the adjacent one. The posts would have been staffed by volunteers and their function would have been to monitor blast and fallout in the aftermath of a nuclear attack. Many of these monitoring posts were abandoned in 1968 although the Millbrook Post at Maker remained functional until September 1991 at the end of the Cold War (*ibid*, 27).

Children's camps at Maker Heights

At some time during the 1920s the Maker Barracks began to be used as a children's camp (Maker Camp). This idea was initially supported by Lady Astor to give children and young people in Plymouth, especially those experiencing social deprivation a holiday. This closed at the end of the 1930s, when the heavy anti-aircraft battery and some ancillary buildings were constructed but returned again after WWII at which time boys stayed in the older Maker Barrack Block and girls stayed in the Nissen huts (Oxford Archaeology 2016, 28).

Maker Camp was disbanded in the 1980s and at that time the Nissen huts were dismantled. There then appears to have been a period when Maker Heights had very little (if any) use. Photographs available on the internet taken in 1999 show the barracks buildings boarded up and apparently disused and it appears from the photos that the area of Nissen huts was also derelict (*ibid*, 28).

Recent history

Maker Heights has been used as a camp site since the 1960s. It is valued for its exposed nature and the dramatic views in all directions. There is an extant Certificate of Lawfulness for Existing Use, for use of the land as a campsite for tents, campervans and touring caravans (planning reference PA14/07209), which covers land parcels G, F, and part of H and L.

The Rame Conservation Trust was established in 1997 with the purpose of conserving heritage assets at Maker Heights. At the time the trustees planned to use it as an educational resource, an Environmental Field Centre, working across the whole of the Rame peninsula. The Trust started small-scale events/activities to try to generate funds for the repair of the buildings. In the rebuilt Nissen huts, Point Europa and Maker Junction housed educational, volunteer and training groups from this country and overseas, and first developed the catering facility. Subsequently Maker Heights flourished as a venue for music, workshops, studios and music festivals. This was supported by and involved all the communities on the peninsula as well as the wider area and fostered its own folklore. Like the earlier phase of Maker Camp, this rich heritage has been encapsulated by the award-winning community project 'Maker Memories' which captures the 'zeitgeist' of the site for the community.

The site continues to be a music and art hub for the community until the present day. A number of successful ventures are based at the Barrack Block, for example Patchwork Studios, a performance space and recording studios, and Soleil Store, an ethical fashion brand. There is a Certificate of Lawful Development of Existing Use for The Random Arms and Energy Room as a bar, music venue, arts education workshop space, a venue for private parties, birthdays and weddings with associated access, outside seating and car parking (planning reference PA17/12219) which is still extant although the venue was closed in 2016. There is also permission for Retrospective use of the main Barrack Block for workshops, art and music studios and recording space and for part of the Nissen huts to cafe (A3 use) (no longer only for educational use) (planning reference PA18/03970).

3.7 Previous archaeological/historical work

Historically the defences at Plymouth have been less studied than those at Portsmouth but recognition of this led to a series of research works in the early 1990s. The main overview of the fortifications in this area is *The Historic Defences of Plymouth* by Andrew Pye and Freddy Woodward (1996), which was the culmination of several years of work.

A rapid archaeological survey of the Rame peninsula was undertaken by the Institute of Cornish Studies (Thomas, ed, 1974), commissioned by the Department of the Environment, in advance of the proposed construction of a power station at Millbrook.

There are a number of popular booklets which feature Maker Heights including '*Rustic Rambles and Military Marches*' produced by Groundwork Plymouth Area (Breslin 1998) and '*Five walks around Mount Edgcumbe and the Rame Peninsula*' (Scolding 2007).

Two papers about the Maker Heights defences have been published in 'Fort' by David Evans (1988 and 1990). He has also published the most detailed account of the Maker Heights defences in the Georgian Group Journal (Evans 1999) as well as an unpublished paper (1970). An article by Bryan Rayden 2017, summarising what is interesting to him personally from the content of Evans 1970 and 1999, has been published on the Rame Peninsula History Group website.

The Barracks Complex is briefly described in 'British Barracks 1600–1914: their architecture and role in society' which contains a redrawn plan of 1845 showing existing and proposed works including the two proposed caponiers at the north-west and south-east corners of the perimeter wall (Douet 1998, fig 70).

In 1999 Keystone Historic Building Consultants, with David Evans, undertook an assessment of the Barrack Complex for the Rame Conservation Trust in connection with the Trust's proposals for the redevelopment of the site (Cox *et al* 1999).

A number of condition surveys have been undertaken of structures, these include: the Barracks and Courtyard Buildings, commissioned by Fluid Architecture Limited (Bailey Partnership 2016a and 2106b) and Redoubt No 5 (Cotswold Archaeology 2019).

Roger J C Thomas has compiled notes on Redoubts Nos 4 and 5 and has drawn a reconstructed plan and elevations for the bridge across the gorge at Redoubt No 5.

A Conservation Statement for Maker Heights, which included an assessment of significance was compiled by Oxford Archaeology in October 2016 and a draft Statement of Significance was produced by the Rame Conservation Trust in November 2017.

An illustrated document on the socio-cultural value of music heritage and music culture was written by Dr Lyvinia Elleschild (Lecturer in Sociology at the University of Plymouth) in 2019 (Elleschild 2019).

A draft Conservation Management Plan (CMP) has been produced to identify the significance of the site and propose a strategy for future management, maintenance and repair over the next five years (Cornwall Archaeological Unit 2020). It was developed in partnership with landowners/ leaseholders – Rame Conservation Trust, Evolving Places and the Mount Edgumbe Estate, in addition to Cornwall Council and Historic England.

3.8 Archaeological potential

The Rame Peninsula in general has enormous archaeological potential, given the recent discovery of the Roman fort at Calstock and the long-standing knowledge of the Iron Age and Roman ports at Mount Batten, Plymouth.

4 Statement of Significance

The evidential, historical, aesthetic, communal and natural environmental values of Maker Heights are high, and the sum total of Heritage Values at the site indicates that the overall significance of Maker Heights is Outstanding.

The group of fortifications at Maker Heights are of outstanding significance for the evidential value that they hold and for their illustration of military engineering and history from the last quarter of the 18th century until the late 20th century, constructed in response to important national and international events. This is considerably enhanced by their dramatic position, unspoilt setting and their relationship to the wider group of historical defences surrounding Plymouth. The Barracks Complex at Maker is the most complete and unaltered small garrison barracks in the country dating from the late 18th century. The importance of the fortification is recognised by the designations of the Redoubts and Barracks Complex as Scheduled Monuments and Listed Buildings.

The geographical location of Maker Heights, affording sightlines between the historical defences, creates dramatic views so that aesthetic and experiential values at the site are high. The outstanding aesthetic value of Maker Heights is reflected by its AONB status.

Maker Heights is unusual amongst heritage sites in having high communal value. It is highly valued by the local community (community of place) and has a large and geographically widespread community of attachment, comprising people who have spent significant parts of their lives there. Both natural environmental and archaeological values are high, and the site offers a great deal of potential as an educational and recreational resource.

5 Assessment of potential impacts

(See Fig 15 for the location of sites listed in the CMP Gazetteer and Appendix 1 for relevant gazetteer entries (CAU 2020)).

5.1 Introduction

The impacts of development on the historic environment may include positive as well as adverse effects. For the purposes of assessment these are evaluated on a seven-point scale:

positive/substantial

positive/moderate

positive/minor

neutral

negative/minor

negative/moderate

negative/ substantial

with the additional **negative/unknown** used where an adverse impact is predicted but where, at the present state of knowledge, its degree cannot be evaluated satisfactorily.

Access Proposals at Maker Heights, Cornwall, Statement, CJ, Rev 0.02, 20/04/2022

The assessment also distinguishes where possible between permanent and temporary effects, or between those that are reversible or irreversible, as appropriate, in the application of the scale of impacts.

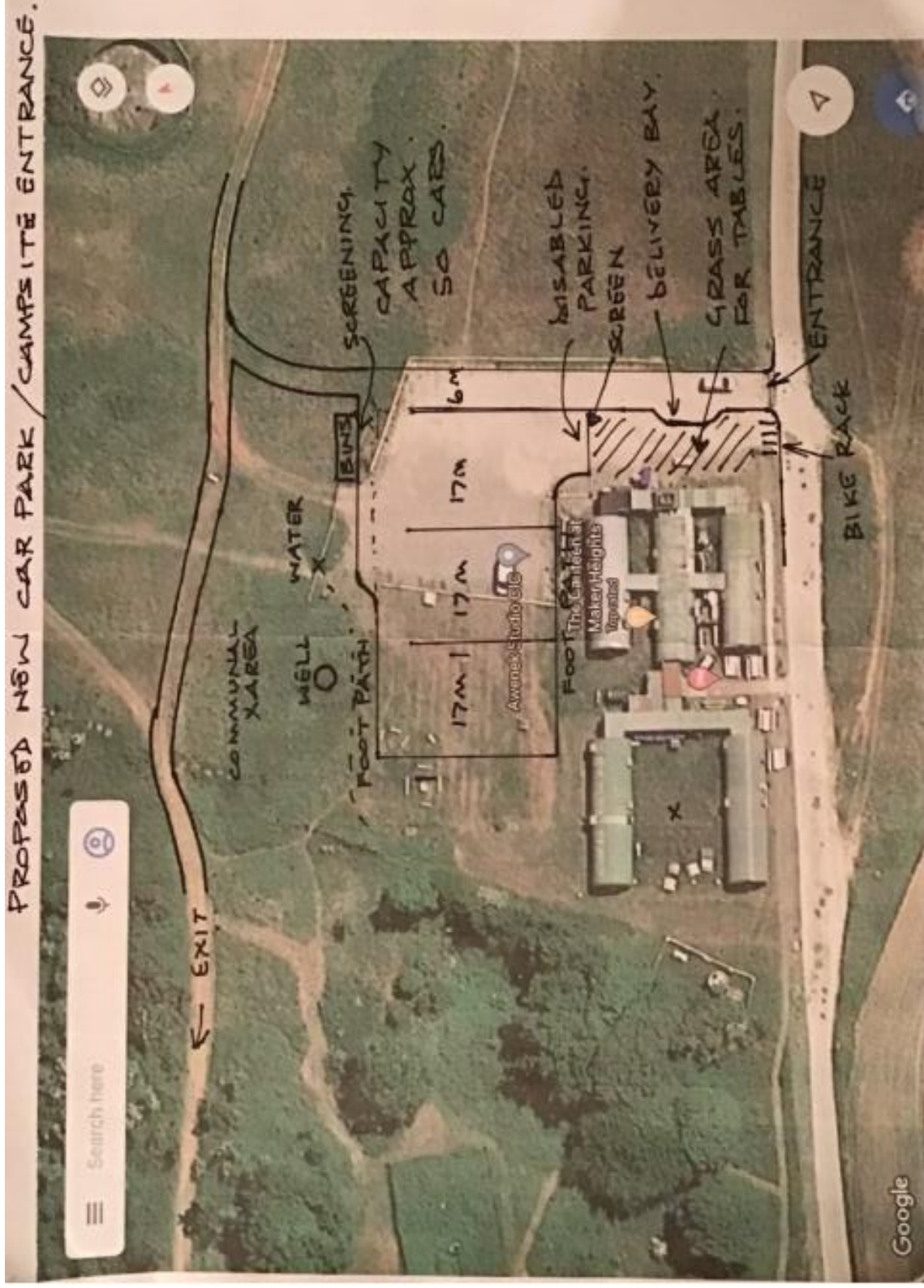


Fig 4 Sketch map of site 1: proposed carpark extension/reconfiguration (RCT).



Fig 5 Sketch map of site 2: proposed new campsite road (RCT).

5.2 Summary of proposed works

The RCT has developed a number of plans in response to recommendations in the CMP. These include a draft Ecological Management Plan and draft Transport and Access Strategy. As part of the development of plans, improvements to existing infrastructure have been identified.

This Heritage Impact Assessment considers specific proposals for reconfiguring and extending the site's main car park and for formalising access to the camp site.

5.2.1 Reconfiguration and extension of the site's main car park (site 1)

The main car park for the site is adjacent to the reconstructed Nissen huts, approximately 200m from the entrance to the site from the B3247. Visitors are encouraged to park here in order to access businesses on site including the Canteen Café and Awenek Arts & Crafts Studios in the Nissen hut and businesses and associated events in the Barrack Block. A car parking survey undertaken by the RCT in 2021 shows that at times, the carpark is at capacity which leads to *ad hoc* parking elsewhere in site. As well as site safety issues, this causes erosion of vegetation and landscape impact.

Qualified Trustees have also advised that the existing car park has a landscape impact as parked cars can be seen from adjacent hilltop views, in particular Wringford Down (Fig 11).

The RCT are proposing to change the layout of the existing car park, and at the same time extend the car park immediately north of the reconstructed Nissen huts, onto a grassed area to the west where a ground-source heat pump (derelict) is located below ground (Figs 4 and 10). It is proposed to place the surfacing for the new car park extension directly on to the existing ground surface. The improved layout would also help operations, both for the tenants of the Nissen huts and in terms of access to the campsite. Figure 4 shows a feature that appears to be a historic well. The RCT is proposing firstly to make this area safer for the public and, secondly, to undertake an archaeological survey in order to better understand the well and its surrounds.

5.2.2 Formalisation of access routes within the campsite (site 2)

Maker Camp uses a circular route for access. During periods of bad weather, it is subject to rutting and erosion, which damages the land and vegetation (Fig 12).

The RCT would like to establish a single route within the campsite for access, in addition to providing an appropriate surface to minimise damage caused by vehicles. This will utilise an existing route, apart from an end section approximately 20m long (Fig 13). It is proposed to place the surfacing for the campsite access directly on to the existing ground surface.

The RCT would also like to create a one-way system to reduce conflict with traffic using the main access road which has recently (within the last two years) been resurfaced with Tarmac. This will use an existing exit track, surfaced with hardcore, which runs around the north side of Redoubt No. 1 (Fig 14).

5.2.3 Contribution of the proposed new works to delivery of the CMP vision

Policy 4 of the draft CMP states: *'Any proposals for new works [including car parks] brought forward by a landowner shall demonstrate how it will contribute to the delivery of the CMP vision. It will show how the proposed use will benefit an existing building, and where this is not possible, that the siting and location of new works has taken consideration of the significance of the asset and the contribution made by its setting in line with published sector guidance (Appendix 7 – Guidance).'*

Maker Heights 5 year Vision – 'The Conservation Management Plan covers a period of five years from 2020 to 2025 by which time the aim is for the existing buildings to be comprehensively repaired and conserved. Sustainable and complementary new uses and activities shall be found that are compatible with both the current educational, community, recreational, artistic and commercial uses operating on site, and the significance of the heritage assets including the contribution made by their setting. The vision is that at the end of the five-year period the buildings will be stabilised and the

site capable of paying for itself in terms of on-going maintenance and minor repairs on a day to day basis.'

The current proposals will contribute to the delivery of the CMP vision by improving the appearance of the car park and campsite access (Fig 6) and thereby enhancing the setting of heritage assets on the site, in particular Redoubt No 1, the WWII anti-aircraft battery and the reconstructed Nissen huts. The proposals will also improve the setting of heritage assets by reducing erosion of vegetation and landscape caused by *ad hoc* parking.

5.3 Summary of potential impacts

5.3.1 Physical (direct) impacts

It is proposed to place the surfacing for the new car park and the campsite access directly on to the existing ground surface, this will be a reversible process, so there will be no direct impacts on the heritage resource.

It is intended that the proposed works will improve parking and access to the wider Maker Heights site and thereby reduce the potential for damage, particularly to the buried archaeological resource, caused by vehicular traffic. The proposed car park extension is on previously disturbed ground. The area had a ground source heat pump array installed in 2008 and any archaeological resource here will have been disturbed to an extent.

Therefore, the potential physical (direct) impacts are assessed as **positive/substantial** or **positive/moderate**.

However, if ground disturbance proves necessary, and topsoil needs to be removed to provide a firm foundation for the track and/or car park, this will have a **negative/moderate** impact on any buried archaeological features.

5.3.2 Visual and other non-physical impacts

Car park extension and reconfiguration

The main visual and non-physical impacts of the new car park will be on Redoubt No 1 (NHLE 1004254; Gaz 1) which includes the Royal Observer Corps Orlit Type B Observation Post (Gaz 1a) and Cold War Royal Observer Corps Observation Bunker (Gaz 1b). The extended car parking area will be approximately 20m closer to Redoubt No 1 (Figs 4 and 10).

There will be lesser, essentially peripheral, visual impacts on Redoubt No 2 NHLE 1004254; Gaz 4); the Barrack Block (NHLE 1375582; Gaz 28); the Coal Yard (NHLE 1329099 (Gaz 5); the Barrack Store (NHLE 1329099; Gaz 6); and the Guard House, Boundary Wall and attached ancillary buildings, (NHLE 1329099; Gaz5-30) (Figs 4 and 8).

There will also be potential visual and non-physical impacts on some non-designated heritage assets: the 19th century well (Gaz 2); the five reconstructed Nissen huts built in the late 20th century (Gaz 3a); the remaining WWII Nissen hut (Gaz 3b) the early 20th century building adjacent to Redoubt No 2 (Gaz 4a); WWII Heavy Anti-Aircraft Battery (Gaz 44a-44h).

There are also potential visual impacts related to moving car parking from the open hilltop area at Maker Heights on views from adjacent hilltops for example, Wringford Down (Fig 11).

There will be no visual impact on Redoubt No 3 (NHLE 1004254; Gaz 1,4 and 32); Grenville Battery (NHLE 1004254; Gaz 32) or Redoubt No 5 (NHLE 1140689; Gaz 57).

RCT's intention is to improve the appearance and functionality of the car park area. Various proposals for mitigation by design are set out below in Section 6.1.

Providing these proposals are put into effect, the potential visual and nonphysical impacts are assessed as **positive/substantial** or **positive/moderate**.

Formalisation of access routes within the campsite

The main visual and other non-physical impacts of the new campsite access will be on the undesignated WWII Heavy Anti-Aircraft Battery (Gaz 44a-44h) (Fig 13).

There will be lesser, essentially peripheral, visual impacts on Redoubt No 1 (NHLE 1004254; Gaz 1); (Redoubt No 2 (NHLE 1004254; Gaz 4); the Barrack Block (NHLE 1375582; Gaz 28); the Coal Yard (NHLE 1329099 (Gaz 5); the Barrack Store (NHLE 1329099; Gaz 6); and the Guard House, Boundary Wall and attached ancillary buildings, (NHLE 1329099; Gaz 5–30).

There will also be potential visual and non-physical impacts some non-designated heritage assets: the 19th century well (Gaz 2); the five reconstructed Nissen huts built in the late 20th century (Gaz 3a); the early 20th century building adjacent to Redoubt No 2 (Gaz 4).

There will be no visual impact on Redoubt No 3 (NHLE 1004254; Gaz 1,4 and 32); Grenville Battery (NHLE 1004254; Gaz 32) or Redoubt No 5 (NHLE 1140689; Gaz 57).

RCT's intention is to formalise and improve the appearance and functionality of the campsite access. Various proposals for mitigation by design are set out below in Section 6.1.

Providing these proposals are put into effect, the potential visual and non-physical impacts are assessed as **positive/substantial** or **positive/moderate**.

6 Mitigation

This section offers options to reduce or mitigate adverse impacts on the resource expected to result from the proposed development. These options are provided for guidance and the actual requirements for archaeological recording will be set by the Local Planning Authority.

6.1 Scheduled Monument Consent

Historic England have advised that Scheduled Monument Consent will not be required for the proposed works.

6.2 Mitigation by design

6.2.1 Car park and access route surfaces

Consideration should be given to the materials for surfacing the car park extension this could be a ground reinforcement surface such as that used at the Royal William Yard in Plymouth. For example, the 'GrassProtecta' car park surface from Goundtrax might be a suitable option. The green plastic grid reinforces the surface and the GrassProtecta polyethylene mesh knits with the grass sward.

The campsite has already trialled use of a flexible ground mat to reduce erosion, but in high traffic areas this has been unsuccessful. Outside the main campsite access track, where traffic is much reduced, this option should continue to be considered if erosion becomes a problem elsewhere.

However, the ground can still become eroded even with a plastic grid. If it is used, the car park extension should be only open for use in the summer, when needed for the camp site, while for the remainder of the year it should be closed to allow grass to regenerate and any maintenance, for example, re-seeding or topping up with earth/gravel to be carried out.

6.2.2 Waste bins

The waste bins are located in an exposed position at the northern edge of the car park (Figs 4 and 7). RCT have explored, but rejected, the option of moving the bins closer to the Nissen Huts because of proximity to Awenek and the campsite common room, a leisure area, which would be affected by the visual impact, smells (particularly on hot summer days) and the attraction to rats. Access for the collection lorries could also be an issue. The bins could be contained in wooden 'hideaway' boxes, which might be more effective than planted screening but temporary/moveable wooden fence screening should also be considered.

6.2.3 Earth bund on eastern side of car park

There is an existing low earthen bund, some 15m long by 0.7m high, along the eastern entrance to the carpark (Fig 9). This could be extended along the whole eastern edge of the car park and would provide some screening of the view from the direction of the Barrack Block and Redoubt No 1, and also from adjacent hilltops such as Wringford Down. The bund could be seeded with gorse which occurs naturally at Maker Heights, perhaps a hedging variety like *Ulex europaeus* could be used.

6.2.4 Scrub clearance at Redoubt No 1

The eastern side of Redoubt No 1, closest to the car park, is quite overgrown (Fig 10). If this could be cleared and tidied as part of RCT's volunteer programme co it would be a heritage gain which would enhance the appearance and setting of the Redoubt.

6.3 Mitigation by record

As it is proposed that the ground will not be disturbed it is considered unlikely that an archaeological watching brief will be required. However, the works should be recorded in the Site Log as recommended in the CMP (Cornwall Archaeological Unit 2020, 49). As well as a written description this should include 'before', 'during' and 'after' photographs. If ground disturbance proves necessary, for example, if hardcore is used for the campsite access and topsoil needs to be removed to provide a firm foundation for the track, then an archaeological watching brief will be required.

7 References

7.1 Primary sources (in chronological order)

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7.3 Websites

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

<https://www.groundtrax.com/car-parks/> Groundtrax Solutions for Car Parks



Fig 6 The car park and proposed campsite access route.



Fig 7 The waste bins at the north edge of the car park.



Fig 8 The car park from Redoubt No 2 with the Barrack Block, Coal Store and the Barrack Store on the right.



Fig 9 The grassy bund which could be extended along the eastern side of the car park.



Fig 10 Redoubt No 1 from the western edge of the existing car park.



Fig 11 Maker Heights from Wringford Down (Barracks block to the right).



Fig 12 Campsite access route.



Fig 13 Final 'new' section of the campsite access route.



Fig 14 The entrance to Maker Heights. The recently resurfaced Tarmac road on the right will be the route in and the hardcore track on the left the exit.

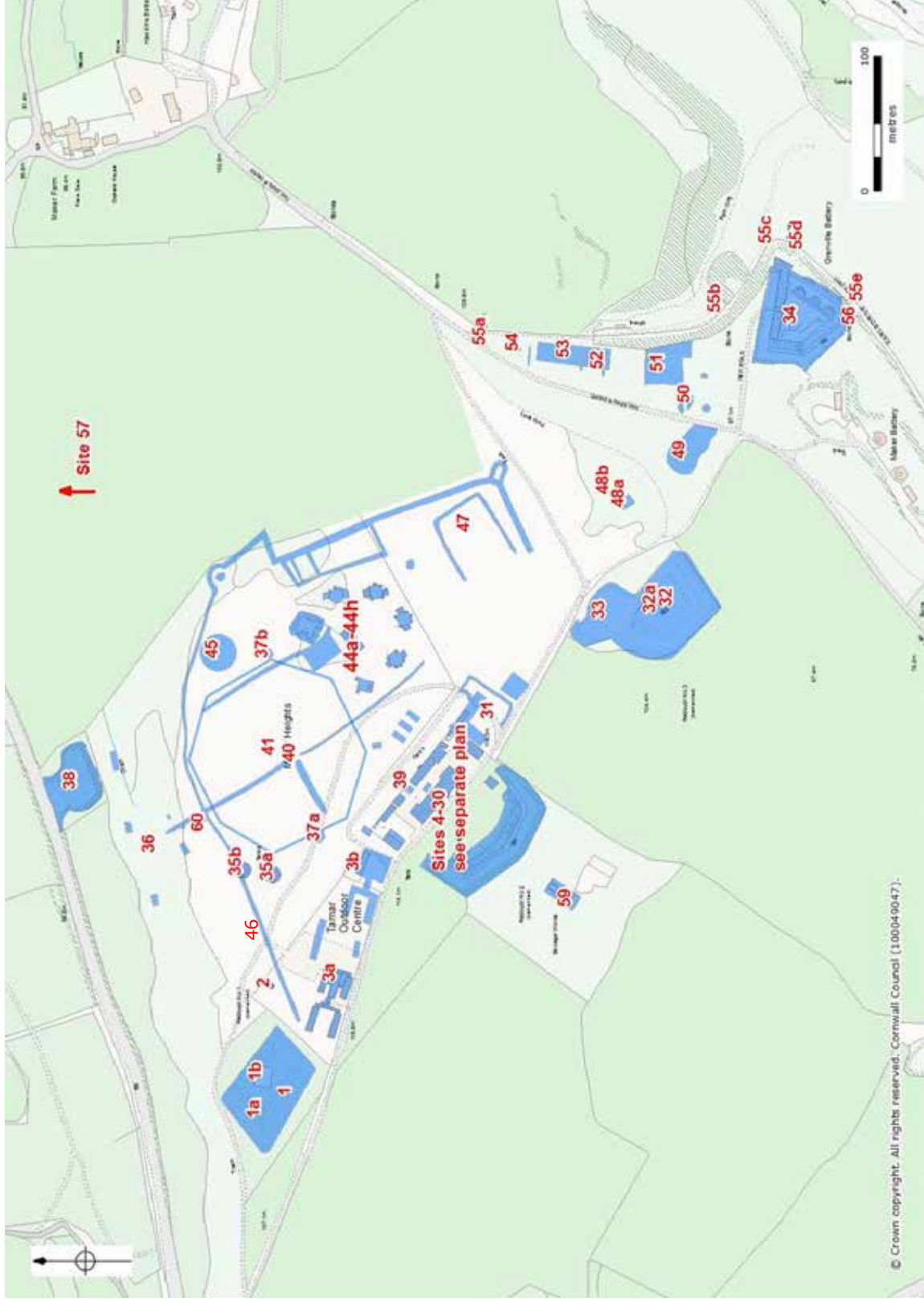


Fig 15 Ordnance Survey digital mapping showing locations of gazetteer sites.



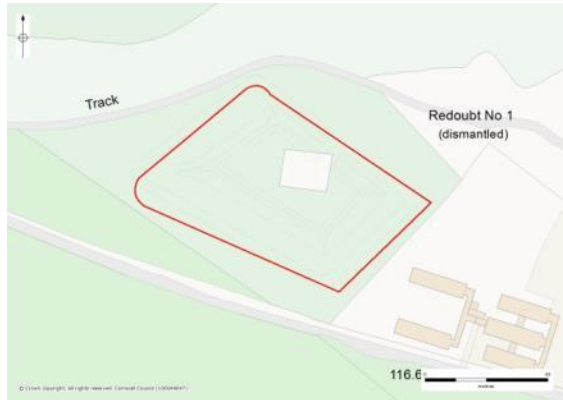
Fig 16 RAF aerial photograph taken in 1946.

8 Appendix 1: CMP Gazetteer for relevant sites

Site Name: Redoubt No 1 (Royal Cornwall)

Gazetteer Number: 1

Grid Ref: SX 43277 51522



(Showing scheduled area)

Site Designations:

Redoubt No 1 is located within the Cornwall AONB (Section 11: Rame Head) and it is a Scheduled Monument, List Entry Number 1004254.

Historical Summary:

The first redoubt in this location appears to have been constructed in 1779 as a temporary earthwork in response to the French threat during the American War of Independence. It may have been constructed by the Cornwall Militia and it was intended to act as a detached bastion below a large new fort. However, the fort itself was not constructed due to financial constraints and the earthwork was probably developed into a permanent redoubt between July and November 1782 as part of the Duke of Richmond's upgrading of Plymouth's defences. By 1784 it was armed with eight guns (18-pdr and 32-pdr smooth bore cannon) and it is labelled on a plan of 1788 as No 1 (Royal Cornwall) Redoubt. Plans of 1808 and 1811 confirm that it had earthen ramparts on its north-west, south-west and south-east sides as well as a ditch to the rear (north-east) side. On the plans there is a building shown to the south-east and also in 1811 a building (possible guardhouse) is shown within the redoubt, opposite the entrance. Ten embrasures are shown around the sides of the earthwork: five to the front, two to the south-east and three to the north-west. The redoubt was probably disarmed in 1815 at the end of the Napoleonic Wars and a plan from 1865 labels it as 'in ruin' (MPHH 1/624). However, Pye and Woodward quote a reference made by A Saunders to the armament of the 'northern redoubt' in 1920 (Pye and Woodward 1996, 49). The redoubt is labelled as dismantled on the 1896 OS map and this also confirms that by this date the two buildings shown previously had been demolished. An aerial photograph from 12th March 1948 shows the outline of the redoubt clearly visible and largely intact. The entrance can still be seen. A photo from 1955 still shows the outline clearly visible but by 1964 the earthworks had become more overgrown (albeit with the interior still clear). An aerial photo from 1995 shows more of the structure overgrown (Oxford Archaeology 2016).

Site Description:

The redoubt is a four-sided, broadly rectangular plan earthwork with ramparts to three sides and a ditch closing the rear (north-east) side. The ramparts and ditch are heavily overgrown, and it is currently difficult to gain a clear impression of their form. The southern and western ditches appear to be largely complete together with the platform while the rear (north) side has been partly infilled and apparently levelled (probably in the mid-20th century) for the construction of the Orlit Observation Post. The ditch is c3m

wide at its base and c6m wide at its top. The outer ditch is c1m tall while the inner ditch is c4.5 m tall and the rear ditch is c3 m tall (Oxford Archaeology 2016).

Condition:

Criteria	Value	Notes
Rarity	High	
Period	Late 18th Century	Later Cold War additions.
Survival/Condition	Moderate	Generally satisfactory but with significant localised problems.
Fragility/Vulnerability	Moderate	Principle vulnerability is scrub and tree growth, trend is declining.
Group Value	High	
Amenity Value	High	

Management Issues:

Redoubt No 1 is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described as 'generally satisfactory but with significant localised problems'; its principle vulnerability is 'scrub and tree growth', trend is 'declining'.

The nature of this earthwork is relatively robust and the fact that it is overgrown should offer it a level of protection. Assuming there is no proposal to reinstate or recreate the original form of the earthwork its management should consist of little more than ensuring that it remains undisturbed and clear of damaging vegetation. Any clearly dumped material should be cleared. No new buildings should be erected within the footprint of the redoubt. The scheduled boundary should be extended to include the glacis to north and west (Oxford Archaeology 2016).

Conservation Objectives:

Clear sycamore trees, brambles and bracken from inside scheduled area and maintain areas cleared of vegetation through regular maintenance.

Ensure that the road leading to the Barrack Block does not encroach onto the glacis any further – consider redefining entrance road with designated passing places to minimise erosion to monuments and natural habitat.

Further historic research to pull together all the primary maps, plans and documents associated with the redoubts would be beneficial to improve the understanding of the site and inform future conservation.

Statement of Significance:

Outstanding: Redoubt No 1 is a Scheduled Monument which forms part of a relatively rare group of structures which together illustrate the response to the American War of Independence and the fear of attack from the French or Spanish fleets which had allied with the rebellious American states. The redoubt helps illustrate the evolution of coastal defensive structures in the later 18th century particularly in the innovative use of detached works which represented a move away from the traditional bastion form of defence. The two 1950s structures represent one of the very few areas where the defensive use of Maker Heights continued into the post-war period. The redoubt will contain archaeological evidence relating to its construction, use and alteration (Oxford Archaeology 2016).

Sources:

Access Proposals at Maker Heights, Cornwall, Statement, CJ, Rev 0.02, 20/04/2022

HER Number: 6113.01.

List Entry Number: 1004254.

Historic England, 2018. Heritage at Risk: South West Register 2018.

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Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 49-52.

<https://www.subbrit.org.uk/sites/millbrook-roc-post/>

Site Name: Orlit Observation Post

Gazetteer Number: 1a

Land Parcel: A

Grid Ref: SX 43262 51530



Site Designations:

The Orlit Observation Post is located within Redoubt No.1 which is in the Cornwall AONB (Section 11: Rame Head) and is a Scheduled Monument, List Entry Number 1004254. While within the scheduled area Observation Post is not explicitly mentioned in the scheduling entry.

Historical Summary:

In c1951-2 a Royal Observer Corps Orlit Type B Observation Post was constructed within the redoubt, on the northern side. This was one of many such observation posts constructed in the early 1950s as part of the ROTOR Plan which was intended to update air defences although it was rapidly rendered obsolete (even before it was implemented) due to the new threat of Atomic weapons. The posts were principally intended to allow the ROC staff to watch for approaching enemy aircraft and then alert authorities via telephone communications (Oxford Archaeology 2016).

Some posts were constructed of brick while others had pre-cast concrete panel walls and there were two basic types: Type A which was a building at ground level and Type B which was raised on four 6-foot legs. The post at Maker has this raised form and a ladder provided access. Each post has two main rooms: a roofed shelter/store and an open room with instrument and chart on a wooden mounting. The open room had a removable cover (Oxford Archaeology 2016).

Site Description:

The elevated concrete platform with four legs survives from the Orlit 'B' post but the pre-fabricated building which would have sat on the platform has been lost as has the ladder which provided access to the building (Oxford Archaeology 2016). The building is constructed of reinforced concrete. The iron rebars within the concrete have begun to decay causing areas of concrete to have been blown from the structure revealing the

internal reinforcement. The remains of at least one of the post's wall panels is present on the ground beneath the platform.

Condition:

Criteria	Value	Notes
Rarity	Moderate	
Period	Cold War c1951-2	
Survival/Condition	Moderate	
Fragility/Vulnerability	High	
Group Value	High	
Amenity Value	Low	

Management Issues:

The Orlit 'B' post (which is slightly earlier than the neighbouring bunker) is above ground and is vulnerable to both the elements and to possible vandalism. Its simple form means that it could also potentially be threatened by removal due to a lack of understanding of its use and interest (Oxford Archaeology 2016).

Conservation Objectives:

Keep clear of vegetation and monitor condition of fabric, including fragments lying on the ground.

Update Scheduled Monument entry to include the Orlit Post.

Provide an interpretation panel at Redoubt No 1 to enable visitors to understand the significance of the Orlit Post.

If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: the Cold War observation post and bunker at Redoubt No 1 are of considerable historical and evidential significance. They have a historical associative value due to the fact that they relate to the Cold War, one of the key events or periods of the 20th century, and also a historical illustrative value due to the fact that they illustrate the nature of these types of structures. They also have an evidential value as these structures are not yet been widely studied and therefore surviving examples hold the potential for informing future studies. They also have a wider group value as they form part of the collection of defensive structures at Maker Heights and they illustrate the continued military use of the site into the post-war period (Oxford Archaeology 2016).

Sources:

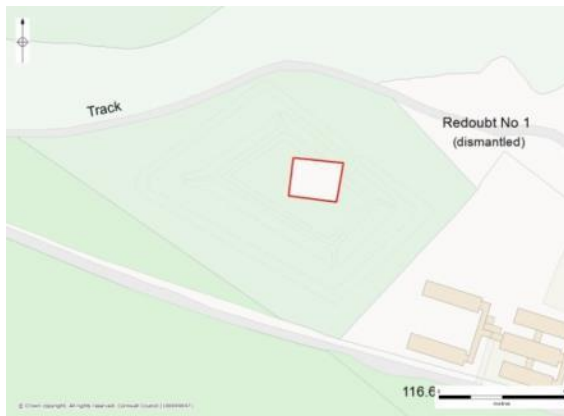
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List Entry Number: 1004254.

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Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 49-52.

Site Name: Millbrook Post - Cold War Royal Observer Corps Bunker**Gazetteer Number: 1b****Land Parcel: A****Grid Ref: SX 43284 51526****Site Designations:**

The Cold War Royal Observer Corps Observation Bunker is located within Redoubt No 1 which is in the Cornwall AONB (Section 11: Rame Head) and within a Scheduled Monument, List Entry Number 1004254, the relevant part of the Listed Building description being:

Within the redoubt is a fenced area containing the visible surface structures and the underground bunkers associated with a 20th century Royal Observer Corps monitoring post.

Historical Summary:

In the 1950s the threats from radioactive fallout became more widely appreciated and a new programme was instigated to construct a large number of underground and radiation- proof ROC bunkers or monitoring posts. One of these posts, known as Millbrook Post, was constructed at Maker, adjacent to the existing Orlit 'B' Observation Post. The underground monitoring posts almost always had a standardised form and were frequently located adjacent to existing Orlit posts (as at Maker) partly due to the existing communications links and the fact that they were existing ROC sites. Over 1500 such posts were constructed nation-wide with a grid pattern so that each post was c8 miles from its neighbour. The overall programme of construction began in 1957 and Millbrook Post was opened in December 1960 (subbrit.com). The nation-wide network was completed in 1965 but soon afterwards the ROC was reorganised and in 1968 about half of the posts were closed. Millbrook Post remained in operation until the end of the Cold War and closed in September 1991 (Oxford Archaeology 2016).

Site Description:

The post has two main rooms (a toilet/store and a monitoring room) and access is through a c4m deep access shaft. The structure would have been constructed by the excavation of a deep hole and the casting of a reinforced concrete box (c6m x 2m x 2m) within it. The floor was c30cm thick while the walls were c18cm and the roof was about c20cm thick (Oxford Archaeology 2016).

Condition:

Criteria	Value	Notes
Rarity	Moderate	

Period	Cold War c1950s	
Survival/Condition	High	
Fragility/Vulnerability	Unknown	
Group Value	High	
Amenity Value	Moderate	Used for group/special interest visits.

Management Issues:

As indicated above the condition of the sunken observation post is uncertain because access has not yet been possible, although photographs from 2000 have been seen and these suggest that the basic condition of the buried shelter is relatively good. The overall structure is relatively robust and protected by the earth covering. The fact that this shelter is buried and locked means that it is no longer threatened by vandalism although internal features have been damaged in the past. The surface features including the vents, access hatch and fence are more vulnerable (Oxford Archaeology 2016). During the present survey it was noted that within the fenced area the site was heavily overgrown with brambles and the access hatch was left open. To limit any further water ingress efforts should be made to keep the access hatch closed.

Conservation Objectives:

An assessment of the condition of the site would be beneficial to identify and any repair work.

At the time of visit the access hatch had been left open – shutting this would prevent rain from causing internal damage and prevent people from entering the bunker.

The vegetation should be cleared from within the fenced area.

Thought could be given to opening the bunker to the public.

If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: the two Cold War monitoring and observation posts are of considerable historical and evidential significance. They have a historical associative value due to the fact that they relate to the Cold War, one of the key events or periods of the 20th century, and also a historical illustrative value due to the fact that they illustrate the nature of these types of structures. They have an evidential value as these structures are not yet been widely studied and therefore surviving examples hold the potential for informing future studies. They also have a wider group value as they form part of the collection of defensive structures at Maker Heights and they illustrate the continued military use of the site into the post-war period (Oxford Archaeology 2016).

Sources:

Brown *et al*, 1996. *20th Century Defences in Britain*. CBA: York.

HER Number: 6113.01.

List Entry Number: 1004254.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 49-52.

Site Name: Well to the East of Redoubt No 1**Gazetteer Number: 2****Grid Ref: SX 43351 51520****Site Designations:**

Cornwall AONB (Section 11: Rame Head)

Historical Summary:

A well is marked on an OS 6 Inch map published in 1867/9 (maps.nls.uk). The well had a large capstone with a late 18th century inscription. It was used as a fireplace during the last ten years and split. More recently it was damaged by a tractor and is now difficult to find because of overgrown vegetation.

Site Description:

There do not appear to be any visible remains of the well on the surface.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Mid-19th century?	
Survival/Condition	Unknown	
Fragility/Vulnerability	Low	
Group Value	Low	
Amenity Value	Low	

Management Issues:

The potential for a well shaft in the area should be considered.

Conservation Objectives:

Maintain in current condition.

Statement of Significance:

Moderate: the site contributes towards the overall understanding of Maker Heights' military complex and the water supply to the site, and presumably Redoubt 1. There is good archaeological potential for the site.

Sources:

<https://maps.nls.uk/view/102352979>

Site Name: West Nissen Huts**Gazetteer Number: 3a****Grid Ref: SX 43340 51477****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

There are no structures shown in this location on any of the OS maps from 1894 to 1914 but an aerial photograph from May 1947 shows c13 regular, rectangular plan structures, some of which are connected by tracks and walkways. A similar arrangement is shown on further aerial photos from 1948 to 1964 and also on an Ordnance Survey map from 1951. These Nissen Huts filled much of the land between the Redoubts 1 and 2 and they include a group of five huts towards Redoubt No 1 which appear to be on the same footprint as the present reconstructed Nissen huts. This map also shows a number of structures within Redoubt No 2 (and elsewhere) of a similar date. Most of the huts had been demolished prior to an aerial photo from 1989 (Oxford Archaeology 2016) except one original Nissen hut that survives at the eastern end of the area (3b).

The huts shown on the aerial photos are known to have been constructed during (or possibly immediately before) WWII and are contemporary with the anti-aircraft battery that dates from this period. They would have been used for accommodation. The AA battery was abandoned after the war but the barracks and Nissen huts found some reuse including as a school camp (Maker Camp). Maker Camp had originally started in the 1920s to provide a holiday or break to local disadvantaged children (Oxford Archaeology 2016).

It is reported in Pye and Woodward (1996, 53) that many of the WWII accommodation huts were demolished in the 1970s (although this reference may principally relate to the huts within Redoubt No 2) while the Maker Junction website states that by the 1980s the huts of the former School Camp were dismantled due to their poor condition. The website goes on to state that some years later the huts were rebuilt on their original footprint possibly reusing some original materials. It is useful to note that the OS map from 1982 still shows the large group of huts intact (Oxford Archaeology 2016). The reconstructed huts now accommodate the well-reviewed canteen café and camping facilities and a community workshop.

Site Description:

The site comprises five reconstructed Nissen huts built in the late 20th century which are used for camping facilities and a café. The internal condition of this was not assessed at the time of the site visit.

A ground source heat pump system was installed in the late 20th century, its extensive underground pipework buried to the rear (north) of the Nissen huts.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	c1980s	
Survival/Condition	Moderate	
Fragility/Vulnerability	Low	
Group Value	Moderate	
Amenity Value	High	

Management Issues:

Maintain in current use.

Conservation Objectives:

Maintain in current use and keep in good condition through regular maintenance. External alteration would have a visual impact upon the surrounding Scheduled Monuments, Listed Buildings and natural environment.

Statement of Significance:

Considerable: the huts contribute significantly to the communal value of Maker Heights.

Although the western group of huts were entirely rebuilt in the later 20th century, possibly partially reusing the historic fabric, they are of some historic value in that they illustrate how this area of the site would have appeared during WWII. The fact that the huts have been rebuilt means that they are of a lower level of significance than if they survived from WWII but they still have an historical illustrative and associative value. The huts also have a strong communal value, partly due to the many school children who have visited the site or stayed over in the buildings as part of an 'evacuation experience' but also for the older generation of people who stayed at Maker Camp in the 1960s and 1970s. The site will no doubt hold memories for many people from their formative years (Oxford Archaeology 2016).

Sources:

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Site Name: East and Demolished Nissen Huts**Gazetteer Number: 3b****Grid Ref: SX 43427 51449****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

There are no structures shown in this location on any of the OS maps from 1894 to 1914 but an aerial photograph from May 1947 shows c13 regular, rectangular plan structures, some of which are connected by tracks and walkways. A similar arrangement is shown on further aerial photos from 1948 to 1964 and also on an Ordnance Survey map from 1951. These Nissen huts filled much of the land between the Redoubts 1 and 2 and they include a group of five huts towards Redoubt No 1 which appear to be on the same footprint as the present reconstructed Nissen huts. This map also shows a number of structures within Redoubt No 2 (and elsewhere) of a similar date. Most of the huts had been demolished prior to an aerial photo from 1989 (Oxford Archaeology 2016) except one original Nissen hut that survives at the eastern end of the area (3b).

The huts shown on the aerial photos are known to have been constructed during (or possibly immediately before) WWII and are contemporary with the anti-aircraft battery that dates from this period. They would have been used for accommodation. The AA battery was abandoned after the war but the barracks and Nissen huts found some reuse including as a school camp (Maker Camp). Maker Camp had originally started in the 1920s to provide a holiday or break to local disadvantaged children (Oxford Archaeology 2016).

It is reported in Pye and Woodward (1996, 53) that many of the WWII accommodation huts were demolished in the 1970s (although this reference may principally relate to the huts within Redoubt No 2). It is useful to note that the OS map from 1982 still shows the large group of huts intact (Oxford Archaeology 2016).

Site Description:

The site comprises one surviving original Nissen Hut and the sites of three detached huts. The internal condition of this was not assessed at the time of the site visit. The surviving hut is currently occupied by tenants.

Condition:

Criteria	Value	Notes
Rarity	Moderate	As the sole surviving Nissen Hut at Maker Heights, its rarity here is high.
Period	WWII	

Survival/Condition	Moderate	
Fragility/Vulnerability	Low	
Group Value	Moderate	
Amenity Value	High	

Management Issues:

Uncertain as the interior of the surviving Nissen Hut was not accessed.

Conservation Objectives:

Maintain in good condition through regular maintenance, make accessible for public and schools.

If any future repair works are proposed for the original Nissen hut to the east (site 3b) it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to any alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: the single remaining original hut (3b) to the east of the area has considerable significance as the only survivor of the WWII Nissen huts.

It has historical illustrative and associative value. The hut also has a strong communal value, partly due to the many school children who have visited the site or stayed over in the buildings as part of an 'evacuation experience' but also for the older generation of people who stayed at Maker Camp in the 1960s and 1970s. The site will no doubt hold memories for many people from their formative years (Oxford Archaeology 2016).

Sources:

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Site Name: Redoubt No. 2 (Somerset)

Gazetteer Number: 4

Grid Ref: SX 43467 51341

**Site Designations:**

Redoubt No 2 is set within the Cornwall AONB (Section 11: Rame Head) and it is a Scheduled Monument, List Entry Number 1004254.

Historical Summary:

The first redoubt in this location appears to have been constructed in 1779 as a temporary earthwork in response to the French threat during the American War of Independence. It may have been constructed by the Somerset Militia and it was intended to act as a detached bastion below a large new fort. However, the fort itself was not constructed due to financial constraints and the earthwork was developed into a permanent redoubt between July and November 1782 as part of the Duke of Richmond's upgrading of Plymouth's defences. Gardener's Map of 1784 shows the redoubt with a small building outside a gorge/ditch to the rear while a plan from 1788 shows the 5-sided redoubt fully enclosed and armed with seven 18 pounder guns. It is also labelled as No 2 (Somerset) Redoubt on the 1788 plan. Plans from 1808 and 1811 show it with a similar rear ditch and at least in 1808 part of the ditch scarps had been revetted in stone. It is possible that the barracks complex to the north-east was first constructed in the mid-1780s soon after the redoubt had been developed as a permanent structure.

The plan of 1811 shows it with ten gun embrasures (six to the front and two to each side) and with a small building (possibly guardhouse) within the redoubt. Access into the redoubt was via a central causeway across the rear (NE) ditch (leading from the barracks complex). It appears to have been disarmed in (or by) 1815. A plan of 1865 labels the redoubt as 'in ruin' (MPHH 1/624). The Ordnance Survey plan of 1896 shows that by this date the ditch to the rear (north) had been infilled but at least some of the embrasures still remained. In the early 20th century (possibly during WWI a building (site 4a) was constructed on the south-east side of the redoubt and by WWII a number of other buildings had also been constructed within the redoubt. These are shown on the OS plan of 1951 which also shows the six embrasures facing south-west. They are also clearly shown on several aerial photographs from between 1947 and 1964. The photograph from 1948 also shows the ramparts relatively intact, although the north-east half of the north-west side of earthworks had been infilled to allow for a new building. The 1948 photograph shows the embrasures and structures at the top of the ramparts. An oblique aerial photograph from 1989 shows that by this date the buildings had been cleared (except for site 4a which survives today) but the outlines of the former structures are visible suggesting that they had not been cleared a long time before the photo was taken (Oxford Archaeology 2016).

Site Description:

The redoubt is a five-sided earthwork with its glacis extending down the hillslope for some distance. The front ditches, facing south-west remain clearly visible (but heavily overgrown) while the two flanking ditches have been partly infilled (the western one largely). The rear (north-east) ditch has been entirely infilled but is visible as a slight hollow on the grassed surface. The embrasures which were shown on the 1951 map are no longer visible and thus the ramparts to front and sides appear to have been taken down in the later 20th century (Oxford Archaeology 2016). The ditches are largely overgrown, with the ditch to the south having had a path made through it. This has revealed a quantity of debris presumably from the demolished buildings. The ditches, therefore, could contain valuable archaeological material as well as potential hazards such as sharp objects and asbestos. The interior surface of the redoubt is laid to grass. At the north corner of the redoubt there is a cast iron gate/fence post adjacent to the road and its twin is lying under the Barrack store's stair; the concrete post in its place is WWI or II.

Condition:

Criteria	Value	Notes
Rarity	High	
Period	Late 18th Century	

Survival/Condition	Moderate	Generally satisfactory but with significant localised problems.
Fragility/Vulnerability	Moderate	Principle vulnerability is scrub and tree growth, trend is declining.
Group Value	High	
Amenity Value	High	“

Management Issues:

Redoubt No 2 is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described as 'Generally satisfactory but with significant localised problems'; its principle vulnerability is 'scrub and tree growth', trend is 'declining'.

The earthwork redoubt is relatively well protected and the main management recommendations should consist of little more than ensuring that it remains undisturbed. No new buildings should be erected within the footprint of the redoubt. Invasive or damaging vegetation should be cleared such as trees located within the scheduled area. The glacia to the south-west now contains pipework and a sewage tank, and allotment plots, some of which are fenced.

Conservation Objectives:

Further historic research to pull together all the primary maps, plans and documents associated with the redoubts would be beneficial to improve the understanding of the site and inform future conservation.

The potential for geophysical investigation should be considered.

The location of this redoubt, adjacent to the barracks and at the heart of the Maker complex, adds to its accessibility and interpretation potential (Oxford Archaeology 2016).

Consideration should be given to extending the scheduled area to include the whole of the earthworks and glacia, and possibly extending to include the barracks and ancillary buildings which may be contemporary.

Statement of Significance:

Outstanding: Redoubt No 2 is a Scheduled Monument and forms part of a rare group of structures which together illustrate the response to the American War of Independence and the fear of attack from the French or Spanish fleets which had allied with the rebellious American states. The redoubt helps illustrate the evolution of coastal defensive structures in the later 18th century particularly in the innovative use of detached works which represented a move away from the traditional bastioned form of defence. It will contain archaeological evidence relating to its construction, use and alteration (Oxford Archaeology 2016). The site has significant historical and evidential value.

Sources:

Historic England, 2018. Heritage at Risk: South West Register 2018.

Oxford Archaeology, 2016. Maker Heights Cornwall Conservation Statement, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 52-53.

Site Name: Early 20th century building**Gazetteer Number: 4a****Grid Ref: SX 43476 51375****Site Designations:**

Cornwall AONB (Section 11: Rame Head). The building lies immediately adjacent to the designated Scheduled Monument area of Redoubt No 2.

Historical Summary:

The building is first shown on aerial photographs from 1947. Elements of the surviving structure suggest that it was built in the early 20th century (perhaps during WWI). The 1947 aerial photograph shows it forming part of a large group of buildings on this side of the road and around the older barracks complex. An aerial photograph from 1979 appears to show the building as disused by this date (Pye and Woodward 1996, 52). It is suggested in the Keystone report that the building may have been used as Commanding Officer's accommodation (Keystone 1999, 47) although its internal layout suggests some other use.

Site Description:

The building is single-storey and rectangular in plan (c7.5 m x 6 m) with a slate covered gable roof with an outshut to the north-west. The exterior walls have a roughcast render finish and the windows are now boarded up. There are six windows in the north-west elevation and a central chimney stack. The six windows contain fixed four-pane windows, to the east there is a horned sash window and to the south, a casement window of six-panes. The north-east gable has bargeboards pierced with quatrefoils. The interior is divided into two rooms on the south-east side separated from a series of small rooms to the north-west by a corridor running the length of the building. The small rooms to the north-west may have been toilet cubicles or stores and they have diagonal planked doors and are separated by matchboard panelled walls. The two large rooms both contain cast iron fireplaces with geometric designs which date to the early 20th century c1920 (V&A, pers comm.) and are the same as those in the sergeants' rooms at the north-west end of the main Barrack Block.

Condition:

Criteria	Value	Notes
Rarity	Moderate	
Period	Early 20th century/ WWI	
Survival/Condition	Low	Original interior, poor condition.
Fragility/Vulnerability	High	
Group Value	High	
Amenity Value	High	

Management Issues:

The building is in poor condition with two windows missing, significant cracks and vegetation growing inside the building. Damage from water ingress is evident throughout and timber supports have been inserted to prevent the collapse of lintels over a couple of internal doors at the northern end.

Conservation Objectives:

A programme of repair work would allow the building to be brought back into use.

Further historic research to pull together all the primary maps, plans and documents associated with the barracks and ancillary buildings would be beneficial to improve the understanding of the complex as a whole. If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: this early 20th century building (perhaps dating to WWI) is the only building on redoubt No 2 to survive demolition. It clearly has a strong connection with the barracks block and should be seen as a significant part of the barracks complex.

Sources:

Keystone Historic Buildings Consultants, 1999. The Barrack Complex at Maker Heights Maker Cornwall Report of 5 August 1999.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth, Truro* (CCC), 52-53.

Site Name: Coal Yard**Gazetteer Number: 5****Grid Ref: SX 43453 51430****Site Designations:**

Grade II* Listed Building Entry Number: 1329099, Cornwall AONB (Section 11: Rame Head). Relevant extract from the Listed Building description:

The' BUILDING TO SOUTH WEST corner comprises coal yard and linen store to North West side, with 1848 extension to South East side comprising stores and barrack sergeants' quarters. Coal yard and linen store of 1804-8 to North West range, extended 1848 to South East with barrack sergeants' quarters and stores. Roughly squared rubble, partly rendered, with brick dressings., roofless. EXTERIOR: 1 and 2 storeys; each 1-window range. The outer North East building forms the end part of the perimeter wall, and has a wide segmental-arched carriage entrance with brick dressings i11 the end, and raking sides with a alter cast-iron inserted roof.

Historical Summary:

A building is shown on this site from 1807 and the Coal Yard may represent this original structure (MPHH 1/677). It is shown on a detailed plan of 1882 as an open yard.

Site Description:

The Coal Yard is constructed of stone rubble with brick jambs and arch to the door opening, which contains modern double doors. The walls heightened, and a modern roof inserted with evidence of a previous roof. The interior has a concrete screed floor overlying the original cobbled surface, with the south-east wall rendered and the remaining three exposed stone rubble. Markings painted on the walls give the heights of quantities of coal in heaps.

The roofed coal yard is currently being let out to a tenant as a workshop and store.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Late 18th century	
Survival/Condition	Moderate	Condition described by HE as poor, however it is described in the 2016 condition survey as being in fair/good condition.
Fragility/Vulnerability	Low	Wall markings for tonnages of coal.
Group Value	High	
Amenity Value	Moderate	

Management Issues:

The Coal Yard is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described poor.

Conservation Objectives:

Further historic research to pull together all the primary maps, plans and documents associated with the barracks and ancillary buildings would be beneficial to improve the understanding of the complex as a whole. If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: this building forms an important element of the well-preserved barracks complex. The list description states that: 'This is the most complete and unaltered small garrison barracks from this significant period, and includes many of its ancillary buildings within a defensible site'. The buildings are of considerable historical and evidential value (Oxford Archaeology 2016).

It is part of the Grade II* Listed ancillary buildings.

Sources:

Historic England, 2018. Heritage at Risk: South West Register 2018.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*. Truro (CCC), 53-54.

Site Name: Barrack Store**Gazetteer Number: 6****Grid Ref: SX 43460 51428****Site Designations:**

Grade II* Listed Building Entry Number: 1329099, Cornwall AONB (Section 11: Rame Head). Relevant extract from the Listed Building description:

The' BUILDING TO SOUTH WEST corner comprises coal yard and linen store to North West side, with 1848 extension to South East side comprising stores and barrack sergeants' quarters. Coal yard and linen store of 1804-8 to North West range, extended 1848 to South East with barrack sergeants' quarters and stores. Roughly squared rubble, partly rendered, with brick dressings., roofless ... A small lean-to (linen store) at the rear. Attached to the South East side is a narrow extension of 1848, roofless at the time of survey (1997), rendered to the front and sides with coped end gables each with a doorway and single first-floor windows, and an external flight of cantilevered granite steps with iron railings up to a first-floor doorway in the side of the elevation. INTERIOR: of the outer store contains 2 vertical slate strips with markings of an unidentified character.

Historical Summary:

A building at this site is shown on plans from 1807 (MPHH 1/677) and it is possible that this building originates from the first phase of construction at the site in the late 18th century. It seems possible that the small north-eastern rooms were added at a later date, possibly in tandem with the 1848 Stables. The building was used as a Barrack Store and office in 1865 (MPHH 1/624), and in 1882 it still used in this way with the upper storey reserved for bedding (WO 78/2975) (Figs 13 and 14). Later annotations to the 1882 plan state that the rooms were used as the 'R. A'. Company Store, medical inspection room and armament office.

Site Description:

The two-storey building, which included a Store and Office, is now roofless and the first floor structure has also largely collapsed. Prior to its collapse the roof was gabled. The walls are constructed from stone, but the south-east and south-west elevations now have a cement render finish. The two tall gable ends each incorporate 12 pane sash windows at first floor level and there is a cantilevered granite external staircase against the south-east wall with original iron railing and two iron support columns. This external staircase is shown on the 1882 plan.

The interior has not been accessed for health and safety reasons although it has been possible to see through a window and this has confirmed that the walls are plastered and some features survive in the walls such as a first floor fireplace (Oxford Archaeology 2016).

Condition:

Criteria	Value	Notes
Rarity	Moderate	
Period	Late 18th century	
Survival/Condition	Low	Condition described by HE as 'very bad'.
Fragility/Vulnerability	High	
Group Value	High	
Amenity Value	Moderate	

Management Issues:

The Barrack Store is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described as 'very bad'.

The building is roofless and in a very poor state of repair with the internal floors collapsed inside the building. There are significant cracks in the building presenting a serious risk of collapse, particularly on the gable end where the electricity supply for the barracks is located. There is significant vegetation growth inside the building including a tree as well as ivy growth to the exterior walls.

Conservation Objectives:

Remove the electricity supply from the north-east gable end. Re-roof or cap the wall tops as soon as possible to prevent further water ingress and make efforts to bring the building back into use.

Further historic research to pull together all the primary maps, plans and documents associated with the barracks and ancillary buildings would be beneficial to improve the understanding of the complex as a whole. If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: although it is in very poor condition, this building forms an important element of the well-preserved barracks complex. The list description states that: 'This is the most complete and unaltered small garrison barracks from this significant period and includes many of its ancillary buildings within a defensible site'. The buildings are of considerable historical and evidential value (Oxford Archaeology 2016).

It is part of the Grade II* Listed ancillary buildings.

Sources:

MPHH 1/624 Kent and Cornwall. Plans of barracks and fortifications 1860-1865.

MPHH 1/677 14 items extracted from WO 55/2331. Devon and Cornwall. Plans of Ordnance land 1807.

Historic England, 2018. Heritage at Risk: South West Register 2018.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 53-54
WO 78/2975 Maker Barracks, Plymouth General plan and plans and sections of buildings 1882.

Site Name: Caponier
Gazetteer Number: 8

Grid Ref: SX 43467 51449 7



Site Designations:

Grade II* Listed Building Entry Number: 1329099, Cornwall AONB (Section 11: Rame Head). Relevant extract from listed building description:

Coped rubble enclosure wall extends approx 150m along North East side, returning South West at North and South ends forming perimeter of barracks, with a small CAPONIER of 1848 to the North West corner with rifle slits to each side.

Historical Summary:

The Caponier was constructed between 1845 and 1865, during a phase of expansion to the barracks complex. An 1845 plan of existing and proposed work at Maker Heights shows proposals for two substantial caponiers at the north-west and south-east corners of the barracks perimeter wall (site 30) (Douet 1998, fig 70). In the event only a smaller version of the north-west caponier (site 8) was built in 1848 at the same time as several other buildings in this area, during a phase of expansion to the barracks complex. A plan of the barracks complex from 1882 shows that by that time the Caponier had been converted as an Ablutions Room (with a hipped roof) and the structure is also shown with this function on the military edition OS map of 1896. A plan dated 1906 shows that by this time the building had been converted again to a Store (NA old archive number: WO78/3655). The building is now roofless and does not appear to have had any use for many decades. Aerial photographs from the post war period (1947 to 1964) show the Caponier with its roof intact but an oblique aerial photograph from 1989 shows that by this date the roof had been lost. In 1989 the structure was however relatively clear of vegetation (Oxford Archaeology 2016).

Site Description:

The Caponier is a single storey, rectangular plan structure (c7 m x 5 m) and it projects from the north corner of the barracks perimeter wall to allow fire on all four sides. It has now lost its roof and both the walls and interior are heavily overgrown. The structure has thick stone walls with narrow gun loops and there is a single door opening in the south-east elevation. Internally the fragmentary remains survive of a brick structure with an upstanding water pipe which relates to the secondary use of the structure as an Ablutions Block. A modern water tank has been constructed immediately south-west of the Caponier and adjacent to the stone boundary wall enclosing the barracks yard (Oxford Archaeology 2016). The interior wall surfaces show the remains of whitewashing.

Condition:

Criteria	Value	Notes
Rarity	High	
Period	Mid-19th century	

Survival/Condition	Poor	Condition described by HE as 'poor'.
Fragility/Vulnerability	High	
Group Value	High	Very valuable – clearly shows the fortified character of the group.
Amenity Value	High	

Management Issues:

The Caponier is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described poor.

The structure is currently disused, roofless and heavily overgrown. A large crack has developed where the Caponier joins the perimeter wall.

The modern water tank has a negative visual impact on the setting of both the Caponier and the perimeter wall.

Conservation Objectives:

The structure should be cleared of vegetation and kept clear through regular maintenance. The walls should be consolidated. The removal of the adjacent water tank would be beneficial to the setting of the building.

Further historic research to pull together all the primary maps, plans and documents associated with the barracks and ancillary buildings would be beneficial to improve the understanding of the complex as a whole. If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the building is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Statement of Significance:

Considerable: the Caponier forms an important element of the very well-preserved barracks complex and helps illustrate the defence of the Maker site in the 19th century. The external form of the building, with regular gun loops clearly shows its defensive function and this character is of particular significance. The list description states that: 'This is the most complete and unaltered small garrison barracks from this significant period, and includes many of its ancillary buildings within a defensible site'. The Caponier is of considerable historical and evidential value (Oxford Archaeology 2016).

The Caponier is part of the Grade II* Listed ancillary buildings.

Sources:

Douet, J, 1998. *British Barracks 1600–1914: their architecture and role in society*, English Heritage

Historic England, 2018. Heritage at Risk: South West Register 2018.

MPHH 1/624 Kent and Cornwall. Plans of barracks and fortifications 1860-1865.

MPHH 1/677 14 items extracted from WO 55/2331. Devon and Cornwall. Plans of Ordnance land 1807.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 53-54.

WO 78/2975 Maker Barracks, Plymouth General plan and plans and sections of buildings 1882.

WO/805 Plans of the Barracks at ground floor and first floor levels and sections showing proposed alterations, 8 February 1845.

WO/805 Plan of Redoubts Nos 1–5 showing Barracks with proposed additions, 8 February 1845

Site Name: Barracks Perimeter Wall**Gazetteer Number: 30****Grid Ref: SX 43504 51416****Site Designations:**

Grade II* Listed Building Entry Number: 1329099, Cornwall AONB (Section 11: Rame Head). Relevant extract from the Listed Building description:

Coped rubble enclosure wall extends approx 150m along North East side, returning South West at North and South ends forming perimeter of barracks, with a small CAPONIER of 1848 to the North West corner with rifle slits to each side; a length of rubble wall extending approx 30m to the South West divides off the North West corner, with stack to a sma rubble 2-window WASH HOUSE in the North East corner against the perimeter wall. A later gateway has been broken through to the centre. The return of the South West end includes hipped ENGINE HOUSE, open to the South West elevation.

Historical Summary:

The Perimeter Wall was constructed c1845 replacing an earlier timber palisade, linking-up buildings and providing shelter and defence for the rear of the barracks/Redoubt 2 complex. There appears to be several phases of construction in the wall. A Caponier (Site 8) was added in the second phase or shortly after increasing the defensive capabilities of the site.

Site Description:

The site comprises a retaining wall cut into the slope of the hill to the north-east. There is an opening in the middle of the wall which was inserted during WWII to access the HAA from the barracks. Inside the yard there is a further dividing wall which extends south-west from the north-eastern part of the wall. Built against the exterior of the wall there are stands for water tanks, presumably built c1900 to serve the ablutions block behind.

Condition:

Criteria	Value	Notes
Rarity	High	
Period	Mid-19th century	
Survival/Condition	Moderate	
Fragility/Vulnerability	Moderate	
Group Value	High	
Amenity Value	Low	

Management Issues:

The Barracks Perimeter Wall is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described poor.

The vegetation on and near the Caponier is significant and removal of the adjacent modern water tank would enhance the setting of the wall.

Conservation Objectives:

Clear vegetation from the Perimeter Wall and Caponier.

Remove modern water tank.

Maintain the wall with regular checks and vegetation clearance.

Further historic research to pull together all the primary maps, plans and documents associated with the barracks and ancillary buildings would be beneficial to improve the understanding of the complex as a whole. If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the structure is fully understood and documented prior to alterations. These works would also inform future interpretation of the site.

Consider extending the scheduling of the contemporary Redoubt No 2 to include the Barracks Block, defensive Perimeter Wall and ancillary buildings.

Statement of Significance:

Considerable: the wall is an important part of the defences of Maker Heights and encloses the barracks and ancillary buildings from the extended landscape, providing a sheltered yard. It is significant in demonstrating that the barracks was a defensible site and has a high group value with the other buildings in the barracks complex, especially the Caponier.

It is a Grade II* Listed Building.

Sources:

Keystone Historic Buildings Consultants, 1999. *The Barrack Complex at Maker Heights Maker Cornwall Report of 5 August 1999.*

Historic England, 2018. Heritage at Risk: South West Register 2018.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth, Truro (CCC)*, 53-54.

Site Name: Redoubt No 3 (50th Regiment)**Gazetteer Number: 32****Grid Ref: SX 43635 51220****Site Designations:**

Redoubt No 3 is set within the Cornwall AONB (Section 11: Rame Head) and it is a Scheduled Monument, List Entry Number 1004254.

Historical Summary:

Redoubt No 3 was one of a number of structures in this area constructed during the American War of Independence due to fears of opportunist attack from France or Spain. The works in this area were a response to concern that an enemy may attempt to land somewhere to the south or west of Maker and then haul their guns up to the heights from where they could bombard the dockyard on the Hamoaze creating the need to defend all routes to Cremyll (or Mount Edgcumbe) from where the Dockyard could be very easily reached by guns. Similarly, to the other redoubts in this area No 3 was probably initially constructed as an emergency, temporary earthwork redoubt in c1779 at the height of an invasion panic. It was then remodelled into a more permanent form in the following years by Col Dixon under the guidance of the Duke of Richmond (Oxford Archaeology 2016).

Works to Redoubt No 3 were undertaken between July and November 1782 although at this stage the intention was for the redoubt to form one of five detached bastions around a large star fort on top of Maker Heights. The grand scheme for the fort would have been exorbitantly expensive and it was eventually dropped after being defeated in Parliament in 1785. Instead, the redoubts were strengthened as individual works. Gardener's map of 1784 shows it as a four-sided work enclosed by a ditch and with a small building outside the gorge. A map of 1788 shows a similar arrangement and also labels it as No 3 (50th regiment) with a complement of 10 guns. A similar layout is again shown on a map of 1811 with 10 gun embrasures (two to north and four each to front and south flanks). The 1811 map also suggests that part of the gorge ditch had been removed by quarrying. The redoubt was apparently disarmed in 1815 and it is shown as 'dismantled' on the 1896 map. It is also labelled as 'in ruins' on a plan of 1865 (MPHH 1/624). By this date the building shown on the early maps had been demolished. Ordnance Survey maps from 1907, 1914 and 1950 show the earthworks as well as a large, irregular quarried away area at the northern corner. Aerial photographs from 1947, 1948 and 1964 each show the redoubt much less obscured by vegetation than it is now and with the embrasures still visible (at least in 1947) (Oxford Archaeology 2016).

Site Description:

The redoubt is a four-sided earthwork orientated roughly south-east to north-west and it measures c45m long by 25m wide. It has a flat-bottomed moat of between 5m and 10m wide and overgrown as well as partially surviving stone-revetted ramparts to north, west and south (not visible during 2019 visit). The rear gorge ditch faces north-east and it has a stone scarp which was removed at the southern end. This removal may have been to allow access to the quarry at the north end of the structure. The interior is open and relatively featureless although it contains a 1790s memorial stone to a Grenadier soldier called James Ashton. To the south and west a large well-preserved glacis slopes away from the redoubt (Oxford Archaeology 2016).

Immediately to the NW, just outside the project area, Lidar survey in 2019 showed a regular pattern of earthworks which appear to accord with the layout and features of a military camp. It is at serious risk of loss or damage due to current ploughing operations.

Condition:

Criteria	Value	Notes
Rarity	High	
Period	Late 18th century	
Survival/Condition	Moderate	Generally satisfactory but with significant localised problems.
Fragility/Vulnerability	High	Principle vulnerability is described by HE as scrub and tree growth but ploughing of the glacis is a serious issue.
Group Value	High	

Amenity Value	High	"
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Management Issues:

Redoubt No 3 is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described as 'Generally satisfactory but with significant localised problems'; its principle vulnerability is 'scrub and tree growth', trend is 'declining'.

The unscheduled glacis is currently being ploughed which is causing significant damage to the structure. The ditches surrounding the redoubt and the tops of the walls are overgrown. To the north-east bank of the redoubt is a path which is eroding into the ground. In the redoubt itself there are a several holes in the ground which may relate to a current or past rabbit problem. Metal sheets on top of the redoubt are used for burning cleared vegetation.

Ploughing of possible military camp.

Conservation Objectives:

The scheduled area should be extended to include the glacis to prevent it from any further damage, with markers defining the scheduled area. The vegetation on the site should be kept down, either through regular maintenance or through grazing, for example by animals which could also act as an attraction to Maker Heights (e.g., donkeys or goats). There is an overgrown path around the ditch which should be reinstated and kept clear through regular maintenance.

Investigation of the possible military camp, extension of scheduling if appropriate.

Statement of Significance:

Outstanding: the Redoubt is a Scheduled Monument of clear heritage significance and this is reflected in its scheduled status. It is particularly of historical and evidential significance as a surviving part of the rare late 18th century fortifications that are associated with the American War of Independence (Oxford Archaeology 2018). The site is important as a memorial site and has significant historical and evidential value.

Sources:

Historic England, 2018. Heritage at Risk: South West Register 2018.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC) 56.

Site Name: Quarry to the north of Redoubt 3

Gazetteer Number: 33

Grid Ref: SX 43620 51270



Site Designations:

Cornwall AONB (Section 11: Rame Head). Adjoins Scheduled Monument, List Entry Number 1004254

Historical Summary:

Stone for revetting Redoubt No 4 (Grenville Battery) was acquired from a quarry behind No 3 (6113.04). A document of 1888 states: 'if stone cannot be obtained without undermining the redoubt near the quarry where you are now getting it, the view must be followed, doing as little damage to the redoubt as possible' (HER Number: 6113.09).

Site Description:

The site consists of a quarried area to the North-east of Redoubt No 3. It is largely overgrown with brambles to the south and trees to the north.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Late 19th century	
Survival/Condition	Moderate	
Fragility/Vulnerability	Low	
Group Value	High	
Amenity Value	Low	

Management Issues:

None – maintain as is.

Conservation Objectives:

The area should be maintained as a wildlife habitat.

Statement of Significance:

Moderate: the site is an important piece of evidence of the construction of the defences at Maker Heights which has left a lasting physical impact on the landscape. The site now has high value as a wildlife habitat.

Sources:

Cornwall & Scilly HER 72122, 6113.09

Site Name: Grenville Battery - Redoubt No 4 (North Gloucester)

Gazetteer Number: 34

Grid Ref: SX 43851 51126



Site Designations:

Redoubt No 4/Grenville Battery is set within the Cornwall AONB (Section 11: Rame Head). It is a Grade II Listed Building, Entry Number 1160076. The Redoubt is also a Scheduled Monument, Entry Number 1003114.

Historical Summary:

Maker Redoubt No 4 was one of a number of structures in this area constructed during the American War of Independence due to fears of opportunist attack from France or Spain. The works in this area were a response to fears that an enemy may attempt to land somewhere to the south or west of Maker and then haul their guns up to the heights from where they could bombard the dockyard on the Hamoaze creating the need to defend all routes to Cremyll (or Mount Edgcumbe) from where the Dockyard could be very easily reached by guns. Similarly, to the other redoubts in this area No 4 was probably initially constructed as an emergency, temporary earthwork redoubt in c1779 at the height of an invasion panic. It was then remodelled into a more permanent form in the following years by Col Dixon under the guidance of the Duke of Richmond. Works were undertaken between July and November 1782 although at this stage the intention was for the redoubt to form one of five detached bastions around a large star fort on top of Maker Heights. The grand scheme for the fort would have been exorbitantly expensive and it was eventually dropped after being defeated in Parliament in 1785. Instead, the redoubts were strengthened as individual works (Oxford Archaeology 2016).

Between 1787 and 1791 Redoubt No 4 was reinforced by the construction of stone revetments as well as a Barrack Block with defensive loopholes, bomb proof magazines and gun platforms. Two musketry galleries were also constructed to protect the southern flank and gorge. A map of 1788 labels it as No 4 (North Gloucester) Redoubt and this suggests it may have been constructed by the North Gloucester Militia. Maps of 1808 and 1811 show it with eight gun embrasures and in 1790 it is known to have been armed with eight guns (probably 32 pdrs). The structure had been disarmed by 1815 at the end of the Napoleonic Wars but it was re-armed in the middle years of the century. By 1849 three 10-inch guns had been approved together with three 68 pdrs and four 32 pdr guns. In 1887 it was remodelled, particularly on the southern side, and in 1899 it was renamed the Grenville Battery. The new battery, facing out to sea was first proposed in 1885 for two 38 ton 12.5 inch Rifled Muzzle Loading guns and the works were completed in 1887. A moveable armament of four 40 pdr guns was also proposed and there is known to have been a shed for moveable armament at the adjacent Maker Battery in 1901. In 1890-92 the two guns from Grenville were relocated to the new Maker Battery and by the end of the century Grenville had been altered to allow for three 4.7 inch quick-firing breech loading guns. These were mounted in 1901 and they were flanked by two look-out posts which remained in place until at least 1927. It is interesting to note that the position is not shown on the 1907 six inch OS map (Fig 16) whereas some of the other positions are shown. This appears to confirm that at this date the battery was still operational, and its military sensitivity led to it being omitted from the map. During World War Two the Barrack Block is understood to have housed Plymouth families displaced by the wartime bombing (Oxford Archaeology 2016).

Various aerial photographs from between 1947 and 1964 show the structure clearer of vegetation than it is today. Aerial photos from June 1992 show that by this date the redoubt was slowly becoming more overgrown (although less so than it is today) and it is interesting that in these images the structure seems to be in use as a store with many large items on show. This corresponds with evidence in the Plymouth Historic Defences Management Appraisal which shows that in 1995 part of the redoubt was let to Mr M Taylor as a boat store (Oxford Archaeology 2016).

Site Description:

The redoubt comprises stone revetted ditches on the land-facing flanks (north and west). There are two musketry galleries towards the south-east. One of these is a two level structure within the gorge with loopholes facing towards the drawbridge only. The front of the redoubt comprises a long, two storey brick-vaulted barrack building with gun loops along the length of the ground floor and a single loop to the first. The interior is a large open area. To the north is the barracks range, the interior retains some of its plaster on the vaulted ceilings and timber chamfered doorframes survive in several internal door openings. The westernmost room has an open hatch which leads to a subterranean magazine, the extent of which is unknown. At the centre of the barracks block lies the entrance gate, and to the east long room leading to the galleries. To the east of the

redoubt there are three c1900 gun emplacements constructed from reinforced concrete and set on the remains of a former late 19th century structure. Beneath this, accessed by a set of wide steps is an underground magazine with shaft and winch above. To the south-west a flight of steps leads up to a concrete position finding station built on top of the walls. To the west of this is a raised platform accessed by a wide ramp with a brick vaulted magazine or shelter beneath. On the west side of the redoubt are the remains of a cookhouse and latrines. In recent years latrines have been dug into the raised platform above the cookhouse.

Condition:

Criteria	Value	Notes
Rarity	High	
Period	Late 19th century	
Survival/Condition	Moderate	Generally satisfactory but with significant localised problems. Structural damage has been caused to the monument in recent years. Significant accumulation of recently deposited rubbish.
Fragility/Vulnerability	High	
Group Value	High	
Amenity Value	High	

Management Issues:

Grenville Battery is listed on Historic England's Heritage at Risk Register for 2018. Its condition is described as 'Generally satisfactory but with significant localised problems'; its principal vulnerability is 'Development requiring planning permission', trend is 'declining'.

The site at the time of the survey had a significant accumulation of recently deposited rubbish along with a temporary house built in the centre of the redoubt and several small vehicles. The waste presents an obvious hazard to anyone who enters the redoubt.

The buildings and structures have been neglected and have fallen into a poor state of repair. The gun emplacements are heavily overgrown as are the kitchen/latrines and much of the upper areas.

Several latrines have been dug into the redoubt within the last few years and a dog's grave has been dug into the bank beyond the emplacement. These have caused damage to the monument itself and introduced contaminated ground.

The ceiling of the barracks is in questionable condition and it would be beneficial for a structural survey to be undertaken across the whole site.

There are known to be several deep chambers in the redoubt including two magazines and the lower floor of the caponier, as well as a potential fourth chamber in the middle of the redoubt.

Some recent damage has been caused to masonry, for example in the long barracks room a granite window sill has been removed and broken where the window opening has been breached to create a door opening, and a portion of masonry has been dug out from the south of the wall.

The north wall of the large barracks room appears to be the subject of some structural instability – piecemeal repairs have been made to the wall, however a portion of the central section of masonry is missing.

Conservation Objectives:

It is understood that the debris is to be removed in the immediate future, during which it is recommended that an archaeologist is in attendance to carry out a watching brief to ensure that none of the historic fabric is removed from the site.

Further historic research to pull together all the primary maps, plans and documents associated with the redoubt would be beneficial to improve its understanding. If any future repairs are proposed it would be prudent to undertake a historic building record to ensure that the structure and buildings within it are fully understood and documented prior to alterations/repairs. These works would also inform future interpretation of the site.

Statement of Significance:

Outstanding: the Redoubt is of clear heritage significance and this is reflected in its scheduled (and listed) status. Its significance as a surviving part of the relatively rare later 18th century fortifications that are associated with the American War of Independence but also for its continued military function which led to several phases of reinforcement and remodelling. The prominent location of the structure facing the coast and the coastal path also enhances its significance. The redoubt is of considerable evidential, historical and aesthetic value (Oxford Archaeology 2016).

Sources:

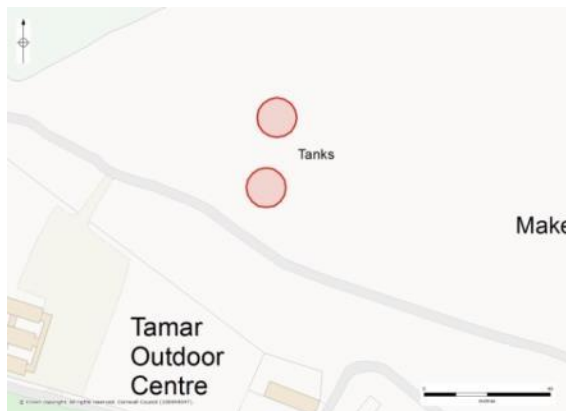
Historic England, 2018. Heritage at Risk: South West Register 2018.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford.

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 56.

Site Name: Tanks (north of Nissen Huts)

Gazetteer Number: 35a & 35b Grid Ref: SX 43434 51519, SX 43438 51541

**Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

The tanks, simply labelled 'tanks' on the OS map, are first shown on aerial photos dated 1946. It is likely that they were constructed during WWII. It is uncertain what the tanks were used to store (presumably either fuel or water).

Site Description:

The Tanks are both circular, concrete lined pits with a surrounding concrete retaining wall which was cast between corrugated iron sheeting. The bases of both tanks are sunk approximately 1m below the surrounding ground surface, although they may originally have been at ground level since large quantities of soil were deposited in this area in the late 20th or early 21st century (RCT, pers comm).

Condition of southern tank (35a):

Criteria	Value	Notes
Rarity	Low	
Period	WWII	
Survival/Condition	Moderate	
Fragility/Vulnerability	Moderate	
Group Value	Moderate	
Amenity Value	Low	

Condition of northern tank (35b):

Criteria	Value	Notes
Rarity	Low	
Period	WWII	
Survival/Condition	Moderate	Significant vegetation growth
Fragility/Vulnerability	Moderate	
Group Value	Moderate	
Amenity Value	Low	

Management Issues:

The southern tank (35a) is reasonably clear of vegetation and has been fenced off, however the northern tank (35b) is overgrown with a tree growing from inside the tank. The northern tank is also currently accessible by a gap in the undergrowth and the remains of wire fencing can be seen. Soil has been dumped around and against the tanks altering the landscape of the area.

Conservation Objectives:

It would be beneficial from both a heritage and safety perspective if the northern tank was cleared of internal vegetation to prevent further damage, and to erect a fence to prevent people from entering the tank. The southern tank should be maintained clear of vegetation with the fence in place.

The vertical sided tanks may offer an entrapment risk to animals such as hedgehogs and a means of exit, for example a small wooden ramp could be erected to allow them to escape.

Statement of Significance:

Moderate: the tanks are significant as evidence of the 20th century military complex at Maker Heights.

Sources:

Cornwall & Scilly HER 72118

Site Name: Cut or Bank Features (around HAA)**Gazetteer Number: 37a, 37b & 37c****Grid Ref: SX 43463 51484, SX 43599 51522, SX 43665 5141****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

There are a series of 'cut' features which were identified from 1940s aerial photographs as a part of the National Mapping Programme.

Site Description:

The south-east and west features (37a & 37c) were not visible at ground level however the northern feature was visible as a small mound, which may represent the remains of a building associated with the GL mat (Site 41).

Condition for sites 37a-37c:

Criteria	Value	Notes
Rarity	Low	
Period	Uncertain	
Survival/Condition	Low	
Fragility/Vulnerability	Low	
Group Value	Low	
Amenity Value	Low	

Management Issues:

The site and surrounding area were heavily mown impacting the wild habitat.

Conservation Objectives:

To maintain the sites as wild habitat/camping areas and reduce mown area.

Statement of Significance:

Uncertain: further investigation of the sites would contribute towards the overall understanding of Maker Heights.

Sources:

Cornwall and Isles of Scilly National Mapping Programme.

Site Name: Quarry (to north of site)**Gazetteer Number: 38****Grid Ref: SX 43501 51677****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

A quarry to the north of the study area is visible on the 1894 OS 25 Inch Map. It is probable that this quarry was used for the construction of the defences at maker.

Site Description:

The site was not accessible during the visit due to dense vegetation its location adjoining a busy road.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Late 19th century	
Survival/Condition	Unknown	
Fragility/Vulnerability	Unknown	
Group Value	Moderate	
Amenity Value	Low	

Management Issues:

Further investigation would be required to ascertain any management issues.

Conservation Objectives:

From the road the site appeared to be heavily overgrown, and this state should be maintained.

Statement of Significance:

Moderate: the site is an important piece of evidence of the construction of the defences at Maker Heights which has left a lasting physical impact on the landscape. The site now has high value as a wildlife habitat.

Sources:

<https://maps.nls.uk/view/105995098>

Site Name: Possible Field System**Gazetteer Number: 40****Grid Ref: SX 43524 51501****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

The HER records the remains of possible early medieval field systems (MCO44860 and MCO44843) respectively to the north-west and north-east of the anti-aircraft battery (centred at SX 4352 5150 and SX 4378 5157). These are visible on 1946 RAF air photos and were plotted by the National Mapping Programme (NMP).

Site Description:

The system was visible as a bank, c2m wide and c20cm high, to the north running north-west –south-east, however the extent of the banks appears to extend throughout the area north of the HAA.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Medieval	
Survival/Condition	Moderate	
Fragility/Vulnerability	Moderate	
Group Value	Low	
Amenity Value	Low	

Management Issues:

The site and surrounding area were heavily mown impacting the wild habitat.

Conservation Objectives:

To maintain the sites as wild habitat/camping areas.

The potential in this area for the survival of archaeological remains below-ground is high. Any future groundworks should be subjected to a programme of archaeological work. The potential for geophysical investigation should be considered.

Statement of Significance:

Moderate: the site represents tangible evidence of early occupation at Maker Heights. It also represents an example of non-military use of Maker Heights.

Sources: Cornwall & Scilly HER MCO72120

Site Name: Gun Laying Radar Mat**Gazetteer Number: 41****Grid Ref: SX 43558 51570****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

A Gun Laying Radar Mat (GL mat) consisted of three principal components; firstly a horizontal wire mat or earthwork octagonal in plan, 65 yards in radius (c110 metres in diameter) which was laid directly on the ground or suspended on 645 vertical iron posts, secondly, a radar platform in the centre formed of four mortar brick piers onto which the receiver was raised and thirdly, an access platform leading from the outside of the mat to the radar platform in the middle (Dobinson 1996, 135).

Site Description:

The site is visible on aerial photographs taken in 1946 as an octagonal earthwork to the north-west of the HAA Battery (Site 44). There is likely to have been a transmitter and generator next to the GL mat and these may be represented by Sites 37a & 37b.

Condition:

Criteria	Value	Notes
Rarity	Moderate	
Period	WWII	
Survival/Condition	Low	
Fragility/Vulnerability	Low	
Group Value	High	
Amenity Value	Low	

Management Issues:

The area is currently used for camping or left as wild habitat which has little impact on the heritage value of the site.

Conservation Objectives:

Avoid building any permanent structures on the site.

Consider the GL mat in the scheduling/listing of the Plymouth 9 HAA Battery.

The potential in this area for the survival of archaeological remains below-ground is high. Any future groundworks should be subjected to a programme of archaeological work.

Statement of Significance:

Considerable: the GL mat adds to the understanding of the HAA Battery and to the overall value of the group of defence structures from different periods at Maker and it helps illustrate the continued military importance of Maker Heights during WWII.

Sources:

Dobinson, C, S, 1996. *Twentieth Century Fortifications in England Volume I.1: Text. Anti-Aircraft Artillery: England's Air Defence Gun sites 1914-46*, CBA (York).

Site Name: Prehistoric Occupation Site

Gazetteer Number: 43

Grid Ref: SX 43598 51499



Site Designations:

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

A flint scatter recovered from near the 'old fort' on Maker Heights in the 19th century comprised 'almost all the recognised forms of smaller implements such as flints, scrapers, knives, sling bullets etc., with cores and many fractured pieces (Brent 1886, 59). The site is recorded in the Cornwall HER as a 'prehistoric occupation site' (MCO6115) because the range of material is said to indicate a flint working site and Brent considered that 'in all probability there was once a village' here (*ibid*). The flints are in Plymouth Museum and have been described as Mesolithic by Berridge and Roberts (1986). The site is located immediately to the north of the anti-aircraft battery, centred at SX 436 515 (MCO 23192).

Site Description:

No visible evidence survives at ground level of the occupation site.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Prehistoric (Mesolithic)	
Survival/Condition	Unknown	
Fragility/Vulnerability	Low	
Group Value	Moderate	
Amenity Value	Low	

Management Issues:

The site and surrounding area were heavily mown at the time of the survey.

Conservation Objectives:

To maintain the sites as wild habitat/camping areas.

The potential in this area for the survival of archaeological remains below-ground is high. Any future groundworks should be subjected to a programme of archaeological work. The potential for geophysical investigation should be considered.

Statement of Significance:

Uncertain, potentially considerable: any remains have evidential potential to add to knowledge of key phases of the history of this area. The site represents evidence of prolonged occupation at Maker.

Sources:

Berridge, P, and Roberts, A, 1986. The Mesolithic period in Cornwall, *Cornish Archaeol*, **25**, 7–34.

Brent, F, 1886. On the occurrence of flint flakes and small stone implements in Cornwall, *Jnl Roy Inst Cornwall*, **9**, 58–61.

Cornwall & Scilly HER 6115, 6169

Site Name: Plymouth 9 Heavy Anti-Aircraft Battery

Gazetteer Number: 44a – 44h

Grid Ref: SX 43608 51461



Site Designations:

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

The battery was constructed in the early stages of (or possibly just before) WWII to help defend against high-level bombing. Pye and Woodward (1996) report that in 1940 it appears to have been armed with four 3.7in HAA guns and that by the 1941 blitz it was part of a ring of HAA positions around Plymouth manned by an HAA regiment. Pye and Woodward also report that the position at Maker was later enlarged to six guns, similarly to other batteries. The barracks was probably used to provide accommodation for the battery. In the 1950s it became apparent that a future attack on targets such as Plymouth would be by atomic bombs delivered by rocket and therefore conventional anti-aircraft positions such as that at Maker were obsolete. Many of the HAA positions were built over, but that at Maker survived relatively intact (Oxford Archaeology 2016).

Aerial photographs from 1947 and 1948 show the group of batteries with their original form. The four early positions each have a horseshoe shaped form with protective earth banking wrapping around them. The two later square plan positions also have protective earth banks, and a central building (the command post) has a blast wall around it. Further aerial photographs, up to those from 1964, show the plan of the group little changed but later images, from 1989 and 1992 show that by this time the protective banks had largely been removed and the blast wall around the Command Post had also been removed (Oxford Archaeology 2016).

Site Description:

The central command post (44a), which is partly sunken and terraced into the slope is constructed from brick and concrete and has a large room to the rear which Pye and Woodward report would have been the plotting room. There are various rooms to the sides (Oxford Archaeology 2016) and a triangular instrument platform at the front. Cable channels in the floor run from the platform and into the rear room of the command post. The cable channels run from the platform to a set of holes in the front wall which are splayed out towards each of the emplacements. The interior rooms have been stripped of their fittings, with obvious signs of damp/water ingress and small amounts of vegetation. The building contains replacement modern windows.

The HAA battery is located on a raised plateau to the north of the barracks complex. It comprises a central, rectangular plan command post with six gun positions laid out in a south-east facing horseshoe shape around it. There are two distinct forms of gun emplacement: four of the positions are close to being circular (13 sided) and are original while the other two have rectangular plans and these are likely to be secondary additions to the battery. The four main gun emplacements are constructed from concrete block with reinforced concrete lintels to openings. They all contain the remains of central bolt fixings for the guns. The rectangular plan emplacements are located to north and west and may have been constructed to add flanking fire. The near-circular emplacements have concrete block walls, earth mound protection and partly whitewashed internal walls. There are blast walls at the entrance to each of these structures and ammunition lockers built into the walls around each. The mounting blocks are oval in shape and there is a cable duct which leads to the centre of each from the entrance. There are traces of holes for curtains over the ammunition stores in some of the emplacements. The rectangular emplacements which are likely to be secondary additions have mounting bolts forming a circle and these are probably for 4.5 in guns (Oxford Archaeology 2016). Emplacements 44d and 44e have intact blast walls. The enclosure or platform to the north of the site (44h) is not visible due to vegetation. This may be the site of the magazine that served the emplacements (Brown et al 1996, 52).

The HAA would have been directly linked to the GL mat (Site 42). It is possible that underground wires/wiring ducts survive beneath the ground between the command post and emplacements.

South of the HAA Battery there are faint traces of part of a possible military camp, where similar marks to those NW of Redoubt 3 were also shown by Lidar survey.

Condition for sites 44a-44h:

Criteria	Value	Notes
Rarity	Moderate	
Period	WWII	
Survival/Condition	High	
Fragility/Vulnerability	Moderate	
Group Value	High	
Amenity Value	Low	

Management Issues:

The site overall presents numerous trip hazards and signs should be erected at the site to warn visitors. As the site is currently used as a fire pit area it suggests that the area will be in use at night which presents a further risk to campers in the dark.

The interior of the central command post (44a) is damp and there is a small amount of vegetation growth. The two door openings at the ends of platform area are generally unsuitable for access due to the height of the roof. The channels in the floor present a trip hazard. The exterior is also suffering from vegetation growth.

Emplacement 44b has vegetation growing on the walls, a wall at the entrance has collapsed and the ceiling is damaged where the iron reinforcement has decayed, and the

concrete blown. 44c suffers from ivy growth at the entrance however the overall condition is good. 44d has some damage to the concrete roof and some invasive vegetation. 44e is in the best condition but does have some vegetation growth. 44f is in poor condition and has significant ivy and bramble growth. 44g is generally clear from vegetation however shrub growth on the tops of the walls is causing damage and there are fly-tipped items. 44g is currently closed to the public. The enclosure or platform to the north of the site (44h) is not visible due to dense vegetation.

Conservation Objectives:

Consolidate the command post and prevent further damage from damp and vegetation growth, remove ivy growth from the exterior.

Remove vegetation from gun emplacements.

Remove fly-tipped waste from 44g and open to public.

Schedule the site and consider potential underground wiring when the designation is written.

The interior of the command post could be used as an exhibition space to inform visitors about the site.

Conduct further research on the way the site worked, the calibres of the guns in 44f and 44g and the possibility of the magazine (44h).

Clear vegetation from 44h.

The potential in this area for the survival of archaeological remains below-ground is high. Any future groundworks should be subjected to a programme of archaeological work.

Statement of Significance:

Outstanding: the anti-aircraft battery is very well-preserved and is a rare survival of this type of structure. It adds to the overall value of the group of defence structures from different periods at Maker and it helps illustrate the continued military importance of Maker Heights in WWII. The battery is of considerable evidential and historical associative value (Oxford Archaeology 2016). The arrangement of the battery with six guns in an arc is unusual and adds to significance of the site. As a rare surviving example of Britain's anti-aircraft defences during WWII, the HAA battery at Maker Heights is of outstanding significance.

Sources:

Brown *et al*, 1996. *20th Century Defences in Britain*. CBA: York.

Cornwall & Scilly HER 72121.

Oxford Archaeology, 2016. *Maker Heights Cornwall Conservation Statement*, Oxford

Pye, A, and Woodward, F, 1996. *The Historic Defences of Plymouth*, Truro (CCC), 54-56

Site Name: Possible Round

Gazetteer Number: 45

Grid Ref: SX 43599 51559



Site Designations:

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

A possible round (Iron Age or Romano-British settlement site) is indicated at this location as a Historic Environment Record (HER No: 6116). A semi-circular bank was seen when this area was ploughed. It is possible, however, that this is the site of the windmill (site 60) referred to on the 18th century map (CRO ME/2402).

Site Description:

There are no visible remains of the round at surface level.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Prehistoric (Iron Age)	
Survival/Condition	Unknown	
Fragility/Vulnerability	Low	
Group Value	Low	
Amenity Value	Low	

Management Issues:

The site and surrounding area were heavily mown impacting the wild habitat.

Conservation Objectives:

To maintain the sites as wild habitat/camping areas.

The potential in this area for the survival of archaeological remains below-ground is high. Any future groundworks should be subjected to a programme of archaeological work. The potential for geophysical investigation should be considered.

Statement of Significance:

Uncertain, potentially considerable: the site represents evidence of prolonged occupation at Maker.

Sources:

Cornwall & Scilly HER MCO6116.

CRO ME/2402 Rough Draft of a Survey of the Manors of Maker and Rame, 1729.

Site Name: Defensive Earthworks

Gazetteer Number: 46

Grid Ref: SX 43704 51432



Site Designations:

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

A long defensive earthwork is visible on the 1946 aerial photograph. It appears to show a fort-like structure to the east which deviates into a simple bank at the north of the site. The eastern part of the site was plotted as a part of the National Mapping Programme. The date of the earthworks is uncertain. It is possibly what was called 'The Old Fort' in early references.

Site Description:

The bank is visible to the east where it forms the boundary between two fields.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Unknown	
Survival/Condition	Moderate	
Fragility/Vulnerability	Low	
Group Value	Moderate	
Amenity Value	Low	

Management Issues:

None.

Conservation Objectives:

The bank is currently set as a wild habitat and this use should continue.

The potential in this area for the survival of archaeological remains below-ground is high. Any future groundworks should be subjected to a programme of archaeological work.

Statement of Significance:

Moderate: the site is important as a part of the defences of Maker Heights.

Sources:

RAF 1946-9 Aerial Photo Cover © Cornwall Council, NMP.

Site Name: Historic Paths and Tracks**Gazetteer Number: 58****Grid Ref: SX 43526 51355****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

There are a number of historic trackways leading across Maker Heights, many of which remain in use.

Site Description:

The historic trackways include part of the South West Coast Path which borders the south-eastern part of the project area next to Grenville Battery. This military road survives with a low stone-faced bank on the seaward side and a low retaining wall on the inland side. The road itself is approximately 3m wide and its crushed stone surface survives. To the east of this road is a large semi-circular platform which may have been created as a firing platform or lookout. Historic maps show that there were a series of trackways which connected the Barracks to Redoubt No 5, as well as Redoubt No 4 to No 5. Some of the historic paths are marked on modern maps however a large number of the routes have since disappeared. See separate site entries 58a, 58b and 58c for the Entrance Road, Earl's Drive and Soldier's Path.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Multi-period	
Survival/Condition	Good	
Fragility/Vulnerability	Low	
Group Value	High	
Amenity Value	High	The paths are used by walkers.

Management Issues:

Some paths are overgrown preventing their use.

The South West Coast Path Association is responsible for managing the section of path by Grenville Battery.

Cornwall Council is responsible for managing the Public Right of Way and any issues should be reported to them.

Conservation Objectives:

Any overgrown paths should be cleared to allow people to make use of them.

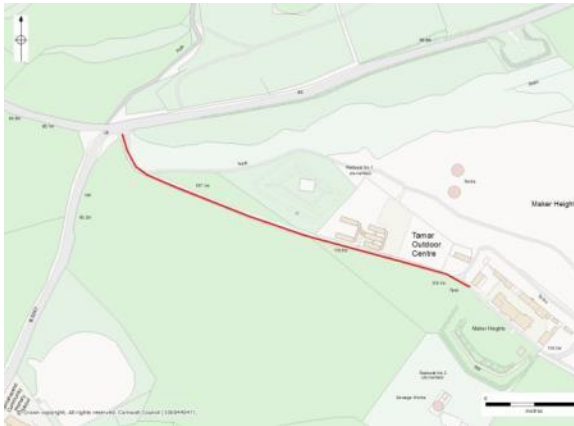
Statement of Significance:

Considerable: the trackways form an important part of Maker Heights' military history. Many of them are still regularly used by locals and visitors today when enjoying the Rame Head section of the AONB. As such they have considerable communal and historical value.

Sources:

OS 25 Inch Maps, available at: <https://maps.nls.uk/view/105995098>, <https://maps.nls.uk/view/105995101>, <https://maps.nls.uk/view/105995104>

<https://www.cornwall.gov.uk/environment-and-planning/countryside/public-rights-of-way/>

Site Name: Entrance Road**Gazetteer Number: 58a****Grid Ref: SX 43526 51355****Site Designations:**

Cornwall AONB (Section 11: Rame Head).

Historical Summary:

The entrance road is visible on maps from the 1860s onwards (maps.nls.uk). It was almost certainly used as a principal entrance road to the barracks, and likely became more heavily used during World War Two when the Nissen huts were built next to it. The road is maintained as the principal entrance to the site.

Site Description:

The road is in a poor state of repair and appears to be constructed from crushed stone hard core and has some concrete, gravel/tarmac additions. It leads from the main road junction on the Millbrook side of the site to the west, up to the barracks block and beyond.

Condition:

Criteria	Value	Notes
Rarity	Low	
Period	Mid-19th century	
Survival/Condition	Moderate	
Fragility/Vulnerability	Moderate	
Group Value	High	
Amenity Value	High	The paths are used by walkers.

Management Issues:

The road is very close to the scheduled monument, Redoubt No1, and will be built on top of any glacis associated with the redoubt.

As the road continues onto Redoubt No 2 and past the Grade II* listed buildings, it would not be ideal for heavy traffic use.

The condition of the road surface is poor and there is a danger of it encroaching onto Redoubt No 1.

Conservation Objectives:

Re-lay the road surface to create suitable access for vehicles attending the campsite and café.

Prevent any encroachment onto Redoubt No 1.

Statement of Significance:

Considerable: the road forms an important part of Maker Heights' military history and contributes to the overall historic trackways at the site. The road has been used as access to Maker for at least 150 years and continues to do so giving it considerable evidential and communal value.

Sources:

<https://maps.nls.uk/view/102352979>

Site Name: Sewerage Works

Gazetteer Number: 59

Grid Ref: SX 43418 51301



Site Designations:

Cornwall AONB (Section 11: Rame Head)

Historical Summary:

A sewerage works is marked on modern maps and is visible on the 1946 aerial photographs (© Cornwall Council). It is not marked on the c1937-47 OS 1:25000 (maps.nls.uk) which suggests that it was constructed after this date, probably during WWII.

Site Description:

The site appears to consist of a cylindrical tank with an adjacent small rectangular building.

Condition:

Criteria	Value	Notes
Rarity	Moderate	
Period	WWII	
Survival/Condition	Unknown	The site was not accessed.
Fragility/Vulnerability	Moderate	
Group Value	Moderate	
Amenity Value	High	The works are still in use so provide a fundamental amenity to Maker Heights.

Management Issues:

Repairs are required to update the sewerage works.

Conservation Objectives:

Repair and retain the structure as far as possible.

Statement of Significance:

Access Proposals at Maker Heights, Cornwall, Statement, CJ, Rev 0.02, 20/04/2022

The sewerage works form an important part of the wider barracks complex and an essential part of the barracks' sanitary system. The buildings are of moderate historical and evidential value.

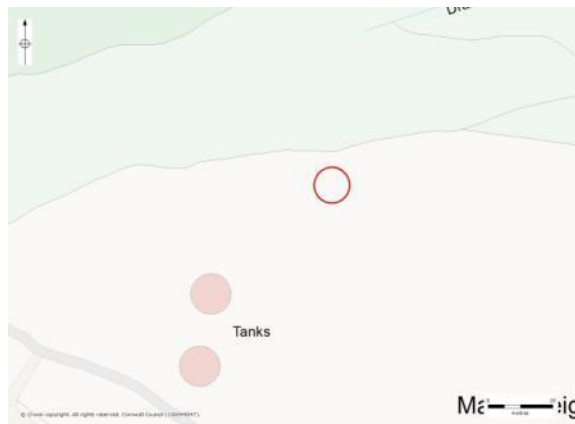
Sources:

Aerial photographs © Cornwall Council
<https://maps.nls.uk/view/95753022>

Site Name: Site of Windmill

Gazetteer Number: 60

Grid Ref: SX 43475 51575



Site Designations:

Cornwall AONB (Section 11: Rame Head)

Historical Summary:

On a map dated 1730 (recorded as 1729 in the records office) two fields to the north-east of the site are named as 'Little Windmill' and 'Great Windmill'. This indicates the existence of a windmill in close proximity during the 18th century. The windmill is recorded in the HER, MCO23218, however the location given in the record is incorrect. It is possible that the site of the windmill is actually what has been interpreted in the HER as the site of a possible prehistoric round (site 45).

Site Description:

The site is no longer visible, and its exact location is not known.

Condition:

Criteria	Value	Notes
Rarity	Moderate	
Period	Post-medieval	
Survival/Condition	Unknown	The site is not visible on the surface.
Fragility/Vulnerability	Low	
Group Value	Moderate	
Amenity Value	Low	

Management Issues:

None.

Conservation Objectives:

None.

Statement of Significance:

Access Proposals at Maker Heights, Cornwall, Statement, CJ, Rev 0.02, 20/04/2022

Uncertain, potentially considerable: the site represents evidence of post-medieval occupation at Maker.

Sources:

CRO ME/2402 Rough Draft of a Survey of the Manors of Maker and Rame, 1729.

HER MCO23218.

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