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CLOVELLY DYKES: SURVEY, RESEARCH AND EXCAVATION 2017–19

By Chris Preece and Terry Green with research by Steve Hobbs. Contributions by Derry Bryant, Dana Challinor, the late Ross Dean, Mark Edwards + Steven Trick, Steve Pitcher and Henrietta Quinnell.

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Cover – overlay by Steve Hobbs of images by Substrata and Aerialcam. ***(The Aerial-Cam image is a digital elevation model generated from drone survey. Image courtesy of NDCAONB)***

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In 2016 North Devon AONB approached North Devon Archaeological Society (NDAS) with a view to investigating aerial photographs which suggested that the scheduled monument of Clovelly Dykes might extend to the south. Following geophysical survey in 2017/18, limited excavation was carried out in 2018 and 2019 to ascertain the nature of features and to obtain dating material. Concurrent with this, extensive documentary and cartographic research was carried out. In late 2019 geophysical survey of the central enclosure of the scheduled monument was carried out with interesting results.

INTRODUCTION

By Chris Preece

Although Clovelly Dykes is generally described as a hillfort it is perhaps better thought of as a plateau fort, sitting as it does on high ground approximately 210 metres above sea level. It is located a mile from the coast as the crow flies, with commanding views over Bideford Bay, while to the south the aspect extends as far as Dartmoor (Fig. 1). Its significance in landscape terms is further defined by the fact that ridgeways intersect at its location.

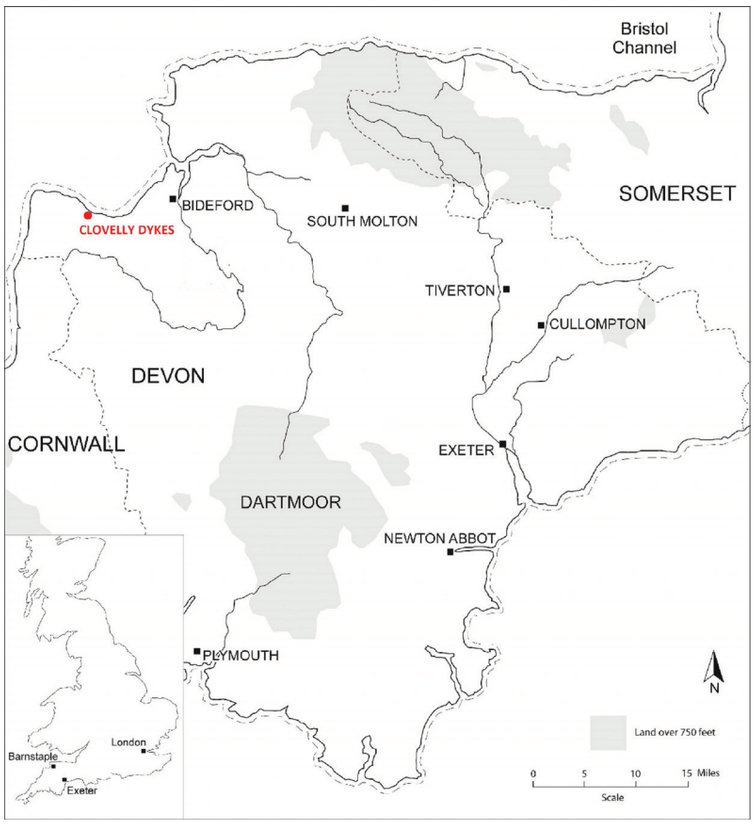


Fig. 1 *Location Map.*

Aileen Fox describes Clovelly Dykes as “the most impressive set of prehistoric earthworks in Devon” (1996, 27) and as if to reinforce this, an aerial photograph of the site graces the cover of her monograph. Frances Griffith, the former County Archaeologist, also selected Clovelly Dykes for the front of her book ‘Devon’s Past: an Aerial View’ (1988). As a relatively rare, large, multivallate hillfort it is also deemed of national importance (Historic England website list entry; Devon HER). For too long however, it has also been referred to as “the forgotten or neglected hillfort” (T. Green *pers. comm.).* There are several reasons why this may be so. Firstly, it is on private land owned by Clovelly Estates. Secondly, it is hidden from view by hedges as you pass by it on the main road to Cornwall, the A39. Thirdly, as a scheduled monument, the management of the site tends towards maintenance rather than investigation in the present climate. Fourthly, like many sites in the north of the county it can be a case of ‘out of sight, out of mind’.

Up until now therefore, most published analysis of the Dykes has been based on its morphology with all the limitations implicit in that methodology. Aerial photography has aided that study, particularly recently. For instance, any examination of aerial photographs of Clovelly Dykes leaves the viewer with an impression of the asymmetry of what remains, particularly to the south where it appears truncated. The insertion of roads and farms has obviously affected what is left of the monument and this is discussed later. Nevertheless, it is still a magnificent site both in terms of its size and complexity.

It had long been assumed that no excavation had taken place at the Dykes (Fox *op. cit.,* 28*)* but recent work by Steve Hobbs has proved otherwise. His documentary research has run alongside a programme of geophysical survey and limited excavation which *in toto* have revealed considerably more detail regarding this remarkable monument. How this came about is detailed below.

BACKGROUND TO THE PROJECT

By Steve Pitcher

The National Mapping Programme (NMP)

The hillfort at Clovelly Dykes was scheduled in 1924 and amended in 1999.

In April 2013 the North Devon Area of Outstanding Natural Beauty (AONB) National Mapping Programme Report was published (Knight and Hegerty, 2013). It had been commissioned by English Heritage and Devon County Council, as part of a national programme to review archaeological sites in all the protected landscapes (National Parks and AONBs) in England. The report was based on an examination of aerial photographs of the area. In respect of Clovelly Dykes, the report stated "*The enclosures at the well known and iconic site of Clovelly Dykes are clearly visible as hedgebanks on aerial photographs between 1947 and 2007.*"

The report continues "*Interestingly several possible banks and ditches to the south of the monument, on the other side of the road, are visible as cropmarks and earthworks on aerial photographs between 1947 and 1986. The best definition is found on oblique aerial photographs from 1966 (Fig.2), when two ditches are visible as dark cropmarks approximately 4 metres in width, in one or perhaps two fields. Curvilinear banks are also visible on aerial photographs dating to 1968. The banks and cropmarks are in line with two of the outwork ramparts, curving to the east and roughly symmetrical with the extant ramparts on the north of the hillfort. A possible curvilinear bank circa 4 metres wide is visible as an earthwork south of the A39, in line with the most westerly bank of the hillfort, on photographs taken in 1947 and 1948. It is plausible that the bank and ditches are the remains of the original southern extent of the three outermost enclosures, which became separated from the main body of the hillfort when a road developed through the southern part, and have subsequently been levelled by ploughing. This interpretation appears to be supported by Parry, writing in 1867, who states that the southern part had been 'obliterated' by the construction of the road. Potentially, therefore, it was possible to 'read' earthworks in the fields south of the hillfort at this date.*"

Fig. 2 *Cambridge collection photo (1966) showing outer enclosure ditch in fields south of scheduled area.*

The report concludes "*The Schedule only includes the complex north of the A39 and this should be considered for amendment, to include the cropmarks to the south which are at the highest part of the field and so particularly vulnerable to continued cultivation*."

In October 2015 Historic England rejected the recommendation to amend the Schedule. In its assessment of the case Historic England said "*Whilst the national importance of Clovelly Dykes, which survives as a*

substantial earthwork, is still without question, it is recommended that its Schedule entry is not amended at the present time for the following principal reasons:

- *Survival: the evidence for the survival of the buried remains to the south of the scheduled area are unclear at the present time, particularly as this area has been compromised by ploughing and has, therefore, been recommended for further archaeological investigation to determine the extent of their survival;*
- *Potential: given the uncertain survival of archaeological remains to the south of the scheduled area, the potential of this area to yield nationally important archaeological information cannot be quantified at the present time.*

The report concluded that should further information become available, it may be appropriate to review this decision. The Secretary of State confirmed the decision not to amend the Schedule.

The AONB Management Plan

The ND Coast AONB Management Plan 2014–2019 has a section on the Historic Environment and Culture. One of its objectives is to identify, protect and conserve the historic environment of the AONB, its setting and the historic character of the landscape. The Management Plan objectives are delivered by focussing on Key Themes on an annual basis. The Historic Environment was a Key Theme for 2017/8 and 2018/9. To bring in additional resources to deliver the theme a successful Coastal Heritage bid was submitted to the Heritage Lottery Fund (HLF), for a two-year project, including a Project Officer.

The owner of the land at Clovelly Dykes Southern Extension, the Hon. John Rous, represents the Country Land and Business Association (CLA) on the AONB Partnership. The AONB Team was thus able to broker the arrangements with the Clovelly Estate, including the tenant farmer, to carry out archaeological investigation on the site.

One of the measures of progress on delivering the Historic Environment theme was that a minimum of two Sustainable Development Fund (SDF) projects each year should be linked to historic environment and culture. The AONB Team encouraged North Devon Archaeological Society (NDAS) to pursue the matter of the scheduling of the potential Southern Extension of Clovelly Dykes, in the light of the NMP report and its own Management Plan policies.

Thus, when NDAS approached the AONB Partnership in 2016 and 2017 for SDF funding for the two geophysics surveys of the potential Southern Extension, the bids were approved because they fulfilled Management Plan criteria, even though the site was just outside the AONB. The Coastal Heritage project started in July 2018 with the appointment of the Project Officer, Joe Penfold. As a result, the subsequent evaluation and post-excavation work at Clovelly Dykes was funded directly from the AONB Coastal Heritage HLF budget.

For the later work at the scheduled site, north of the A39, funding was provided by Historic England, through its Monument Management Scheme. In particular, this funded the Geophysics survey of the inner enclosure carried out in 2019, with additional funding from NDAS and Devon County Council.

DESK-BASED STUDY

By Terry Green

This study rests to a very high degree, on research undertaken by Steve Hobbs of Hartland who has an intimate and extensive knowledge of the documentary history of Hartland and Clovelly. I am indebted to him for providing access to the information that he has gathered together over a period of years and which has facilitated the writing of this study. Sources from the Hartland Digital Archive (HDA) are referenced as such in the text. TG.

Description of the Site – Location and Topography

Clovelly Dykes are part of the Clovelly Estate and are contained within the land of East Dyke Farm. The entire site is currently under pasture. Broadly, the site lies within the Culm National Character Area of grasslands, moor and marsh over heavy, poorly drained clay soils. The earthwork, centred at SS31152330, lies on a downland ridge or plateau at 210 metres OD with extensive views over a gently undulating landscape falling away to west, south and east, while to the north the land descends more steeply to the coast of Bideford Bay. The location affords open views in all directions including over the waters of the Bristol Channel, towards Lundy Island and the coast of South Wales beyond.

The underlying solid geology consists of carboniferous sandstones of the Crackington formation.

The earthwork is defined on the south by the A39 road from Barnstaple to Bude, is cut on the east by the B3237 from Clovelly Cross to the village of Clovelly and on the west is flanked by a stretch of the B3248 leading to Hartland as well as a minor road leading to the hamlet of Burscott. As presently known, the sub-triangular multivallate earthwork covers an area of over 8.09 hectares, comprising two concentric sub-rectangular central enclosures and four further enclosures on the west, north and east. That on the east is bisected by the road from Clovelly Cross to the village of Clovelly and is largely occupied by the cottages of Dyke Green and Dyke Green Farm with buildings on either side of the road. East Dyke Farm straddles the road at the north-east 'corner' of the earthwork.

The monument is complex with a number of ramparts, partly interlocking banks together with internal and external ditches. The central enclosure is defined by a 2.1m high bank with no apparent outer ditch. The second enclosure, concentric to the first, is defined by a rampart standing up to 3.0m high with an outer ditch reaching at the north-west a depth of 3.5m, thus an aggregate depth of c.6.5m from top of rampart to base of ditch which at the north-west is of considerable width. Entrances, to the east on the inner enclosure and to the east and south-east on the second enclosure, are mainly of recent origin. The area to the west of the central enclosures is divided by two relatively low (up to 2.5m) banks into what look like medieval plough-strips running north-south with curvilinear boundaries. The inner of these is stone faced and neither shows any sign of a ditch. These features lose definition where they curve to the north-east and merge with a potential entrance complex of interlocked banks (partly occupied by the buildings of East Dyke Farm). The outermost enclosure is roughly triangular in plan and has a steep rampart rising up to 3m high.

The outer ditch survives as a buried feature to the east and south, but is up to 3m deep on the western and northern sides. On the south the enclosure boundary flanks the A39 road and is here obscured by heavy tree growth. To the east it is noticeable that hedgebanks extending to the east of the farm buildings and east of the outer ditch come together to form an obtuse angle and appear to continue the lines of the northern and southern enclosure banks. It has consequently been suggested that the hedgebanks echo the boundaries of a further sub-triangular enclosure which may have been part of the original structure. In addition, aerial photography since the 1940s and recent geophysical survey have strongly indicated further linear features, conceivably a continuation of ditches on the south side of the A39 road. (See excavation report below.)

Apart from the recently indicated southern extension, the site is a scheduled ancient monument.

Historiography

Strangely, John Leland made no mention of Clovelly Dykes when he passed through the area on his itinerary of 1534–43 (Chope 1967, 6), so that his successor William Camden, in his *Britannia* of 1586, provides the earliest known commentary on the earthworks, briefly mentioning, in the context of Hartland, *a furze grown ruins of a great Roman Camp* (quoted in Chope 1908, 13). In the following century Thomas Westcote who produced *A View of Devonshire in 1630*, wrote of Clovelly *where there is some appearance of banks cast up called Clovelly Dykes, but for what use I cannot conjecture* (1845 ed., 313). Other later writers were less shy of conjecture, so that the supposition that the Romans were responsible for the earthwork became a common theme among the few writers who mentioned the Dykes up until the end of the 19th century. In his novel 'Westward Ho!' (1855, 58), Kingsley talked of *the huge old Roman encampment*, and as late as 1903, the owner of the Clovelly Estate spoke of *the Roman encampment on our farm* (Hobbs, HDA) There is in fact no current *direct* evidence of any Roman or Romano-British use or occupation of the site*, although it would not be at all unlikely that the Roman military were aware of its stategic significance and might have made use of an existing strongpoint, a possibility acknowledged – but on balance dismissed – by J.A. Parry in a paper read to the Devonshire Association in 1867 (*infra*).

(*The results of recent geophysical survey however, may suggest that the Dykes invited significant attention during the centuries of Roman rule.)

Serious thought began to be devoted to the origins of Clovelly Dykes in the latter half of the 19th century, when in 1867 J.A. Parry presented the Devonshire Association with a detailed description of the Dykes, which he had personally mapped. He expressed doubt of any Roman hand in their construction, and instead advanced the idea that they were an 'old British' work (1867, 99ff). He did however suggest 'an adaptation of an old British work to the requirements of the Romans'. By the end of the 19th century, the idea of a native British origin had been developed, so that in 1899 the Rev. Sabine Baring-Gould, in *A Visitor's Guide to North Devon* (1899, 151), described the Dykes as a 'British king's *Dun*'. In 1903 Baring-Gould sought permission from the Clovelly Estate to conduct an archaeological dig on the Dykes (Hobbs, HDA). By the standards of the time, this appears to have been carried out in a thoughtful and disciplined manner, so that in that year Baring-Gould was able to furnish the Clovelly Parish Magazine with a brief, but relatively detailed report (see 'Historic Excavation' below). He suggested a date in the early Iron Age. In July 1908 R. Pearse Chope followed on with a report in the Hartland and West Country Chronicle in which he quoted Baring-Gould at length, provided a description and accurate plan of the earthwork and drew comparisons with other nearby earthworks, principally Embury Beacon.

At around the same time (1906), with input from Chope himself, the Victoria County History (VCH) volume for Devon provided a very detailed and accurate description of the earthworks and in its analysis entertained the idea that the broad outer 'courts' on the west might have been used by the 'Britons' for the collection and management of herds of cattle as reported by the ancient Greek geographer Strabo and by Julius Caesar (Page ed. 1906, 593).

The site had now caught the attention of serious scholars such as the archaeologist C.A. Ralegh Radford. In the summer of 1921 the Western Morning News reported that Ralegh Radford had accompanied members of the Devon Archaeological Exploration Society on a visit to the Hartland area and had introduced them to Clovelly Dykes to which, like Baring-Gould, he ascribed an Iron Age date and also suggested use of the large outer enclosures for cattle herding. In July 1931 the Bideford Gazette recorded a further visit to the site by Ralegh Radford, this time with members of the Devonshire Association to whom he gave an address reiterating what he had concluded ten years earlier.

In 1927 the Devonian Yearbook printed a paper by G.E.L. Carter who had made a close study of this and other earthworks in the county, notably Woodbury and Milber Down. His take on the earthworks that he studied betrayed an obsession with a semi-mystical interpretation of geometrical relationships. He had spent time in India and had clearly absorbed Indian mysticism which led him to conclude that the banks and ditches of Clovelly Dykes represented a spiritual journey.

Serious study post World War Two began with Lady Aileen Fox who, together with her husband Cyril Fox, knew the site well and in 1952 published a paper in the Archaeological Journal: *Hill-Slope Forts and Related Earthworks in South-West England and South Wales*. She repeated her conclusions in abbreviated form in a 1996 publication *Prehistoric Hillforts in Devon* (27–29). She drew comparisons with other earthworks with multiple enclosures, and concluded that Clovelly Dykes represented at least two phases of construction, the inner two concentric enclosures, followed by a phase of enlargement involving the wide, strip-like enclosures on the west and north. Like others before her, she concluded that the management of livestock was a major factor underlying the layout and design of the earthwork, specifically the secondary enclosures. Unlike others before her, she attempted to relate the site to its landscape, emphasising the access to water and suggesting that the Dykes represented a major tribal centre, market and coastal trading post.

W.G. Hoskins in his 1954 publication *Devon* (1992 ed., 370) and in his 1959 book *Devon and its People* (17) made passing reference to the impressive scale of Clovelly Dykes and uniquely suggested that the site might have been intended to guard approaches from the sea.

Beyond the work of Aileen Fox, there has been no further published academic study of Clovelly Dykes.

The Cartographic Record

The earliest cartographic record of the Dykes is Benjamin Donn's map of 1765 (Fig. 3). Shown lying between the road to Hartland and the road to Clovelly, two concentric ovals are labelled 'Dichen Hills and Intrenchments a Roman Camp'.

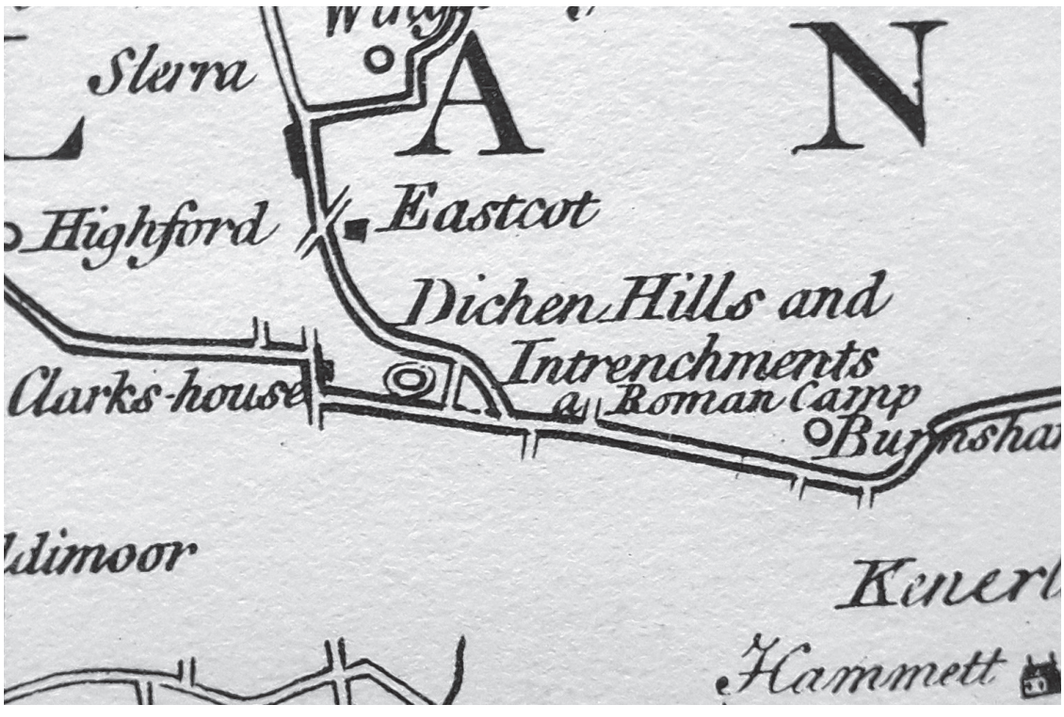


Fig. 3 *Extract from Donn's map of Devonshire, 1765 with legend 'Dichen Hills and Intrenchments a Roman Camp'.*

A cartographically more detailed, but nevertheless not very precise record is represented by the so-called Old Series Ordnance Survey map at one inch to the mile, surveyed *c*.1805/6 and published in 1809 (Fig. 4). This was subject to periodic adjustments through much of the 19th century until the advent of the much more accurate OS mapping of the 1880s. On the 1809 map Clovelly Dykes is labelled 'Ditchen Hills'; East and West Dyke Farms are East and West 'Dicks' respectively.

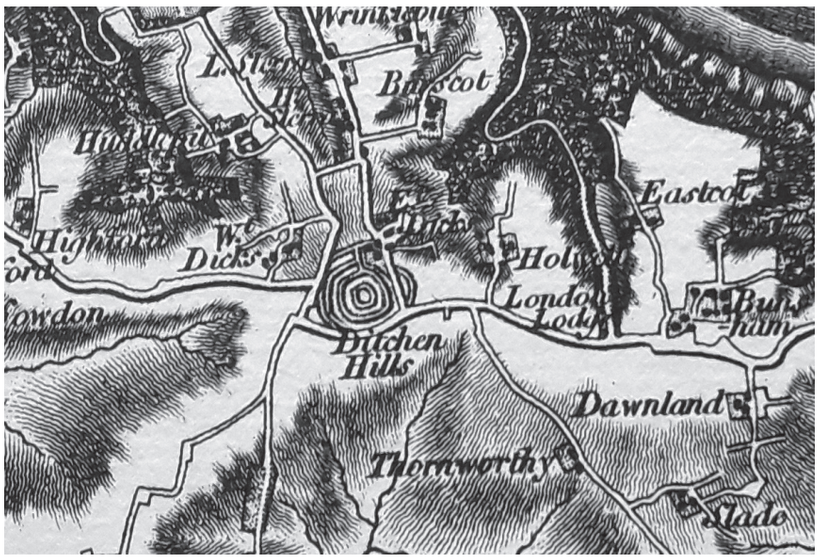


Fig. 4 *Extract from the 'Old Series' Ordnance Survey map at one inch to the mile, surveyed c.1805, published 1809 with legend 'Ditchen Hills'.*

The tithe survey of 1840 (Fig. 5) produced the earliest accurate and detailed map of Clovelly Dykes. In the normal manner of the tithe survey, each distinct enclosure within the Dykes is numbered and in the Apportionment (1839) a field name and a brief indication of the state of cultivation is provided (see below for details).

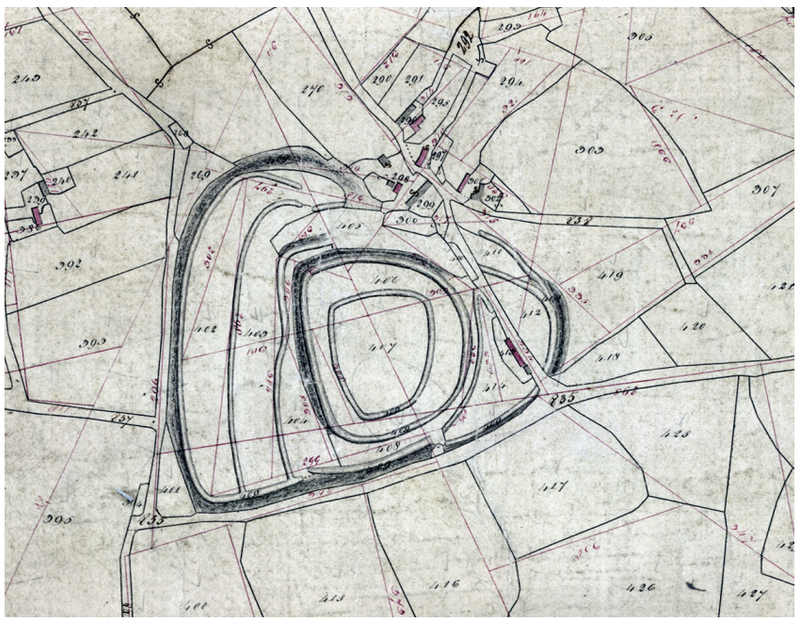


Fig. 5 *Extract from the Clovelly tithe map of 1840.*

In light of the very good work of the tithe surveyors, it is somewhat surprising that Parry in 1867 chose to produce his own plan which fancifully represents the site as almost symmetrical (Fig. 6).

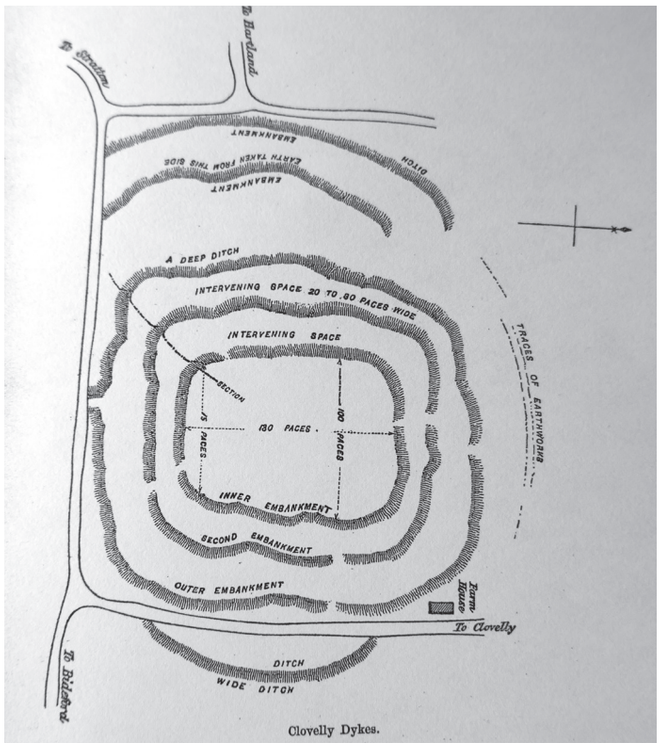


Fig. 6 *Parry's plan of the Dykes as printed in Transactions of the Devonshire Association 1867.*

A yet more accurate survey and mapping is represented by the Ordnance Survey First Edition map at 1:2500 surveyed around 1886 and published in 1889/90 (Fig. 7). The standards of the Ordnance Survey provide assurance that the extra detail provided in comparison with the tithe map accurately represents the topography of the site in the late 19th century. The use of hachures to show direction and degree of slope, the indication of gaps in the banks and extra detail (in comparison to the tithe map) on the north and south contribute useful information.

Fig. 7 *Extract from the First Edition Ordnance Survey map at 1:2500 published 1889.*

The second edition OS map at 1:2500 published in 1905 (Fig. 8) is slightly more sparing of fine detail, but shows no change other than the appearance of structures behind the cottages of Dyke Green.

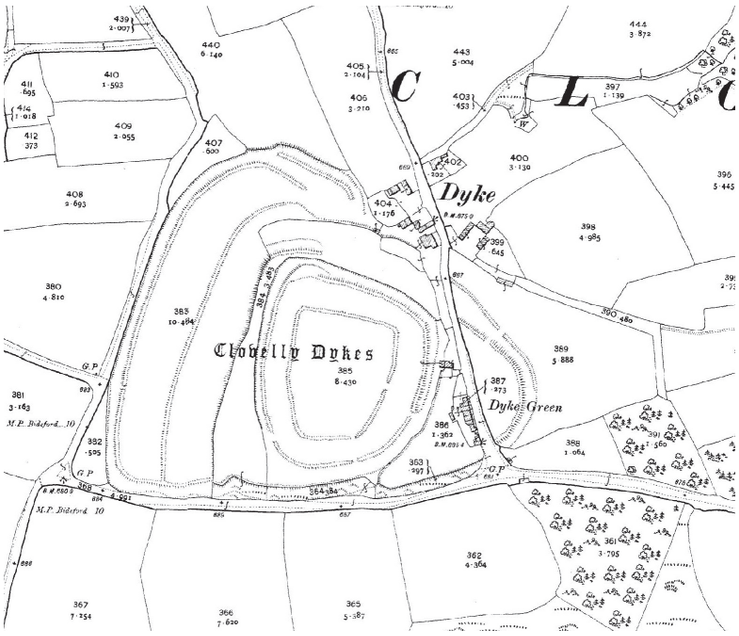


Fig. 8 *Extract from the Second Edition Ordnance Survey map at 1:2500 published 1905.*

The map published in 1906 in the Victoria County History volume for Devon (Fig. 9) is clearly directly based on the OS map, but usefully adds profiles of the banks and ditches at points which are indicated on the map.

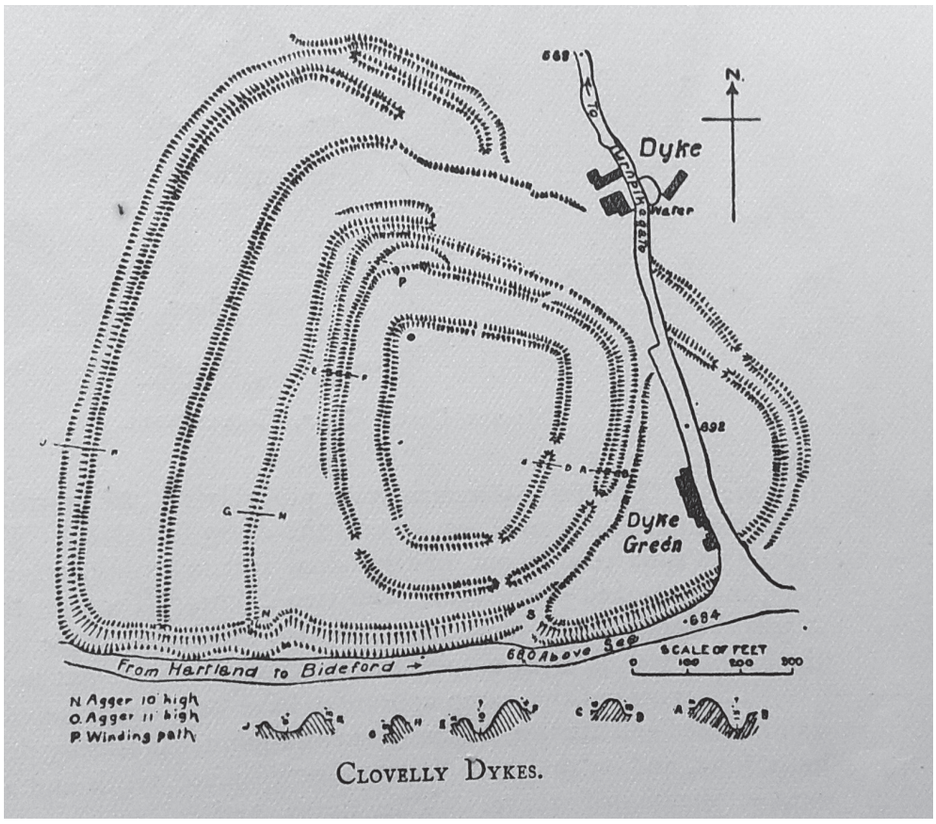


Fig. 9 *Plan of the Dykes as published in the Victoria County History of Devon 1906.*

Further 20th century editions of the OS map provide no further information other than changes in the adjacent farm and buildings.

The Tithe Apportionment

On the 1840 tithe map numbers are assigned to every definable section or part of the Dykes, and in the accompanying tithe apportionment each number is expanded with information on ownership, field-name, state of cultivation and acreage. With a single exception, all individual plots numbered 402 to 414 within the Dykes were tenanted by East Dyke Farm. The exception was 413 representing Dyke Green Cottages. All but 409 and 410 are described as 'arable', which does not necessarily mean that they were ploughed in the 1840s, but that they had been ploughed in the past and had the potential to produce an arable crop. Even small and awkward plots 404 and 405, 'Brandies Meadow' and 'Higher Meadow' respectively are so described. The exceptions are 409 – which number is assigned to all the ditches – described as 'waste', and 410 which is a garden.

Of potential archaeological interest is the name applied to the central area, plots 406 and 407, both named 'Chapel Ground'. There is no record of an early chapel here. The nearest appears to have been at Higher Velly, where there are records of a private oratory dedicated to St James. It is suggested that the name arose from the use of the central area of the Dykes for open-air non-conformist preaching. This has to be set against recent drone photography which suggests a square platform in the centre of the central enclosure and against the results of geophysical survey (see below).

Roads, Buildings and a Football Pitch: post-medieval intrusions

Roads:

Currently the Dykes are more or less contained between the A39 trunk road on the south, the B3237 minor road from Clovelly Cross to Clovelly village on the east, and on the west the first 100 metres or so of the B3248 minor road leading on to the single-track road to Burscott.

Benjamin Donn's Devon map of 1765 (Fig.3) shows a road skirting the south side of 'Dichen Hills' and leading on via Highford and Rosedown to Hartland, more or less as at present. An earlier less direct route from Bideford to Hartland went via Woolfardisworthy, but in or around 1740 the newly established Bideford Turnpike Trust appears to have taken in hand what was perhaps previously no more than a track redirecting the main highway to take the route that is now the A39. The Turnpike Trust's adoption and improvement of this route would have entailed either flanking the southern edge of the then surviving Dykes or cutting through an enclosure on its southern side where the outer earthworks may already have been reduced by medieval ploughing. This work may then have marked the point at which any southern extension of the earthwork became cut off and subsequently obliterated through 18th/19th century land improvement and arable cultivation.

Meanwhile the present route of the B3237 from Clovelly Cross to Clovelly village, appears to represent a diversion from an earlier route somewhat to the east. Donn's 1765 map records a road leading off the (newly established) Bideford – Hartland road (the present A39) more or less at the point where it is joined by a road from Woolfardisworthy, thence heading north and west and joining the road to the village more or less at the location of East Dyke Farm*. At the same time Donn shows a connection between what would now be Clovelly Cross and the location of East Dyke Farm, making a third side of a triangle. Within the next fifty years this 'short cut' had been adopted. In 1824 the Bideford Turnpike Trust raised an Act of Parliament for improving and repairing roads for which they were responsible including a road (from) Woolfardisworthy (to) 'Dike Green' and *thence to the port or quay of Clovelly* (Hobbs, HDA). The presence and location of Dyke Green Cottages justifies the assumption that 'Dike Green' is what we know as Clovelly Cross, thus it appears that what may have been formerly a cart track leading from the farm through perhaps a convenient gap in the

dyke, was by 1824 turned into part of a turnpike road with a toll gate at Burscott, where it still stands. This will have involved some major widening of the track and possibly the levelling of a bank or banks as is suggested by a visible rise and fall in the road surface as you approach East Dyke Farm from the south.

(* *It is notable that this old route is partly discernible on the tithe map and OS mapping up to the mid-20th century. On the tithe map it is represented by a narrow, linear feature numbered 838 (See Fig. 5) and included under 'Roads, Brooks and Waste'. It is tempting to ask whether the somewhat circuitous route represents respect for an outlying feature of the Dykes, an eastward extension perhaps.*)

To the west of the Dykes the B3248 skirts a field below the western bank and ditch before turning sharply west towards Hartland. From this point a minor road continues northwards flanking the earthwork, then continues to echo the curvature of the outer bank before heading off north and west with a high bank on its eastern side. This is the old Clovelly Road which, at Hugglepit Cross (SS319239), bends north-east towards Burscott (misnamed by Donn as Estcott). From Burscott a footpath leads to Wrinkleberry from whence there is an old, winding route into Clovelly. Meanwhile, from Hugglepit Cross a now minor track leads north and, via an old entrance to Clovelly Court, joins a footpath leading ultimately to Mouthmill. On Donn's map of 1765, this route is suggested by a spur off the Hartland road, but, while very probably ancient, was ignored in favour of the route from Dyke Green (Clovelly Cross) leading directly to Clovelly Court.

Buildings

Buildings within and adjoining the earthwork include Dyke Green Cottages, Dyke Green Farm and East Dyke Farm. Dyke Green Cottages and Dyke Green Farm lie within the arc of the eastern outer bank. The cottages were present on the Tithe map of 1840, but were not recorded on the 1809 Old Series OS map, therefore probably date from the 1820s/30s. An aerial photograph of 1932 shows that the land on the east side of the road, between the road and the outer bank was taken up with allotments or gardens (Fig. 10). These were still present in the 1960s, but by the 1990s had given way to a variety of sheds and outbuildings. Dyke Green Farm was not recorded on the tithe map, but was present by 1889. What now counts as the farmhouse clearly dates from the mid-19th century, while originally Dyke Green Farm was based around the last of the cottages in the row. Outbuildings now occupy a narrow strip to the rear of Dyke Green Cottages. East Dyke Farm occupies an area on both sides of the road on the north-eastern edge of the earthwork. What is now East Dyke Farmhouse dates from the mid-19th century, but the tithe map records a hamlet of four domestic buildings together with barns and shippons within a cluster of small plots in an area that may have been anciently an entrance complex of the Dykes**. By the end of the 19th century these had been reduced to the new main farmhouse and outbuildings on the west of the road with, on the east of the road, a substantial group of buildings on three sides of a yard. To these the 20th century added a large cow-shed and adjacent building. The latter sits astride what *may* have been the boundary of an eastern extension of the earthwork as suggested in the note above. Aerial photographs from the 1930s-1960s indicate that an open area on the north side of the earthwork may have been occupied by a piggery.

Fig. 10 *Aerial view of the Dykes in 1932.*

Fortunately the farms and cottages that occupy parts of the east and north-east of the earthwork together with the B3237 road represent the only post-medieval and modern intrusions on the Dykes, though conversely and unfortunately the development of East Dyke Farm, at least in its earlier manifestation, has disturbed an area that may have been an entrance complex.

(** *Notably, in this regard, the hamlet of homesteads and small plots recorded on the tithe map and straddling both sides of the road to Clovelly village includes on either side of plot 295 'Pigs Plot', two long, parallel bands numbered 292 and described as 'Waste' (Fig. 11). These may represent the vestiges of a track or hollow way leading towards a triangular area, also 'Waste' in the Tithe Apportionment. This is a wet area where the Ordnance Survey records a well, which may have served the hamlet at East Dyke, but may equally have served the ancient occupants of the Dykes. On recent 3D imaging parallel long hollows appear in the corresponding location.*}

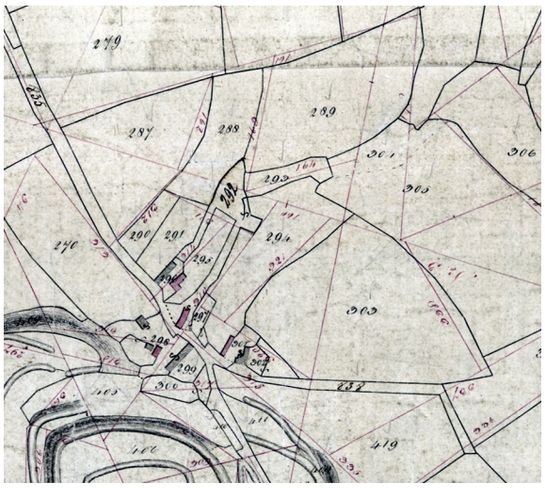


Fig. 11 *Extract from the tithe map showing the north-east possible entrance complex with the hamlet at East Dyke and 'Pigs Plot' (295).*

The Football Pitch

From the 1920s up to the mid-century, the central area of the Dykes saw service as a football pitch. There were clearly goalposts and there was a corrugated iron hut, all of which may have left their mark in the ground.

The Historic Landscape

The earthworks of Clovelly Dykes are situated within a farmed landscape with all the man-made changes to the 'natural' landscape that this implies. The earliest clear and detailed record of the landscape of 'recent' times is represented by the tithe map and tithe apportionment of 1840 and 1839 respectively. Examination of, on the one hand, the fieldscape and on the other, the field names identifies a significant difference between land to the north, north-west and east of the Dykes and that to the south and south-west. The former is dominated at the time of the tithe survey by settlements with small fields, many of them narrowly rectangular, their parallel long sides suggesting a reflection of and enclosure of medieval arable strips. These are field-systems which, on the whole, occupy ridges above deep coastal valleys and are thus well drained. The latter, more southerly area is more plateau-like and is dominated by large fields with long straight boundaries suggestive of late 18th/early 19th century parliamentary inclosure (Fig. 12). A number of the field-names attached to these are either quite prosaic, eg. Four Acres, Five Acres, Seven Acres, or they contain reference to moor and marsh. The indication is that before late inclosure the land to the south was unenclosed moorland, ie. wettish, rushy, scrubby land uninviting for arable cultivation, but good for open grazing***. In fact John Leland, passing this way in the 16th century remarked that his journey from Hartland

to Bideford was 'much by Morische Ground but very good for Broode of Catelle'. (Chope 1918, 6). The late inclosure fields were probably the result of 18th century efforts at drainage, and the fact that in the 1940s more work of drainage was carried out in this area by Italian POWs (Hobbs, HDA), strongly indicates that, left to itself, this would revert to 'moorish ground'.

Fig. 12 *Extract from the tithe map showing the pattern of Parliamentary Enclosure fields to the south of the Dykes.*

(****This statement may be qualified in light of surface finds from the recent excavations on the south side of the A39. Finds of medieval North Devon gravel-tempered ware (13th-15th century) suggest cultivation in the medieval period. This may have been short-lived or at least discontinued for a variety of reasons (Black Death, climate change, eg.) allowing the land to revert to moorland. The source of the material may have been the medieval (predecessor of) East Dyke Farm.*)

Furthermore, the documented medieval settlements in this area, Thornery (Thornworthy), Highworthy, Burford (originally a 'worthy'?) and Stitworthy stand out with their core settlements as 'islands' on relatively higher ground and with (in the 1840s) their medieval field-systems largely intact. If we combine this observation with the incidence of 'Moor' names on the current OS map (Bursdon Moor, Welsford Moor, Tosberry Moor), the persistence of marshy areas at Kennerland and Burford and perhaps significantly the name Rosedown (just east of Hartland), with its probable Celtic element *rhos*, 'moor or marsh', then for the medieval period at least, we have the suggestion of a largely open, moorish landcape with pockets of settlement and arable land, much as encountered by John Leland. These early stages of the historic landscape rest on a precursor landscape, clues to the nature of which lie in the available evidence, as detailed below (The Relict Landscape).

Before exploring the earlier, prehistoric landscape context however, we should finally consider the most

obvious characteristic of the landscape in which the Dykes are embedded, namely the (near) coastal location. The coast of North Devon from the Cornish border at Welcombe on the Atlantic coast, around Hartland Point and along the shore of Bideford Bay as far as Abbotsham is dominated by high cliffs and a rocky shoreline offering very little in the way of a safe landfall. The village of Clovelly occupies a deep coastal cleft offering access to the shore via the village street leading to a man-made harbour built out over a relatively level beach. The harbour reportedly dates from the 14th century, but otherwise this awkward site is an unlikely choice for a medieval settlement and most probably represents post-medieval development from a seasonal fishing cellar serving the inland manor and churchtown (compare Ilfracombe, Combe Martin and Lynton/Lynmouth, possibly also Northam/Appledore). On a coastline with so few opportunities for a safe landing, the location of both the medieval manorial centre of Clovelly and of prehistoric Clovelly Dykes seems likely to take advantage of the same relatively favourable topography and tidal conditions. Whether it represented access to comparable resources and opportunities in either era has to be a matter for investigation and debate. In any case it is striking that both the Dykes and the more prominent nearby medieval settlements (Welcombe, Stoke, Clovelly manorial centre) bear a similar relationship to the coast, testifying perhaps to a perennial ambivalence towards relationships with the sea.

The Relict Landscape

Given the consensus view that the Clovelly Dykes earthworks are an Iron Age construction, a major route to our understanding of the site lies in relating the Dykes both to the natural local and regional topography and to what we can ascertain or surmise about human activity in the underlying prehistoric landscape. The evidence base will be archaeological, in terms of artefacts and monuments as recorded in the HER, together with recent environmental studies emanating from Exeter University. Place-name evidence also has something to contribute.

Taking these factors in reverse order, the name of Clovelly has engaged the attention of a number of place-name scholars, most of whom were unable to come up with a convincing derivation. In recent years however, Richard Coates (2000, 117–23) has made a convincing case for a derivation from Old Cornish **klōð* corresponding to Welsh *clawdd* 'man-made earthwork' also 'an earth and stone bank' plus a personal name Felec, which may also lie at the heart of nearby Velly and the farm known as Trellick (<*tre(f)+felec) in Hartland Parish. Thus: 'earthwork associated with someone called Felec' (a Celtic equivalent of xxxbury?). Previous attempts to explain the name based on the topography of the present village were clearly misguided since the village in its present form and location dates from the 16th century while the name Clovelly is recorded in Domesday. To name the manor or the parish from its most prominent feature makes perfect sense – compare eg. Kentisbury or Countisbury. This does not tell us anything about the earthwork itself, but rather that while the area was still Brittonic in speech (up to, say, the 9th century), the Dykes had a cultural presence which quite credibly reached continuously back into prehistory.

As for environmental analysis, the geographically most relevant study is the PhD thesis produced by Exeter student Charlotte Hawkins in 2005 (*Vegetation history and land use change over the past 10,000 years in three study areas of lowland Devon: the Blackdown Hills, the Clyst valley and the Hartland Peninsula*). In this palynological study Hawkins looked at pollen samples from the three areas of Devon indicated in the title, choosing, in the Hartland Peninsula three wetland sites, at Kennerland, Clifford and Bursdon. Kennerland (roughly 3 kilometres south-east of Clovelly Dykes) provided the earliest evidence of land use and vegetation change. Here sediments accumulating from the late Bronze Age/Early Iron Age indicated a predominantly open landscape with pockets of deciduous woodland. Woodland clearance accompanied by a rise in grass species occurred c. 800–520 B.C. Clearance was followed by the establishment of meadow and pasture land which suggests that pastoral activities dominated local land use at this time. Kennerland also provided the earliest evidence of cereal cultivation in the area, namely in the early Iron Age. Clifford, about 2.5 kilometres south of the Dykes provided no evidence of cereal cultivation, suggesting (negatively) a predominance of

pastoral activity. Cereal cultivation at Bursdon (roughly 6 kilometres south-west of the Dykes) appears to have begun a little later than at Kennerland, therefore mid-Iron Age. All three sites provided ample evidence of a range of tree species at the same time as open grassland, suggesting pockets of woodland, which would have represented a significant resource in terms of timber and woodland grazing or pannage.

This study represents the best evidence that we possess for the vegetational history of the prehistoric landscape within which the Dykes were created. The evidence is inevitably a proxy for the immediate environment of the Dykes, but there is no reason to doubt that the character of the Late Bronze Age/Iron Age, and probably equally the Roman Period landscape is captured by this base of environmental evidence. The broad picture is one of an open, largely grassland landscape, therefore an environment suited to pastoral activity. At the same time, the suggestion of cereal cultivation relatively close by implies a mixed economy, albeit one dominated by the management of livestock.

For the evidence of cultural activity other than subsistence, we must look to flint scatters, barrows, earthworks and standing stones. The flint assemblage, as recorded in the HER and anecdotally, represents human presence and activity from the Mesolithic to the Bronze Age probably overlapping into the conventionally dated Iron Age. The widespread location of chance finds is indicative of a well-used landscape over a long period of time. The Devon County HER records a Mesolithic flint scatter at East Dyke Farm (MDV172), Neolithic arrowheads at Southdown (MDV12400), Thornery (MDV13822) and Cliff Road (MDV21554), while characteristically Neolithic polished stone axes are recorded at Southdown (MDV12400) and from the ground surface within the Dykes (MDV170). The HER also records a large collection of flints from Burscott (MDV49498). The collection is ascribed to H. Eggerton Godwin, who in the 1940s assembled a very great number of surface finds which are now in the Museum of Barnstaple and North Devon. As Eggerton Godwin appears to have been methodical and assiduous in his searches, the density of finds at Burscott may well be characteristic of the area, since all the other recorded finds appear to be the result of chance. The impression of widespread Mesolithic to Bronze Age activity is borne out by both the writings of Worth (1942, 107–10) and by comments furnished by Steve Hobbs. In 1942 Chope presented a paper to the Devonshire Association detailing a wealth of Neolithic to Bronze Age artefacts in locations within Hartland Parish, while Hobbs recently points out that flint scatters are commonly collected from fields around Embury Beacon, Elmscott and all around the coast to Brownsham with substantial amounts at Blegbury and Fattacott. Bronze axe heads have also been found in the Blegbury area. Most of these locations – with the exception of Burscott – are beyond the immediate environs of the Dykes, but are spread across the hinterland of the earthworks clearly implying an active inhabited landscape throughout the prehistoric period.

Conversely barrows are not numerous. Apart from one barely surviving example beside the B3258 about 500 metres west of Clovelly Dykes (MDV168), the next is the bowl barrow beside the coast path above Gallantry Bower (MDV72). There is another possible bowl barrow nearby (MDV102339). Otherwise the nearest clusters of barrows are on Bursdon and Tosberry Moors several kilometres to the southwest. The presence or absence of barrows may well be the product of centuries of differential ploughing and land improvement, so the paucity of examples nearer to the Dykes does not necessarily indicate an avoidance of the area for funerary purposes. What the barrows do emphasise once again is the longevity of habitation to which the builders of Clovelly Dykes were heir.

Other features of the prehistoric landscape are standing stones. A brief study undertaken by Robert Wilson (2006) of standing stones at Stoke Barton, Hartland, records a number of extant and now lost or displaced stones in that part of Hartland Parish. The nearest documented stone to the Dykes was at Sowden or Southdown some two kilometres west of the Dykes. This may have been part of a stone row leading towards (or away from) St Katherine's Tor. If the proposition is correct, that these are all or mostly ancient rather than recently positioned for the convenience of livestock with an itch, then it seems likely that others would

have existed across the Hartland Peninsula and may be seen as a further indication of a prehistorically active landscape.

The Iron Age landscape and local context:

Assuming the earthworks of Clovelly Dykes to have been created in the period *c*.800BC up to, say, AD45, conventionally regarded as the Iron Age, we may safely propose, that the work was imposed on a landscape with a deep cultural history. Topographically it was a largely open, somewhat marshy landscape with isolated stands of trees. Aside from islands of settlement and arable cultivation, it was a landscape most suited to pastoral activity with the sea as a probable additional resource. Evidence of prehistoric settlements in the area is sparse, perhaps because they were few, but more likely because any remnants have been obscured by later medieval settlement and centuries of farming. It is highly probable that those flint artefacts that we conventionally ascribe to the Bronze Age, in fact represent human manufacture well into the age of iron – any clean break is imaginary on our part – so that it is possible to suggest, for example, Bronze Age/Iron Age settlement at Burscott.

In the apparent absence of prehistoric farmsteads, we nevertheless have clear evidence of substantial Iron Age or late prehistoric activity in the form of embanked settlements at Embury Beacon – largely lost to cliff erosion – at Windbury Head and possibly above Bucks Mills. In addition there is a possible prehistoric (Iron Age?) hilltop enclosure at Yapham (MDV57823). The only one of these to have been examined archaeologically is Embury where excavation in 2014 confirmed a Middle Iron Age date of construction. The ovoid enclosure of Windbury is of simple design with a single rampart, what little of Embury that survives suggests a double banked enclosure with a relatively complex entrance, while the enclosure above Bucks Mills appears to have a single bank. These coastal enclosures may be the survivors of a larger population now lost, but represented in the names of Blegberry, Titchberry and Tosberry, all of which have medieval forms in *-bury* from Old English *burh* ‘fortified place’. In terms of defended sites, these near neighbours of Clovelly Dykes do not measure up to the Dykes in scale or degree of elaboration. In fact it is glaringly obvious that Clovelly Dykes are not only the most impressive set of earthworks in Devon, but as a ‘developed’ hillfort are uniquely isolated in the North Devon area and, in terms of complexity Devon-wide, are comparable only with Milber Down, Newton Abbot.

GEOPHYSICAL SURVEY 2017/2018

In 2017, NDAS, prompted by the AONB's initiative, commissioned Substrata Ltd. to carry out an earth resistance survey of the 3 fields south of the A39 and outside the scheduled area. The objective was to define the extent of the possible outer enclosure ditch which had been suggested by the aerial photographs (see above). The results were less informative than anticipated and following discussions with Substrata, NDAS commissioned a magnetometer survey in 2018. This covered the same area as the resistivity but also extended the area further south. The results are illustrated below with a brief summary of interpretation. The full report is available on the ADS (Archaeological Data Service) website.

Conclusions by the late Ross Dean

This report presents the results of an archaeological magnetometer survey and, in the light of this magnetometer survey, the re-interpretation of a resistance survey previously undertaken along the northern edge of the magnetometer survey area (Dean, 2017).

The magnetic responses across the survey area were sufficient to be able to differentiate between anomalies representing possible archaeological features and background magnetic responses (Fig, 13).

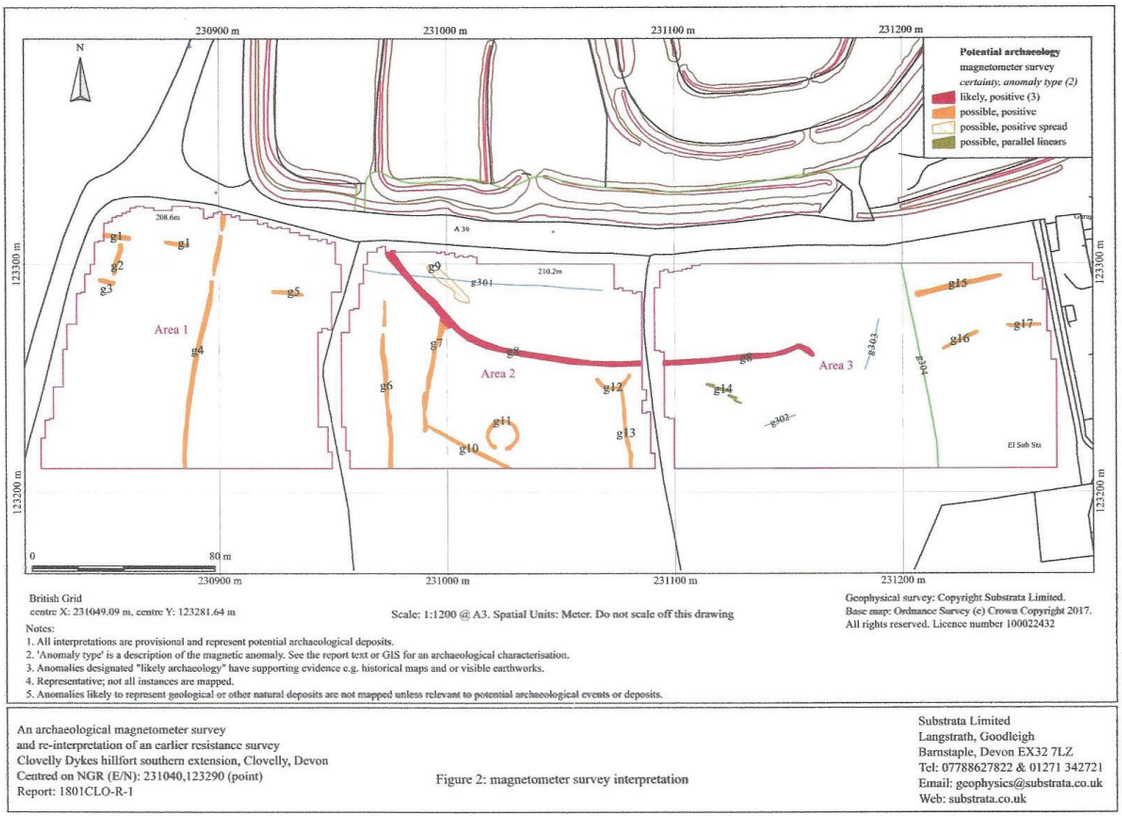


Fig. 13 *Magnetometer survey interpretation.*

Seventeen magnetic anomaly groups were mapped as representing potential archaeological deposits or features. One of these groups (g8) partially coincides with, and likely represents, the western side of the southern boundary of the Clovelly Dykes hillfort which was recorded as cropmarks on aerial photographs between 1947 and 1986 (Devon Historic Environment Record MDV169). Anomaly group g8 does not follow the cropmarks north-eastwards to rejoin extant banks of the monument and appears to have a slight curve south-eastward at its eastern end. Two groups (g11 and g12) may represent ring ditches. One group (g14)

may represent a routeway of unknown date. Speculatively, three linear anomalies (g7, g10 and g13) may represent sections of an enclosure or field abutting the Clovelly Dykes southern boundary. The remaining anomaly groups (g1 to g6 and g15 to g17) have characteristics typical of fragmentary remains of field and enclosure boundaries of unknown date.

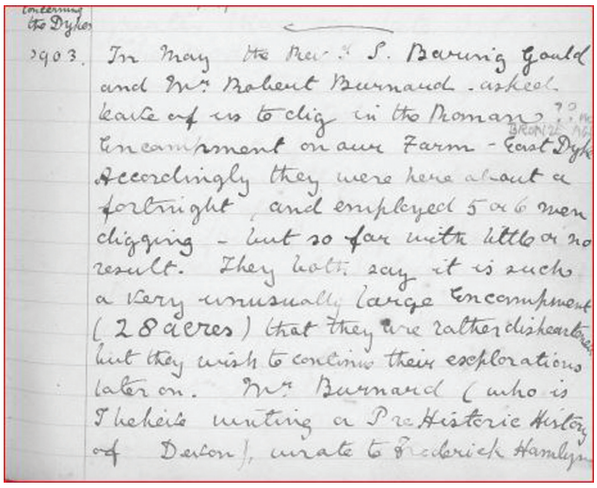
In the previously completed resistance survey dataset, a number of curvilinear anomaly groups were suggestive of stony banks with flanking earthen deposits or ditch-bank-ditch features. The distribution and pattern of these sets of anomaly groups were interpreted as a possible, partial mirroring continuation of the pattern of extant banks comprising the Clovelly Dykes hillfort to the north. In the light of the current magnetometer dataset, some of the curvilinear resistance anomalies are more likely to represent near-surface geological patterns and the remainder of these are of uncertain provenance with a geological or archaeological origin possible (r401, r402, r405, r408, r409, r410 and r423). One resistance anomaly group (r15) coincides with magnetic anomaly groups g8 and g9 and it is now clear that r15 is likely to be associated with the southern boundary of the Clovelly Dykes monument.

SITE EXCAVATION, PAST AND PRESENT

By Chris Preece

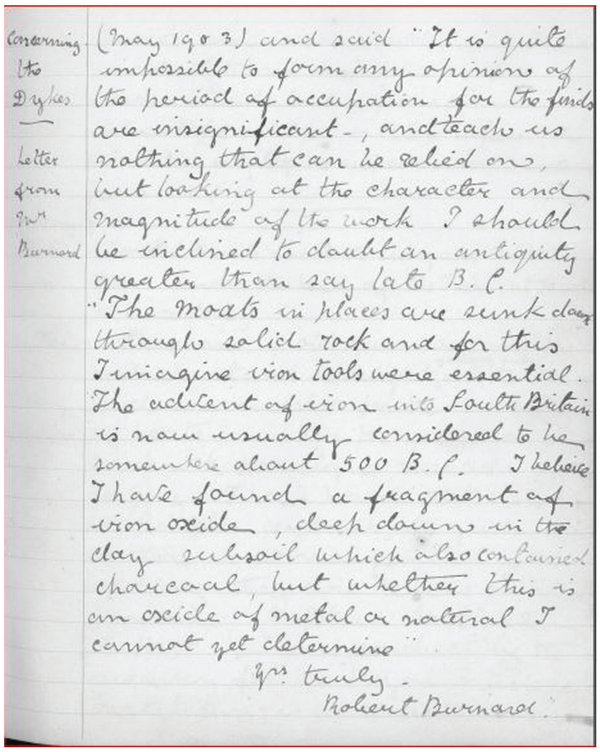
Historic Excavation

Until recently it was a commonly held view that there had been no excavation at Clovelly Dykes (see Introduction above). However, Steve Hobbs' research within the Clovelly Estates archives has unearthed several revealing documents. The first appears to be a partial transcription by the owner of East Dyke Farm of a letter from Mr. Robert Burnard detailing an excavation which he carried out along with the Reverend Sabine Baring Gould (Fig. 14). The document is dated 1903 (HDA). The farm owner details how the dig was 'about a fortnight' and how 5 or 6 men were employed to do the digging. In the transcribed part of the letter, Burnard describes how the 'moats in places are sunk down through solid rock' and he assumes the use of iron tools to do this. He also notes a 'fragment of iron oxide' found deep down in the subsoil which he states also contained charcoal.



Concerning the Dykes

1903. In May the Rev. S. Baring Gould and Mr. Robert Burnard asked leave of us to dig in the Roman? Encampment on our Farm - East Dyke Accordingly they were here about a fortnight, and employed 5 or 6 men digging - but so far with little or no result. They both say it is such a very unusually large Encompment (28 acres) that they are rather disheartened but they wish to continue their explorations later on. Mr. Burnard (who is I believe writing a Pre-Historic History of Devon), curate to Frederick Hamlyn



Concerning the Dykes

Letter from Mr. Burnard

(May 1903) and said "It is quite impossible to form any opinion of the period of occupation for the finds are insignificant -, and teach us nothing that can be relied on, but looking at the character and magnitude of the work I should be inclined to doubt an antiquity greater than say late B. C.

"The moats in places are sunk down through solid rock and for this I imagine iron tools were essential. The advent of iron into South Britain is now usually considered to be somewhere about 500 B. C. I believe I have found a fragment of iron oxide, deep down in the clay subsoil which also contained charcoal, but whether this is an oxicle of metal or natural I cannot yet determine"

Yrs truly.

Robert Burnard.

Fig. 14 *Letter from Robert Burnard (a) + (b). (Image courtesy of Steve Hobbs, HDA).*

Further details of the excavation are gleaned from a second document which Steve Hobbs has made available on the Devonshire Association website (see bibliography). This was a response from Baring-Gould to a request from the rector for an account of the excavation, published in the Clovelly Parish Magazine in 1903. This contains a number of important observations. Firstly, Baring- Gould elaborates on the depth of a ditch: "In one moat the bottom was not reached though a trench was sunk 6ft below the surface". It is likely this 'moat' was the extant second enclosure ditch of the hillfort. Given that today this ditch is still a good 3 metres deep in places (see Description of Site above) and that the bottom was not reached, a conservative estimate of the depth of this 'moat' would be 12–15ft (4–5 metres). Ditches of this depth are not needed for stock enclosure and are most likely defensive. Another detail also suggests the need for self-protection. Baring-Gould records the discovery of "great numbers of rounded pebbles used as slingshots". These may have come from within the central enclosure, as the description of 'a fire hole full of charcoal' suggests excavation here. Baring-Gould postulated that "The defenders of the camp dug holes in the ground and made fire in these' but the possibility that this was a storage pit whose contents were set alight either on purpose or accidentally should not be discounted.

Further evidence of interior excavation is suggested by the description of the 'original floor' (presumably the natural subsoil) in relation to a lack of Iron Age pottery found. Baring-Gould details 'comparatively modern' pottery near the surface (presumably in the topsoil). He also relates how a number of flint flakes were found. Despite these finds and features the excavators were clearly disheartened with the outcome: "singularly little was unearthed" and "very barren of results" seem to reflect their disappointment, with Baring-Gould noting that "for centuries the area within the dykes has been ploughed and reploughed".

It might be speculated that Richard Pearse Chope was privy to details of the excavation (both he and Burnard were contributors to the Devonshire Association) as he also describes the excavations in an article in the Hartland and West Country Chronicle of July 1908 (HDA). He quotes verbatim from the Parish Magazine of 1903 and illustrates the article (entitled Clovelly Dykes and other Earthworks) with a plan of the Dykes (Fig. 15). In relation to the plan he argues for two entrances: one to the north (where a case could be made for the remnants of outworks) and a second entrance on the south side where "roads and buildings…have obscured the exact arrangement". Interestingly, the theory of a southern entrance is given further credence by the 2018 geophysics, in that where the outer ditch appears to terminate at the east end, it also turns out, suggestive of an entrance.

HARTLAND & WEST COUNTRY CHRONICLE, JULY, 1908. 13

Notes of the Past.

BY R. PEARSE CHOPE.

114.

CLOVELLY DYKES AND OTHER EARTHWORKS.

It may appear strange that I have so long delayed any consideration of such a striking specimen of antiquarian remains as Clovelly Dykes, but the reason is that little or nothing is known of their history, and experts are divided in opinion as to their origin. Various conjectures have assigned these works respectively to the Britons, Romans, and Saxons. Kingsley, following the celebrated antiquary, William Camden, speaks of them as "the furze-grown ruins of a great *Roman* camp, which gives its name to the place, 'Clovelly,'—Vallum Clausum, or Vallis Clausa, as antiquarians derive it; perhaps, 'the hidden camp,' or glen,—perhaps something else. Who cares? The old Romans were there, at least ten thousand strong, and looked far and wide over the Damnonian moors from a station which would be, even in these days, a first-rate military position." Whether it originated with that people or not, it certainly is of great size, embracing over 20 acres, though the area of the camp on Milber Down, near Newton Abbot, surpasses it, and the expanse of the enclosures would have provided ample accommodation to those herds of cattle which both Cæsar and Strabo tell us the Britons collected within their fortifications. There is, however, little evidence to connect the Romans with the district, though the name *Stratton* seems to indicate that they had a station still further west, and there is a tradition the Agricola, the renowned Roman governor of Britain, landed at Bude in A.D. 83. The statements that there was a Roman road across Bursdon Moor, connecting Clovelly Dykes with Launceston, and another connecting the Dykes with Clovelly itself, are, I believe, purely imaginative.

Five years ago the Rev. S. Baring-Gould and Mr. R. Burnard commenced a systematic exploration of the camp, but the work was never completed and the result was singularly disappointing. In a note published in the *Clovelly Parish Magazine*, Mr. Baring-Gould said that "as far as can be judged, it was raised in the 'Iron Age,' which began about B.C. 800, but may have been, and probably was, occupied in times of war and trouble to a much later period. In fact, iron cannon balls of the times of the Commonwealth have been found in and about it. That the original constructors of the camp employed slings has been abundantly proved by the discovery of great numbers of rounded pebbles used as sling-stones. That they also employed flint for weapons and tools is probable, for, although no flint weapons or arrow heads have been found, yet a certain number of flint flakes have been unearthed, flakes struck off from nodules of silex brought from Dorset, in the construction of tools or weapons of that material. The defenders of the camp dug holes in the ground, and made fires in them. During the recent exploration one of these fire holes was discovered full of charcoal. The moats must have been very deep, and the banks considerably higher than at present. In one moat the bottom was not reached though a trench was sunk 6 ft. deep below the present surface. It was found that to form the moat the rock had been cut through. Undoubtedly the top of the banks was originally further protected by a stout palisade of wood."

But Clovelly Dykes formed only one of a series of camps in the neighbourhood. The "cliff castles" at Embury Beacon, Windbury Head, and above Bucks Mills, formed an efficient protection against the ravages of invaders at Welcombe Mouth, Mouth Mill, and Bucks Mills, respectively, while Embury Beacon may have been made exceptionally strong to guard against the neighbouring nation, the Carnabii of Cornwall. Another series of three camps on the River Duntz, a tributary of the Yeo, in the parishes of Buckland Brewer and Frithelstock, guarded the interior of the country against an advance by the river valleys by way of Bideford.

The general appearance of Clovelly Dykes from the Hartland to Bideford road is well known to all my readers, but probably only a few of them have ever been inside, or have any idea of the complicated series of fortifications enclosed by the outer and only visible embankment. A glance at the map will show that the fortifications were planned with great strategical foresight. There are on all sides except the south no less than five rings of defence, forming five separate enclosures which gradually rise higher and higher from the outside to the centre. The innermost enclosure is an irregular oblong, 120 yards by 100 yards, surrounded by a bank 6 ft. high on the inside and 8 ft. on the outside, except at the north-west corner A, where it is 11 ft. high. The next defence consists of a high bank, strengthened around the northern half by a broad moat or ditch, as shown, the height of the bank from the bottom of the ditch varying from 15 to 23 ft. At the northwest corner B the bank widens into a broad platform. The court outside this second bank is entered by a sunk road at C, and at the south-west corner D is a recess in the outermost embankment which rises 10 ft. from the interior. The third bank on the west has a dry wall of stone on its outer face, with a depth of 8 ft. into another court at a lower level, and at its northern termination it has the protection of a ditch. The fourth line of defence is a bank 4 ft. high on the inside and 7 ft. on the outside; this originally extended from the west around the north and east, but the northern part has largely perished and the eastern has been cut off by the road to Clovelly. The fifth or outermost defence consists of a bank 9 ft. high with an interior breastwork of 3 ft., and surrounded on the west and south by a wide moat having a low bank outside. On the north at the point E, where the main entrance to the outer court was situated, it is strengthened by two additional embankments before merging in the single bank of the fourth defence. The inner bank of the detached eastern portion is from 15 to 20 ft. high and wide. It is probable that there was another entrance on the south side, at the point marked F, but the roads and buildings, besides the general wear in cultivation, have obscured the exact arrangement. The moats or ditches are marked G.

The camp at Embury Beacon, which is drawn to the same scale, is much smaller than Clovelly Dykes, though it was doubtless considerably larger than it is at present. The inner defence, of which very little is left, is a bank 5 ft. high and 12 ft. wide, protected by a ditch 12 ft. wide and 10 ft. deep from the top of the bank. A circular mound at H, 3 ft. in height, has been described as a tumulus or grave-mound, but it is more likely to have been a defence to an entrance at this point. The outer defence is also a bank and ditch, the former being 3 ft. high and 15 ft. wide, and the latter 8 ft. wide and 10 ft. deep from the top of the bank or 3 ft. deep from the outside. The entrance at the point I was protected by an internal mound, marked J, and ditch of great strength, the mound being 16 ft. high from the bottom of the ditch. A portion of another mound K remains on the edge of the cliff.

The camp on Windbury Head also was

Fig. 15 *Pearse Chope article in the Hartland and Westcountry Chronicle. (Image courtesy of Steve Hobbs, HDA).*

Pearse Chope had evidently field-walked the site as he observes that “The third bank on the west has a dry wall of stone on its outer face”. A section of this revetment was verified and photographed by NDAS in 2019 (Fig. 16). Stone facing has been noted at a number of Iron Age hillforts including the outworks of Maiden Castle (Cunliffe 1991, 324–8). There are also examples of stone-built hillforts, for example Cranbrook Castle, Moretonhampstead. However, without excavation we cannot be certain that this bank is of Iron Age date (see Conclusions below).

Fig. 16 *Revetment in third bank to west.*

2018 Excavation

Following consultation with the land owner and the tenant farmer, permission was granted to investigate the features revealed in the middle field south of the A39. Due to the field being in crop, there was a limited window of opportunity afforded by the interval between harvest and the next sowing. Excavation (excluding 2 days for topsoil removal and reinstatement) was therefore only feasible for 9 days, two of which were rain affected. Personnel numbers were inevitably limited in part due to the difficulties occasioned by the short notice of the exact dig dates.

With an average therefore of only 6 people on site a day, objectives had to be revised as the dig progressed.

Note: spot heights are measured relative to a benchmark taken from the OS height of 210m on the A39.

T1

This trench (T1) was sited to evaluate the apparent outer enclosure ditch (120) of the fort suggested by aerial photography and identified through geophysical survey (Fig. 17). The initial length of the trench (20m) was reduced to 8m once topsoil had been removed and the cut of the ditch identified. The width of the ditch

was 2.5m. (Fig. 18). Beneath the ploughsoil (100) was a layer of mid-brown friable clay (101). The only finds from this layer were five sherds of North Devon Medieval coarseware, suggesting the possibility that this was residual medieval ploughsoil. Beneath this was a mid-brown silty clay with specks of yellow/orange subsoil (102). There were no finds from this layer. This sealed a deposit of silty, greyish-brown clay (103), probably alluvial and representing the primary silting of the ditch. This layer contained eight sherds of gabbroic Iron Age pottery, including a base sherd. This layer was bulk sampled for charcoal and gave a calibrated C14 date of 161 cal BC-24 cal AD (SUERC-86271; 95.4% probability). The base layer of the ditch (104) represented initial slippage and weathering of the ditch sides, more so on the steeper north slope; the sandy orange soil being similar to the natural (105).

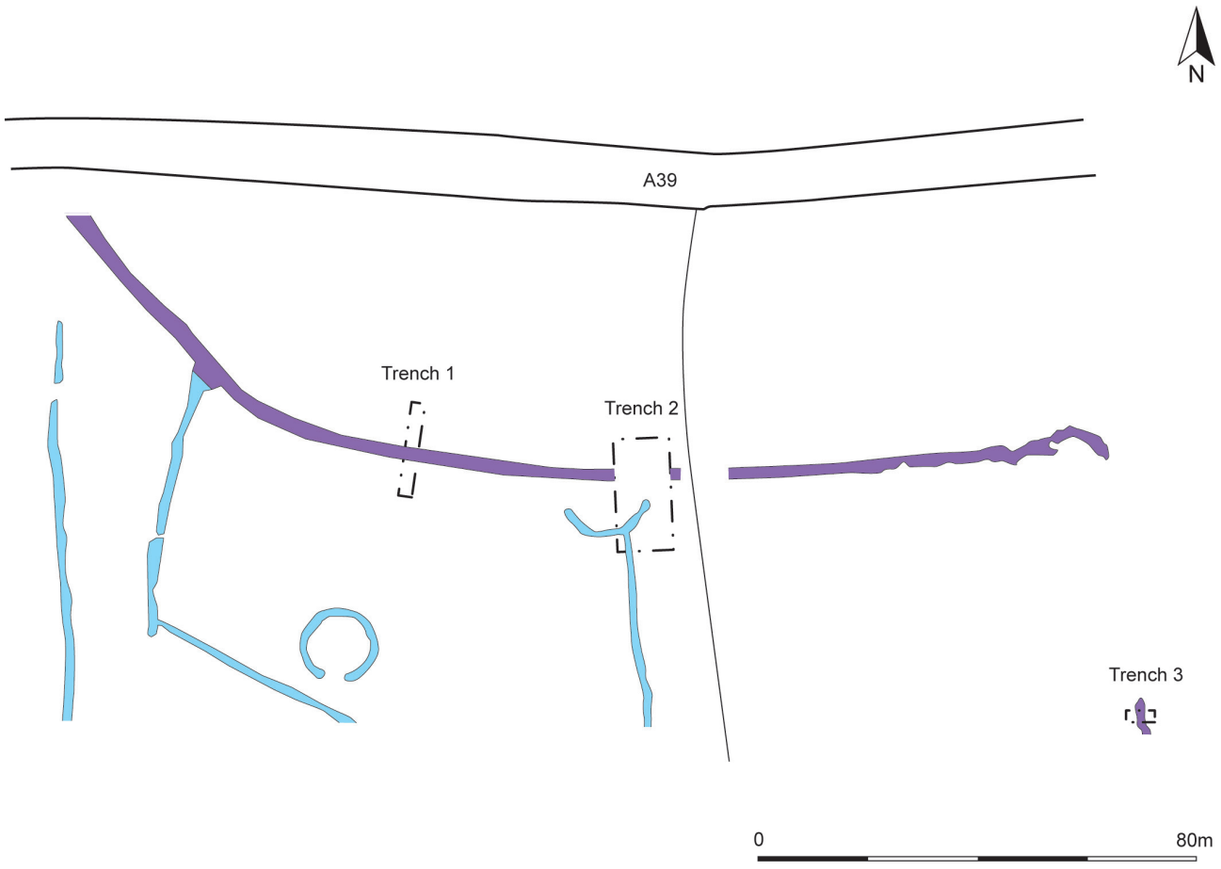


Fig. 17 *Trench location plan*

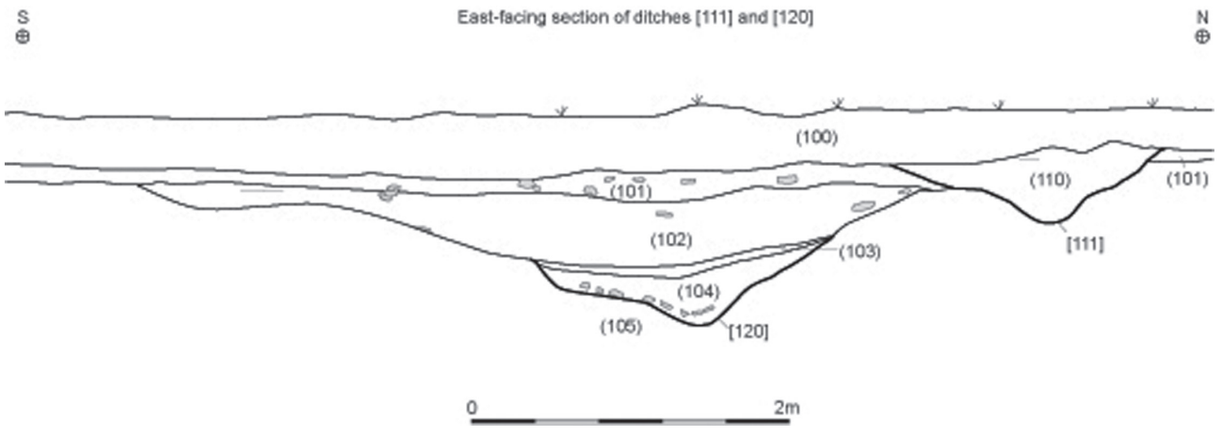


Fig. 18 *Trench 1 section.*

To the north side of the ditch, a shallow ditch (111) of unknown function had been dug. This cut the medieval layer (101) and was therefore of later date. No finds were made in the single fill (110) and this feature, along with ploughing, had removed any potential evidence of a rampart.

The relatively shallow depth of the outer enclosure ditch (120), even allowing for loss of evidence due to ploughing, suggests its function was enclosure rather than defence. Its later Iron Age date indicates this feature was probably the final stage of the development of the hill fort enclosures.

T2

The preliminary objective of this trench was to define the truncated ring-ditch (Fig. 13, g12) and to understand how an adjoining part of an apparent sub-rectangular enclosure related to it, as well as further clarifying the extent of the outer enclosure ditch. Following topsoil (200) removal of the 20m x 20m area, objectives were revised however. The area was halved by a north/south division and only the eastern half was cleaned back due to the constraints of time and manpower. (Fig. 19) The outer enclosure ditch (202) was clearly visible running east-west across the trench (Fig. 20). Its edges were defined at the east end of T2 to confirm its presence; its width in plan being approximately 4m.

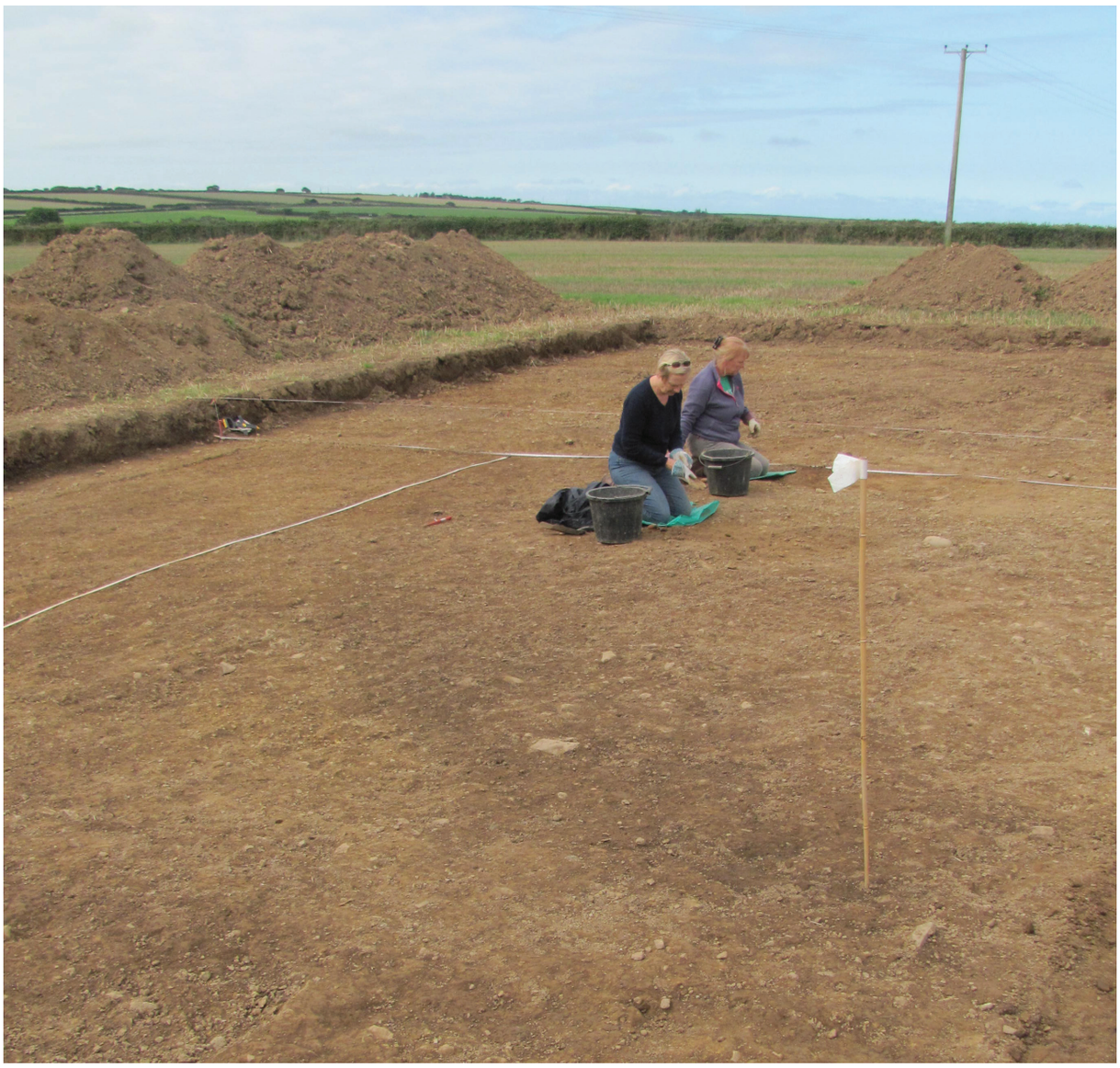


Fig. 19 *Cleaning back T2 with ring ditch (206) marked by flagged cane.*

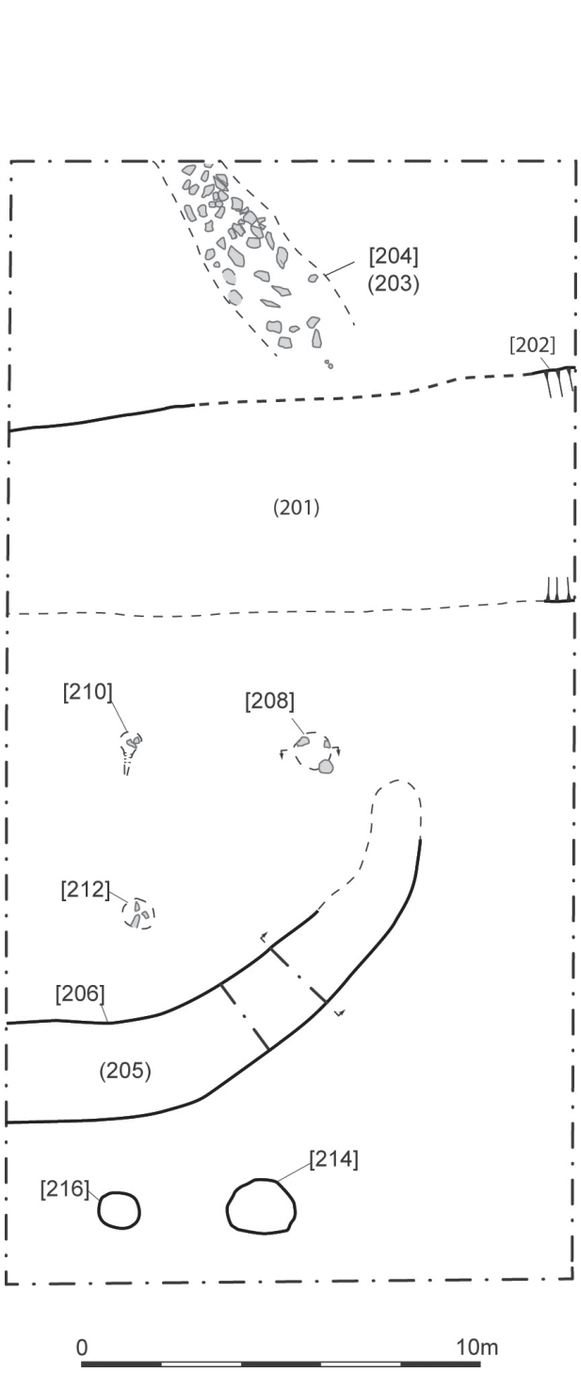


Fig. 20 *Trench 2 plan.*

In the southern part of the trench, part of the ring-ditch was sectioned (Fig. 21). This revealed a double ditch (206/218) separated by a ridge but with one homogeneous fill (205). The cut of the inner ditch (206) was fairly flat bottomed and can be interpreted as the foundation for the wall of a roundhouse. There was no evidence for the form this took but it should be noted with such a small sample excavated, that postholes, slots, grooves etc. may exist elsewhere in the inner ditch. The fill (205) comprised a mixture of frequent charcoal fragments, angular stones (<50mm) and redeposited soil. This was bulk sampled and sieved for analysis and produced a range of taxa, dominated by oak (see Appendix 5 below). Charcoal selected produced a date of 391–208 cal BC (SUERC-86272; 95.4% probability) which tied in with the initial interpretation (based on the geophysics) that the outer enclosure ditch had cut the roundhouse and that the roundhouse therefore predated the latest extension of the hillfort.

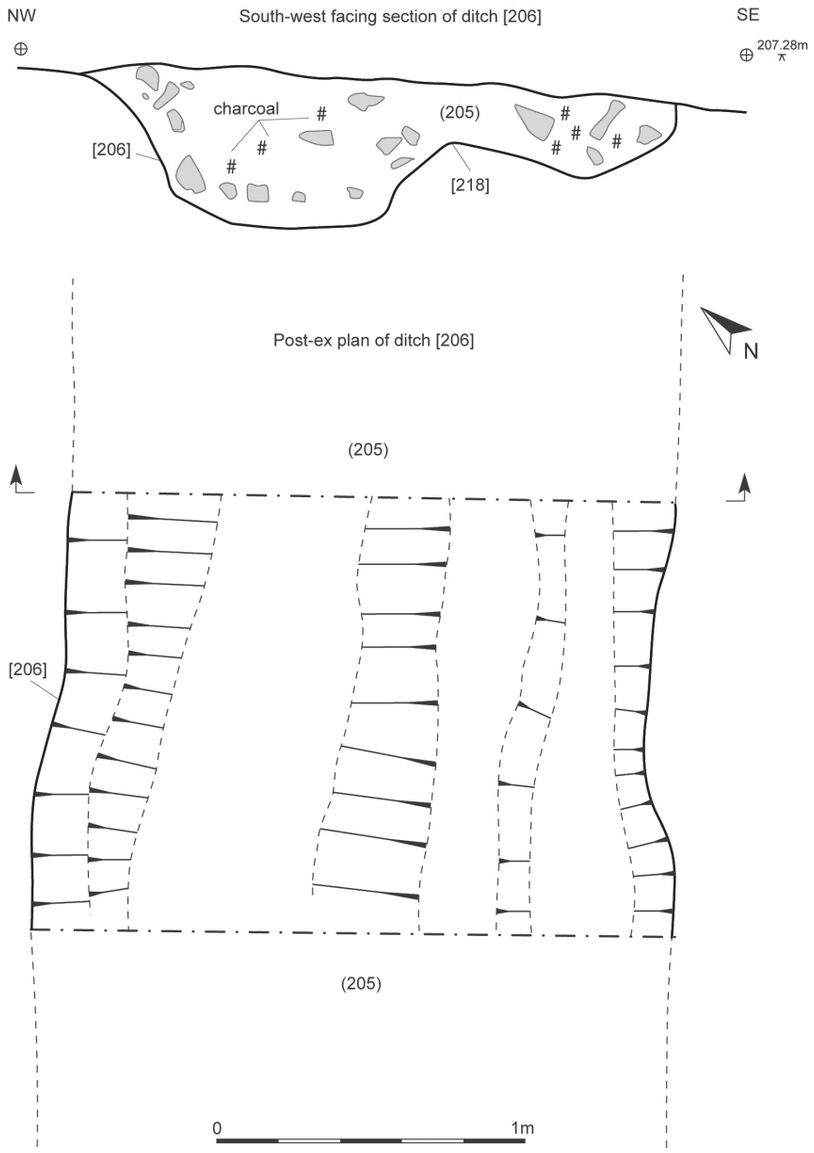
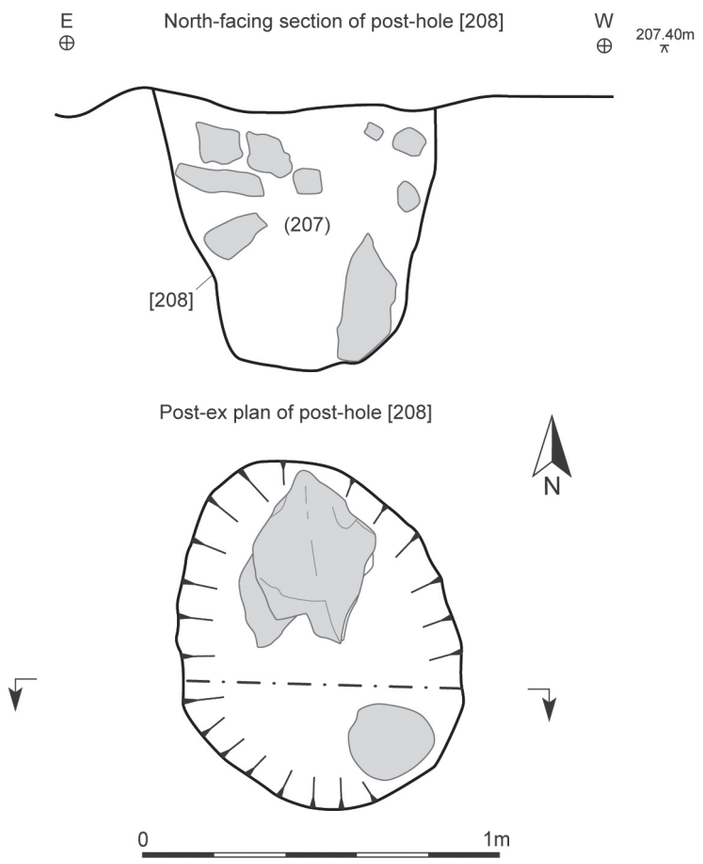


Fig. 21 *Ring ditch (206) section and plan.*

Outside the inner ditch was a shallower ditch for which a possible interpretation is a drip gulley or alternatively a drainage channel (218). As both ditch and gulley were filled by (205) however, this would suggest the gulley was kept clear of silt until the event which caused the deposition of the fill. The fact that the fill (205) overlay the top edges of the cut of (206/218), added to there being frequent charcoal inclusions within the fill (which was dark in colour), might be seen as suggesting that the building was burnt down, either accidentally or deliberately.

Internal to the ring-ditch were three postholes all of which appeared to have stone packing (Fig. 20). Two of these (208 and 212), were of similar diameter (approximately 0.6m) and may have formed part of the post-ring which supported the roof. They also conform in terms of the ratio between diameter of post ring and overall house diameter detailed in Romankiewicz and Mann (2017). One of these postholes (208) was excavated and the fill (207) contained large, mainly angular packing stones with the exception of one which was a large pebble, presumably from the beach a mile or so away (Fig. 22). No post-pipe was visible in section (Fig. 23). The fill was bulk sampled and produced a date of 410–257 cal BC (SUERC-86273; 95.4% probability). The second post-hole (212) was not excavated (Fig. 24) but also featured a largish beach-derived pebble (17cm long) in the top of the fill (211). The fact that both pebbles from the postholes were in the top of the fills may be significant either in structural terms or possibly in relation to a site closure ritual.

Fig. 22 *Large pebble from (208); scale 30cm.*



Fig, 23 *Plan and section of post hole (208).*

Fig. 24 *Photo of unexcavated post hole (212).*

The third posthole (210) was smaller. It was planned but not excavated and also had angular stones around the edge of its fill (209).

Outside the ring-ditch to the south were two more sub-circular features (Fig. 20). These were planned but not excavated. One of these (214) was larger in diameter than the internal postholes and may have been a pit. The other (216) was smaller.

In the northern part of T3 was a linear filled with stones (204). This does not appear to be part of the roundhouse as it does not align with the projected circumference of it. One possibility is a field drain as it runs down slope and appears to feed into the enclosure ditch (202).

By the end of the excavation, the geophysics details had been confirmed and enhanced. The outer enclosure ditch had yielded pottery and a C14 date. The ring-ditch of the roundhouse had been dated along with a posthole likely to have been used as a structural support. In addition, a number of other internal and external features were recorded. It was also confirmed that the truncated roundhouse had predated the late development of the hillfort as manifested by the outer enclosure ditch.

2019 Excavation

After negotiation with the farmer, a small area of excavation was agreed in the field to the east of that investigated in 2018. The same strictures regarding crop harvesting applied as in 2018 and the dig lasted just over a week, including turf removal, relaying and backfilling. Personnel numbers were similar to 2018.

T3

The rationale behind the trench location was twofold: firstly, to investigate a possible ring-ditch but one

which had a weaker signature than the two in the field to the west. Secondly, to establish whether the distinct difference in the data illustrated on the contour plot between the two fields was due to differences in ploughing depths or for other reasons such as poor survivability. This would help inform future decisions about the preservation of the site.

A 5m x 2m trench (T3) was delineated by Mark Edwards of Substrata with considerable precision as excavation revealed. Following turf and topsoil (300) removal, the next layer (301) was excavated by hand (Fig. 25) and proved to be a relatively modern ploughsoil with finds ranging from flint flakes to North Devon medieval coarseware, through to C19 ceramics, clay pipe fragments etc. Noteworthy finds were several small waterworn pebbles, some of which may have been slingstones (see Appendix 3 below) and ten fragments of quartz weighing 330g in total (see comments in 'Conclusions').

Fig. 25 *Cleaning back T3.*

Beneath this was a thin compact layer of mid-brown soil mixed with yellow/orange clay derived from subsoil (302). This interface (302) overlay the natural (310). After cleaning back (and overnight rain), the ring-ditch (307) was clearly visible. A section was put across the ditch at the north end of the trench (Fig. 26). This showed the ditch to be shallower than the 2018 ring-ditch (206) and with a gentler break of slope but still deeper than many examples found elsewhere in the country. The upper fill (305) was a mid-brown silty clay with lenses of orange-yellow subsoil. A few flecks of charcoal were noted. This sealed a primary fill of orange-yellow clay with gravel-like stones (306). No finds were made in either context however.

Fig. 26 *Ring ditch (307) sectioned.*

In the south end of the trench (i.e. inside the putative roundhouse) a small posthole (309) was half sectioned (Fig. 27) and a tiny fragment of pot was found in the fill (308). Although no post pipe was noted, the packing stones in section suggest the diameter of the post which is assumed to have rotted in situ. This post would have been too small to be part of a post-ring judging by its size and was possibly an element of a small raised structure within the house, for which there are many parallels.

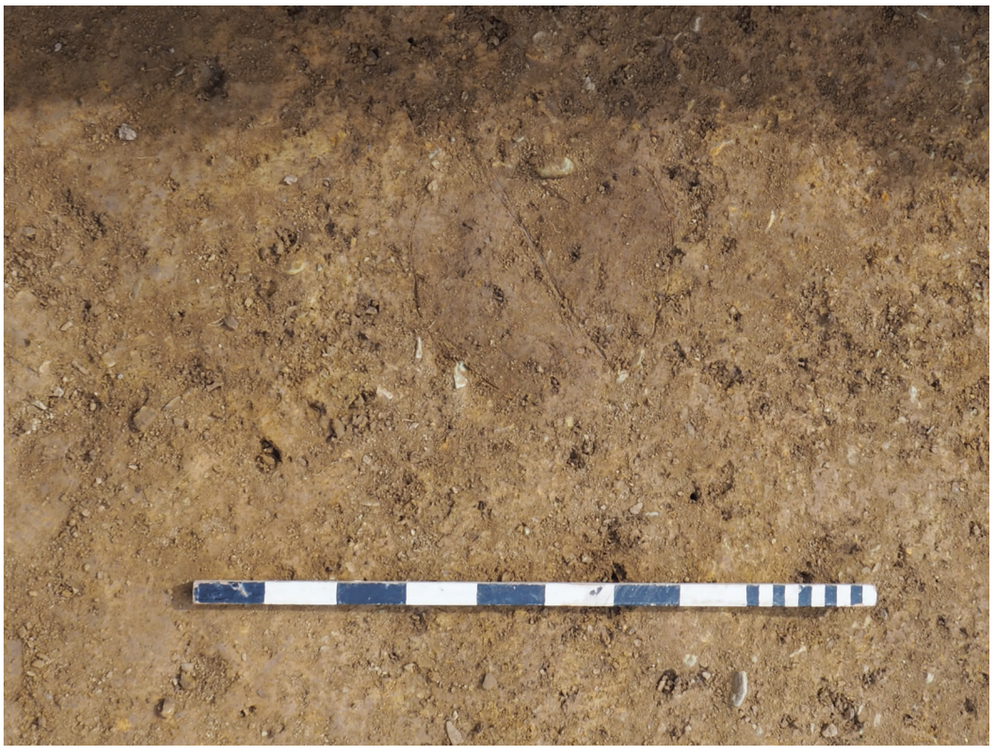
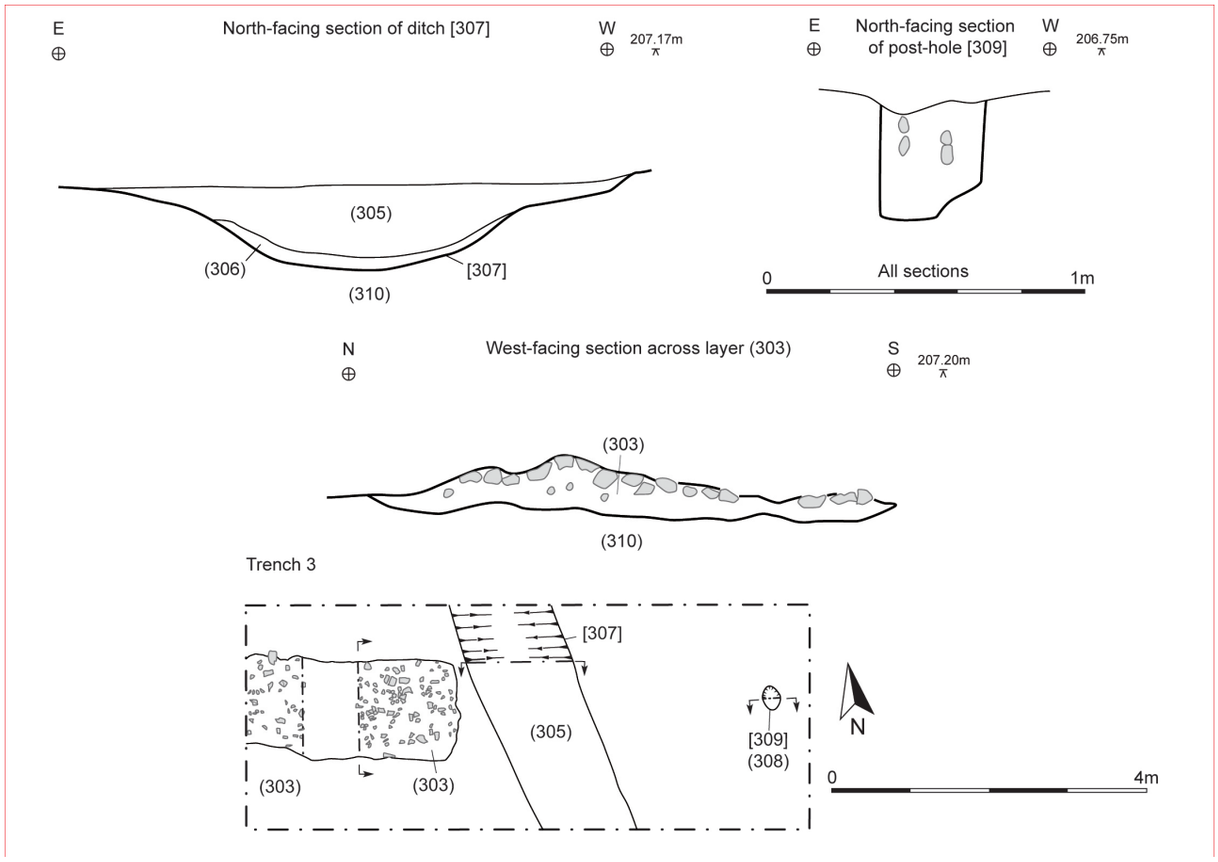


Fig. 27 *Post hole (309) pre-ex.*

To the west of the ring-ditch was a spread of stones (303) which was sectioned (Fig. 28). This was sitting on the natural (310) and was possibly clearance from the inside of the assumed roundhouse, or the ring-ditch, or both. However, it was sub-rectangular in form and possibly linear as it continued into the west section of the trench. If so, its function is difficult to discern as it was outside the assumed wall of the roundhouse and not associated with an entrance. Possibly a rough platform for objects which had to be raised off the soil?



Fig, 28 *Plans and sections of T3.*

By the time the excavation was finished, the main objectives had been achieved. The evidence of the geophysics had been confirmed and the presence of another roundhouse established. The difference between the two fields had been assessed and the 2019 roundhouse ring-ditch was shown to be of a different profile (and shallower) than the 2018 example in the field to the west. In addition, it was demonstrated that the depth of the soil overburden was greater in the east field, thus perhaps accounting for the difference in the geophysics contour plot.

2019 GEOPHYSICAL SURVEY OF CENTRAL AREA

As Clovelly Dykes is a scheduled monument and given that the area covering the central enclosure is large (one hectare), the most obvious way of understanding the form is by geophysical survey, as Bournmouth University had shown in Dorset (Stewart and Russell, 2018). Permission was secured from Historic England, and Substrata were commissioned to carry out a dual survey, using both resistivity and magnetometry (Fig. 29).

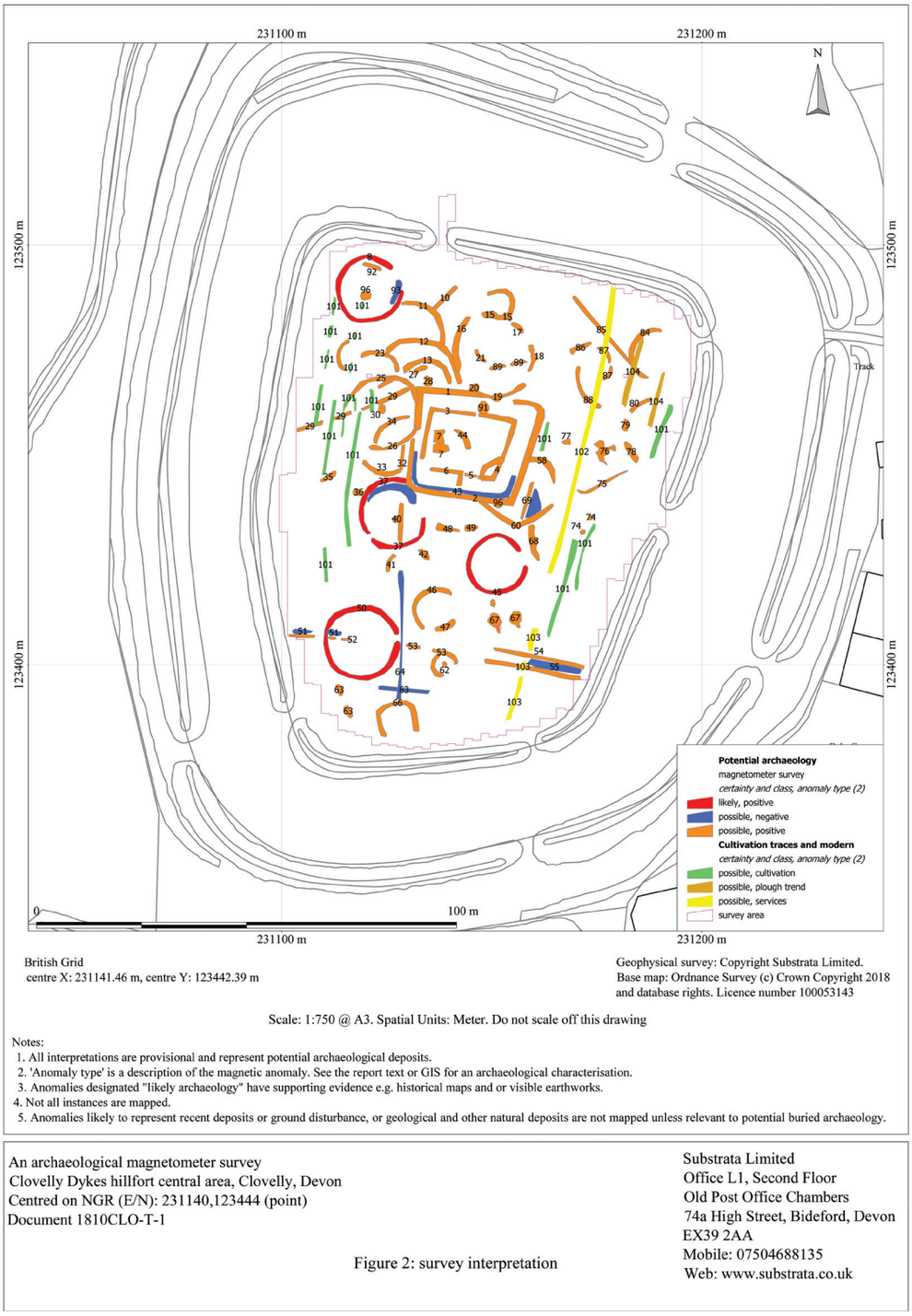


Fig. 29 *Geophysics survey and interpretation.*

Discussion of magnetic anomalies by Mark Edwards and Steven Trick

Anomaly Group g1 is a positive rectilinear anomaly that appears to form part of the perimeter of a larger square anomaly. Anomaly Group g2 is a positive rectilinear anomaly that appears to depict the rest of the perimeter of this square feature with the width of the anomaly at 2m suggesting a substantial wall. Anomaly Groups g3, g4, g5 and g6 are positive rectilinear anomalies that appear to form an internal divisions within this complex. The difference in strength of signal amongst these may suggest differential survival of the wall foundations. Taken as a whole these Groups depict a roughly square structure, c. 27m x 25m, with internal corridor around a central open space. Such an arrangement is characteristic of a Romano-British temple complex, with an internal area or cella surrounded by an ambulatory or veranda. The context within an Iron Age hillfort would support this interpretation. The geophysics suggest there was an entrance in the western or northern wall of the structure. Anomaly Group g44 may be internal features of the structure. Anomaly Group g7 may be further internal features or storage pits associated with the Iron Age occupation. Anomaly Group g43 is a negative curvilinear anomaly that lines the inside of the southern wall of the structure, possibly swept occupation debris or a foundation trench. Anomaly Groups g91 and g69 are sub-circular positive anomalies internal to the square structure and are possibly architectural elements of this, or perhaps storage pits. Anomaly Group g32 is a subtle linear positive anomaly parallel to the western wall of the square structure and may be a drip line of the latter's roof, or a continuation of long linear Anomaly Group g64 discussed below.

Anomaly Group 8 is a circular positive anomaly 14.7m in diameter N-S. Given the hillfort setting and practice of structural superposition (discussed below), this ring-feature is interpreted as an Iron Age roundhouse. Whether the anomaly reflects the bedding trench for the wall of the structure, or the drip line of the roof is currently uncertain. It is large for this class of structure, so possibly served a non-domestic function. It is similar in size to the two ring ditches detected south of the road previously by Substrata (Dean 2018), which have been excavated and confirmed as Iron Age (Edwards pers comm.). There is an apparent entrance in the northeast quadrant. Anomaly Group g92 is a positive linear within this ring of uncertain interpretation, possibly contemporary with the occupation. Anomaly Group g96 is a sub-circular positive anomaly internal to the structure, possibly a hearth, or storage pit pre or post-dating occupation. Anomaly Group g93 is a curvilinear negative anomaly lining a stretch of the structure wall, possibly swept debris, or a bedding trench.

Anomaly Groups g11, g12, g13, g22, g23, g33 and g34 are positive curvilinear anomalies that appear to be sections of larger ring features. Their partial nature is interpreted as being the result of a process of roundhouse construction, occupation, demolition and rebuilding with spatial displacement leaving remnants of previous structures.

Anomaly Groups g25 and g26 are subtle positive curvilinear anomalies, that possibly together form a larger ring-feature c. 16.5m in diameter, N-S. These anomalies are located in a zone that was a focus for structural superposition and so this interpretation must be tentative. Anomaly Group g30 is a strong sub-circular positive anomaly that lies at the centre of this postulated ring feature, possibly a hearth or perhaps a storage pit from an earlier or later phase.

Anomaly Group g29 is an alignment of positive linear segments. Interpretation is uncertain, perhaps a ditch disturbed by later activity. This alignment possibly continues in Anomaly Groups g86 and g89 which are similar linear segments of positive polarity.

Anomaly Groups g24 and g27 are short positive linears that roughly share the same alignment. Interpretation is uncertain perhaps short sections of larger ring features or a section of ditch later disturbed by later processes.

Anomaly Group g10 is a positive linear anomaly of uncertain interpretation, possibly a ditch.

Anomaly Group g16 is a positive curvilinear anomaly that appears to be part of a larger ring feature, possibly a roundhouse. Anomaly Groups g15, g17 and g19 possibly form further sections of the perimeter of this larger ring feature although this is not certain. Anomaly Group g21 is a positive curvilinear anomaly and may be a contemporary deposit within this postulated ring feature. Anomaly Group g20 is two strong sub-circular anomalies on the perimeter of this postulated roundhouse. These may be architectural features, or alternatively, storage pits as are common on hillforts.

Anomaly Group g14 is a penannular positive anomaly which may be a small ring feature of uncertain function.

Anomaly Group g37 is two positive curvilinear anomalies which together form a circle likely to represent a roundhouse 15.6m in diameter, N-S. Similar to Group g8, the entrance appears to be in the northeast sector. Anomaly Group g39 is a crescent shaped negative anomaly which runs alongside the interior edge of the northern wall of this structure. This is interpreted as swept debris, or a foundation feature. Anomaly Group g40 may be an internal feature such as a hearth. Alternatively it may be a storage pit pre or post-dating the structure here.

Anomaly Group g50 is a circular positive anomaly, interpreted as a likely roundhouse, 16.3m in diameter N-S. Similar to Groups g8 and g37 there appears to be an entrance in the northeast sector.

Anomaly Group g63 is two irregularly shaped, strong positive anomalies near the southwest edge of the Survey Area. Interpretation is unclear, possibly storage pits.

Anomaly Group g66 is a U-shaped positive anomaly at the southern edge of the Survey Area. Possibly an enclosure built against the bank of the monument, or a ring-feature that runs under the bank.

Anomaly Group g64 is a long linear negative anomaly. This possibly continues north in the form of positive anomaly g65 and possibly beyond that as Group g32. It is possible for archaeological features to flip polarity on the same site. The resistance survey discussed below indicates that there is generally a drier, harder subsoil on the northern half of the Survey Area, which may contribute to this phenomenon. Interpretation is uncertain, possibly a ditch serving some function.

Anomaly Group g54 is two parallel linear anomalies c. 3m apart, with a negative anomaly (Group g55) between them for some of their length. These features appear to be continued to the west in the form of Groups g53, g52 and g51. This arrangement of a negative stand flanked by positive strands is usually indicative of a Devon hedgebank flanked by ditches. This suggests the southern end of the central enclosure of the monument was partitioned off at some point in history. Such a boundary does not appear on the earliest available mapping, i.e. the tithe map of c. 1840. Another interpretation would perhaps see these anomalies as a metalled track with flanking ditches through this possibly boggy area which the resistance results (discussed below) indicate is lower resistance and theoretically more water-holding. Such an interpretation would naturally raise the question of why they do not start and end in breaches in the bank. Anomaly Group g63 is a negative linear anomaly of uncertain interpretation possibly a section of ditch.

Anomaly Groups g46 and g47 are both curvilinear positive anomalies that appear to define a ring feature 9.2m in diameter, N-S. A gap between these Groups makes this interpretation tentative however. A possible gap in the northeast sector as witnessed elsewhere on site may support the interpretation as a small roundhouse.

Anomaly Group g61 is a tentative penannular positive anomaly which may indicate a small ring-feature.

Anomaly g62, a subtle sub-circular positive anomaly at the centre of Group 61 may be a hearth or storage pit.

Anomaly Groups g41 and g42 are vaguely curvilinear positive anomalies which tentatively form arcs of a greater ring-feature which may have been destroyed through the practice of structural superposition.

Anomaly Group g45 is a circular positive anomaly measuring 13.4m, N-S. It is interpreted as a likely roundhouse with an entrance in the northeast sector.

Anomaly Group g35 is a short section of linear positive anomaly of uncertain interpretation possibly geological.

Anomaly Group g36 is an irregularly shaped positive anomaly at the edge of Group 37. Possibly a geological response, or possibly a storage pit.

Anomaly Groups g48 and g49 are irregularly shaped positive anomalies whose irregular shape is suggestive of a natural geological origin, however given the archaeological context, may be anthropogenic.

Anomaly Group g67 is a group of three irregularly shaped positive anomalies. Interpretation is uncertain, possibly geological, however all feature a sub-circular element and so may be storage pits.

Anomaly Group g68 is an irregularly shaped positive anomaly of uncertain interpretation, possibly geological in origin.

Anomaly Groups g58, g59 and g60 are disjointed positive curvilinear anomalies that together, tentatively, define a ring feature, possibly a roundhouse, 15.4m in diameter N-S. If this is the case then the postulated temple cuts through these deposits. It should also be noted that Group g60 is apparently more rectilinear in form and together with Group g58 could perhaps be a later, ad-hoc structure built against the wall of the postulated temple. Anomaly Group g69 is a positive linear anomaly of uncertain interpretation perhaps an internal feature of the postulated enclosures here.

Anomaly Group g71 is an irregularly shaped negative anomaly of uncertain interpretation, perhaps occupation debris associated with the postulated enclosures here.

Anomaly Groups g76, g77 and g78 are irregularly shaped positive anomalies of uncertain function whose irregular shape is suggestive of a geological origin, however, given the focus of activity here in the past, an anthropogenic origin is possible.

Anomaly Groups g75 and g85 are linear positive anomalies of uncertain interpretation. Their orientation is at odds with the postulated temple footprint, and the ramparts surrounding the Survey Area. These may be ditches associated with a pre-Iron Age phase of occupation of this plateau, or alternatively, ephemeral field boundaries from recent history for stock control purposes.

Anomaly Groups g78, g79 and g80 are disjointed positive curvilinear anomalies that together possibly depict the arc of a large ring-feature that abuts the bank surrounding the Survey Area or underlies it.

Anomaly Group g84 is a curvilinear positive anomaly that appears to form a large part of a larger ring feature the remainder of which has been destroyed through later activity possibly including the construction of the bank and ditch surrounding the Survey Area.

Anomaly Group g87 are two short positive curvilinear anomalies that possibly describe the arc of a larger

ring-feature the remainder of which has been destroyed through structural superposition. Similarly Group g88 is a curvilinear positive anomaly that appears to be a section of a larger ring-feature the remainder of which has been destroyed by taphonomic process.

Anomaly Group g74 is two small (c.1.5m across) sub-circular positive anomalies. Such discrete positive anomalies are commonly encountered in geophysical surveys in the southwest. They are possibly geological in nature, or could be storage pits.

Anomaly Group g101 consists of subtle linear and curvilinear parallel anomalies that run in a south-southwest direction coaxial with the bank surrounding the Survey Area. These are interpreted as the result of cultivation in the past, however the nature of this cultivation is unclear. Modern aerial photography (Bing Virtual Earth) suggests the monument is harvested for silage, and so these anomalies are interpreted as the tractor tracks pulling the mower/tedder.

Anomaly Group g102 is a long linear negative anomaly that appears to continue in positive linear Group g103. This linear lines up with a narrow breaches in the two successive banks north of the Survey Area suggesting this is a modern service trench serving the farm buildings of East Dyke Farm.

Anomaly Group g104 is two parallel negative linear anomalies. These are broader than the linears of Group g101, suggesting that these represent an earlier more invasive form of cultivation possibly ploughing dating from before the scheduling of the monument in 1924.

Resistance Anomalies

Group r301 (not illustrated here) is a clear edge in the plot that coincides with the footprint of the proposed temple seen in the magnetic data. This suggests the foundations of this building have cut into the subsoil as deep as the resistance meter detects (c. 0.75m) and possibly deeper.

Discussion

The differences in magnetic responses across the Survey Area were sufficient to be able to differentiate between anomalies representing possible buried archaeology and background magnetic responses.

The magnetic and earth resistance surveys detected 96 anomaly groups of archaeological potential, and four representing possible modern activities. The high density of anomalies and their even spread across the Survey Area suggests focused human activity here in the past, across a number of temporal phases. The evidence suggests a broad chronology of multiple phases of Iron Age occupation, followed by a Romanised phase associated with the construction of a possible temple, this however could relate to a much later chapel in reference to the C19th field name.

The density of anomalies indicates the Survey Area as a whole is a zone of high archaeological potential with areas in between the geophysical anomalies likely to contain archaeological deposits associated with established hillforts such as occupation layers, grain storage pits, granaries and perhaps burials.

Based on these encouraging results it is suggested that the geophysical survey be expanded to include the remainder of the area of the scheduled monument (not covered by previous surveys) in order to determine the archaeological potential of these zones.

CONCLUSIONS

By Chris Preece

The Enclosures

In 2019, as part of the Coastal Heritage Project, the AONB commissioned Cotswold Archaeology to survey and interpret the hillforts of the North Devon Coast. In regard to Clovelly Dykes, a thorough analysis of the sequencing and construction of the ditches and ramparts forming the enclosures was carried out. The various entrances through the ramparts were also examined (many were made for farm access) and the report was able to differentiate these from the more likely original entrances. The numbering sequence of the ramparts (the innermost is '1', the outermost '5') devised by Cotswold Archaeology is used here as a template (Arkley, 2019, 34).

The section of the outer enclosure ditch (120) excavated in 2018 was relatively shallow in depth, in contrast to both the extant and documented depth of one of the inner ditches (as gleaned from the Baring-Gould excavations). However, Clovelly Dykes is clearly a 'developed' hillfort to use Cunliffe's term (2004, 45–6) and the outer ditch is not too dissimilar in terms of profile, width and depth to the equivalent at Embury Beacon (Sims et al. 2014, 86–7). The outer ditch is therefore more suggestive of stock enclosure than defence and its later date relates to a period which has been described as transitional in terms of social structure (Manning and Quinnell 2009, 128).

The considerably greater presumed depth of at least one of the inner ditches (Fig.30) allied to the description of the sorted sling shot (Baring-Gould, 1903) suggests the initial phase (presumably the two inner ramparts and ditches) was essentially defensive in nature. Although this phase is undated at Clovelly, it has been established that most hillforts in Southern Britain were mainly built and occupied in the Early and Middle Iron Ages, a pattern generally followed in Devon (Manning and Quinnell *loc. cit.*). The dates from the roundhouse (205/207) confirm occupation associated with the hillfort in the Middle Iron Age.

Fig. 30 *AONB volunteers clearing scrub, showing depth of extant inner ditch (Photo by Joe Penfold; image courtesy of NDCAONB).*

The changes wrought by the insertion of roads and farm buildings have been detailed above. In the medieval period onwards there were clearly impacts too. Baring Gould asserts the area within the Dykes had been ploughed for centuries (1903). The kink in the alignment of rampart 3 gives the impression of alteration at some stage and the fact that there is stone revetment may be suggestive. Together with rampart 4, these may have been adapted as strip field boundaries, as Terry Green (above) and Arkley (2019, 57) have suggested. That these strips may have extended to the south prior to the construction of the A39, is given further credence by the layer of medieval ploughsoil (101) recorded in T1. Medieval cultivation is also postulated at Denbury hillfort (Probert and Dunn, 1992, 57) and later cultivation at the Rings, Loddiswell (Wilson-North and Dunn, 1990, 92).

Although (120) has been described as the outer enclosure ditch, allowance should be made for an alternative hypothesis. Whilst (120) could have joined the ditch of rampart 5, in many ways it appears a better fit with the (ploughed over?) ditch of rampart 4 (see cover illustration). This configuration also appears to respect the proportions and shape of the inner ramparts (1&2) better. If this were so however, there is no sign of a further ditch outside (120) on the geophysics, unless of course, it is further to the south of the area surveyed. What gives some credence to this possibility is the slight dog-leg in the western field boundary of the area surveyed and the dog-leg which runs east-west in the easternmost field surveyed. This interpretation in turn raises questions regarding sequencing, however. It would be reasonable to assume, as the Cotswold report (Arkley 2019, 59) suggested, that the construction of rampart 5 followed the assumed initial phase of the inner ramparts (1 and 2). The outworks still partially evident in the north-east give further credence to this theory as they are generally associated with the earlier defensive phases of hillfort construction. This would mean if rampart 4 was linked to (120) then according to its later Iron Age date, it must have been a subsequent, sub-division within the hillfort. These are questions which can only be resolved by further survey and excavation.

The Roundhouses

South of the scheduled monument, evidence for at least 3 roundhouses was manifest. The clearest example from the 2018 geophysics (the most westerly) was left unsampled as it appears to be complete and would therefore be the most suitable for total excavation. This roundhouse appears to be approximately 12m in diameter. It is interesting to note that the entrance faces south, a feature which was also noted at Middle Burrow Farm (Gillard, Morris & Walls 2012, 128) where interesting theories were proposed as to why this might be (it seems counter-intuitive to face the entrance virtually into the prevailing wind). The other two roundhouses were confirmed through limited excavation as described. A distinction could be made between these two roundhouses, both in terms of their size and in terms of their ring-ditches. The roundhouse sampled in 2018 had an approximate diameter of 14m; that sampled in 2019 an approximate diameter of 12m. The larger roundhouse, as well as having a drip/drainage gulley (208), was steeper-sided in terms of its ditch profile than (307) and suggests different construction.

Close examination of the geophysics plots (2018) suggests hints of other (less well-preserved?) ring-ditches and there may well be further examples to the south of the area surveyed.

The mass of ring-ditches within the central enclosure (2019 geophysics) suggests multi-phase occupation, as several are cut by others. As Stewart and Russell (2018) have stated, "….overlapping buildings indicate occupation over a long period, which also makes it unlikely that the structures simply housed the huge workforce required to raise the ramparts in the first place. The traces of industry and the artefacts found in the various excavations at such sites suggest that, by the middle Iron Age, developed hillforts had become permanently occupied centres, possibly akin to market-towns, with resident storage facilities and craftspeople'.

Whilst many of the presumed roundhouses in the central enclosure are of similar diameter to those south of the A39, some are considerably larger and may indicate higher status dwellings or possibly, have had other functions. Two have diameters of 16.5m and one has a diameter of 15.6m. Nationwide, even a 15m diameter

house is very rare (Current Archaeology online at www.archaeology.co.uk, Aug. 2008), meaning the Clovelly examples are of some significance.

The four roundhouses highlighted in red in the geophysics interpretation (Fig. 29) all have entrances facing approximately north-east. If the main entrance to the hillfort was, as suggested earlier, in the north-east, this reflects a characteristic also demonstrated at Little Woodbury where the entrance of a large circular hut (13.7m diameter) aligned with the entrance to the enclosure (cited in Cunliffe 1991, 215).

Possible Romano-British Temple

The most stunning feature revealed by the 2019 geophysical survey was what appears to be the cella and the outer wall of an ambulatory of a Romano-Celtic style temple (Fig. 29). If proven this would be the first example of a temple in a hill fort in the far south west. There are a number of parallels for temples within hillforts elsewhere, for instance: Chanctonbury in Sussex (Bedwin, 1980), Maiden Castle in Dorset (HE listing 1015775) and Brean Down in Somerset (HE listing 1008211). However, the cellas of these tend to be smaller than Clovelly, ranging from 5m square to 9m x 7m, so a caveat must be inserted until the interpretation is confirmed by excavation. However, there are some examples of larger structures: the rebuilt temple at Hayling island (illustrated in Cunliffe 2004, 112) has a rectangular precinct which approximates in size to the ambulatory of Clovelly, and Camp Hill in Gloucestershire (HE listing 1017373) is a larger hillfort temple. In addition, the geophysics interpretation of the Clovelly structure, which suggests walls (in particular the resistivity which indicates a deep foundation trench) still lead to a temple being the most likely interpretation. Romano-British temples elsewhere tend to date to the later centuries of Roman occupation of Britain and this would suggest continuity of use of the Dykes into this era. The association of many of these temples with sacrifice, particularly of animals (King, 2005), means that future excavation would likely be highly informative.

In 2019, N. Devon AONB commissioned Adam Stanford of Aerial-Cam to carry out a drone photogrammetry survey of the Dykes. This revealed a further, outer rectangular feature (see Fig. 31). Although this is less defined than the geophysics results, this feature may address the shape of the temple, or possibly extend to the north of the central enclosure, perhaps implying a separate structure. (Photogrammetry results can be seen on the North Devon AONB website listed below in the bibliography).

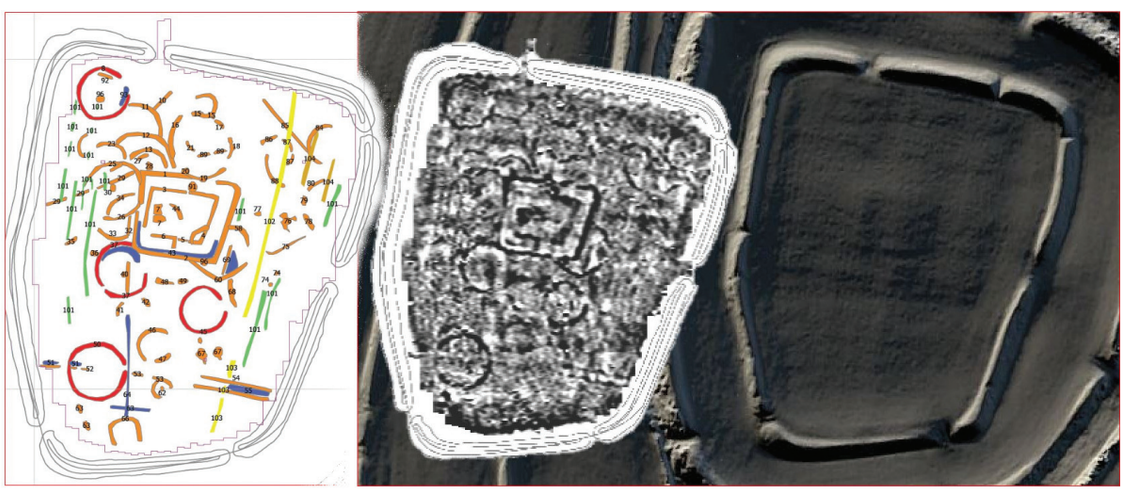


Fig.31 *Comparison of Geophysics interpretation with Aerial-Cam image on right (by Steve Hobbs).*

Location and Trade

As suggested earlier, Clovelly Dykes is best described as a plateau fort but its present setting is deceptive. If the modern buildings and hedgerows were removed, the Dykes would still command views of considerable distance on all sides, as it must have during the Iron Age. In addition, considerable drainage has taken place

in the surrounding fields to facilitate crop-growing. The place name evidence suggests many of these fields were formerly marshy moorland. This would have added to its defensibility. If the traditional view of the Early Iron Age undergoing a period of climate change with increased rainfall (Brooks 1927, Cunliffe 2004, 9) is accepted, then this adds to the rationale for the location of the fort. Straker et al. have cautioned however, that the evidence in the South-West is still debatable, suggesting other factors may account for the wetness evidenced (2008, 115).

As Cotswold Archaeology have observed, the Dykes were probably intended to be visible from the sea (Arkley 2019, 56–7). Equally, the inhabitants of the Dykes had a commanding view of the Bristol Channel and would have been able to monitor coastal traffic as well as the entrance to the Taw/Torridge estuary. This suggests trade was an important factor in the fort's location.

The prevalence of hillforts along the North Devon Coast (Embury Beacon to the west and Hillsborough (Ilfracombe to the east, amongst others) is also suggestive of coastal trade. Transport by ship would have been far more effective than by land and the occurrence of gabbroic pottery from both Embury and Clovelly Dykes as well as close to the Taw estuary at Tews Lane (see appendix 1 below) suggests the trade route extended to Cornwall. From the limited evidence available from the Dykes, export trade may well have been in livestock or by-products as Fox originally postulated (1996, 29). Cunliffe has made a persuasive case for maritime trade further around the south-west littoral. At Mountbatten in South Devon, east-west trade was suggested with both Cornwall and Wessex (1988, 103).

As regards beaching a vessel, there are a number of possibilities. Larger vessels may have used the Taw/Torridge estuary but smaller vessels could have landed closer to Clovelly Dykes. The valley routes from the coast would have given uphill access to the Dykes, either from the beach at Clovelly itself or from Mouth Mill. It is interesting to note that Clovelly in particular, picks up far less swell than most of the well-known surf beaches (Westward Ho! Saunton, Croyde etc.) as it lies in the lee of Gallantry Bower and faces east-north-east.

Familiarity with the coast is evidenced not only by the slingstones and the large pebbles from the postholes, but may also be suggested by the observation that quartz is visible in the inner rampart of the Dykes (Arkley 2019, 38), a feature known from other hillforts, for example Warbstow Bury some 25 miles to the south in Cornwall (Edwards 2014, 25). The quartz at the Dykes would have had to be brought to site and one possibility is from Gallantry Cliff (mindat.org.).

Summary

The concerns raised by Historic England in 2015 regarding the unscheduled area south of the monument (see 'Background to the Project' above) have now hopefully been addressed:

- Survival – evidence for buried remains is now clear: the outer enclosure ditch of the hillfort has been sampled and dated; 3 roundhouses have been revealed with two sampled and one dated; three linear anomalies noted in the geophysics are suggestive of a sub-rectangular enclosure or small field which abuts the outer enclosure ditch. Cunliffe has proposed the existence of 'kraals' around the fort being used at times of lambing and calfing (1986, 168).
- Potential – there are faint traces of other possible roundhouses in the survey area, particularly in the east field where the depth of soil appears to mask the archaeology. There is also potential for further archaeology to the south of the surveyed area as detailed above.

Although the project was limited in terms of time and scope, it is fair to say that it has considerably advanced our understanding of Clovelly Dykes. As well as the evidence just outlined, the history of the site, including historic excavation, has been revealed.

In the future, certain research questions will hopefully be answered:

- The later Iron Age date from the outer enclosure ditch (120) is unusual in Devon and this, and the assumed Romano-British date of the temple, suggest that the period of occupation or use of the site at Clovelly Dykes may have been longer than most Devon hillforts. Would dating the primary enclosures (assumed to be the earliest phase) extend this or are the dates obtained from the roundhouse (206) contemporary with the initial construction?
- Are there further features to the south (as suggested above)?
- What is the length of occupation within the central enclosure (as suggested by the overlapping ring-ditches)?
- Assuming the feature in the central area is a Romano-British temple, is there evidence of an earlier shrine, as Cunliffe (1991, 512) has suggested is often the case?
- What would geophysical survey (as Substrata have recommended) of the other enclosures within the scheduled monument reveal? Has ploughing here throughout the centuries affected survival of features?
- Is there a southern entrance as the 2018 geophysics seems to suggest?

The Iron Age in North Devon is little understood. Commercial archaeology excavations such as those at at Middle Burrow Farm (2012) and Tews Lane (2018), are beginning to fill detail on a fairly blank canvas in terms of settlement. Larger sites such as Hillsborough, Berry Castle (Huntshaw), Windbury and Bucks Mills remain enigmatic, despite recent surveys. The archaeological potential of Clovelly Dykes however is evident, as the stunning results of the central enclosure geophysics have made clear.

It is to be hoped that at some point in the future a large-scale, well-resourced, research project can enhance our understanding of what is undoubtedly a major tribal centre and a nationally important site.

APPENDIX 1

Iron Age Pottery by Henrietta Quinnell

A total of 12 sherds 135 grams of later Iron Age pottery was recovered. These have been examined with a hand lens by Roger Taylor who identifies all but the sherd from (308) as gabbroic, from the Lizard in Cornwall. All are body sherds unless otherwise stated.

Details

(103) fill outer enclosure ditch 8 sherds 107 grams including one base angle. Well-made gabbroic with traces of 'black paint' externally (Fig. 32).

Fig. 32 *Pottery from (103).*

(308) fill posthole (309) 1 sherd <1 gram of an uncertain fabric.

Trench 2 topsoil SF1 1 sherd 6 grams gabbroic.

Trench 2 topsoil 2m north of ring ditch SF2 2 conjoining sherds 21 g gabbroic, with a thickness appropriate to a vessel larger than usual.

Comment

SUERC-86271 BP 2042+/- 26, 161 – 132 cal BC (5.9%) and 117 cal BC – 24 cal AD (89.5%) on charcoal from (103) fill outer enclosure ditch is appropriate for the very end of the Middle Iron Age and for the Late Iron

Age, suggesting that the ceramics may belong to either of these periods. Well-made gabbroic fabric was used throughout Cornwall for South Western Decorated Ware of the Middle Iron Age or for Cordoned Ware of the Late Iron Age (Quinnell 2011) and without diagnostic sherds the two styles cannot be distinguished. The 'black paint' is common in both although its only analytical study, suggesting a carbon-based preparation, remains that by Tite (1981).

There are only minimal finds of later Iron Age pottery in North West Devon. Most of the Middle Iron Age assemblage from Embury Beacon, a cliff castle in Welcombe parish, was identified on stylistic but not petrographic grounds as gabbroic (Jeffries 1974, 149–152), an identification which has been generally accepted (Nowakowski and Quinnell 2011, Fig 17.2 and gazetteer). The excavation of a badly damaged enclosure at Tews Lane, Fremington, of later Iron Age and early Roman period date produced a small assemblage of mixed fabrics of which nearly half was gabbroic (Rainbird and Quinnell 2018). There is currently (2020) no definite local fabric identified for the later Iron Age and the gabbroic material from Clovelly Dykes fits a pattern of coastal spread up from Cornwall into North West Devon.

APPENDIX 2

Lithics by Derry Bryant

The assemblage from 2018 and 2019 consists of twelve pieces, two from or near Trench 1, six from or near Trench 2 and five from or near Trench 3, all from topsoil or ploughsoil (i.e. unstratified). Seven pieces had cortex, a mix of pebble and nodular. Colour varied from black to grey to orange-red, a colour noted in the Mesolithic assemblage from Burymoor Bridge, Huish, Merton which was probably from a source in North Devon, possibly Orleigh Court (Newberry 2002; Bryant 2018). A single black flint nodular core had bladelet detachments and suggests a Mesolithic date. There are also a notched flake and a possible piercer. Most pieces have some degree of use wear or edge damage. The assemblage could be entirely Mesolithic or also contain items of subsequent periods. Mesolithic material is recorded from East Dyke Farm, Clovelly (Wymer 1977, 56), part of a broad spread from Westward Ho! westward around the North Devon coast (Jacobi 1979, Fig 17).

2018

A total of 7 flint pieces were recovered during the excavations.

1 Bladelet core – multi-directional – black/nodular – Mesolithic
1 Backed bladelet microlith – red/orange/nodular – Mesolithic
1 Backed bladelet (damaged) – black/pebble – Mesolithic
1 flake – piercer/scraper – black/nodular – Mesolithic
1 Core fragment – orange/nodular
1 Core fragment light grey/pebble
1 Flake with retouch – light grey/pebble

All pieces had some cortex visible, either nodular or pebble.
The collection includes several Mesolithic bladelets, a microlith and a bladelet core, along with core fragments which might indicate that knapping may have taken place on site.
Colours varied from black to light grey, to orange/red. The orange/red is a colour which has been noted in another mainly Mesolithic collection from Burymoor Bridge, Huish, near Merton, North Devon (2018). This flint may be from a local source in North Devon (possibly Orleigh Court).

2019

A total of 5 pieces were found during excavation in August 2019.
1 bladelet (burned) – Mesolithic
1 bladelet with retouch – Mesolithic; light brown
1 serrated flake (burin) piercer – Mesolithic; honey colour
1 half pebble with glossy patina on ventral face – no apparent working; dark orangey brown
1 tiny flint fragment – no evidence of retouch
3 of the pieces are illustrated.
3 of the pieces had cortex remaining.
Full details are recorded on a spreadsheet which is lodged with the site archive. Below are drawings of the more informative pieces (Fig. 33a).

2020

A large chopper worked on a flint beach cobble, 632 g, was found during a subsequent complementary programme of AONB conservation work near the inner east entrance of the hillfort. Evidence of retouch as trimming. Cortex white/grey; exposed flint dark grey with white patches. It may well be Mesolithic and demonstrates the unexpected size of local beach cobble material. (Fig. 33b)

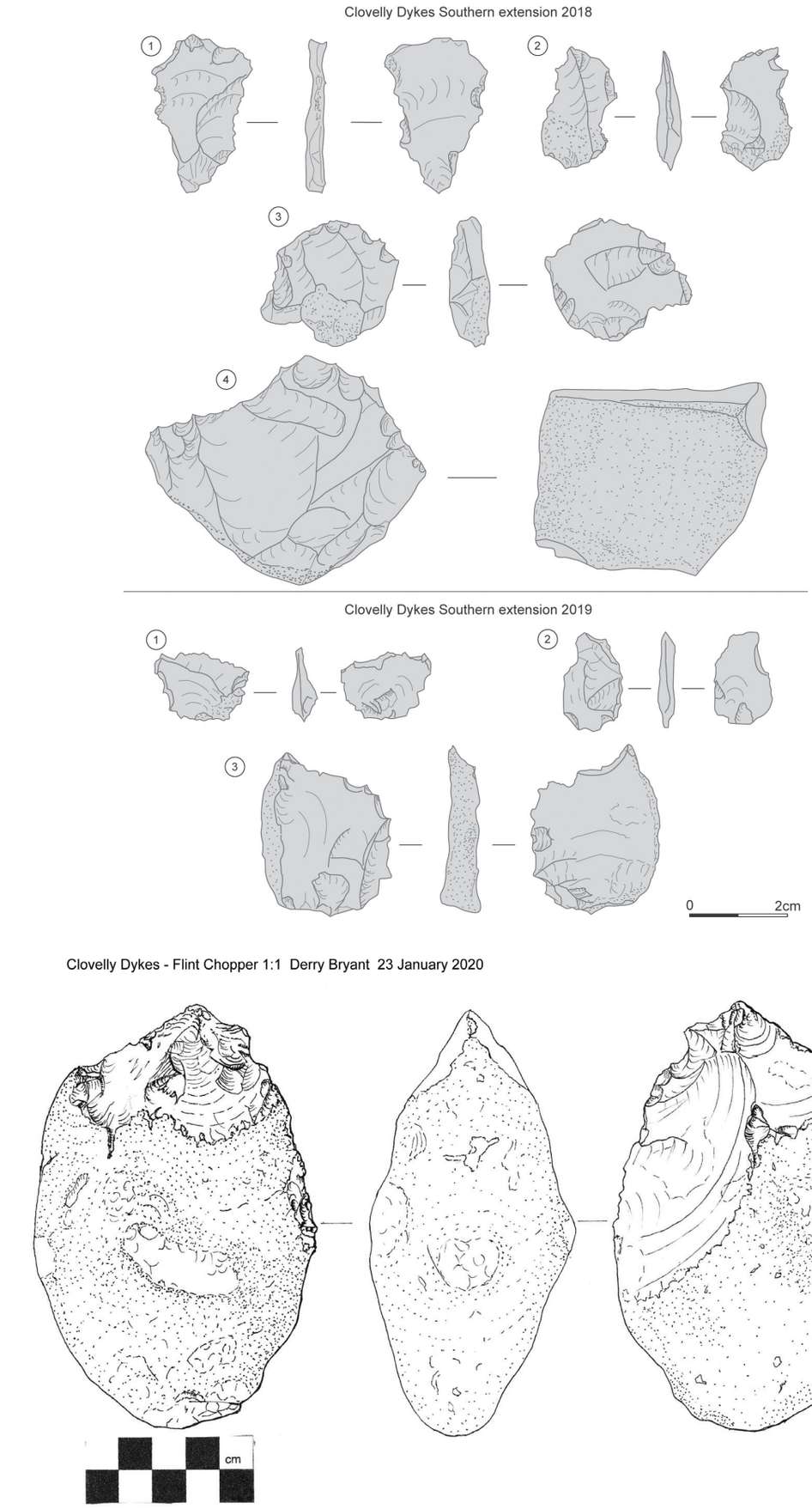


Fig. 33 *Lithics by Derry Bryant (a) Flints from 2018/19 excavations (drawn by Derry Bryant)(b) Cobble chopper found in 2020 (drawn by Derry Bryant).*

APPENDIX 3

'Slingstones' by Chris Preece

Finds of sorted 'slingstones' from hillforts are widely documented. From Devon alone, caches of small pebbles have been recorded from Blackberry Castle (Young and Richardson, 1954–5), Milber Down (Fox et al., 1948), Berry Down (Gallant and Silvester 1985), Sidbury Castle (Hutchinson 1868), Stockland Castle (*ibid.*), Hawksdown Castle (*ibid.*), Hembury (Liddell 1930/31), and Embury Beacon (Sims et al. 2014, 88), as well as from Baring Gould's excavations at Clovelly Dykes (1903). The frequency of these finds from hillforts in Devon, as well as elsewhere in the country, has lead to them usually being interpreted as stores of missiles used to defend forts.

An alternative view however has been proposed by Tilley (2017) who sees an aesthetic and symbolic significance to such depositions. He is not convinced of the use of the pebbles from Sidbury Castle for defence: "They are very small oval pebbles (about 3 cm long) derived from the local beach and unlikely to do much harm to anybody attacking the place if used in a sling unless they were hit in the eye!"

However, the Bible story of David and Goliath, albeit possibly apocraphyl, may well have been based on realistic details. If so it suggests two things: firstly, that skilled slingers could be very accurate and secondly, that the force of a slung stone could be considerable: "David put his hand in his bag, and took thence a stone and slang it and smote the Philistine in his forehead, that the stone sunk into his forehead and he fell upon his face to the earth" (Samuel 17, 49). There is plenty of corroborating evidence for both the accuracy and velocity of slung stones. Swan (2014), citing Vigors, states: "The damage these weapons inflicted could be potent: a colonel viewing an injury caused by a sling by tribesmen of New Caledonia in the nineteenth century compared it to a bullet wound (Vigors, 1988: 363). Thus these weapons could be extremely effective on the battlefield".

The use of slingshot was also widely reported by a number of classical writers such as Strabo and Vegetius. The skills of the Balearic slingers for example, were documented by Diodorus Siculus, and Procopius mentions the felling of a warrior by a slinger in the Persian Wars. These examples and others are detailed in a convincing assessment of the efficacy and power of slingshot by Chris Harrison (2006). As well as being potentially lethal, slingshot was also used to harrass and discomfort the enemy.

Shepherds too, have been known to use slingshot to deter predators and in this context it is interesting to speculate on the finding of eight small waterworn pebbles which were recovered from two contexts (301/302) in the 2019 sample excavation of the roundhouse. Although these were not precisely sorted in terms of size (practice pieces?) some of these (Fig. 34) may have been slingstones (a greater number were recovered from the hillfort during the Baring Gould excavations). It can be asserted that all these would have probably been collected from the nearby beach, however.

Two of the smaller examples from the 2019 roundhouse were between 2 and 3cm width and weighed 25 and 34g respectively. These are within the size range noted at Danebury (Cunliffe 1986, 80). A number were also noted at Embury Beacon (Sims et al. 2014, 88) but the Embury examples were slightly larger. Two further stones from Clovelly were larger than these (66g and 100g) but could still have been used. Slinghot have also been excavated from roundhouses at Berry Down and Blackberry Castle (*op. cit*).

Fig. 34 *Slingstones from (301) and (302). Scale 3 cm.*

APPENDIX 4

The Clovelly Bead by Steve Hobbs and Chris Preece

In 'Prehistoric Hillforts in Devon' (1996, 28), Aileen Fox mentions a blue glass bead of Iron Age type being found at Clovelly Dykes by a previous farm tenant. The present farm tenant is Stephen Goaman. His mother has no recollection of meeting Aileen Fox. It is more likely then, that the tenant Aileen Fox refers to was a Mr. Hilton, who was tenant and estate manager before the late Walter Goaman, Stephen's father. Aileen Fox was evidently on good terms with Mr. Hilton as she was allowed to reproduce aerial photographs he possessed of the Dykes in her paper of 1952. She also thanks him for his kindness and permission to study the site.

Despite considerable effort in trying to relocate this bead, its location is still unknown. However, one result of all the enquiries made was the identification of a blue bead from Pancrasweek, some 16 miles south of Clovelly. The find has been registered and a photograph of it is reproduced below (Fig. 35). Although undecorated, it has similarities with those beads detailed by Julian Henderson in the Berry Ball report (Manning & Quinnell 2009, 116–120) and is presumably of Iron Age date.

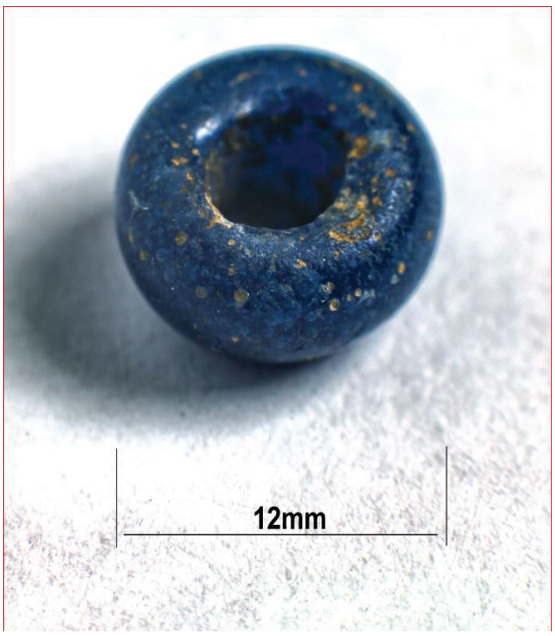


Fig. 35 *Bead from Pancrasweek.*

APPENDIX 5

Wood Charcoal Analysis by Dana Challinor (August 2019)

Three samples were examined for charcoal. Short-lived charcoal pieces were selected for radiocarbon dating from each sample, producing Middle to Late Iron Age dates. The samples came from the enclosure ditch (103), the ditch of the roundhouse (205) and a posthole within the roundhouse (207). Standard identification procedures were followed, with identifications made according to modern reference material and appropriate keys (Hather 2000; Schweingruber 1990).

With the exception of the assemblage from (103), charcoal was moderately abundant in the assemblages, but condition was poor; soft and crumbly, with high levels of sediment infiltration. Vivianite staining, indicative of deposition in partially waterlain conditions, was noted in (205). The assemblage from (103) was particularly sparse, with small fragments and some coal. A single fragment of cf. *Cytisus/Ulex* (broom/gorse) roundwood was identified, but no other identifiable material was present. The assemblages from the ditch (205) and posthole (207) samples were more productive, with a small range of taxa identified (Table 1): *Quercus* sp. (oak), *Betula* sp. (birch), *Corylus avellana* (hazel) and Maloideae (hawthorn, apple, whitebeam/rowan etc.).

Feature	Ditch	Posthole
Context no.	205	207
Quercus sp. oak	21 (8r, 4h)	23 (14r, 1h, 1br)
Betula sp. birch	1	1
Corylus avellana L. hazel	2r	6r
Alnus/Corylus alder/hazel	3	
Maloideae hawthorn etc.	1r	
Bark	2	

r-roundwood; h=heartwood; br-burrwood

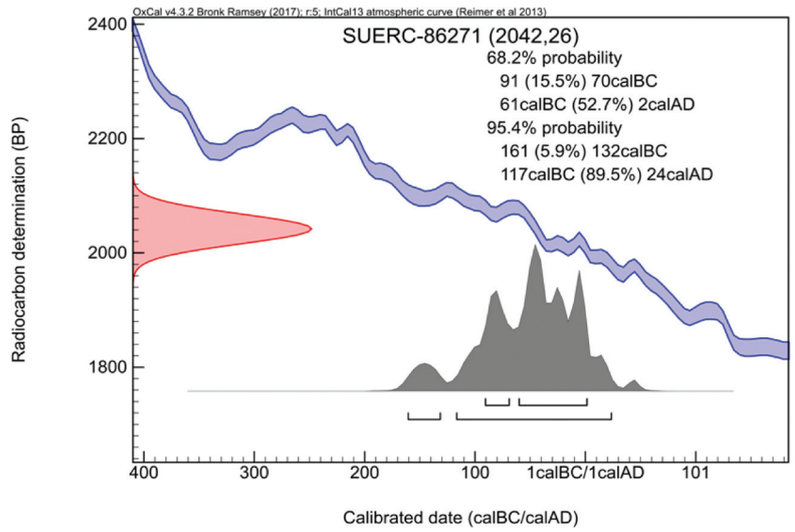
Table 1: Charcoal results

The assemblages from the ditch (205) and posthole (207) are likely to represent domestic fuel waste from activities occurring within the roundhouse. The primary fuelwood used was oak, reflecting the dominant woodland in the area. The presence of heartwood and burrwood testifies to the presence – and usage – of mature trees, but there was also a fair amount of younger branchwood. The use of some mature oak, supplemented with hazel and occasional other taxa, is typical for domestic fires in this period.

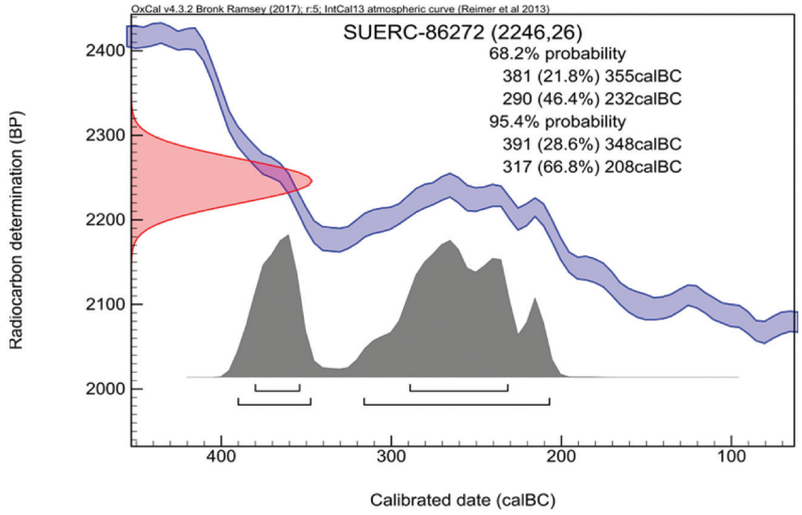
APPENDIX 6

C14 dating by Scottish Universities Environmental Research Centre, May 2019.

Context Reference (103)
Sample Reference 1
Material Charcoal : Cytisus/Ulex
$\delta^{13}C$ **relative to VPDB** -24.5 ‰
Radiocarbon Age BP 2042 ± 26



Context Reference (205)
Sample Reference 2
Material Charcoal : Quercus
$\delta^{13}C$ **relative to VPDB** -23.5 ‰
Radiocarbon Age BP 2246 ± 26



Context Reference (207)
Sample Reference 3
Material Charcoal : Corylus/Avellana
$\delta^{13}C$ **relative to VPDB** -26.4 ‰
Radiocarbon Age BP 2311 ± 27

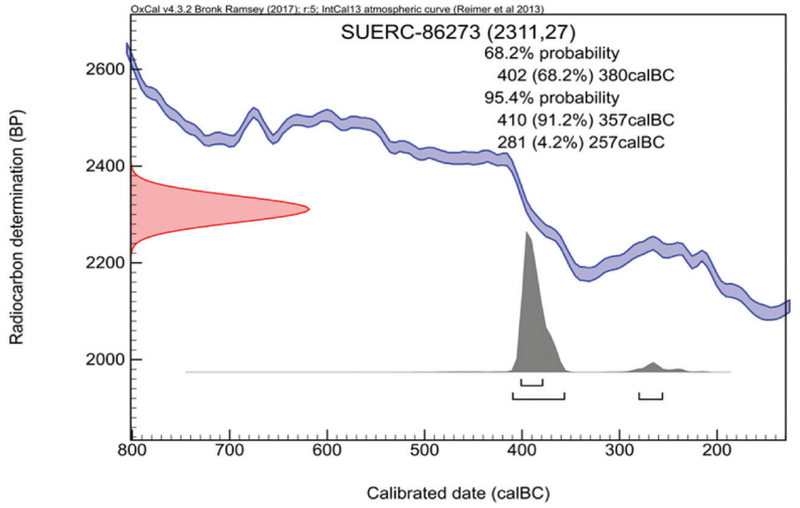


Fig. 36 *(Carbon 14 dates)*

ACKNOWLEDGEMENTS

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Excavation would not have been possible without all the NDAS volunteers who freely gave of their time, in particular Steve George whose professional experience made him an invaluable supervisor in 2018 and Nigel Dymond who was present throughout. The following also participated and are thanked for their contributions: Phil Belcher, Linda Blanchard, Celia and Silas Braund, Derry Bryant, Val Chapman, Tim and Deborah Crane, Ruth Downie, Rosemary Dymond, Lance Hosegood, Sarah Mcrae, Elizabeth Medley-Smith, Julie Pepworth, Maurice and Diana Purkiss, Bob Shrigley, Ann White and Veronica Wilson.

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The AONB themselves would like to express their gratitude to Historic England for funding from their Monument Management Scheme. The MMS funding paid for photogrammetry (aerial photographs and Digital Elevation Models) and Level 2 'ground-truthing' work carried out by Aerial-Cam and Cotswold Archaeology respectively. In addition HE part-funded the central area geophysics survey.

The AONB would also like to acknowledge the role of AONB and National Trust volunteers in the ongoing conservation management of the monument.

Digitisation of drawings and plans, as well as processing of samples for C14 dating, was carried out by South West Archaeology.

The site archive will be deposited at North Devon Museum, Barnstaple. Accession number pending.

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