Caerhays Castle, Cornwall: Investigation and Conservation of the Battery Arch, Kennels and Walled Garden

Cornwall Archaeological Unit

Report No: 2016R065

Caerhays Castle, Cornwall

Investigation and Conservation of the Battery Arch, Kennels and Walled Garden

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The CAU Project Manager was Jo Sturgess.

The author also thanks Claire Newman (pdp Green Consulting Limited) for liaison throughout the project. Shaun Rothwell and his team (Rothwell Historic Restoration) provided careful assistance during the archaeological watching brief.

The views and recommendations expressed in this report are those of the author, Cornwall Archaeological Unit and pdp Green Consulting Ltd, and are presented in good faith on the basis of professional judgement and on information currently available.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

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Cover illustrations

1. Battery Arch before vegetation clearance and masonry repairs (top).
2. A view of the eastern end of the walled garden, with the kennels below, before vegetation removal and renovation (bottom).

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Abbreviations

CAU	Cornwall Archaeological Unit
HER	Cornwall and the Isles of Scilly Historic Environment Record
HLS	Higher Level Stewardship
MCO	Monument number in Cornwall HER
NE	Natural England
NGR	National Grid Reference
OS	Ordnance Survey

1 Summary

Preliminary assessment and subsequent conservation works to structures at Caerhays Castle, Cornwall were funded by Natural England's Higher Level Stewardship Scheme. These structures comprised the enigmatic and ruinous Battery Arch, as well as a complex of former hunt kennels and the enclosure of a walled garden.

Battery Arch is a folly which provided a scenic viewpoint over Porthluney Cove, as well as being a decorative feature within the ornamental park associated with the early 19th century Caerhays Castle. Battery Arch shares some architectural details with the Castle and is therefore likely to be the work of architect John Nash. A scenic promenade route (Battery Walk) included the Arch and a clifftop path to Watch House Point. Archaeological investigation works revealed the site of the original turret stairs to the viewing platform above the arch, and also uncovered the slate flagstone floor of the platform itself.

The kennels and garden are hidden away in a valley to the north of the Castle. The walled garden was developed from an orchard in the 1840s and was later equipped with greenhouses and potting sheds. The northern walls of the enclosure are of cob with an interior facing of brickwork. These cob elements are in poor condition; conservation works were concentrated on their slate copings (to slow down the rate of decay and repair of collapsed elements of the masonry walls). The greenhouses were outside the scope of the project except where ventilators through the wall could be conserved.

The kennels site comprises three kennels, their pens/yards, plus a feed house containing a boiler. Historic map evidence suggests these were established in the 1860s and that they had already been extended by 1879. Conservation works included clearing and consolidation of floors, rebuilding of collapsed wall faces and repair of the copings on the yard walls. As the gables and wall-plate of the original building survive well it was decided to re-roof this part of the site, to serve as a shelter for visitors to this area of the Castle's gardens. Re-roofing was not included in the NE funded works, but was separately funded by the Caerhays Estate.

The dates of disuse of the walled garden and kennels are not currently known but both were abandoned in the mid-20th century.

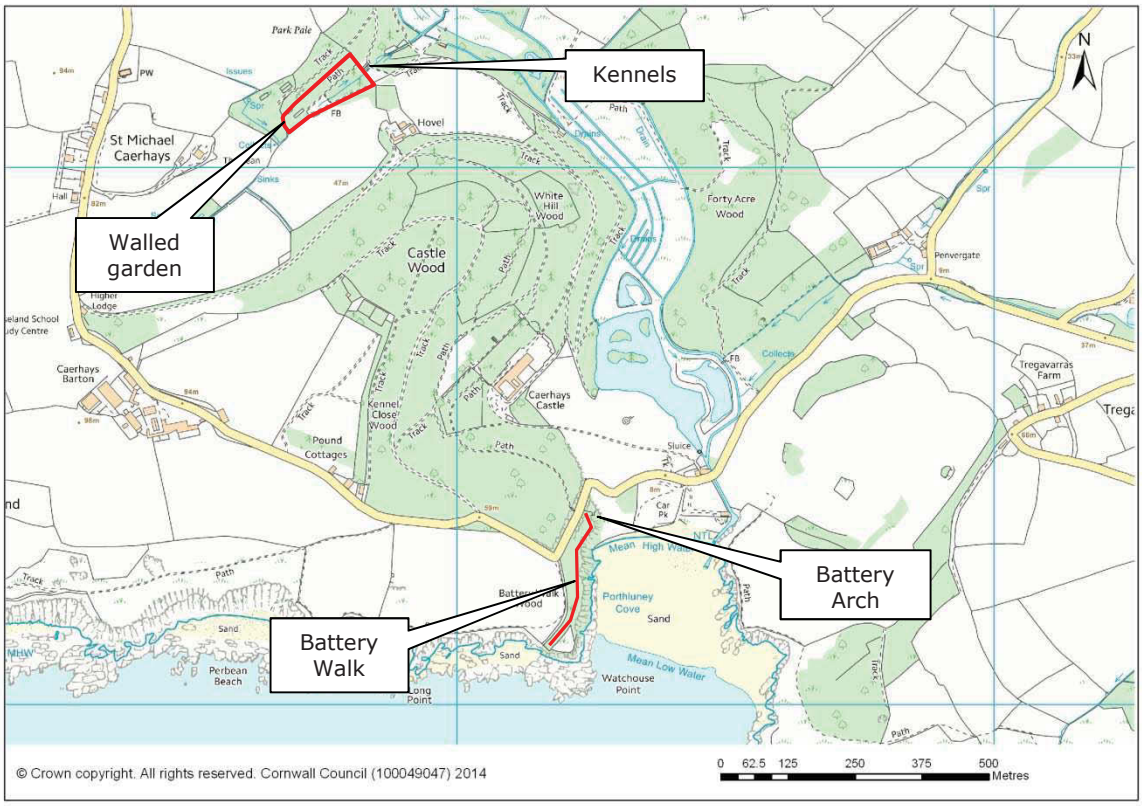

Figure 1 Location map

2 Introduction

The Caerhays Estate (based at Caerhays Castle, St Michael Caerhays Parish on the south Cornish coast) has undertaken conservation of particular features within its parkland landscape. These include the Battery Arch (overlooking Porthluney Cove), plus the disused hunting kennels complex and adjoining walled garden enclosure within the gardens and woods north of Caerhays Castle (see Fig 1 for locations).

A feasibility study, management proposals and archaeological assessment were carried out within a Higher Level Stewardship Scheme funded by Natural England (NE). A brief for the proposed works was issued by NE to potential conservation contractors in April 2014. Following receipt of tenders, pdp Green Consulting Limited was awarded the contract. Cornwall Archaeological Unit was then contracted by pdp Green Consulting Limited to undertake the historic building records and archaeological recording.

Following the usual practice for HLS funded schemes, the project was carried out in two stages, Stage One (in 2014-15) being background research, surveys and tenders for work in Stage Two. Stage Two (in 2015-16) comprised the practical conservation works and related presentation of the features. This report presents the historical and archaeological results from Stages 1 and 2.

3 Working methods

3.1 Desk-based research

Detailed historical research of the Caerhays Estate was previously carried out by Nicholas Pearson Associates as part of a Heritage Management and Parkland Plan (2011). Results of this study formed a background to the present project and no further desk-based research was required in the NE brief. Historical information from the 2011 study has been reproduced in this report (see Section 6.1).

3.2 Fieldwork: Stage 1

Stage 1 comprised site visits to undertake assessment of the structures, to inform the conservation works in Stage 2.

Measured surveys of the subject structures were undertaken by Ben Opie of 3D Land Surveys Ltd. The output scaled drawings formed the basis for archaeological recording and conservation proposals.

A 'walkover' survey was undertaken by the author to record sites in advance of works, to provide a record of the structures as existing, and to provide guidance to the conservation proposals. Measured information and detail was added on site to copies of the survey drawings. Photography was also used as a primary method of site recording.

The initial scope of the works included proposed clearance works along the course of Battery Walk. Prioritisation of the project budget and practical considerations unfortunately determined that this area was eventually excluded from Stage 2.

3.3 Fieldwork: Stage 2

An archaeological watching brief, comprising several site visits by the author, was undertaken to record debris clearance and other groundworks, as well as structures during conservation works in Stage 2.

At the close of Stage 2 all site records were compiled and processed for long term storage. This report summarises the findings.

3.4 Fieldwork methodology

Site recording methods included the following:

- Site drawings (plans, sections, locations of finds) were made by pencil (4H) on drafting film.

- Plans and sections were made of significant features, at an appropriate scale (1:20).
- Excavated areas were accurately located on site location plans at an appropriate scale.
- Archaeological contexts were described to a standard format linked to a continuous numbering sequence.
- Excavation areas (as well as excavated spoil) were carefully inspected for finds.

Both CAU and the author follow Historic England guidance on digital image capture and file storage (2016). Methodology for the photography is set out as follows:

- Photographic recording was undertaken with a digital SLR camera.
- Photographs of details were taken with lenses of appropriate focal length.
- A tripod was used to take advantage of natural light and slower exposures.
- Difficulties of back-lighting were balanced by the use of flash.
- A metric scale was included in all views, except where health and safety considerations made this impractical.

4 Location and setting

Caerhays Estate is centred inland of Veryan Bay on the south Cornish coast, about two miles west of Dodman Point. The core of the estate (including Caerhays Castle itself, its parkland, gardens and woods) are situated along a relatively deep but wide bottomed valley which opens out at its southern end to become the sandy inlet of Porthluney Cove. The castle, with its gardens and managed woods behind, forms a picturesque backdrop to the cove.

Battery Arch (NGR SW 9720 4135) stands on the western cliffs of Porthluney Cove, its site providing a dramatic outlook over the beach and sea, with part of the estate's parkland and fields framing the view beyond. Older OS maps, slightly misinterpreting its purpose, label it as a 'Tower' (Figs 11 and 12).

Battery Walk once formed an extended picturesque walk through the woods along the western edge of the cove to Watch house Point.

The estate's former hunting kennels and walled garden (NGR SW 9666 4205 to SW 9680 4220) lie to the north of the castle within a small wooded side valley. A small stream runs north-westerly through the base of the garden which once provided water to the kennels.

5 Designations

5.1 National

Caerhays is protected as a Registered Park and Garden, Grade II*. The Castle is a Grade One Listed Building and the entrance lodge is Grade II. The coastal slopes and cliffs at Caerhays and Portholland are part of a Site of Special Scientific Interest (SSSI) (Figs 2 and 3).

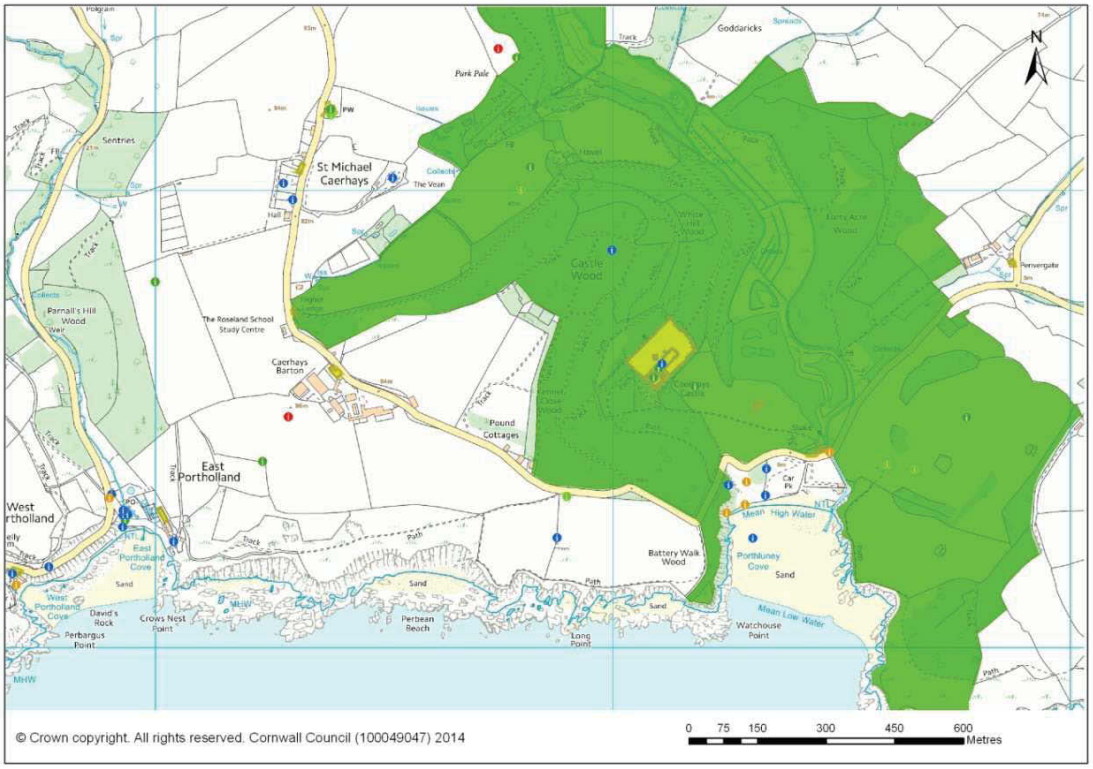

Figure 2 Registered Park and Garden (in green) and Listed Buildings (yellow). Coloured spots represent archaeological assets recorded in the HER.

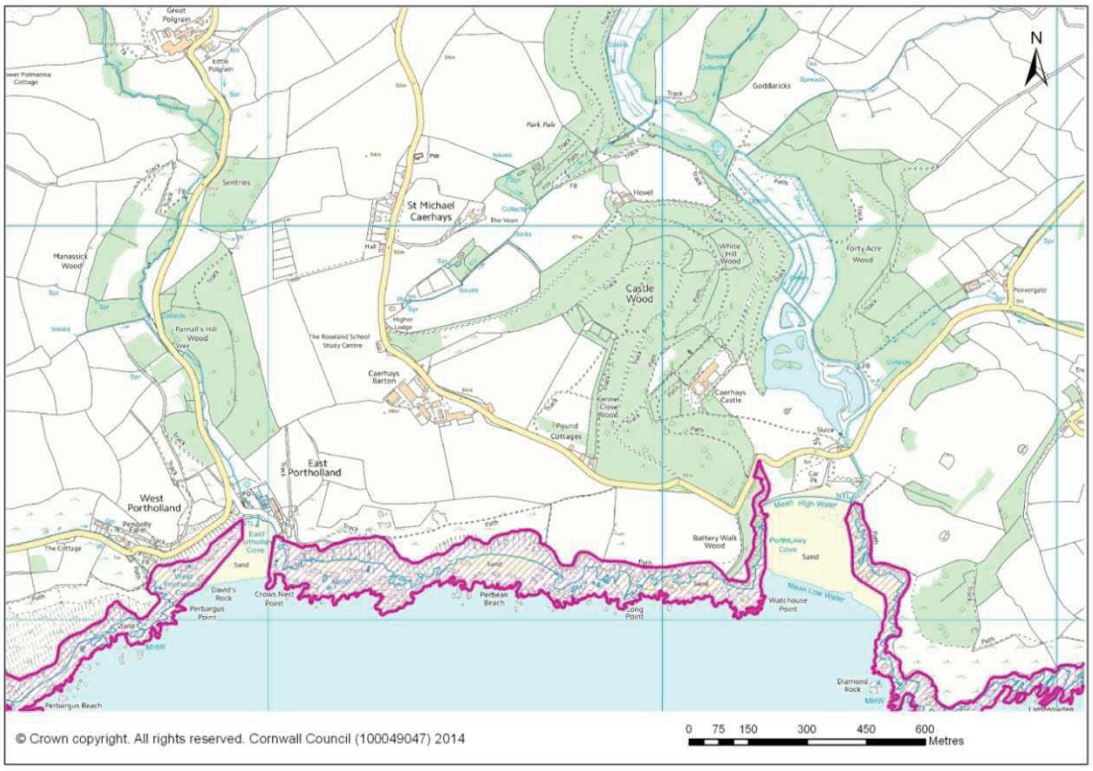

Figure 3 Extent of SSSI.

5.2 Regional/county

The whole of St Michael Caerhays parish is within an Area of Outstanding Natural Beauty and designated Heritage Coast. The project area lies within and Area of Great Scientific Value and is also part of a County Wildlife site (Figs, 4, 5 ,6 and 7).

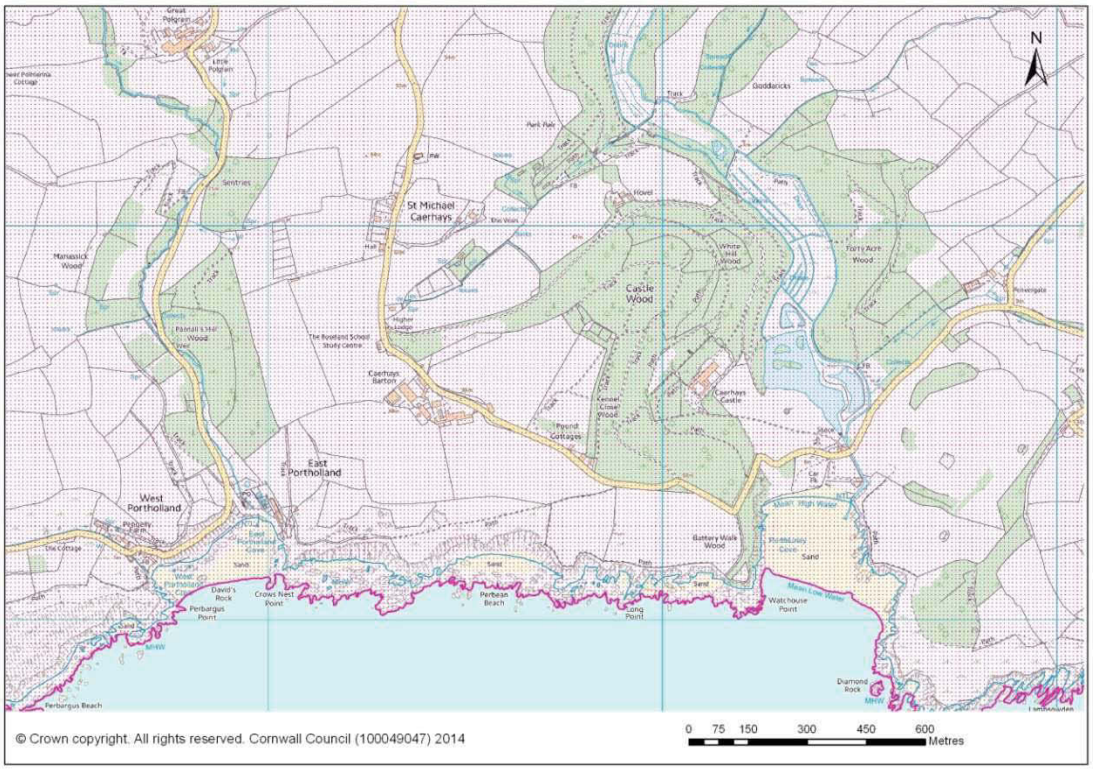

Figure 4 AONB area.

Figure 5 Area of Great Scientific Value.

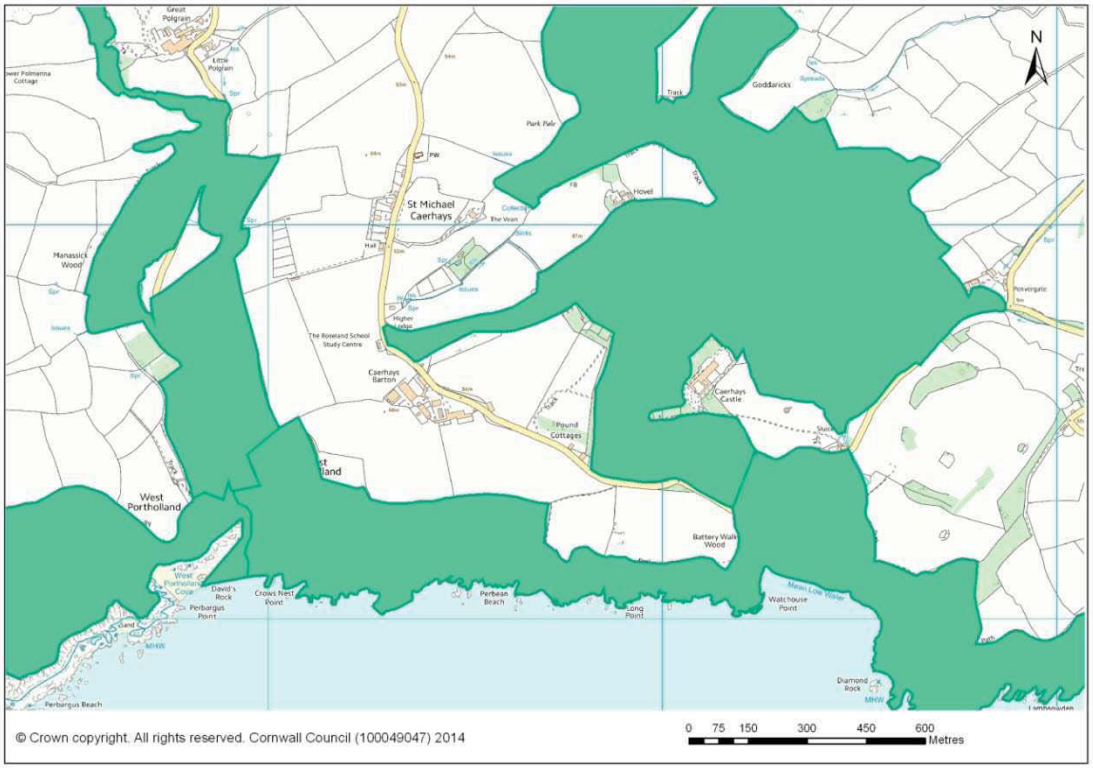

Figure 6 County Wildlife Sites.

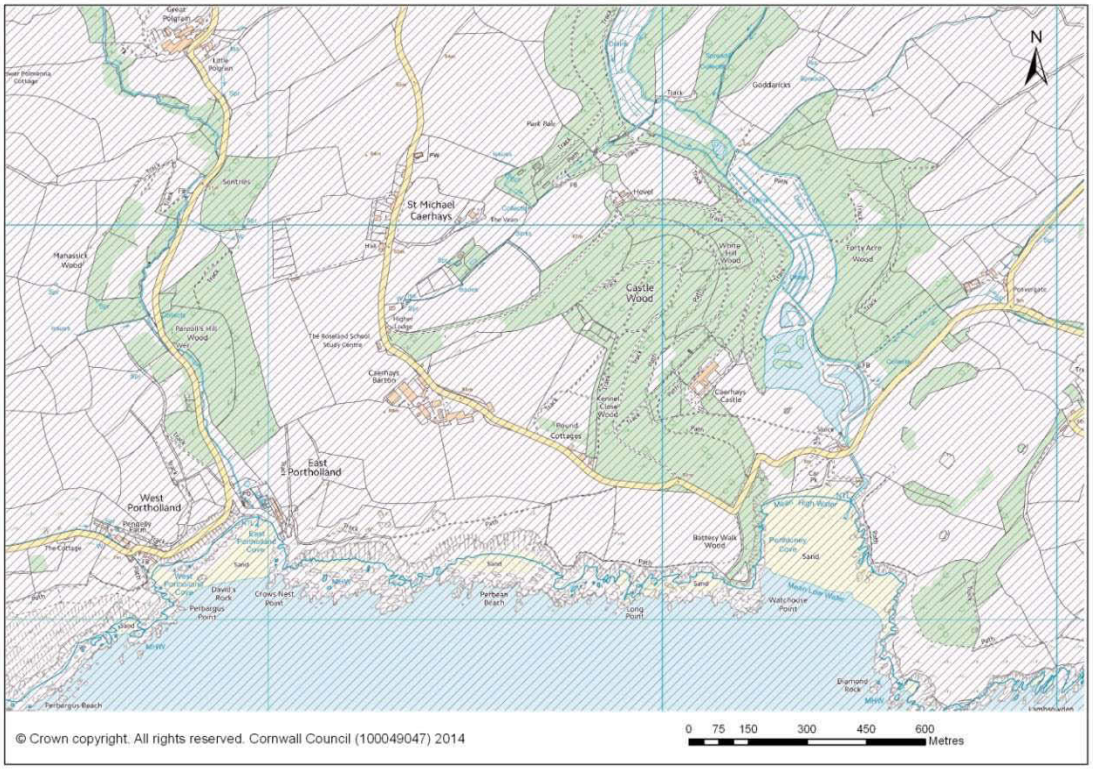

Figure 7 Heritage Coast area.

5.3 Local

No local designations appear to apply to the project area.

6 Summary history of Caerhays

A thorough study of the development of Caerhays Castle and its wider estate was produced by Charles Williams with assistance from Peter Herring and Steven Tyrrell (Williams *et al* 2011). The following summary history is closely based on that within the Nicholas Pearson Associates Heritage Management and Parkland Plan (2011), which incorporates information from Williams *et al*.

6.1 Early history

A number of circular banks and ditches forming *rounds,* enclosing small farming hamlets are found in the area surrounding Caerhays. These were in use from the 4th century BC to the 6th century AD, and the Historic Environment Record (HER) suggests that the name Caerhays is derived from *ker*, meaning round. A circular earthwork enclosure on the top of the hill above Caerhays house is thought to be a potential round, although the distinctive curving field boundary was not mapped until the 1840s. A number of circular features noted on air photos located to the southwest of Caerhays Barton indicate the site of a settlement, whilst coins and pottery found on the estate indicate Roman-period trading activity within the area, the coins dating from AD 253-282 and the amphora fragments dated 400s or 600s AD.

A pattern of small settlements was established in the vicinity of Caerhays during the early medieval period, these often being prefixed with the name *Tre* and, often on the location of the earlier prehistoric sites. Each settlement of farming households was surrounded by farmland with woodlands on the steeper valley sides.

6.2 Medieval period

The earlier medieval history of Caerhays is difficult to piece together, partly because it was part of several different manors at the time of the Domesday Survey in 1086.

The core of the Caerhays estate is thought to have belonged to the manor of Brannel, four miles west of St Austell, with a chapel attached to St Stephen's at Brannel. John Fitz Ralph and Ranulph Fitz John were both described as Lords of *Karyhays* or *Cariheys* in the 1240s and thought to have had a residence at Caerhays. The dedication of St Stephen's in 1259 and the description of a manor of Caerhays with a mill and land at *Porthalen* (Portholland) and Pengelly, in 1287, all indicate that the core of today's estate was in place by at least the mid-thirteenth century. Based on a description by Tonkin of the location of the ancient house, and field names of 1802, Tyrell suggests that the residence during this period was located further up the hill, northwest of the present Castle.

By 1400, the manor of *Cariheys* had been acquired by the neighbouring estate of Trevanion, owned by the Trevanion family. Trevanion is thought to have been a medieval settlement, first documented in 1302, said by some to have occupied a large flat platform to the southwest of today's Old Park Wood. Richard Trevanion, son of Robert, was Knight of the Shire of Cornwall in the early fifteenth century and married into one of the most powerful Cornish families, the Bodrugans; his son, John, served as MP for Lostwithiel in 1433 and married Jennet Treffry of Place in Fowey; William Trevanion triumphed at the Battle of Bosworth in 1485 and received a title from Henry VII in 1508. Sir William Trevanion was a close friend of Sir Richard Edgcumbe of Cotehele, and the two families were united when William married Anne, Sir Richard's daughter. William and Anne's son Hugh continued to uphold the Trevanion's local and national status as Sheriff of Cornwall and by carrying out various commissions for Henry VIII with Sir William Godolphin, including a survey of coastal defences in 1539.

6.3 Tudor mansion and deer park

Both the Edgcumbes and the Godolphins were investing in their Cornish estates during this period, modernising and extending their medieval mansions and deer parks. The Trevanions must have been aware of these impressive estates, and undoubtedly possessed something similar, described as *a capitoll mansion house* in 1546. Notably,

this mansion was *at Caryheyes* whilst a deer park owned by Sir William Trevanion in 1517 was described as *at Trevanion*.

The eviction of the tenant of Helland in 1543, between Caerhays and Trevanion, may mark the start of a wider consideration of the private landscape around Caerhays House. By the fifteenth century, the main residence at Caerhays, complete with chapel, is thought to have been relocated further downhill to the present site of the Castle. In 1547, it was largely rebuilt and the remodelling was commemorated with a datestone above the entrance arch. Tyrell proposes that this involved the conversion of an early hall house into a grander, traditional courtyard house with an impressive gatehouse, comparable to the Edgcumbes' Cotehele.

Saxton and Spede both mapped a deer park at Caerhays on their county maps of 1576 and 1610, and the position of this enclosed park to the east of the church suggests that it was in the vicinity of today's Old Park Wood. Therefore, this was probably the same park as that referred to as being *at Trevanion* in 1517 and Herring proposes that it originated from the deer park established by the Trevanions before the 1390s, associated with the old Trevanion House.

Despite a fine of £665 for supporting the King during the Civil War, the Trevanions seemed to have remained a fairly wealthy and high status family. As Tyrrell points out, they continued to marry well in the late sixteenth and seventeenth centuries, and also received a small royal grant following the death of Col. John Trevanion when he fought for the King at Bristol in 1643. The count of 23 hearths in the early 1660s placed their residence at Caerhays in the top five largest mansions in the county. However, throughout this period, it is thought that very few major changes were made to the house other than general updating, such as two late sixteenth century phases of interior decoration.

6.4 Georgian investment

By 1703, John Trevanion had inherited Caerhays, and was probably keen to modernise the 150-year old Tudor style house. He married the daughter of a leading politician, Lord Berkeley of Stratton, who was Master of the Rolls in Ireland (1696-1731), Chancellor of the Duchy of Lancaster under Queen Anne and George I (1710-14) and First Lord of Trade (1714-1715). During John Trevanion's thirty-seven year ownership of Caerhays, some of the earliest written descriptions of the house were produced by Borlase and Tonkin. Tonkin is the most illuminating, discussing how John Trevanion spent *a great deal* of money on the buildings and gardens. Interestingly, Tonkin refers to the house as *more properly called* a *decent romantic seat than a complete habitation*, and criticises its damp position under a hill. He also discusses how the location of the *well wooded* park was still at Trevanion, clearly mapped by Thomas Martyn in 1748. Together, these slightly disparaging comments may imply that Caerhays was not a fashionable Georgian house, sitting alongside rather than within its deer park.

A more detailed record of the designed landscape is provided by mid eighteenth century legal documents – in 1740, the *capital mansion* is described as possessing *gardens, walks and park* and in 1753 the landscape included *a grove*, *flower garden*, *spalier hedge*, *kitchen garden*, *a new wilderness*, as well as several orchards, nurseries, *park lawns* and numerous outbuildings, including a *new sixteen horse stable*. This suggests a fairly complex landscape of different areas and enclosures, probably originating from an earlier seventeenth or even sixteenth century formal landscape. Wildernesses became fashionable in the late seventeenth and early eighteenth centuries as wooded garden areas, usually explored via a labyrinth of meandering walks and later they commonly incorporated picturesque grottoes or ruins. The reference to *a new wilderness* was, therefore, indicative of John Trevanion's modern tastes in landscape design.

The second half of the eighteenth century saw inheritance by the Bettesworths and fairly basic maintenance works, including repairs to park paling, were recorded in

estate accounts. However, in 1789 Caerhays was inherited by a minor. Presumably due to the family's financial difficulties, the contents of the house and seventy deer were put up for sale, and the house and park were let for twelve years.

6.5 Regency castle

The coming of age of John Bettesworth Trevanion saw the most significant phase of the development of Caerhays. Corfield's survey of 1802 provides a picture of the landscape developed by the Trevanions and the Bettesworths since the late fourteenth century. The house was shown as a rectangular block and does not appear to have a central courtyard, although this may be cartographic simplification. The designed landscape around the house is recorded as a collection of irregularly shaped walled enclosures with a *Great Grove* running up the valley to the north. Views from the house would have probably focused on the immediate grounds, as leats and a corn mill dominated the landscape of the valley bottom.

By this stage, the Caerhays estate comprised a large area of farmland west of the river Luney. The deer park remained up stream, at Trevanion, with a clifftop warren to the south. Undoubtedly, this arrangement was regarded by John as outdated and inadequate as *a feudal pile worthy of the Bettesworths*. This implies almost a dynastic sense of the Bettesworths as a modern, ambitious family, basking in the heroic glamour of great uncle Admiral Byron, *foulweather Jack,* and his late brother, George, commemorated in the landscape, scion of the greatest Naval power on earth. This can be seen in the context of the contemporary Naval monuments and garden temples (at Stowe and Monmouth), Naval gardens (at Buckland Abbey, Devon) and Nelson monuments across the country (Portchester, Hereford, Great Yarmouth, Glasgow and London). Consequently, he consulted John Nash (1752-1835), one of the leading architects of the day, who from 1810 onwards was almost entirely working for the Prince Regent. Nash designed a number of Gothic picturesque castles in his career, the first being his own home on the Isle of Wight, East Cowes Castle, built between 1798 and 1802, contemporary with Luscombe Castle (with Humphry Repton) 1800-1804 (also with fired clay copings). Most of Nash's castles have fared less well, and those at Kilwaughter, Ravensworth, Knepp, and Shanbally, all contemporary with Caerhays, 1807-1819, have been demolished. A century earlier, Tonkin had described the old house at Caerhays as a *decent romantic seat* and Bettesworth obviously had similar ideas, commissioning Nash to produce the latest in Regency Romantic seats in 1807. The result was the house we see today – a striking, dramatic, mock castle, set against the hillside, making the most of this difficult building site and expressing ideas of the ancient origins of the Trevanion family or as Jones put it in 1819 – *the semi-castellated dwellings of our ancestors*. Tyrrell notes that it re-used the old house as a base to raise the new building and provide ready-made cellars.

Such a magnificent mansion would have required an appropriate landscape setting. Nash is well known for having worked with Humphry Repton, and Pole Carew is said to have written to Repton in 1809, suggesting he paid Caerhays a visit. However, there is no further evidence to suggest that Repton had any involvement in partnership with Nash or on his own at Caerhays Castle. Furthermore, Nash and Repton had fallen out around 1800 and in 1811 Repton was disabled by a carriage accident.

Possibly the least picturesque view of the Castle was the earliest, an engraving published in 1818, showing the rather gloomy, Gothic pile set against bare grazed pasture. This is the only view from the south, and may reflect the alignment of the old southwest approach drive, mapped in 1811. Gilbert and Stockdale's 1820s illustrations of the much more flattering view of the Castle and park from the east, presented a picturesque scene with parkland trees, wandering deer, rustic peasants, and the Castle Wood just emerging over the crenellated towers of the house. By the 1840s, Drake (Fig 9) had published his panoramic landscape view of the Castle and Porthluney Cove which moves away from the pretty picturesque of the 1820s, and reintroduces some drama and Romance into the landscape more suited to the tastes of the early Victorians. Needless to say, all the engravings were subject to a degree of artistic

licence – note how the mill is absent from each view. In particular, this applies to the deer shown on Gilbert's, Stockdale and Drake's views.

In 1802, a deer park remained at Trevanion, some way north of the house. Caerhays still retained this park in 1819, and a deer park is described on a *ridge of hills* on the *northern side of the house* in 1820. However, by 1842 the tithe plan describes the sloping valley fields northeast of the Castle as *New Park Hills*, and the sales particulars have this whole area, together with the fields to the south, listed as one large *Deer Park*. This is the only deer park described on the particulars, suggesting that the medieval park at Trevanion no longer existed by the 1840s. This is supported by other evidence such as the sale of a herd of 45 Red Deer in 1839, and the tithe plan field names of *Old Park* and *Wood*. What is curious is that, by 1842, the old park had been subdivided by a new large stone-faced bank, which may imply that some use of the deer park remained, despite the land forming part of the Caerhays Barton holding on the sales particulars. In any case, it seems unlikely that deer would have been running around anywhere in front of the Castle in the 1820s and 1840s as implied by the engravings, although, clearly the message was that the estate aimed to achieve this prestigious accessory.

On his death in 1840, John Bettesworth Trevanion was described as *a complete man of fashion…the very arbiter elegantiarium*, and this is reflected in what he achieved at Caerhays. As well as commissioning the Castle which, despite being unfinished in 1824, was praised by commentators as a *residence of splendour* built at *vast expense*, Trevanion was noted for *continually improving the grounds round the house*. By 1833, he was seriously in debt. His work on the landscape at Caerhays can therefore be placed between *circa* 1807, when he commissioned the Castle, to around 1830. The various written descriptions of the estate suggest that most improvements were in place by the 1820s.

The early 1800s were all about the Picturesque Movement. Fuelled by the debate and publications of the Rev William Gilpin, Richard Payne Knight and Uvedale Price, there was a move away from the neat and smooth landscapes laid out in the mid eighteenth century by Capability Brown and his followers. Instead, the Picturesque landscape was embraced, exposing the rustic, unmanaged qualities of nature, where every scene was designed to inspire the artist with ruined gothic eye-catchers, varied textures and tones. The *elevated walk in the grounds towards the sea* (described in 1819) known as the *Watch house Walk* and later, the *Battery Walk*, would have been a very Picturesque addition to the designed landscape, noted for its magnificent sea-views (Fig 9). It probably also provided views back across the Cove, towards the *monument to the memory of the late Captain Bettesworth* (possibly the Coade stone statue now in the church) and over the parkland to the north. The walk was taken over a Gothic archway, probably designed by Nash, that had the dual purpose of carrying the walk over the diverted public road, but also providing an impressive eye-catcher in views of the Castle from the east, as depicted by Drake. Gilbert also commented on the winding valley *enlivened by a fine sheet of water* which indicates that John had excavated the lake by 1820, adding further to the *picturesque wildness* of the estate.

Further features in place by the date of the tithe plan, and therefore at the end of John's thirty-nine year ownership, included the lodges and new drives. The new drive from the northwest would have undoubtedly taken advantage of the picturesque views of the new Regency rectory, and of the wider wooded scenes across the valley as it approached the Castle, and still does today.

6.6 The Williams family at Caerhays

Following Trevanion's rather sad end as a bankrupt fleeing the law and dying in Brussels, Caerhays was put up for sale. In 1854, Michael Williams purchased the rather dilapidated Castle, empty of its contents and unoccupied apart from some ducks washing themselves on the drawing room floor. Williams was part of an aspiring group of wealthy successful industrialists, all keen to make their mark in class-conscious

Victorian society and own property on a scale to rival the nobility. Williams seems to have wasted no time updating and enhancing Caerhays. Most notably, with a tin miner's capability and pragmatism, he removed the mill and cottage in the park to the south of the Castle and excavated the *Great Cut*, which provided direct views of the sea and a more impressive setting to his Castle for the public to admire. The abandoned short-lived deer park on *Deer Park Hills* was planted with woodland. Land at Tregavarras was purchased and parkland laid out here, again, greatly improving views from the Castle and extending the private estate. Colson and Stone refer to this as a third deer park, however, the boundaries that survive today do not show any evidence of being deer-proof and the area was not labelled *Deer Park* on the Ordnance Survey map of 1879.

Photographs taken by the Rashleigh family capture Caerhays in the 1860s, when it was owned by Michael's son, John, known as the richest man in Cornwall. The parkland immediately below the Castle and around the lake appears surprisingly well-wooded with mature specimens. This was perhaps, the remains of a screen of planting established in the earlier nineteenth century to hide the mill in views from the Castle. The gardens around the house appear remarkably simple, with immaculately maintained lawns and gravel paths.

Under the next heir, John Charles Williams (known simply as J.C.), Caerhays became internationally renowned for its horticulture. On the estate in general, he was a very hands-on landowner, designing and constructing estate buildings, such as the unusual circular cow house called Noah's Ark, and laying out a network of walks to help explore Kennel Close Wood, Castle Wood and Old Park Wood. J.C.'s passion, however, was plant cultivation, in particular, daffodils and the newly introduced exotic plants fresh from eastern Asia. In the 1880s, J.C, started cultivating rhododendrons and by 1900, he had been asked by Veitch and Son to experiment with some of the latest introductions of plants from China, collected by plant hunter, Ernest Henry Wilson. J.C. remained in close contact with the Veitches, and sponsored plant collection expeditions of George Forrest. As well as rhododendrons, J.C. amassed a collection of magnolias, camellias, azaleas and hydrangeas. In 1924, he planted his first Camellia hybrid, *Camellia saluenensis x japonica*, and from this emerged the x williamsii camellias, described by the Hillier's Manual of Trees and Shrubs as *one of the most valuable hybrid shrubs ever produced and perhaps the best Camellia for general planting in the British Isles. The cultivars originating from this cross are invaluable shrubs, exquisitely beautiful and exceedingly free-flowering.*

By 1917, 264 species and natural varieties of rhododendrons were growing at Caerhays, mainly on the slopes and summit of the hill behind the Castle. Castle Wood had been transformed into a classic, late nineteenth and early twentieth century woodland garden, carefully designed, planted and maintained to show off the colourful shrubs and trees to their best advantage. In the present age of garden centres and mass clearance of *Rhododendron ponticum*, it is perhaps less easy to imagine quite how exciting it was for the public to discover these alien plants from the other side of the world, with bright, clear colours, large flowers and glossy leaves, bearing little resemblance to anything native to the UK. Furthermore, it was a display of science and the advancements of practical horticulture that had taken place over the nineteenth century, revealing a greater understanding of plant genetics and how to manipulate nature. The focus on single species also reflects a scientific approach, together with the fascination with acquiring complete themed collections, just as J.C.'s ancestors had amassed a vast collection of mineral and rock specimens. J.C. Williams's plant collections and breeding went on to influence a whole generation of woodland and plantsman's gardens in Cornwall and, particularly on acidic soils elsewhere, which continues to the present day.

Caerhays has continued to be enhanced and developed by the Williams family, with the principal focus being on plant collection and cultivation. This has been aided by the highly knowledgably, long-serving head-gardeners, in particular Philip Tregunna,

gardener from 1956 to 1996. Planting and management has had to adapt to droughts, storms and the economic constraints of running a modern estate. However, despite this, Caerhays is still considered to be *probably the most important plantsman's garden in Cornwall.*

7 Battery Arch

7.1 Historic map evidence

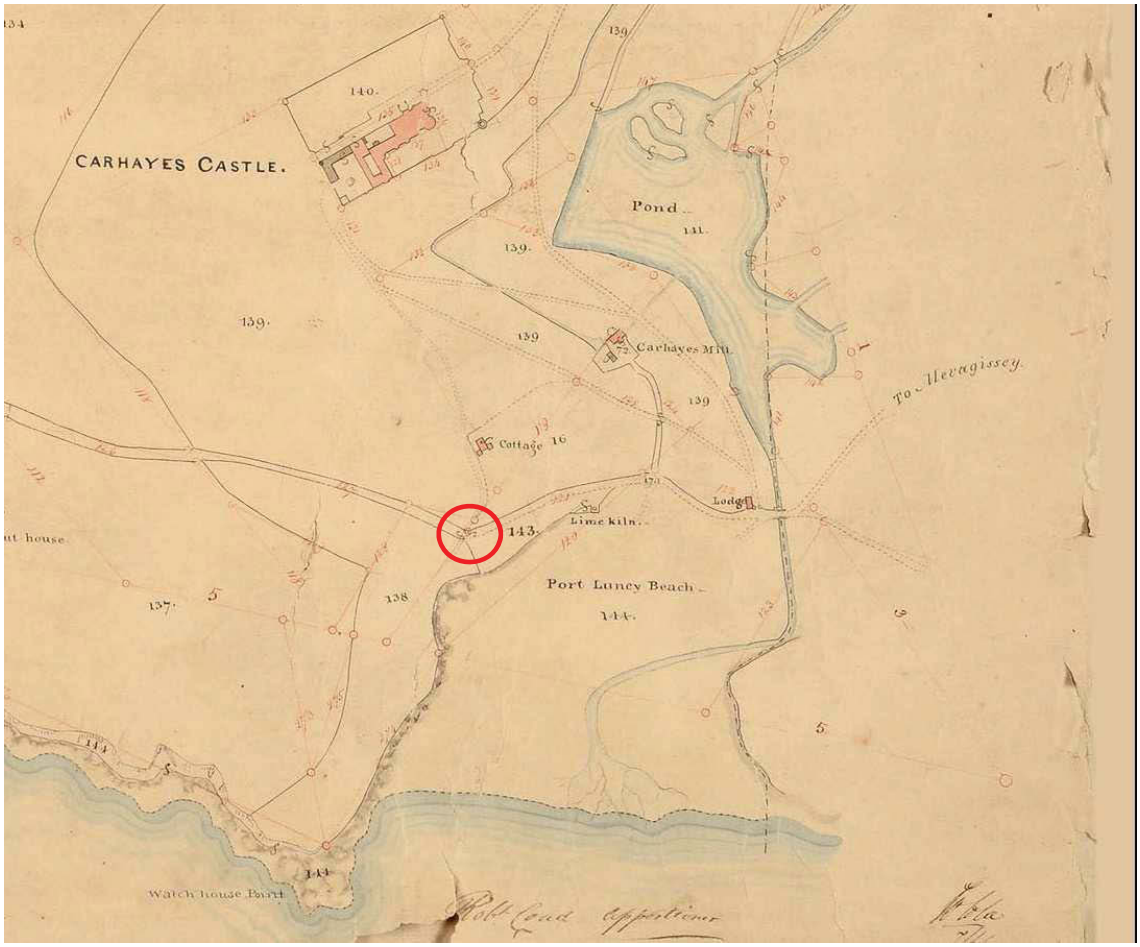

Figure 8 Tithe Map 1841 showing the location of Battery Arch (circled) and the former route of the public road.

Figure 9 Engraving of Caerhays Castle by H Drake (c 1840) showing Battery Arch and the former public road running beneath it.

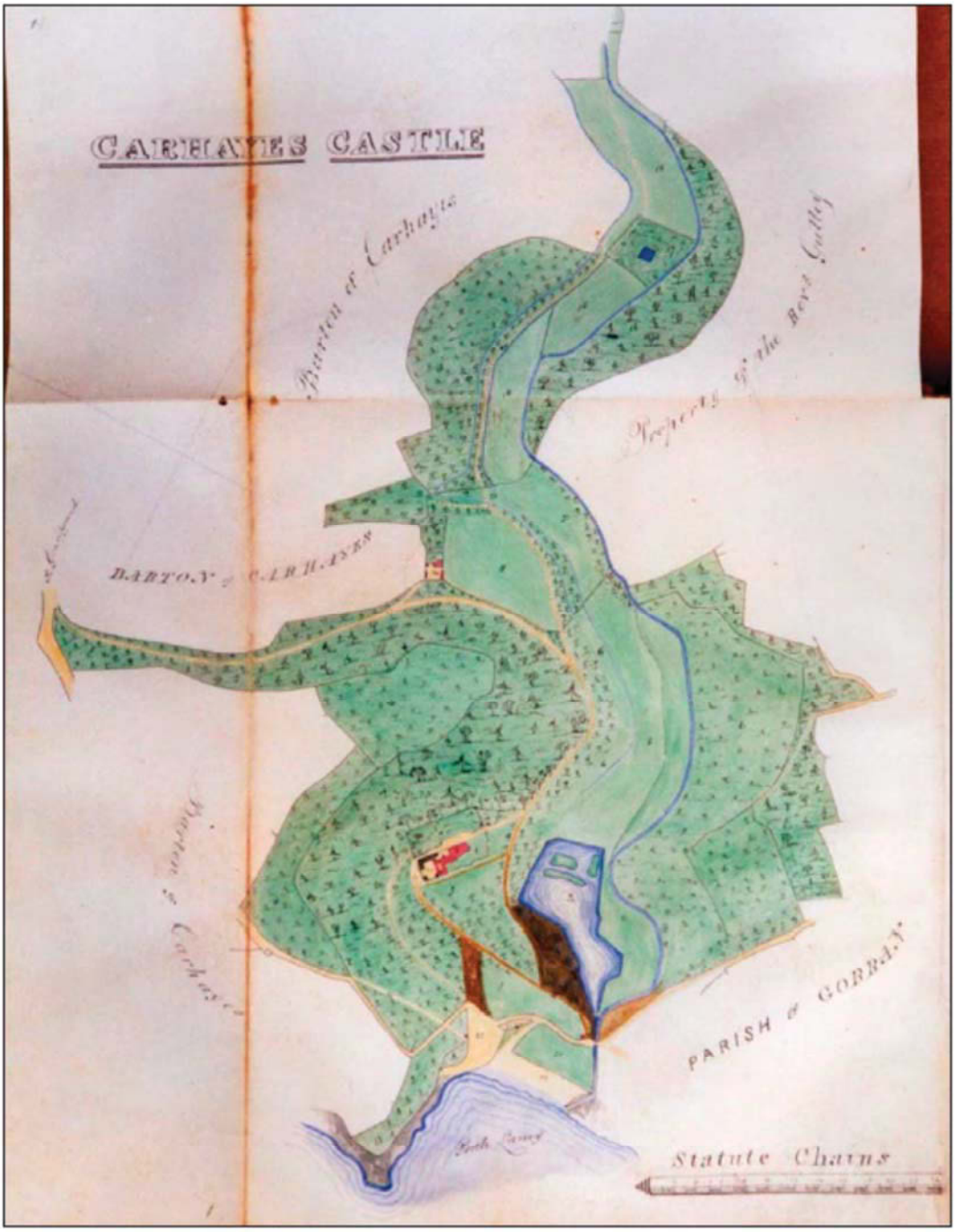

Figure 10 Copy of W Smith's estate plan of 1858.

This survey shows the 'Great Cut' (in lighter brown, centre) and the reorientation of the public road to its present course.

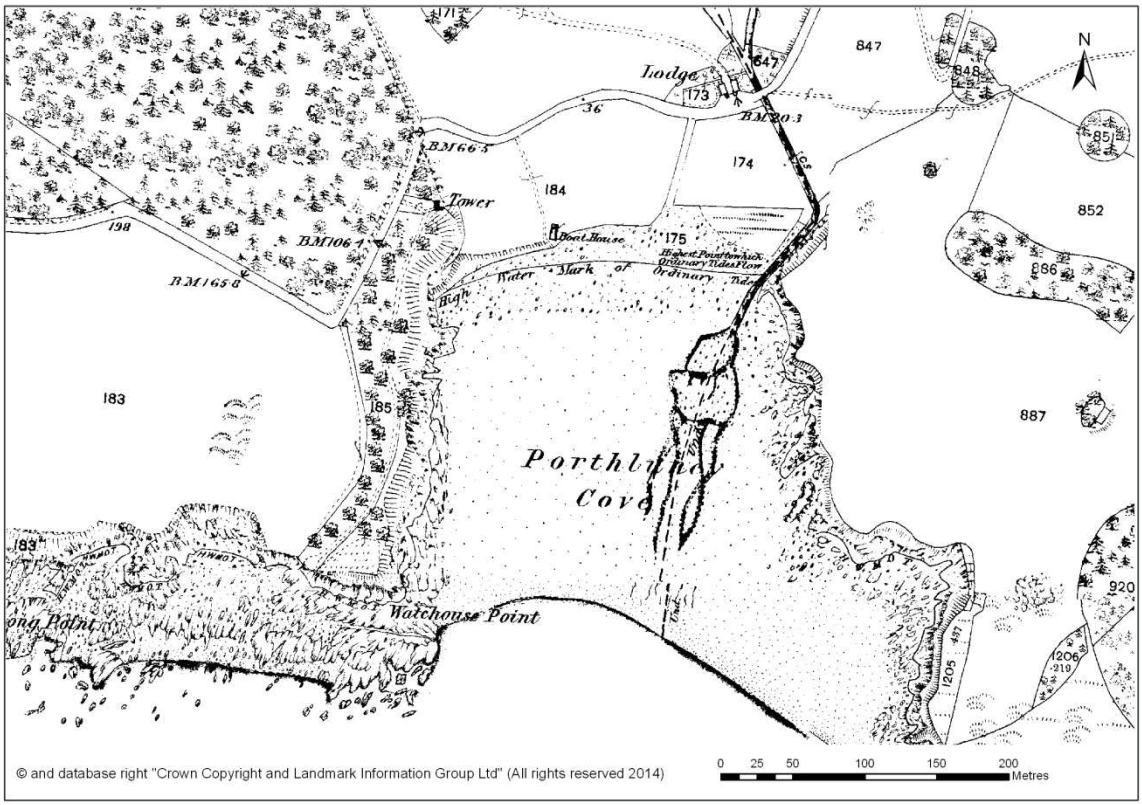

Figure 11 Extract from the OS First Edition 25 Inch Map, 1879.

The route of Battery Walk is much clearer on this map, and shows a 'turning circle' or point of interest at the southern end.

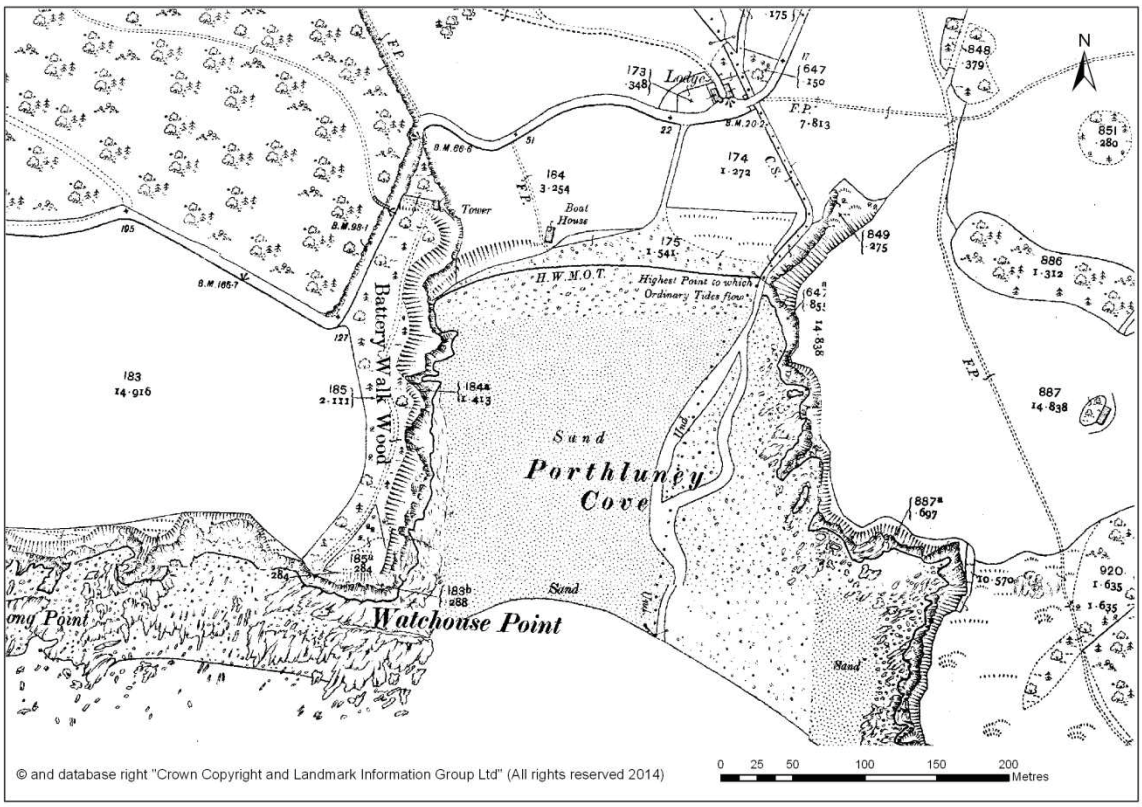

Figure 12 Extract from the OS Second Edition 25 Inch Map, c1907.

7.2 Description

7.2.1 Structural evidence

Viewed from the existing road Battery Arch resembles a battlemented bridge carrying a carriageway or footpath over a lane within a deep sloping gully. But there is no thoroughfare carried across the structure, there is only a platform formerly reached by a stair turret. It is therefore a folly, providing a scenic viewpoint over the neighbouring beach. The arch is also a decorative structure designed to be viewed from the east side of the valley, so it can be seen with the Castle, lake and beach, and with woodland as a backdrop.

7.2.2 Materials

Battery Arch is predominantly constructed of slate rubble masonry of local origin (most likely quarried from the adjacent cliffs), bedded in lime mortar. It has a single round arch or vault built of dressed voussoirs, of Pentewan or similar volcanic stone. Keystones for this vault are of slightly wider width. Pentewan stone is also used for the keystone of a pointed arched gateway in one of the eastern flanking walls.

Granite is not generally used in the structure, except in areas of repair or secondary features.

The parapet walls and merlons incorporate greater quantities of local blue slate, as this finer material could be more easily worked into the thinner walls.

Copings on the merlons (and in the bases of the embrasures) are built of a cementitious mortar. Before renovation works commenced the copings were in very poor condition, with many of them severely fractured (caused by frost spalling or other weathering processes) or entirely missing/detached. The copings have an unusual asymmetric triangular section with an offset beading at the apex. On the parapets the beading is usually pointing outwards where it has greater decorative effect. The copings are broadly similar in design to those on the Castle itself.

Although the use of cement may suggest the decoration is of more recent origin, cement mortar was occasionally used in the 19th century where its fast setting properties would be useful in construction or ornament. In this instance it is particularly noteworthy that a (displaced) gargoyle made of similar mortar was found within the ruins of the building. It appears that this is an important, original construction feature, designed to clear rainwater from the structure.

7.2.3 Construction

The primary structure of Battery Arch is the vault itself and its abutments against the neighbouring ground. Other parts, including the flanking walls, abut the arch; there are few bonded joints, suggesting construction may have been ad-hoc, with minor adjustments to its design incorporated as building work progressed.

7.2.4 Investigation works

Before the NE funded conservation works commenced the whole structure was in a very ruinous condition and was heavily engulfed with vegetation and years of build-up of debris. Initial works included vegetation clearance and measured survey. Many features were masked by debris so these first survey works did not include all the features that were eventually discovered. Investigation of the site comprised several field visits to uncover and record as initial assessment works (and later conservation repairs) progressed (Figs 13-44).

On-site interpretations of the initial survey revealed that the building comprised a viewing platform built over the vault structure. Remains of slate steps to reach the platform were visible at the SE corner. Below this area, the flanking wall had tumbled and it was clear that part of a stair turret had collapsed.

Four principal site investigations took place at Battery Arch:

1. Collapsed southeast flanking wall.
2. Trial section across the roadway.

3. Clearance of the viewing platform.
4. Clearance of the access steps/turret.

1 Collapsed southeast flanking wall

During the assessment in Stage 1 it was necessary to clear tumbled material and debris from the tumbled southeast flanking wall, to establish the condition of the remaining core wall and to investigate its foundations. This work was carried out by a contractor using a mini digger, with the work supervised by the author. All the material removed was tumbled stone and mortar, a combination of collapsed face of the flanking wall and also fallen material from the east parapet of the viewing platform. Parts of the former east parapet could be identified by the remains of mortar copings.

After all the tumbled material was removed (and saved for reuse during reconstruction) the base of the flanking wall was revealed, with the lower course of facing stones still intact. This would provide a good basis for reconstruction of the face.

Below the straight wall face a curved kerb structure was exposed. At the time this was interpreted as a different design of flanking wall that had been altered to become a straight facing higher up. This initial interpretation was later amended after excavation of a section across the roadway (2).

Investigations (2) to (4) were carried out during the course of conservation works in Stage 2. Works were undertaken by hand digging by the contractors supervised by the author.

2 Trial section across the roadway

A section (labelled A-B, see Figs 33 and 39) was cut across the roadway beneath the eastern side of Battery Arch. This was dug to determine the depth and nature of the Arch and flanking wall foundations, as well as to examine the road material itself. The layers of material encountered are listed in Appendix 1.

The section (and a deeper sondage cut at the north end) clearly showed the base of the northeast flanking wall, which appeared as a slight stepped foundation. There was no indication of a curved kerb structure as visible on the opposite side. The section also showed there was a drainage gully on the south side of the archway. The kerbed structure on this side was then more satisfactorily reinterpreted as a means to protect the base of the flanking wall from potential scour damage.

3 Viewing platform

It was necessary to remove about 100-250mm of soil from the viewing platform. This comprised a relatively loose material of leaf litter bound up with abundant roots and topsoil build up. Close to the western parapet there was also debris from fallen merlons, comprising stones, lime mortar and fragments of mortar copings. There were a few finds in the spread of debris comprising a brass .22 spent cartridge, a similar larger spent cartridge from a .303 gun, as well as mid- to late 20th century glass bottles.

Removal of the debris revealed the original slate flagstone paving of the platform, remarkably well preserved although some of the stones had decayed where disturbed by roots (Fig 25). The central line of flagstones comprised neat squared paviours but less regular stones had been used nearer the edges (Fig 35). At the southeastern corner of the platform the top of the original access steps was exposed (Fig 26). There were also traces of a mortar line existing on the flagstones on the south side, indicating this side had also once been enclosed by a masonry parapet. This feature had completely disappeared, only traceable as tumble on the south side of the structure.

There was no surviving indication of any drainage arrangements for the platform, although the paving slightly sloped downward from west to east. As the base of the eastern parapet was solid, no drainage outlets were provided, although it is possible that a gargoyle type outlet was provided close to the stair turret. A fragment of a gargoyle, made from moulded cement-based mortar, was found by the contractors around the base of the arch (Fig 31).

On the north side of the platform there was no evidence of any parapet or barrier; here the platform is only slightly higher than the surrounding ground level. At the north west end of the platform (and just beneath the west parapet wall) is a large dressed granite block with an iron tie-bar and securing plate attached. This clearly runs diagonally under the platform flagstones to emerge near the southeast steps. Here there is a substantial length of rusted iron bar which now droops down over the corner. It is evident from the length of the bar that the tie-bar was intended to prevent structural movement of the stair turret (which was not tied in to the arch structure). Ultimately this failed as the turret eventually collapsed.

A few observations can be made regarding the tie-bar; firstly it would have been necessary to lift and re-lay at least some of the paving to insert it, and secondly; when the tie-bar was added it would have crossed the line of the stair turret, making it very awkward to ascend the steps. It is therefore possible that an alternative access to the platform was made during the later stages of the structure's use.

4 Stair turret

Investigation of the remains of the stair turret was necessary before this area could be conserved. The surrounding wall of the circular turret structure still survives as a stump above the southeast flanking wall. At an early stage of debris clearance it became apparent that the lower slate steps were still preserved (Fig 30). These were revealed beneath topsoil/leaf litter build up and tumbled masonry from the collapse of the turret itself.

At the base of the stair turret is a slate threshold stone, slightly deeper than the winder steps inside. On the inside of the base of the turret wall is a mortar scar, showing the location of a wooden door or gate frame that once existed here.

The past structural movement in the turret was visible from a gap that had opened up between it and the arch abutment. Vertical mortar scars on the arch abutment still indicate the former limits of the circular turret.

Several pieces of curved moulded merlons were found below the stair turret, showing that it too was originally provided with a decorative parapet. In terms of decorative balance (and when viewed from distance away), the stair turret had some symmetry with the pinnacle built at the other end of the platform.

A question remains as to the original access to the stair turret from the base of the arch. It appears that there was originally another pointed archway within the southeast flanking wall (as survives on the opposite side) and there was once a path from here to the base of the turret.

7.3 Photo record

Figure 13 A view of the heavily overgrown and ruinous Battery Arch in 2014.

Figure 14 A similar view, after renovation works, in June 2016.

Figure 15 The overgrown and decayed parapet masonry in 2014.

Figure 16 Restored parapet.

Figure 17 A view of the southern side of Battery Arch after vegetation clearance but before commencement of renovation works.

Figure 18 The south side after completion of renovation work.

Figure 19 Collapsed masonry covering the southeast flanking wall.
The remains of the stair turret are also visible (centre, top).

Figure 20 Removal of fallen masonry revealed a kerb at the foot of the wall.

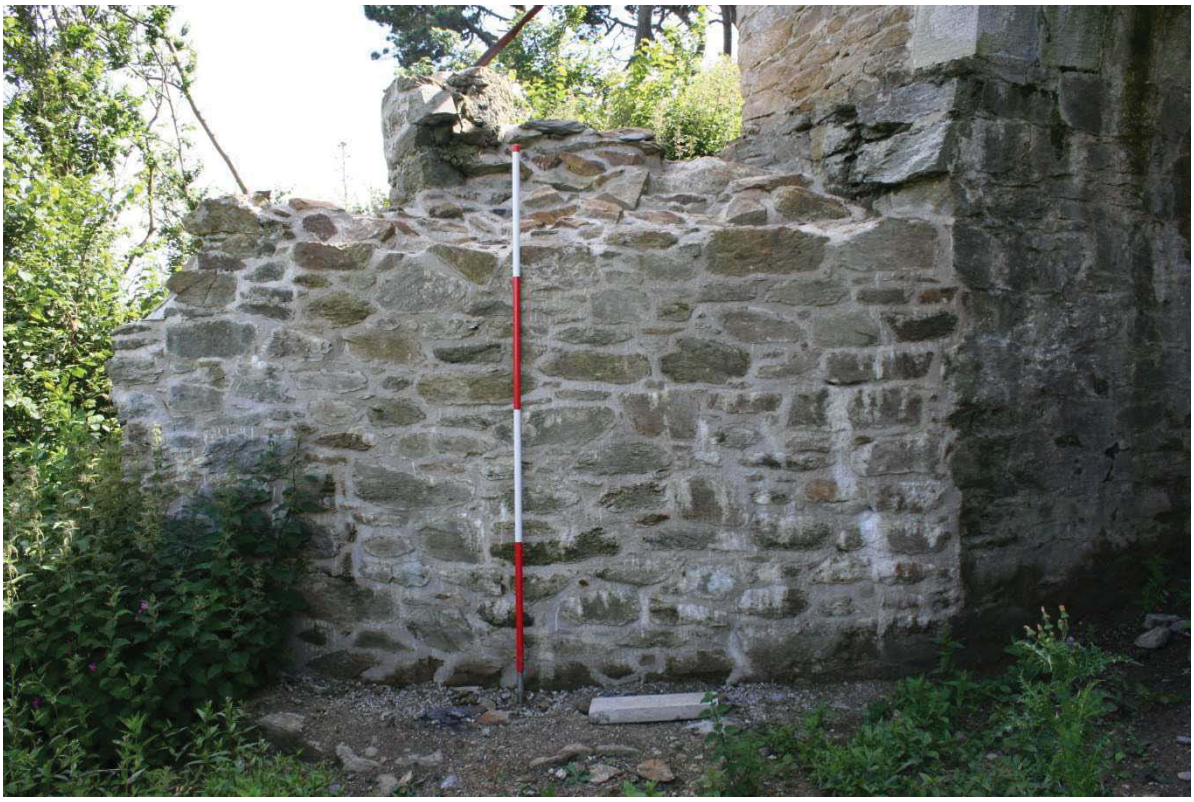

Figure 21 A similar view after rebuild of the tumbled wall face.

Figure 22 The north east wall prior to renovation.

The Gothic archway once linked a footpath from the Castle to Battery Arch. This access was removed when the Great Cut was created circa 1858.

Figure 23 A similar view after completion of re-pointing works.

Figure 24 The platform of Battery Arch (viewed from the north side), after initial scrub clearance but before clearance of accumulated soil.

Figure 25 Removal of soil from the platform revealed surviving flagstones.

Figure 26 At the south east corner of the platform the top of the original access steps was revealed.

Figure 27 An iron tie-bar running diagonally across the structure, beneath the flagstone paving.

This feature was added as a bracing to try and prevent movement of the stair turret at the south east corner of the platform. A granite block has been added behind the bar. Addition of the tie bar would have involved lifting and replacement of part of the flagstone floor.

Figure 28 View of the decorative pinnacle and remains of the eastern parapet.

Figure 29 A similar view after replacement of the parapet.

Figure 30 The south side after re-exposure of the base of the stair turret.

The drooped remains of the secondary tie-bar can be seen above.

Figure 31 A fragment of a gargoyle, probably from the stair turret roof.

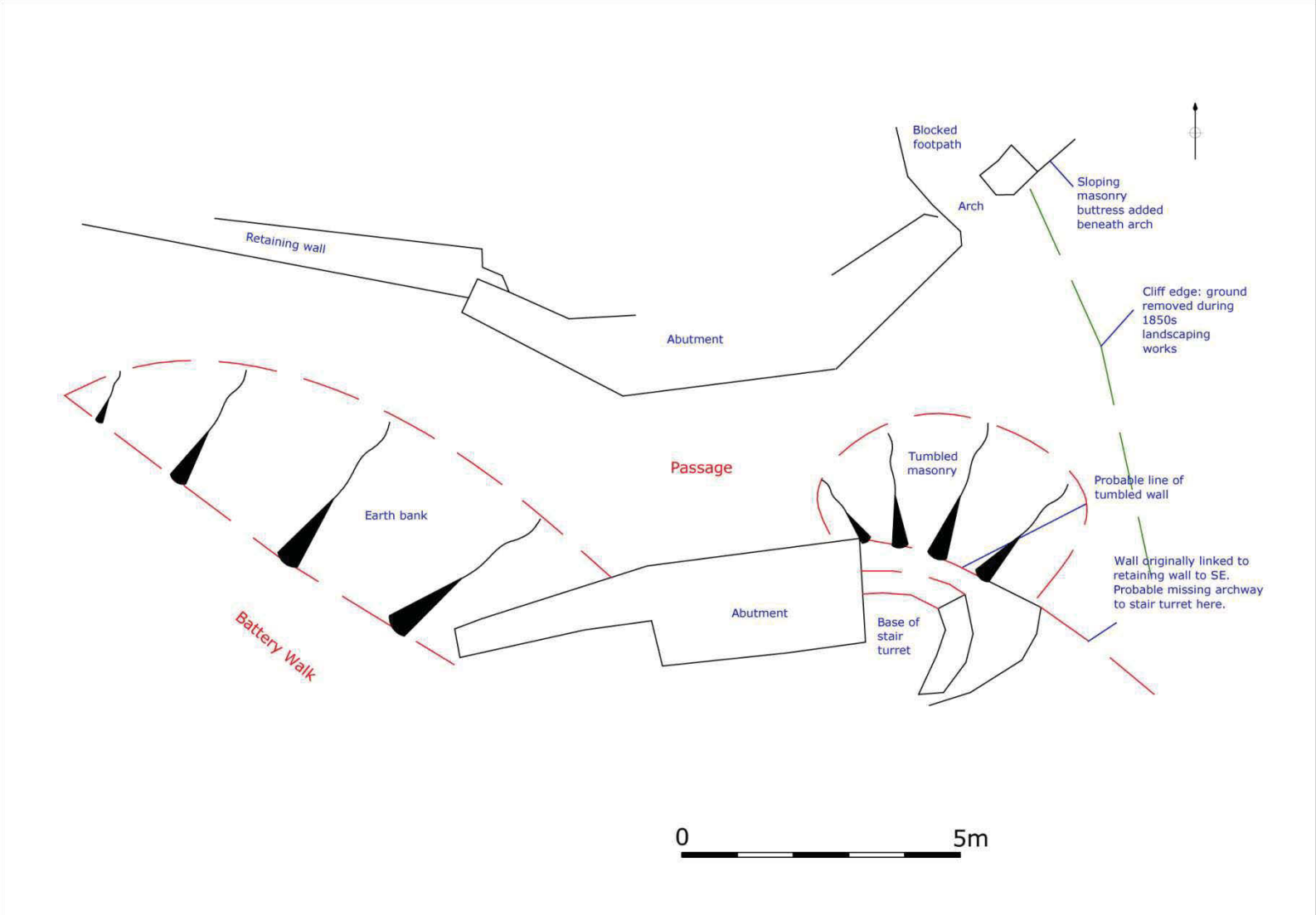

Figure 32 Battery Arch ground floor plan, prior to renovation works.

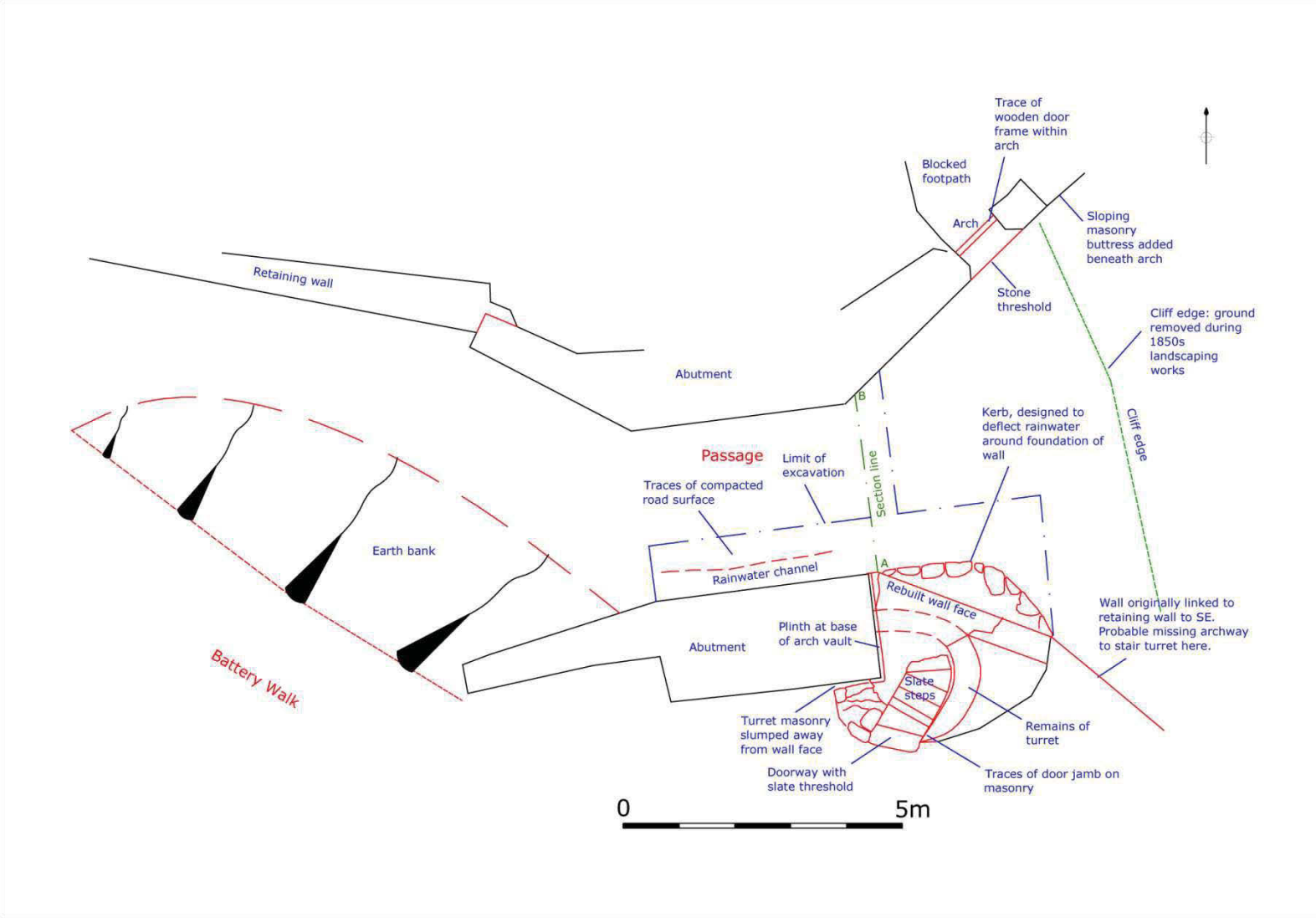

Figure 33 Battery Arch ground floor plan, after renovation works.

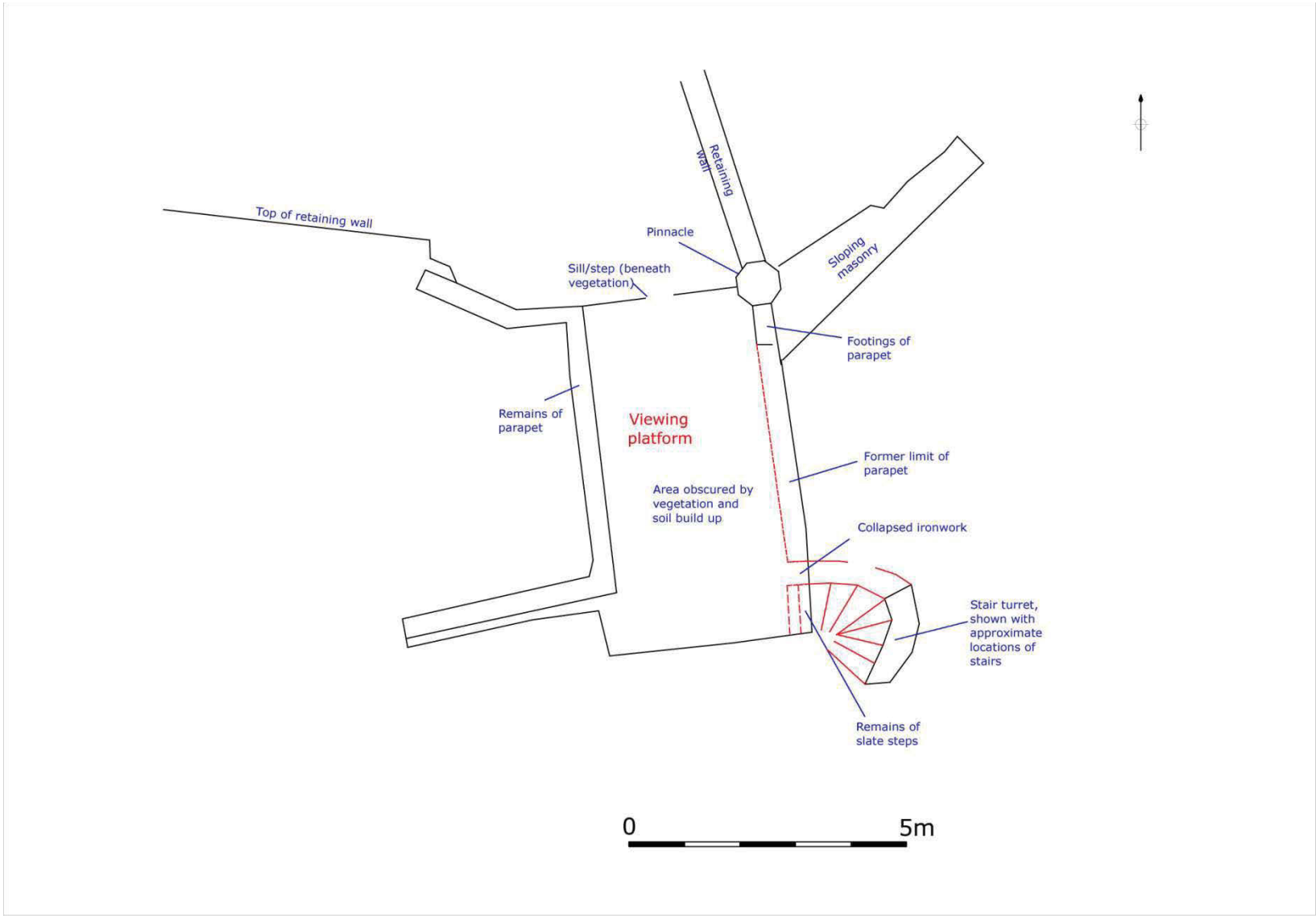

Figure 34 Battery Arch platform level plan, prior to renovation works.

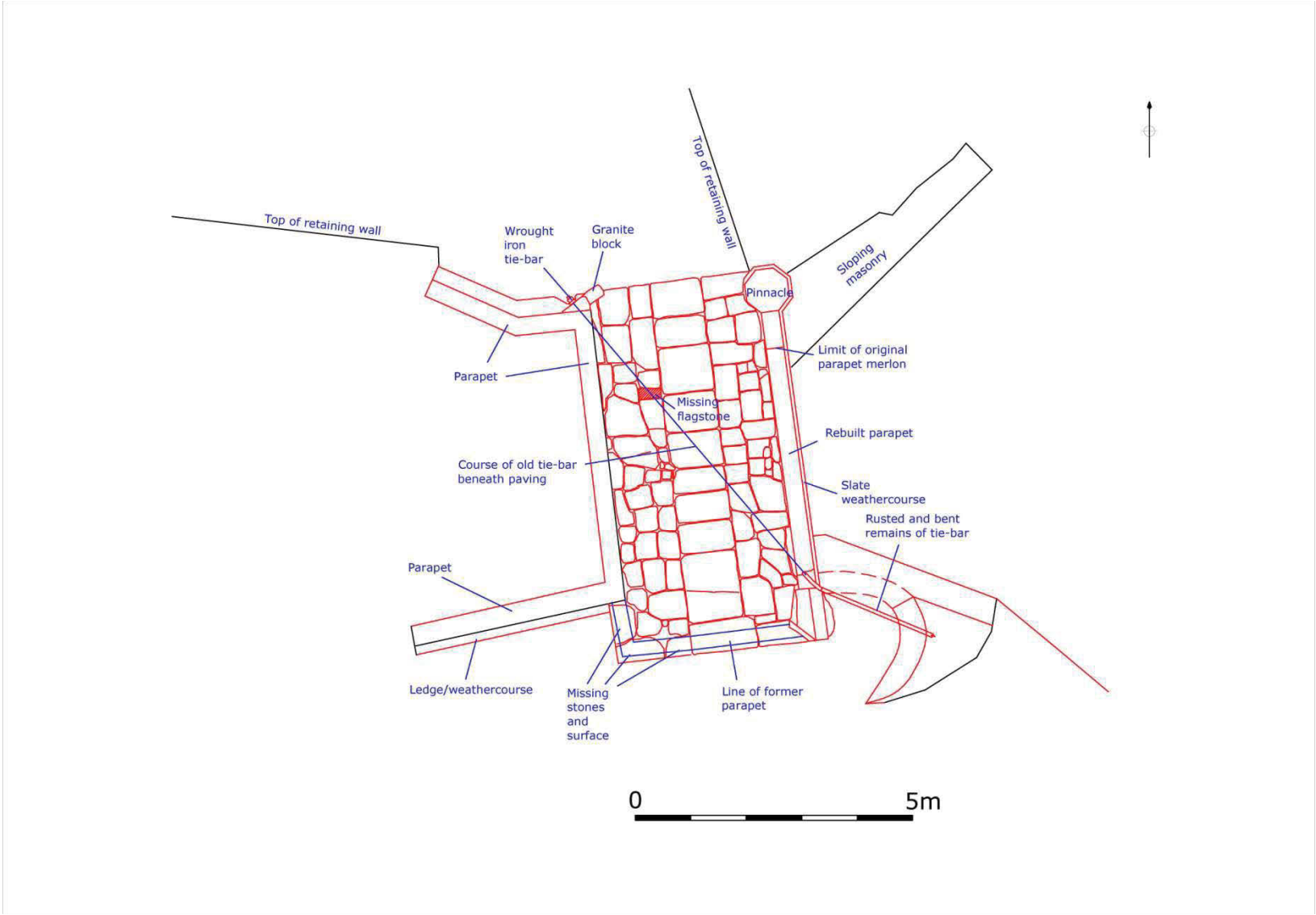

Figure 35 Battery Arch platform level plan, after renovation works.

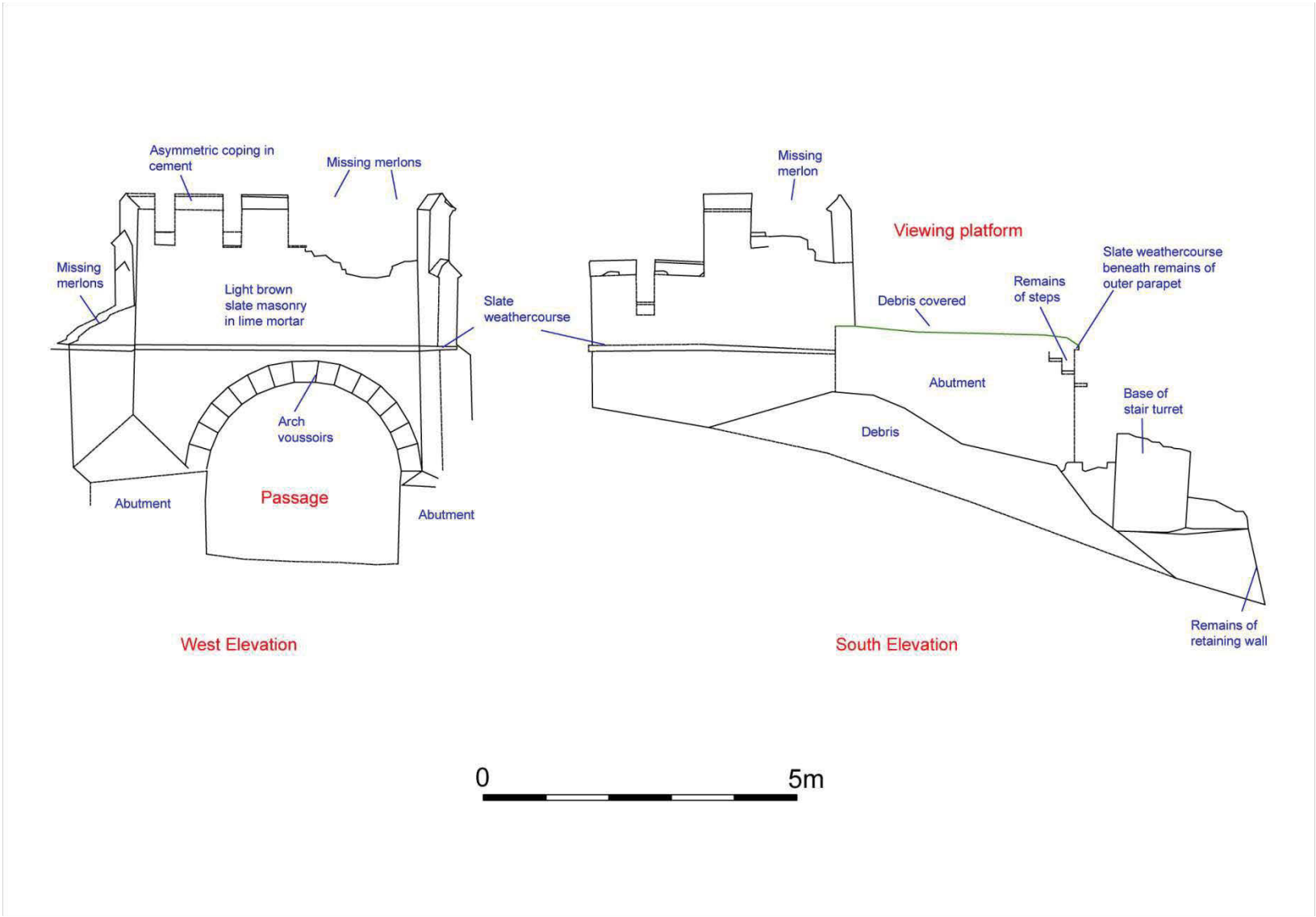

Figure 36 Battery Arch west and south elevations, prior to renovation works.

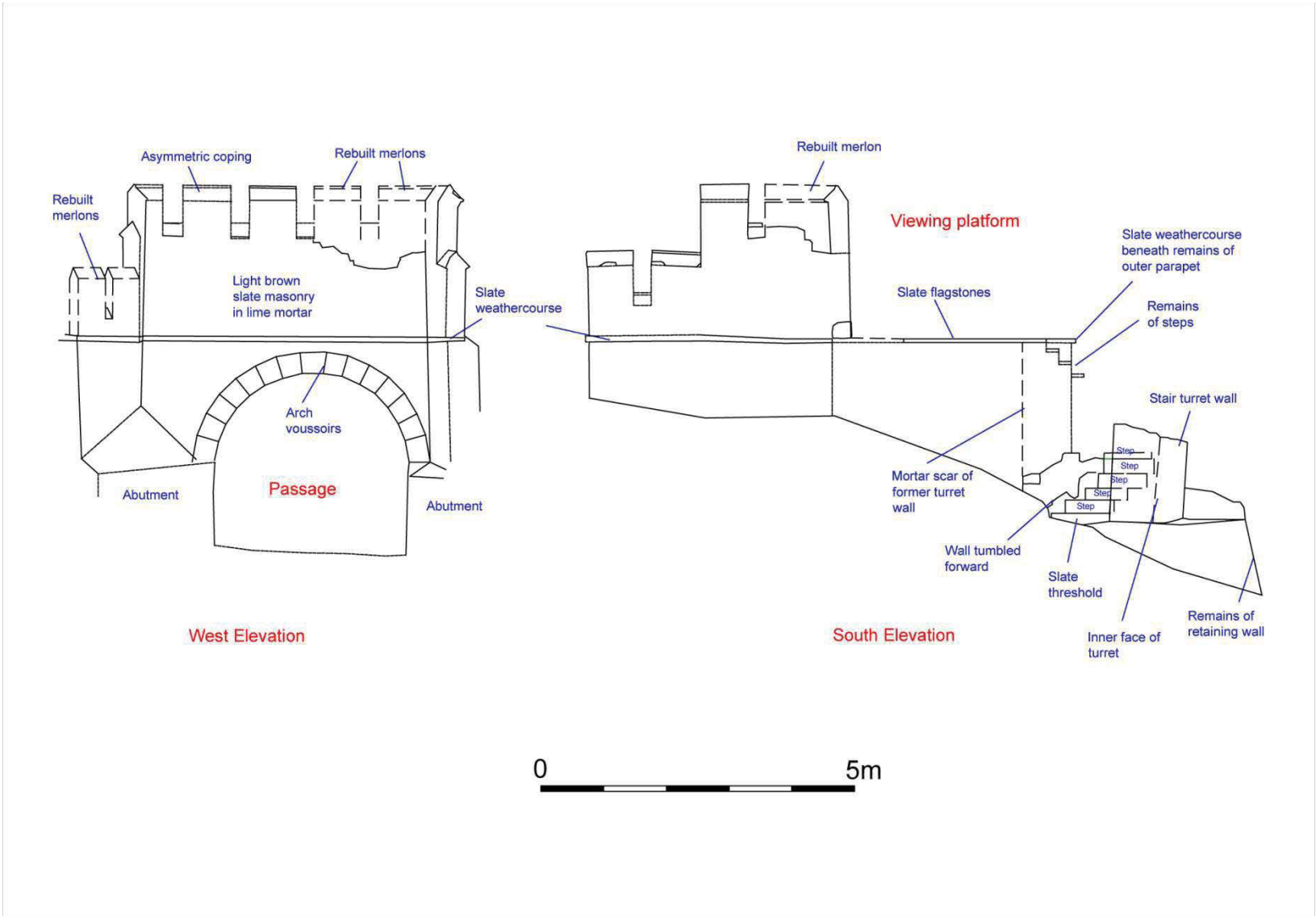

Figure 37 Battery Arch west and south elevations, after renovation works.

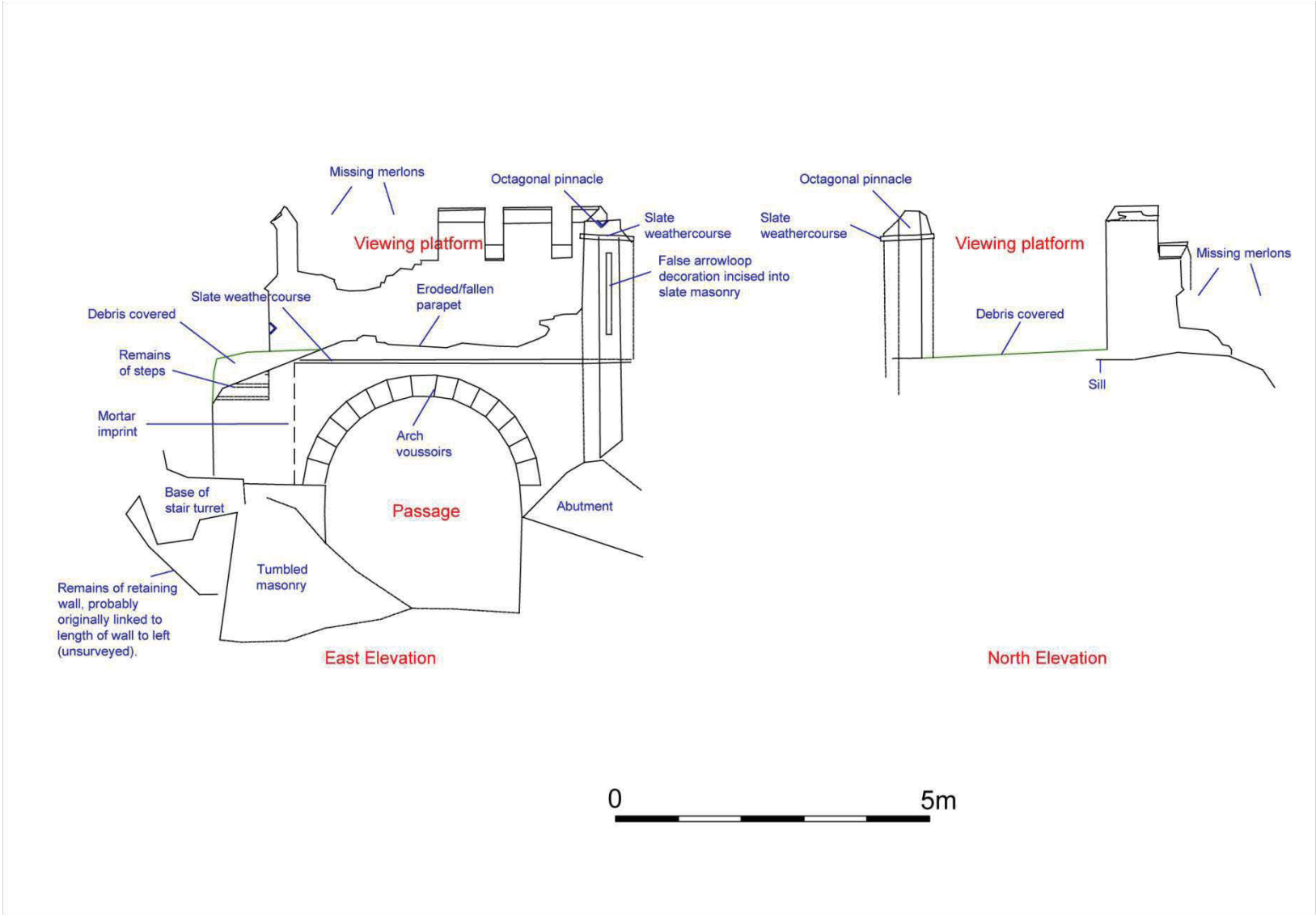

Figure 38 Battery Arch east and north elevations, prior to renovation works.

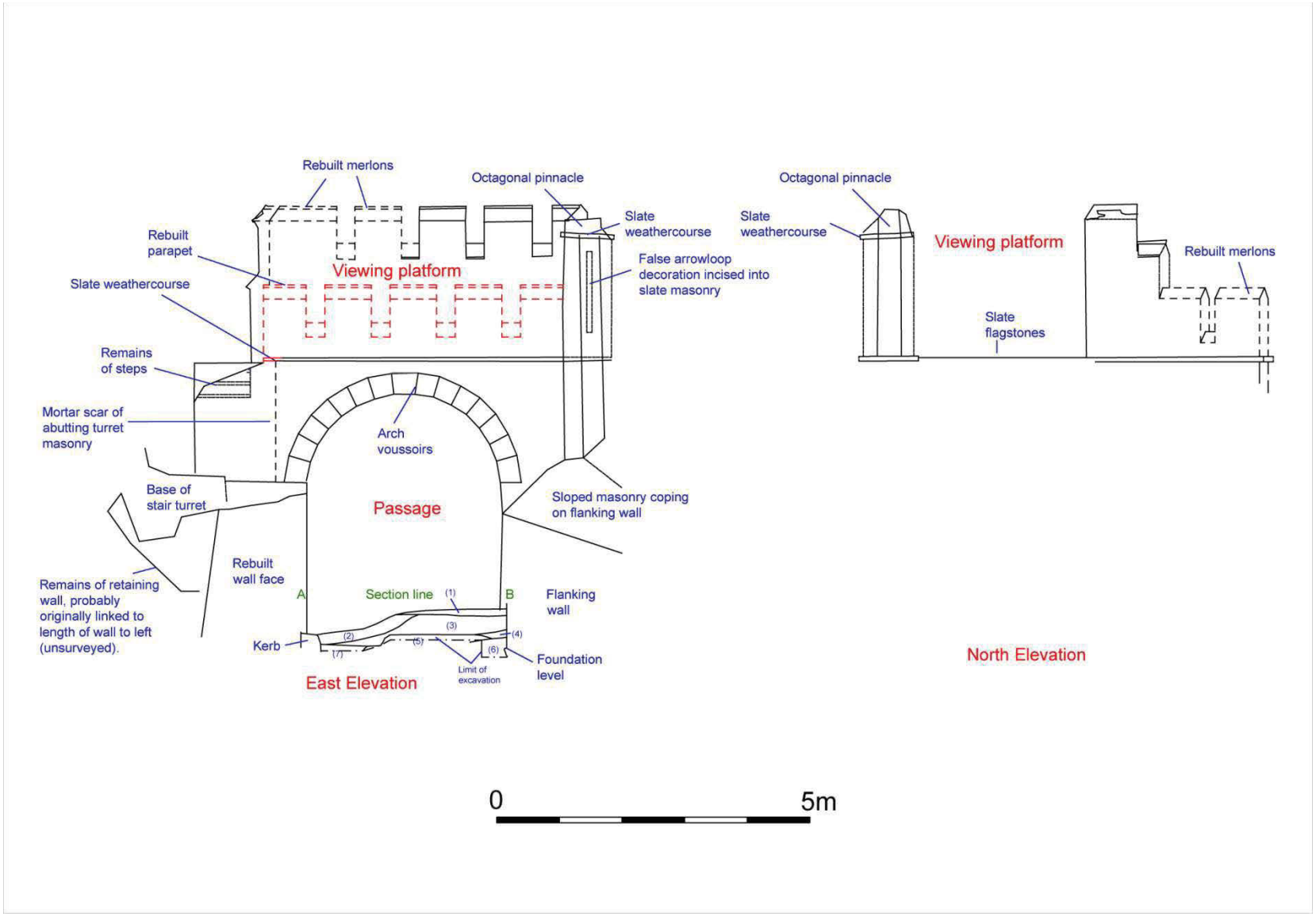

Figure 39 Battery Arch east and north elevations, after renovation works.

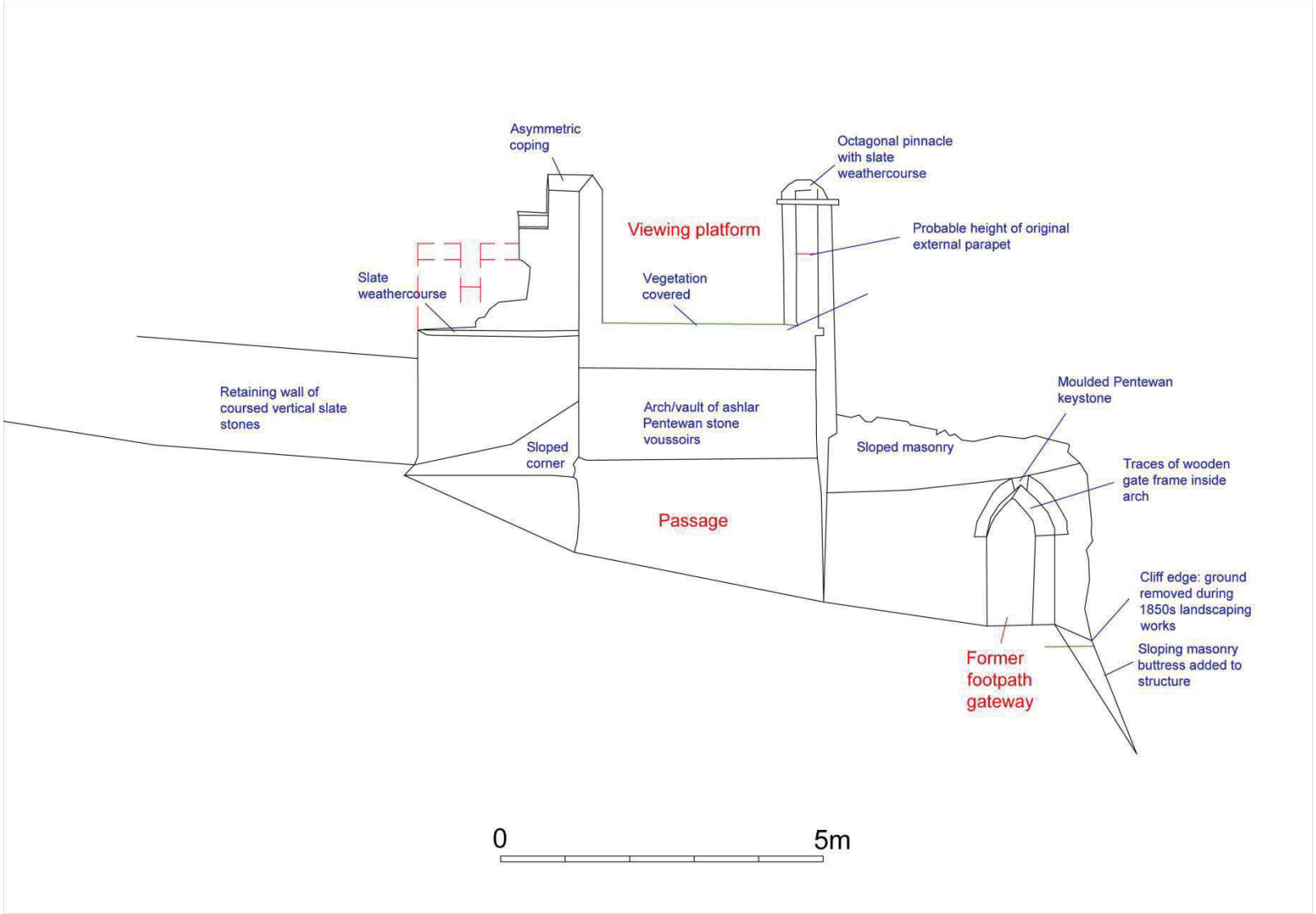

Figure 40 North section through Battery Arch, prior to renovation works.

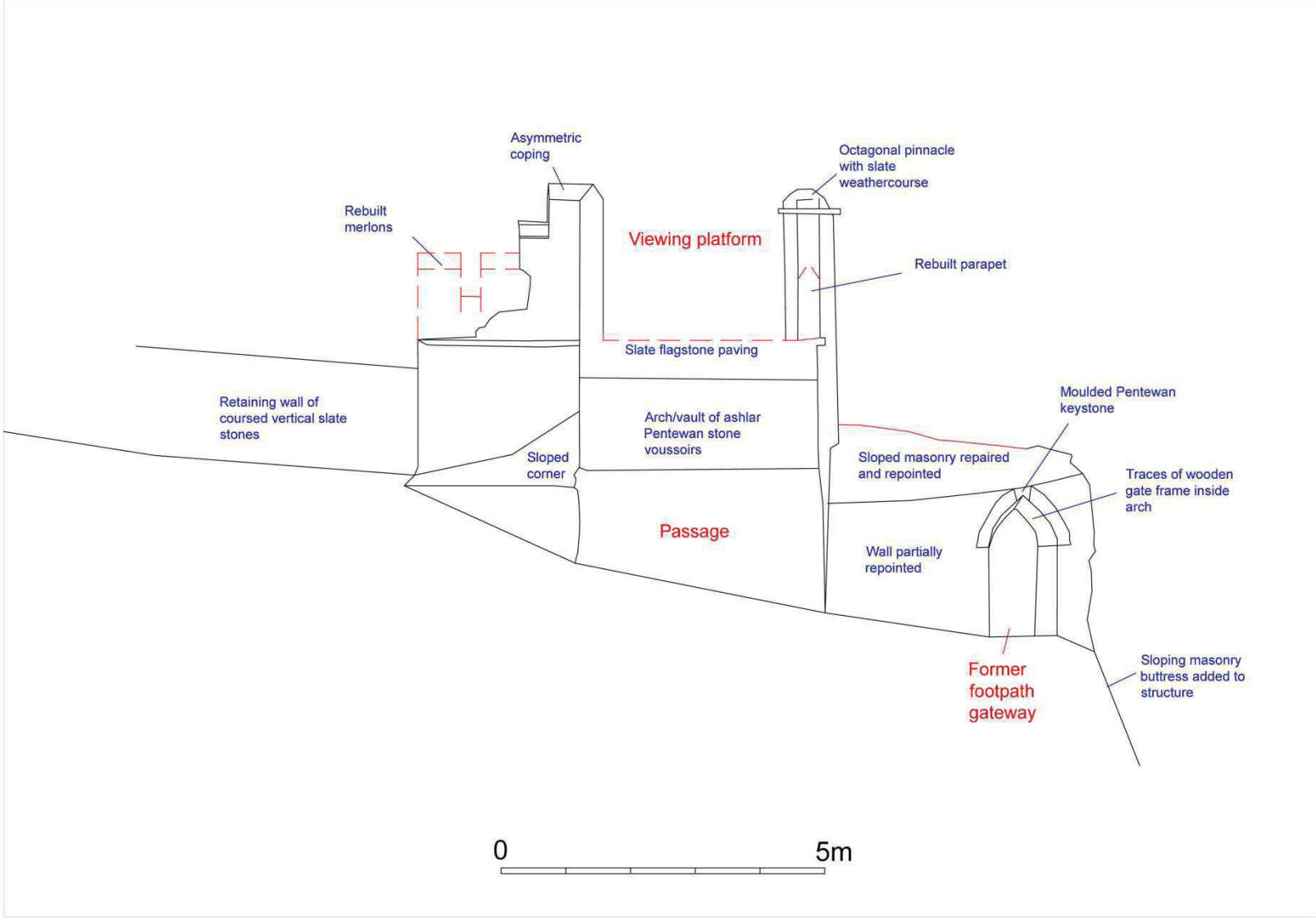

Figure 41 North section through Battery Arch, after renovation works.

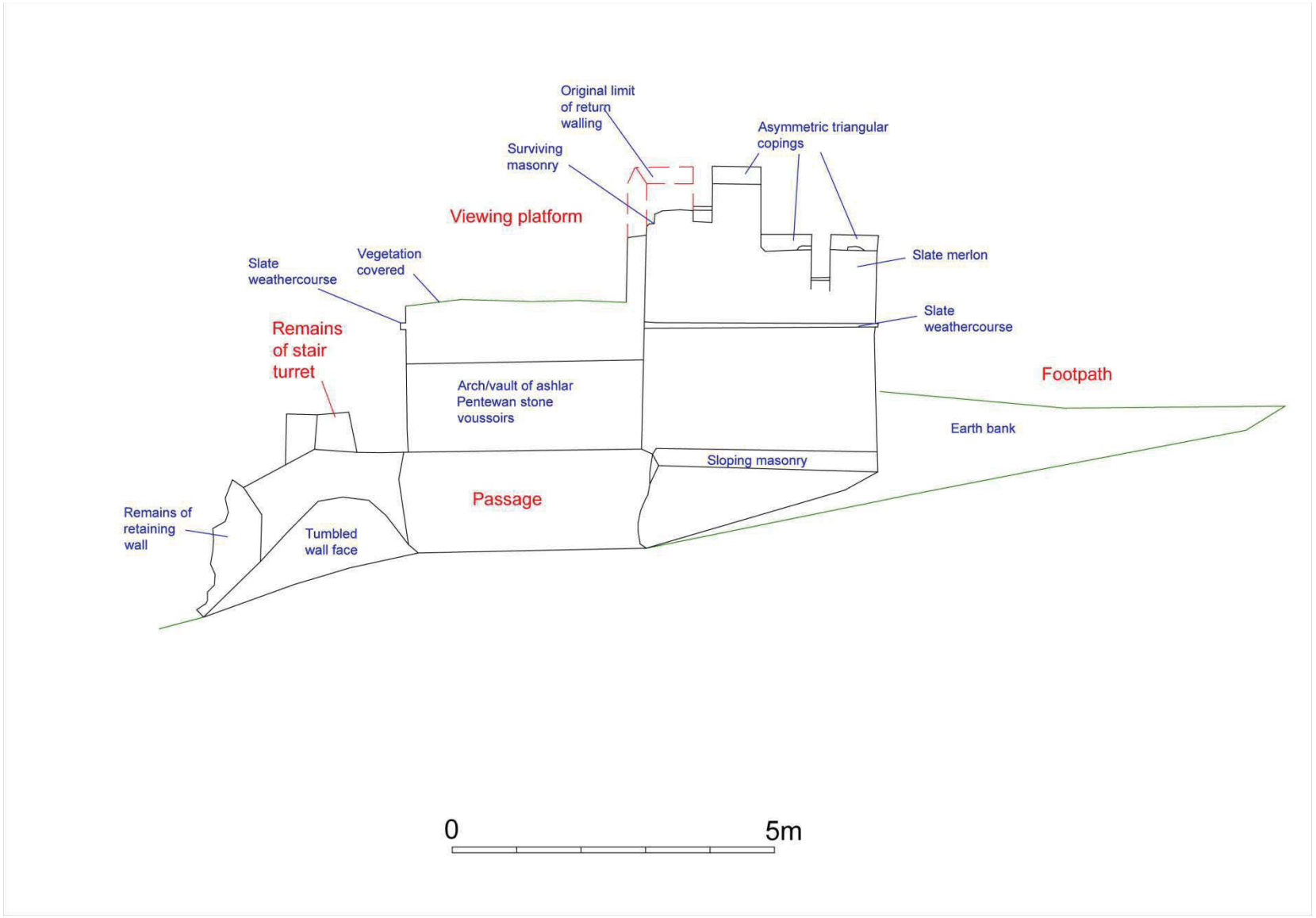

Figure 42 South section through Battery Arch, prior to renovation works.

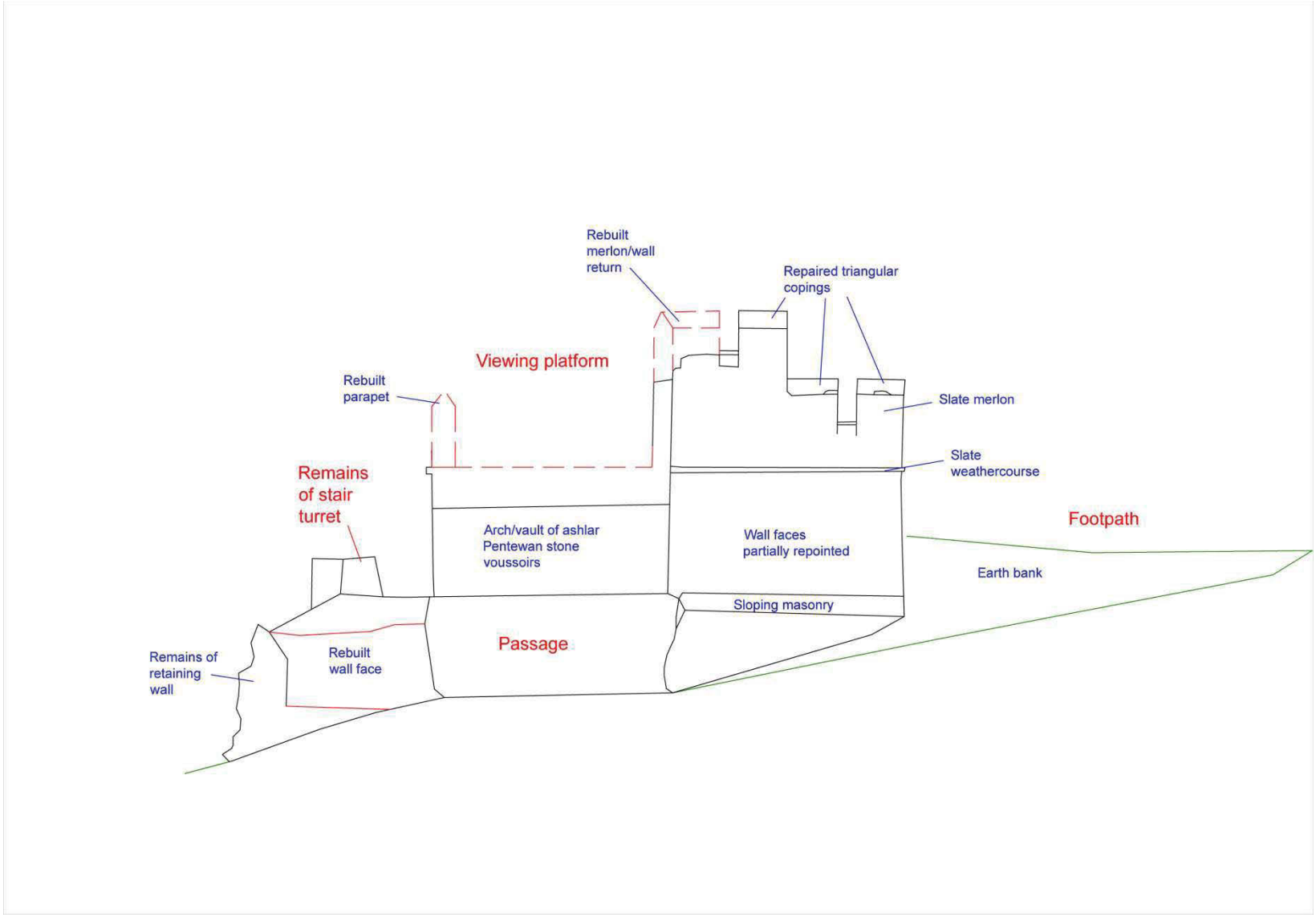

Figure 43 South section through Battery Arch, after renovation works.

8 Battery Walk

8.1 Description and brief history

Battery Walk once formed an extended picturesque walk through the woods along the western edge of Porthluney Cove to Watch house Point.

Neale's *Views of Seats* (1819) refers to 'Watch-house Walk' at Caerhays. Part of Watch House or Battery Walk is shown faintly on T Corfield's *Survey of Carhase* (1802), partially shown on W Smiths estate plan of 1858 (Fig 10) and the whole length is shown clearly on the 1879 and *circa* 1907 large scale OS mapping (Figs 11 and 12). These maps show the winding course of the path with a 'turning circle' or viewing area at the seaward end. The path is now disused and overgrown but still clearly visible where under tree canopy (Fig 44). The extreme southern end is currently under thick bramble and thorn scrub. It is possible that the former viewing area still exists here.

Figure 44 View along Battery Walk.

The path has a levelled base and a constant width of about 2m, seemingly adequate for a light carriage. On the outer (seaward) side it is embanked for much of its course and in places a low built hedge has been provided.

The generous width of the path suggests it was originally designed for light vehicles, whereas the post 1850s approach at Battery Arch was apparently by footpath only. It may therefore be an ornamental form of an earlier route, perhaps to the reputed battery at Watch House Point.

In 2014 the view of Battery Arch from Porthluney Cove was framed by tall decorative pine trees. There were two trees on the north side of the Arch and a single leaning pine tree on the south side. As all these trees were at the end of their lives (and in danger of falling onto Battery Arch) a decision was taken to fell them, in advance of Stage 2. Another large pine tree is still extant on Battery Walk and there is a further fallen ornamental tree also on this path.

Eroded earth banks around 1m high on the cliff edge enclose part of Watch House Point on the eastern (seaward) side of the Battery Walk path. There is a double bank at the

north end, with a gateway leading onto the steep coastal slope/cliff. The upper ends of the banks appear to be overlain by the outer edge of Battery Walk.

The banks could merely be parts of a coastal field system but the tradition of a battery sited here strongly suggests they are remains of a small fortification. A good Cornish parallel is Crinnis Cliff Battery which was built to protect the new port of Charlestown in the 1790s, and was staffed by volunteer militia. It seems likely that the owners of Caerhays wished to protect themselves from potential threats during the Napoleonic period or earlier and created a similar defence.

The field adjoining the west side of Watch House Point is separated from the woodland containing Battery Walk by an earth bank and large ditch. These earthworks form a livestock-proof boundary for the headland but are now supplemented by a post and wire fence. The bank and ditch may be purely agricultural in origin but as the ditch seems significantly larger than most local field boundaries then it is possible that it relates to a former small coastal battery sited on the point.

8.2 Stage 1 assessment works

It was initially proposed as part of the NE funded works that Battery Walk should be assessed with a view to possibly clearing it and re-opening it as part of the coastal footpath. This was not eventually carried through to Stage 2 due to a need to concentrate the available funding on the structures (i.e., Battery Arch, the kennels and the walled garden).

9 Kennels complex

9.1 Historic map evidence

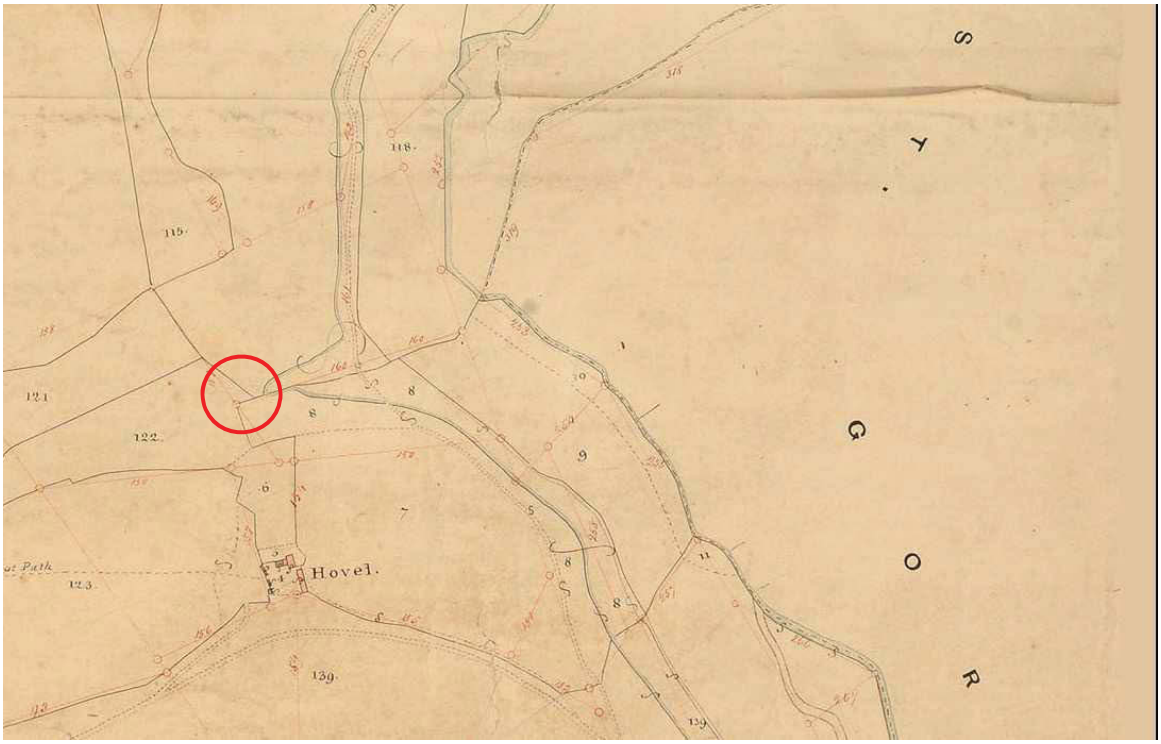

Figure 45 Tithe Map 1841.

The site of the kennels is circled on Fig 45 and was plainly not built then; it is also not shown on W Smith's estate plan of 1858 (Fig 10), so perhaps construction was not started until the early 1860s.

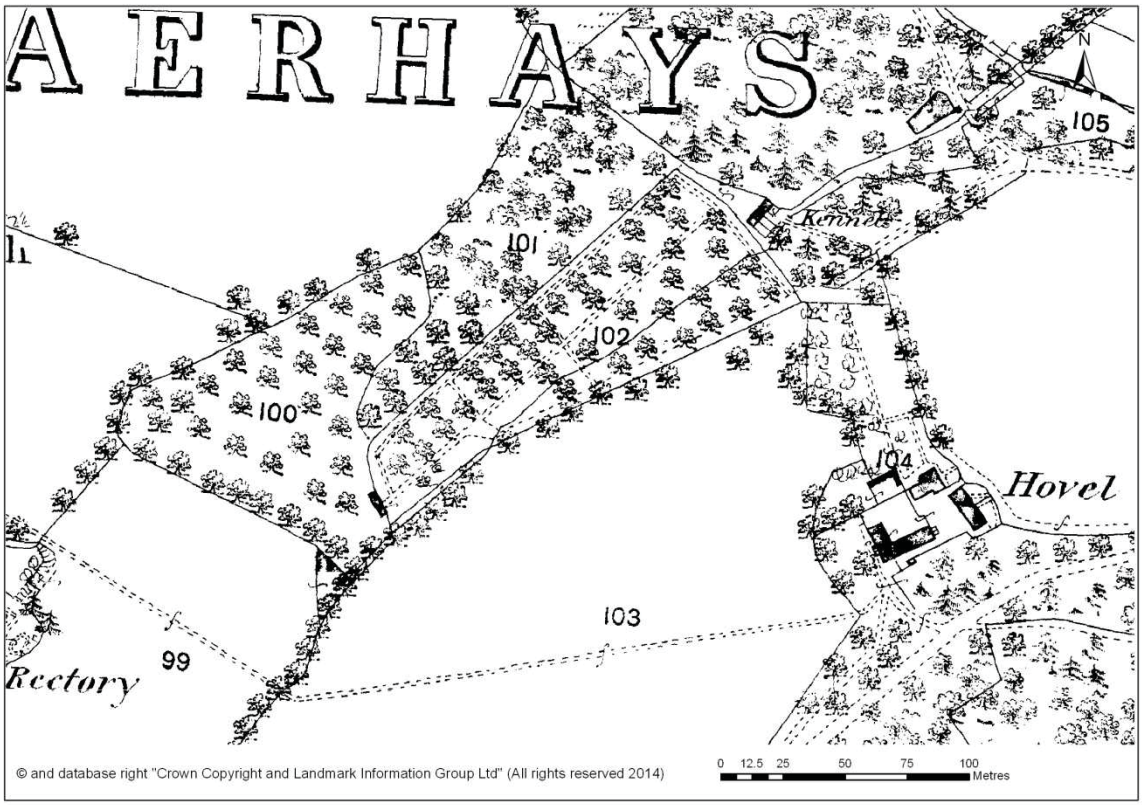

Figure 46 Extract from the OS First Edition 25 Inch Map, 1879.

By the time the 1879 map (Fig 46) was surveyed the kennels had been built and already extended. A path is shown running toward the kennels and walled garden from the east side of Hovel.

The kennels site was evidently chosen to be hidden away in the valley, well away from the Castle (because of potential disagreeable smells and noise) but also close to a stream, so the dogs could have access to water.

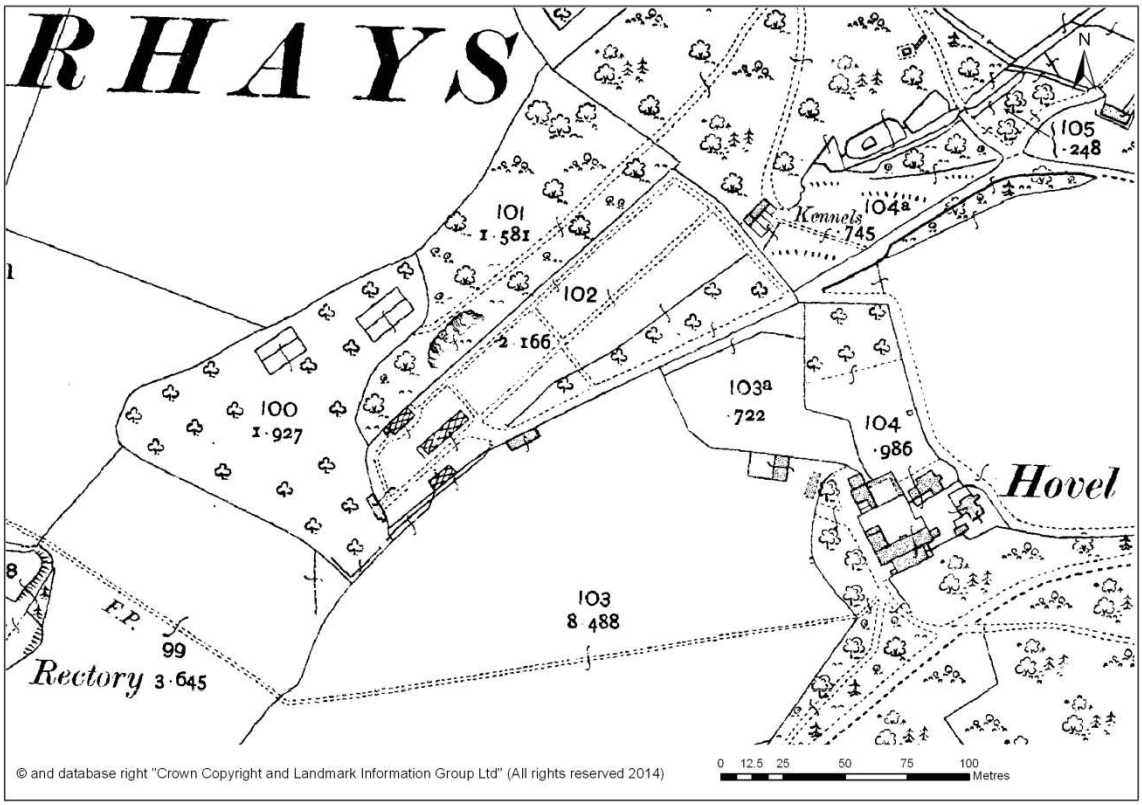

Figure 47 Extract from the OS Second Edition 25 Inch Map, c1907.

There appears to be no change regarding the kennels themselves when the area was resurveyed by the OS for the Second Edition map (Fig 47), although more ponds had been added on the stream below the site and the rear gardens and orchards of Hovel appear to have been rearranged.

The date of abandonment of the kennels is not known.

9.2 Description

9.2.1 Layout

The kennels complex now comprises a single-storey range of three kennels with a feed house, and attached yards on their south side. Originally there were two kennels on the west side, each with their own yards, and a feed house on the east. The easternmost kennel and associated yard are clearly additions, as their walling abuts the original three-celled range.

The two original yards (or pens) are longer, and each is crossed by a diverted stream at their lower ends; this was to provide clean water for the dogs and also to help with periodic cleaning out.

9.2.2 Materials

The walls of the kennels are built of rubble stone masonry, probably of material quarried locally on the estate. All original bedding mortar is lime-based.

Roofs of the kennels are a simple gabled structure, with bays created by the dividing stone walls; there is no surviving evidence of any intermediate timber trusses. Therefore the roof itself was simply of timber purlins and covered with rafters supporting a scantle slate covering.

The floor of the feed house is of blue slate flagstones, repaired near the entrance by two inserted slabs of very fine concrete. The replaced slab within the doorway has since worn and cracked away. Within the two original kennels the floors are of concrete;

these rise at the edges as integral moulded skirtings *circa* 200mm high, and were probably inserted to assist periodic washing out. Foundations for wooden sleeping benches for the dogs are still extant in each kennel.

The yard walls are capped with sloped cement copings, incorporating timber supports for wire mesh pens (three supports on the western pen are extant, and are probably still at full height). Both original yards have concrete with cement screed surfaces, whilst the eastern additional yard has a blue slate flagstone surface. Somewhat surprisingly there was no original drainage provided for the additional yard.

The passageway to the feed house between the yards is cobbled. This was originally approached by a footbridge over the stream, via a path from Hovel.

Traces of wooden door jambs are visible on all the kennels and feed house, and there are also indications of gate positions on each of the yards.

Inside the feed house is a boiler in the north east corner. This is a cast-iron bowl, heated by a firebox beneath, similar in form to traditional wash-houses. The boiler vents by a flue to a short brick chimney stack on the (present) east gable.

9.2.3 Works undertaken

The principal conservation works at the kennels have included:

- Measured survey of the ruinous remains.
- Clearance of vegetation.
- Removal of soil debris, tree roots and re-exposure of the original floor levels.
- Rebuild of the collapsed part of the central yard wall.
- Partial rebuild of the east kennel wall (collapsed wall face).
- Repair of the gables and wall-plates of the original three-cell building.
- Reconstruction/repair of the brick chimney stack.
- Re-roofing of the original three-cell building, to create a shelter for visitors to this part of the estate's gardens (this element was funded by the Caerhays estate and not part of the NE supported works).
- Repair of copings on the yard walls.
- Rake-out and repoint of all other wall faces (with lime mortar) where needed.

Clearance works were undertaken by the building contractors with archaeological supervision where required (see Figs 48-62).

9.3 Photo record

Figure 48 The derelict and partially overgrown kennels in 2014.

Figure 49 A similar view after renovation and re-roofing, June 2016.

Figure 50 The rear of the kennels in 2014.

Figure 51 A similar view in 2016.

Figure 52 The overgrown yards (with partly collapsed walls) in 2014.

Figure 53 Vegetation clearance and renovation works revealed that the southern wall has a battered foundation above the line of the adjoining stream.

Figure 54 A derelict (but intact) cast-iron boiler, within the feed house.

Bricks in the foreground are from the collapsed chimney stack on the gable wall (out of shot, above right).

Figure 55 Damaging tree growth on the gable wall (left) and in the centre yard.

Figure 56 A similar view in June 2016.

The sprawling tree stump has roots penetrating the concrete yard surface.

Figure 57 Sloped yard with stream-fed drain at lower end.

Figure 58 Culvert beneath wall to allow diverted stream through kennel yards.

Figure 59 View of the eastern (additional) yard to the kennels.

Figure 60 Removal of vegetation and soil debris in 2016 exposed a fine flagstone floor.

9.4 Survey drawings

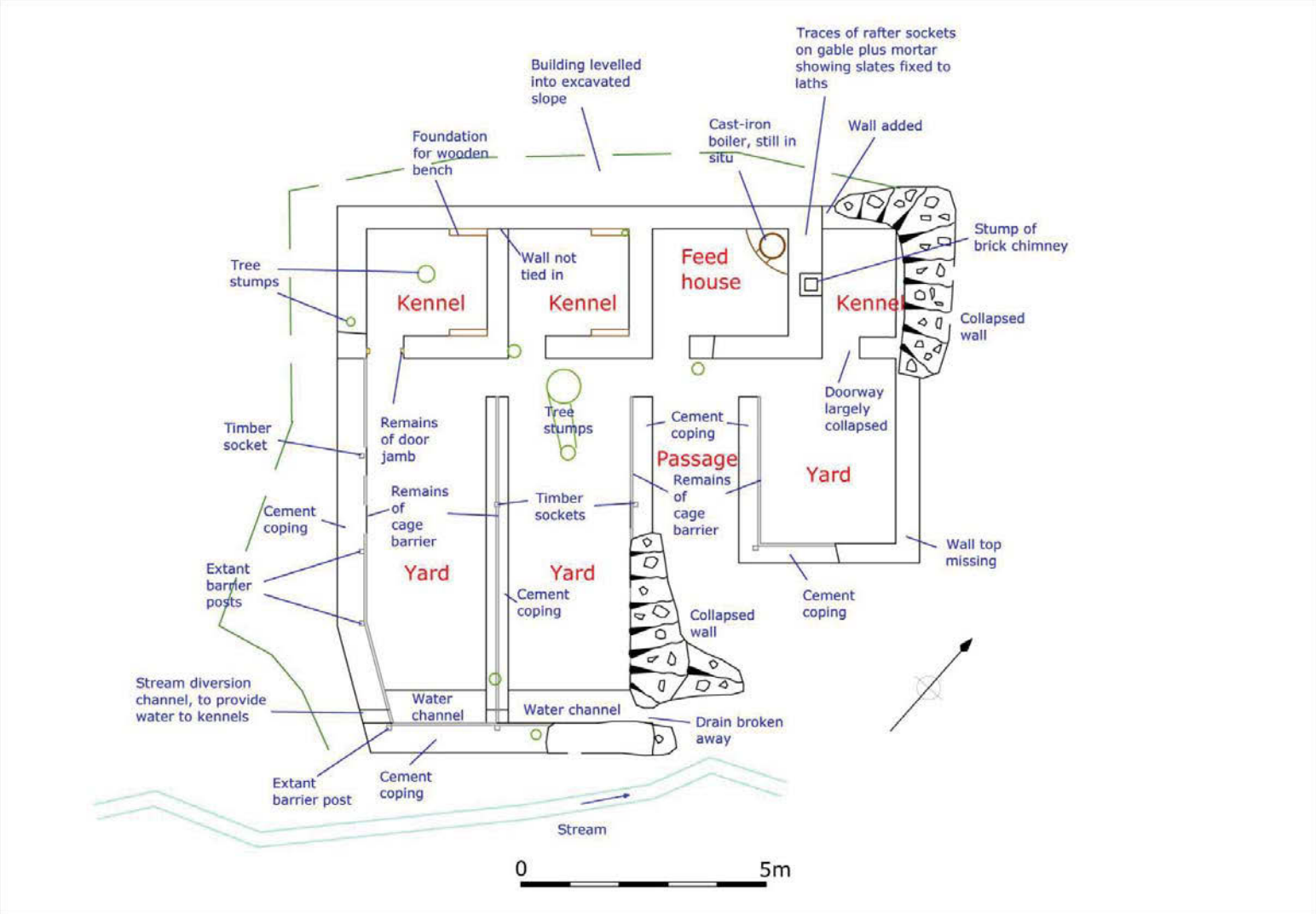

Figure 61 Plan of the kennels, prior to renovation works.

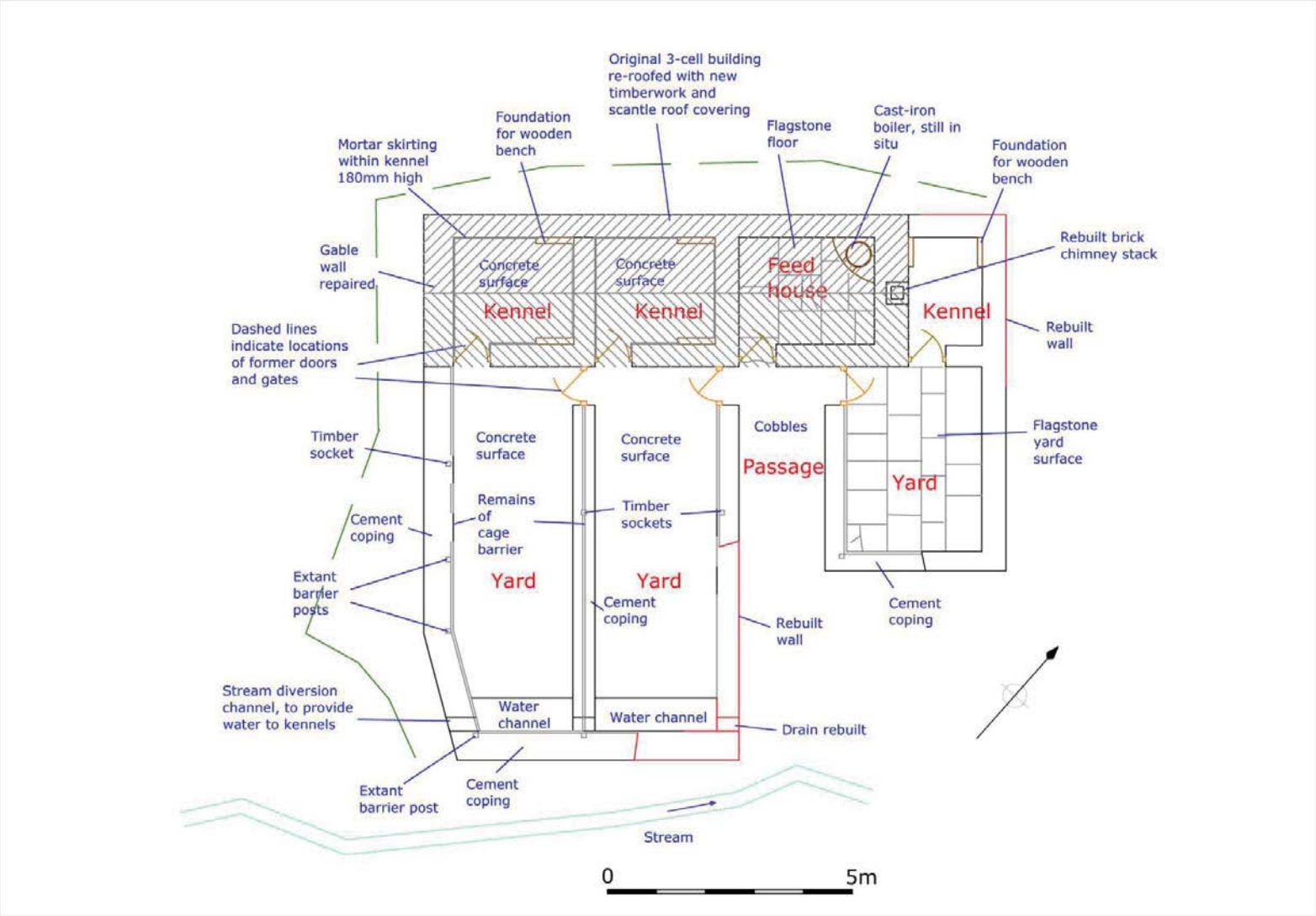

Figure 62 Plan of the kennels, after renovation works and replacement of the roof.

10 Walled garden

10.1 Historic map evidence

Figure 63 Tithe Map 1841.

This garden seems to have been developed by subdividing Giddle Orchard, which is shown on T Corfield's 1802 *Survey of Carhase.*

By the time the St Michael Caerhays Tithe Map (Fig 63) was surveyed, the garden enclosure walls on the north west, southwest and southeast sides were mapped, but the present wall on the north east side was not extant.

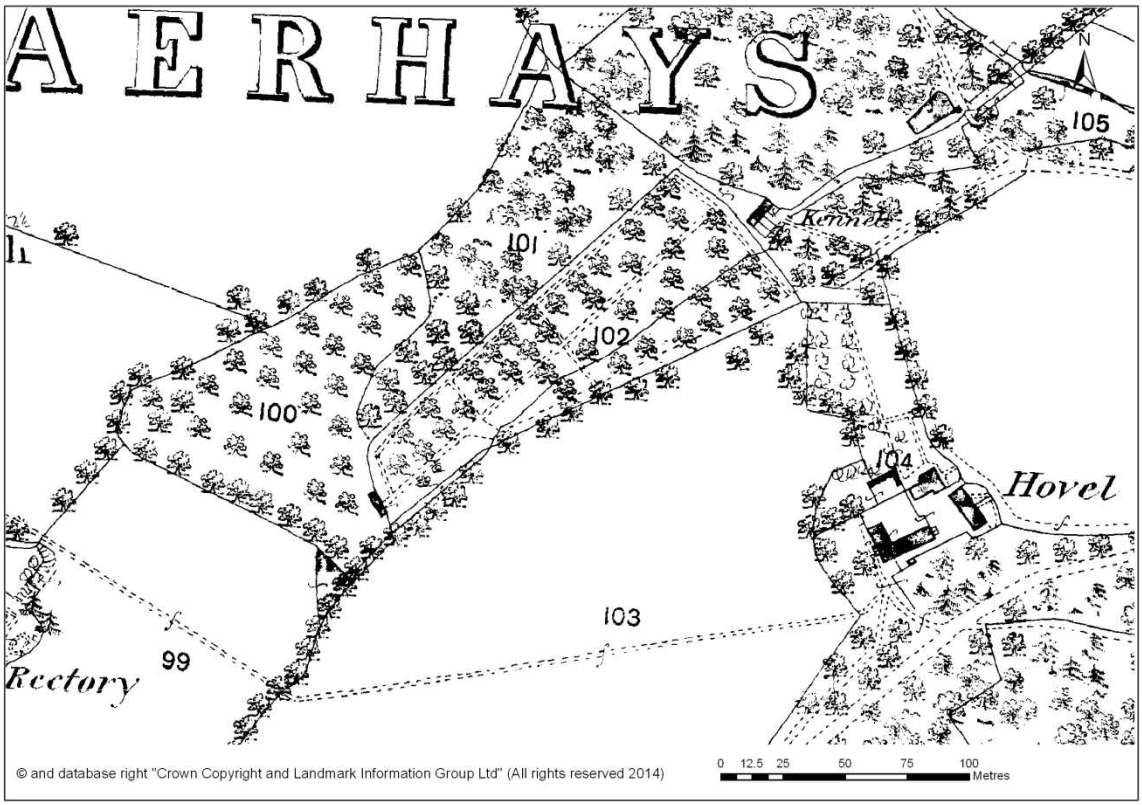

Figure 64 Extract from the OS First Edition 25 Inch Map, 1879.

The walled garden was complete by the time the OS surveyed it in 1879 (Fig 64), and the map conventions suggest it was wholly in use as an orchard. A small roofed building is shown on exterior of the southwest wall, linked to a path running across the centre of the garden. This implies there was a doorway through the wall in place by this time (Figs 82-3).

The regular tree symbols shown in the enclosure west of the garden indicate this area was also in use as an orchard. It is therefore possible that the small roofed building was a cider house associated with both orchards.

By the time the OS carried out revision of the large scale map three greenhouses had been added inside the walled garden, and the potting shed (Fig 76) adjoining the southeast side (Fig 65). Map conventions suggest the majority of the trees had been removed, with only the north-west facing slope (south of the stream) planted with fruit trees. This indicates a more diversified use and by this date the paths probably demarcate areas of beds for growing vegetables, soft fruit, etc.

A small quarry had been opened immediately northwest of the walled garden, suggesting material was required for upgrading of the boundaries.

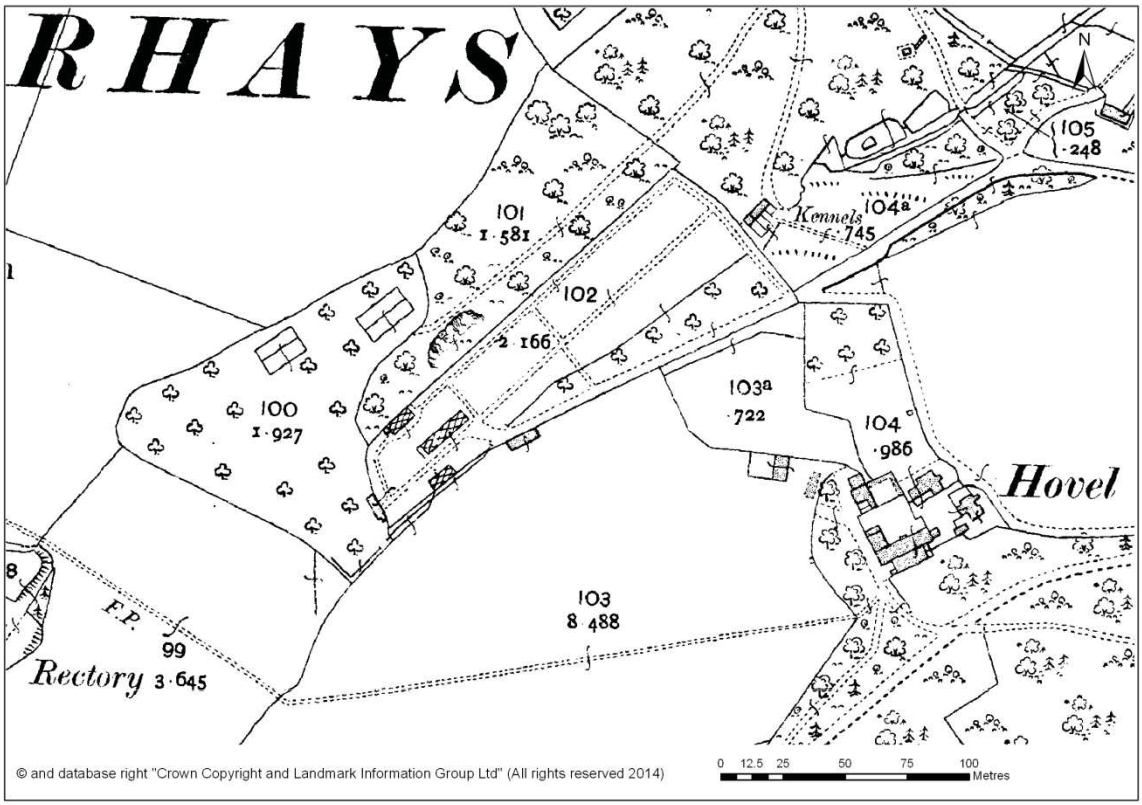

Figure 65 Extract from the OS Second Edition 25 Inch Map, c1907.

It is not known when the walled garden was last used for its original purpose; at present there are a few ornamental trees within the site and the partially overgrown enclosure is used as a pheasant rearing pen. A detailed study of estate records (old account books, etc.) may indicate periods of use or abandonment.

10.2 Materials

Two different types of original build are visible in the enclosure walls. The north west and southwest walls have a base of solid slate stone masonry (measured internally, about 1.5m high above the relative ground level, but this varies considerably due to the slopes). Above the internal face is a single skin of red brickwork (1.5m high). The original outer wall face is of cob, and the inner skin of brickwork is keyed in to the cob with tie bricks. The wall top is finished with blue slate flagstone copings (Figs 93-5).

The north east and southeast walls are built entirely of slate rubble masonry, with similar slate coping stones.

10.3 Structural evidence

(For layout please see plan, Fig 96.)

Occasional vertical joints suggest that parts of the garden enclosure were created in different stages, perhaps year by year. This is also suggested by the 1841 Tithe Map, which shows the enclosure incomplete (Fig 63).

There were two original entrances to the garden enclosure. An original pedestrian gateway, now blocked, exists in the angle of the southwest and southeast walls alongside the stream. When in use, it was probably approached by a footbridge, which has long since disappeared.

At the south end of the north east wall a trackway approaches the garden enclosure; a wide gateway allowed access for carts. It seems likely this entrance was used for bringing in manure and also for harvesting produce (Figs 72-3).

Both the large scale OS maps (Figs 64 and 65) show the network of paths that existed in the garden. Slate stone kerbing, used for marking the edges of beds and paths is still extant close to the east corner (Fig 74), and it is likely that more paths could still be traced beneath the overgrown areas.

The old OS surveys also show the course of a stream running through the garden. This runs down the valley from the west to reach the garden enclosure by its west corner. After flowing through a culvert under a wall it runs outside the garden wall along the southeast side until it reaches a short dog-leg. Here a culvert beneath the wall allows the stream into the garden (Fig 77). Originally it flowed through a slate-lined channel all the way down the garden enclosure but blocking of the channel has long since caused it to overflow and find a more meandering course. Parts of the original channel are still traceable. At the lower end of the garden the stream once flowed through a slate covered culvert and then exited through the base of the north east wall.

There is considerable evidence of wall rebuilding, particularly in the areas originally built in cob. This is particularly evident in the curved section west of the upper greenhouse, where the upper cob part has been rebuilt at various stages in stone masonry (Fig 87).

Where cob has collapsed in more recent years, parts of the wall have been replaced with concrete blockwork. This indicates preservation of the boundary but not necessarily use as a garden; it might reflect its present role as a pheasant rearing enclosure.

The west corner has been considerably altered:

1. The pedestrian gateway by the stream (mentioned above) was blocked with stone masonry.
2. Probably around the same time, another entrance was made through the southwest wall. This was cut through the original stone base wall but has built jambs higher up, surmounted by a shallow brick arch (on the inside) and wooden lintels (exterior). At the same time the surrounding upper part of the garden wall was rebuilt in stone. This rebuild is associated with the rectangular building shown outside the garden on the 1879 map (Fig 64).
3. Part of the wall closer to the stream was rebuilt again later on, this time comprising stone masonry and cement mortar. A blocked culvert beneath caused the stream to overflow and this part of the wall collapsed again during the winter of 2015-16.

Lengths of the southeast wall are now missing. A part alongside (and to the east of) the potting shed has been removed, and another length further along has also been taken down. Both missing sections have been replaced with fencing.

10.4 Greenhouses

Three greenhouses were added to the western end of the walled garden before 1907. Two of these are lean-to type, being built against the interior face of the garden wall, whilst the largest one is freestanding.

10.4.1 Upper greenhouse

(See Figs 88-92.)

There are substantial remains of the upper greenhouse, comprising a brick-built foundation wall (surviving to its fully built height) enclosing an area 12.4 long and 3.7m wide. At the east end is a single doorway with an external concrete step. There are a few traces of its original wooden framework that supported the glazing and there is a large amount of broken window glass littering the site.

This greenhouse was originally heated by a boiler standing in a brick-built compartment at the west end. This compartment is at a lower level than the greenhouse base and

entered by debris-covered steps. Although the boiler has long since disappeared there is a flue hole inserted through the wall leading into a brick-built buttress chimney on the exterior. At the head of the chimney there are still remains of mortar flaunching for a chimney pot. The boiler presumably heated water pipes that circulated the floor of the greenhouse.

In the upper part of the garden wall parallel to the greenhouse are five rectangular apertures with the inside faces covered with wooden shutters. These were adjustable ventilators and it is likely that there were other ventilators within the glazed structure. Each of the surviving ventilator apertures has wooden lintels above and in this part of the garden wall the coping has been replaced with rag roof slates. The ventilators can be seen to be additions to the garden wall as they are built as insertions within the earlier masonry. There are therefore three phases of construction visible in this part of the garden wall:

1. Original garden wall build comprising stone base, with brick inner face and cob exterior face, surmounted by slate coping stones.
2. Outer face rebuilt in stone masonry.
3. Insertion of ventilators associated with greenhouse. Replacement coping of roofing slates.

The upper greenhouse will have benefited from its sunny location at the top of the walled garden. Lead plant tags were found attached to the wall, indicating that varieties of peaches were once grown here.

10.4.2 Lower greenhouse

(See Figs 78-9.)

The lower greenhouse was of a similar lean-to build but much less appears to survive. The principal visible remains are a series of six ventilator apertures in the upper part of the garden wall. As all the wooden lintels have rotted away this has left the wall with a battlemented appearance. On the inside of the wall are 'ghostings' of vertical timbers in the mortar, which indicate the locations of the glazed structure. There are no surface traces of the greenhouse floor, unless this still survives beneath mud and debris. There is no indication of any heating. The approximate size of the greenhouse is 11.5m log and 3m wide.

10.4.3 Middle greenhouse

As the middle greenhouse is not connected to the garden wall it was not included in the NE funded works and therefore not recorded in detail. This greenhouse was the largest of the three (approx. 23m long and 4.1m wide) and was built as a freestanding rectangular structure. It has a brick-built base which largely survives to its original built height. A single central doorway is at the east end. Inside, the original brick-edged beds can still be seen. The glazed elements have long since collapsed but there are still elements of the displaced timber frame extant.

When mapped *circa* 1907 there appears to have been a boiler house at the west end (Fig 65).

10.5 Recommendations

- Maintenance: Monitor and keep stream culverts clear of debris, as blockages will cause flooding and damage to garden walls.
- Study estate records to find references to this garden, planting schemes, etc.
- Trace, survey and clear out original course of culverted stream through the garden. Re-route stream in original course so as to cause less damage to neighbouring parts of the garden.
- Trace and survey original paths and any other internal features.
- Clear debris from and survey the remains of the greenhouses.

10.6 Work undertaken

Northeast wall:

- Rebuild breaches. Large breach/collapsed area beside kennels needed archaeological investigation to find original stream outflow (Figs 66-71).
- Replace copings.

Southeast wall:

- Take down severely leaning part (Fig 75). Consolidate remainder and refit coping stones (where they survive).
- Unblock culvert where stream enters garden (Fig 77).
- Consolidate 'crenellated' wall top at site of Lower Greenhouse (Fig 78).

Southwest wall:

- Remove engulfing vegetation. Consolidate wall tops and copings (Figs 84-7).
- Rebuild culverted section over stream at west corner (Fig 81).

Northwest wall:

- Remove engulfing vegetation. Spot repairs to cob walls, to try and arrest further collapses (Fig 95).
- Replace rotten lintels to Upper Greenhouse ventilators. Renew rotten timberwork in greenhouse shutters (Fig 91).

10.7 Photo record

Figure 66 NE wall, showing collapsed lower middle part where stream has breached through.

Figure 67 NE wall: Careful clearance of collapsed debris revealed the original wall foundation.

Figure 68 NE wall: Distorted foundation over blocked stream outlet.

Figure 69 NE wall: Two views showing the original culverted stream course (above: slate capstones still in place; below: after temporary removal of the capstones and clearance of blocking debris).

Figure 70 NE wall: View of the lower side after unblocking of the culvert.

Figure 71 NE wall: after slight enlargement of the culvert and rebuild of the wall.

Figure 72 Cart entrance at east corner.

Figure 73 Remains of the wooden gates.

Figure 74 Slate kerbing (centre foreground and below scale pole) denoting original limits of paths and beds.

Figure 75 SE wall: severely leaning and collapsed part.

Figure 76 Remains of potting sheds and gardeners' crib hut adjoining SE wall.

Figure 77 SE wall: Blockage of a culvert within the dogleg section (left of scale pole) has forced the stream to enter the garden beneath a pedestrian gateway.

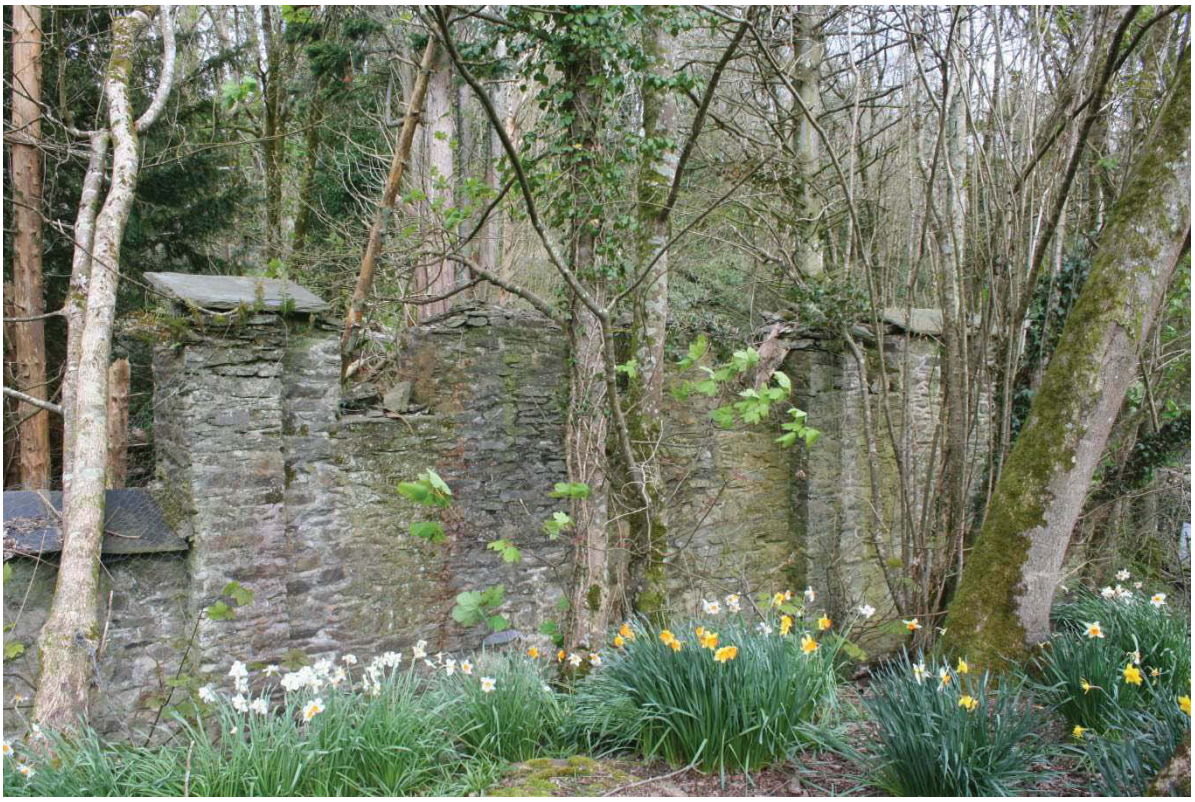

Figure 78 Remains of the lower lean-to greenhouse: the apparently crenelated wall top is the site of the top ventilators.

Figure 79 Remains of the lower lean-to greenhouse: A vertical scar at the west end shows the former location of the glazed structure.

Figure 80 An infilled former pedestrian gateway at the south west corner.

Figure 81 A field wall adjoins the walled garden at the west corner.

The garden wall had already tumbled before rebuilding took place.

Figure 82 A brick-arched pedestrian gateway at the SW end.

This doorway was created as a breach through the original garden wall, and probably replaced an earlier opening at the south west corner.

Figure 83 The same doorway, viewed from the exterior.

Lintel sockets (centre) and a wall return (towards the right) indicate the site of an external shed, mapped here in the 1870s. The wall (extreme right) is a later rebuild.

Figure 84 The severely overgrown SW part of the walled garden, photographed in January 2016.

Figure 85 A similar view, after vegetation removal and during renovation of the wall copings.

Figure 86 Iron fitting attached to brickwork, for support of garden plants.

Figure 87 SW wall of the garden, viewed from the exterior, during renovation work.

Three build phases are visible, comprising the original stone base, a 19th century stone rebuild of the upper wall (left) and a 20th century stone rebuild to the right of the scale pole.

Figure 88 The NW wall and foundations of the upper greenhouse.

Figure 89 Brick chimney stack from the upper greenhouse boiler, added as an external buttress.

Figure 90 Detail of a sliding wooden ventilator shutter on the upper greenhouse.

Figure 91 Greenhouse ventilator openings, viewed from the exterior side.

Figure 92 Surviving lead plant labels, found attached to the upper greenhouse wall.

Figure 93 Collapsed part of the NW wall, showing its original construction detail.

Figure 94 Original cob outer facing, eroded where there are gaps between slate coping stones.

Figure 95 Part of the NW wall, showing tumbled coping stones and collapsed cob, with brick inner facing still standing.

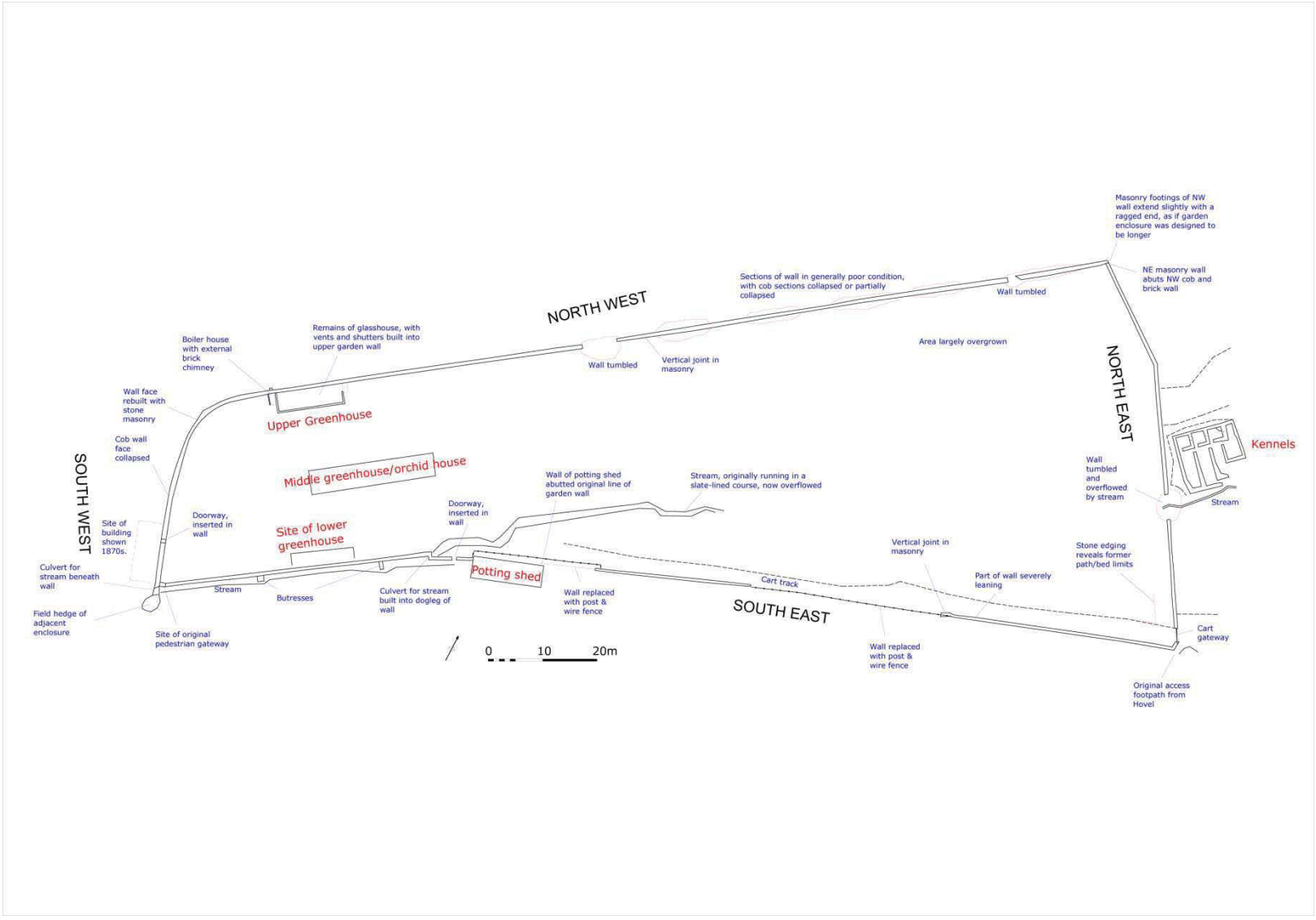

Figure 96 Plan of the walled garden.

11 Statements of significance

11.1 Definitions of significance

1) "The sum of the cultural and natural heritage values of a place..." (English Heritage 2008, 72).

2) "The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting." (National Planning Policy Framework 2012, Annex 2: Glossary).

11.2 Criteria

Significance of assets in the historic environment is more formally assessed in terms of four criteria:

- *Evidential value* - relates to the potential of a place to yield primary evidence about past human activity.
- *Historical value* - relates to the ways in which the present can be connected through a place to past people, events and aspects of life.
- *Communal value* – relates to the meanings of a place for the people who relate to it, and whose collective experience or memory it holds.
- *Aesthetic value* – relates to the ways in which people derive sensory and intellectual stimulation from a place.

(English Heritage 2008).

11.3 Battery Arch

Evidential value

High. As a decorative feature, Battery Arch appears unlikely to produce considerable physical evidence value other than the methods used in its construction. Nevertheless, it is a very unusual structure as it is a bridge-like folly but did not support a walk or carriageway, only providing a viewing platform.

Historical value

High. The building of Battery Arch appears to be contemporary (or near contemporary) with the construction of Caerhays Castle. It is a key feature in the Castle's landscape and is also likely to be the work of the architect John Nash.

Battery Arch originally bridged part of the public road on the west side of Porthluney Cove.

After construction of Battery Arch, changes in the landscape of the Castle with the creation of the Great Cut caused the physical separation of the Arch from the route of the public road.

Communal value

High. Probably for around a century or longer (from the 1820s), Battery Arch was a key place to be visited by the Castle's owners and their guests. The site was linked by private paths from the Castle and also linked into a longer promenade on Battery Walk. The platform above the arch provided a view over Porthluney Cove.

Aesthetic value

Although Battery Arch was essentially reserved for the family and guests at Caerhays, the site has always been visible to the wider public using the road across the Cove. In the present age, with public access to the beach, the Arch is now better known, although in recent years it had become more hidden due to tree growth that partially masked the structure, especially in the summer months.

11.4 Kennels

Evidential value

Moderate. With the completion of renovation works, there is still a little potential for re-exposure of features. The functions of the site can be readily understood.

Historical value

The kennels complex demonstrates an aspect of the running of the estate in the later 19th century and earlier 20th century, in terms of both land management and sport. Although not requested for this project, future analysis of estate records may reveal more information regarding the day-to-day running of the kennels. There are only a few hunting kennel complexes now surviving in the county. Its historical value is therefore high.

Communal value

Moderate. The kennels were probably once managed by estate staff living nearby at Hovel, and the hunts were undertaken by family and guests at the estate.

Aesthetic value

Moderate. Although now ruinous the kennel complex represents good quality vernacular style buildings, within the setting of the wider estate (and located at a discreet distance from the main house).

11.5 Walled garden

Evidential value

Moderate. There is potential for the walled garden to reveal more aspects of the domestic/kitchen garden functions at Caerhays. Within this project only the walls have been (partially) archaeologically examined. Within the site the associated greenhouses and former potting shed could (archaeologically) reveal further information. There is also potential value in tracing and re-opening the original watercourse, as well as old paths and cultivation bed limits in the garden.

Historical value

Low to moderate. Survival of walled gardens associated with gentry houses is relatively commonplace within Cornwall and beyond. This example relates specifically to the later 19th century development of Caerhays. It seems to have been developed after 1858 and was originally an orchard. Its use as a kitchen garden seems to have lasted for less than a century.

Communal value

Moderate. The gardens were probably once managed by estate staff living nearby at Hovel.

Aesthetic value

Low to moderate. The walled garden has walls of cob and stone, capped with slate coping stones, typical of local vernacular construction. Although conservation works have now carried out repair on considerable lengths, parts of the garden enclosure (particularly the north west section) remain in poor condition with some areas of wall tumbled. If the structure is repaired then there is potential for public access to be made.

12 References

12.1 Original documents consulted

English Heritage, 2008. Conservation Principles: Policies and Guidance for the sustainable management of the historic environment

Ordnance Survey, 1879. *25 Inch Map* First *Edition* (licensed digital copy at CAU)

Ordnance Survey, c1907. *25 Inch Map Second Edition* (licensed digital copy at CAU)

Ordnance Survey, 2014. *Mastermap Digital Mapping*

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12.2 Secondary sources

Nicholas Pearson Associates, 2011. *Caerhays: Heritage Management and Parkland Plan*

Williams, C, Tyrrell, S and Herring P, 2011. *Caerhays*

12.3 Websites

http://www.heritagegateway.org.uk/gateway/ *Historic England's Listed building and Historic Environment Records*

http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/delivering-sustainable-development/12-conserving-and-enhancing-the-historic-environment/ *National Planning Policy Framework: Planning practice guidance*

http://map.cornwall.gov.uk/website/ccmap/?zoomlevel=9&xcoord=190239&ycoord=65559&maptype=basemap&wsName=ccmap&layerName=Historic%20Landscape%20Characterisation

Cornwall Council's interactive mapping site.

https://historicengland.org.uk/advice/hpg/hpr-definitions/s/536524/ *Significance.*

https://historicengland.org.uk/images-books/publications/conservation-principles-sustainable-management-historic-environment/

13 Project archive

The CAU project numbers are **146388 and 146536.** The project's archaeological archive (comprising documentary, digital, photographic and drawn material) is maintained by Cornwall Archaeological Unit, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY.

Historic England/ADS OASIS online reference: cornwall2-264551

Appendix 1: Watching brief contexts

Recorded within east facing section of roadway beneath Battery Arch. Depicted on section drawing Fig 39.

Context Number	Cut/Build /Deposit	Description	Depth	Date	Comments
(1)	Deposit	Sand and lime fragments	100mm	2015/16	Mortar debris from 2015-16 repair works. Seals all other layers.
(2)	Deposit	Light grey-brown sandy soil with abundant lime mortar fragments	150-200mm	20th century	Probably debris from collapse of adjacent flanking wall and also from tumbled parapet above. Below (1).
(3)	Deposit	Humic dark brown soft sandy soil and roots. Occasional lumps of collapsed building stone and lime mortar	300mm	19th – 20th century	Build-up of post-abandonment debris and fallen masonry. Below (2).
(4)	Deposit	Light brown sandy silt with blue slate fragments	150mm	19th century	Debris at side of road. Below (3).
(5)	Deposit	Very compact orange gritty clay and silt	>200mm	19th century	Most likely rolled hardcore introduced to create road surface. Rainwater gully created on south side. Below (4). Base of layer not excavated.
(6)	Deposit	Medium brown soft sand and grey decayed slate fragments.	>300mm	Early 19th century	Lies above flanking wall foundation so post-dates construction of arch and flanking wall. Below (5). Base of layer not excavated.
(7)	Deposit	Dirty mid-brown clayey silt with slate fragments. Wet/waterlogged and lies within drainage gully on south side of arch.	>100mm	Early 19th century	Wet/waterlogged but otherwise similar to (6). Curved line of kerb to left is most likely interpreted as a line of an open drain carrying rainwater away from the interior of the arch; the steep edge of (5) appears to form the other side of the drain. Below (3). Base of layer not excavated.

Appendix 2: Existing archaeological records

The following sites and features within or adjoining Porthluney Cove, Caerhays are recorded in the HER:

MCO: 24126
Name: CAERHAYS - Post Medieval lime kiln
Grid Reference: SW 9733 4139

A lime kiln is shown on the Tithe Map of 1841, and referred to in the Royal Cornwall Gazette of 1822. Sheppard lists the site in the parish checklist. Excavations for the expansion of the beach car park in 1969 revealed traces of the kiln, but no trace now remains.

MCO: 24171
Name: PORTHLUNEY - Post Medieval findspot
Grid Reference: SW 9730 4123

A small cannon was found in 1973-4 on the west side of Porthluney beach and is now in the care of the finder, Mr D Rowse. Richard Larn of the Ferdinand Research Group considers it a Serpentine of about 1750. One side is badly worn by shingle. This cannon may be have been initially discovered following violent storms in the 1850s that shifted the sand.

MCO: 50937
Name: CAERHAYS - Modern beach defence
Grid Reference: SW 9729 4136

Sited on the rough ground overlooking Porthluney Cove, the remains of a possible WW2 beach defence is visible as earth and stoneworks on RAF photographs taken in 1946 and was plotted as part of the NMP. The remains consist of two irregular shaped ditches which may have been used as a tank trap. There is a circular building approx. 6.0m in diameter which may also be an associated pillbox.

MCO: 166307
Name: PORTHLUNEY - Modern road block, Modern pillbox
Grid Reference: SW 9724 4129

This is a Type 24 pillbox in good condition and was built as part of the anti-invasion defences for this beach. An anti-tank road block still exists for approximately half the length of the beach.

MCO: 170561
Name: PORTHLUNEY - Post Medieval boat house
Grid Reference: SW 9733 4133

A boat house is shown at this location, at the head of the beach on the OS 1st and 2nd Edition 1:2500 maps of 1879 and c1907.

MCO: 170562
Name: PORTHLUNEY COVE - Post Medieval tower
Grid Reference: SW 9725 4135

A tower and walling remains can be found here and are associated with Caerhays Castle. [This brief entry refers to Battery Arch.]

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