

Archaeological Recording of a Burnt Mound Site at Pwllauduon Farm, Tregaron.



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Ar gyfer Cadw
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Gan / By

Polly Groom
Hubert Wilson

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ARCHAEOLEG CAMBRIA
Ymddiriedolaeth Archaeolegol Dyfed Cyf
Neuadd y Sir, Stryd Caerfyrddin, Llandeilo, Sir Gaerfyrddin SA19
6AF
Ffon: Ymholiadau Cyffredinol 01558 823121
Adran Rheoli Treftadaeth 01558 823131
Ffacs: 01558 823133
Ebost: cambria@acadat.com Gwefan: www.acadat.com

CAMBRIA ARCHAEOLOGY
Dyfed Archaeological Trust Limited
The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire
SA19 6AF
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Fax: 01558 823133
Email: cambria@acadat.com Website: www.acadat.com

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SUMMARY

Archaeological recording of a burnt mound site (Project Record Number 50625) was undertaken at Pwllauduon Farm in Ceredigion, (SN 65556295). The work was carried out by Cambria Archaeology on February 13th 2004, and was funded by Cadw.

The burnt mound was revealed by ditch cleaning, and was identified during a Tir Gofal Farm Visit (PRN 47858) carried out by Cambria Archaeology on October 27th, 2003. Archaeological recording of the site was subsequently proposed in order to ensure that an appropriate record was made of the exposed section.

The north-facing section was cleaned and a section drawing produced at a scale of 1:20. Monolith samples were collected for environmental analysis (to be undertaken by Astrid Caseldine, University of Wales, Lampeter). Radiocarbon dates of Cal BC 1380-830 and Cal BC 1490-1310 were obtained for two charcoal samples from the exposed section. A rapid survey of the burnt mound (PRN 49194) and another probable burnt mound nearby (PRN 49195) was also carried out. The section drawing and the survey are included with this report.

INTRODUCTION

Pwllauduon Farm (SN 65556295) (Fig. 1) was visited by Cambria Archaeology on October 27th 2004, as part of the application procedure for the Tir Gofal agri-environment scheme (PRN 47858). Ditch clearance and enlargement had recently been carried out in an area of wet grassland, and the landowner had noticed a dark feature showing up in the ditch section. This was identified as a burnt mound (PRN 49194) that had been cut through by the digger bucket. The following description of the mound was included in the HE2 report, produced shortly after the farm visit:

“A clearly visible burnt mound revealed by ditch cleaning. The ditch cuts through the middle of the mound, with the profile of the site showing clearly in both the north and south ditch sections.

The burnt mound comprises small stones (mostly less than 7cm) and charcoal. Many of the stones show signs of burning or are heat shattered.

The mound is sited in boggy ground, in an undulating field. Although it stands to around 0.5m at its centre, it probably would have gone unnoticed except for its exposure in the ditch sections. The visible earthwork is roughly oval (though cut through the middle by the ditch) and is probably about 12m in diameter. It offers exceptional potential for palaeoenvironmental evidence – the profile shows waterlogged clay surfaces underneath the mound and peat formation covering it. ... Another, similar mound (PRN 49195) is situated just east of this site, and is probably another burnt mound. These sites are normally considered to be of a Bronze Age date (2000 – 500BC).” (Groom 2003, 12).

A recommendation was made for further investigation and recording of the feature to be carried out, and grant-aid from Cadw made it possible for these follow-up works to be undertaken.

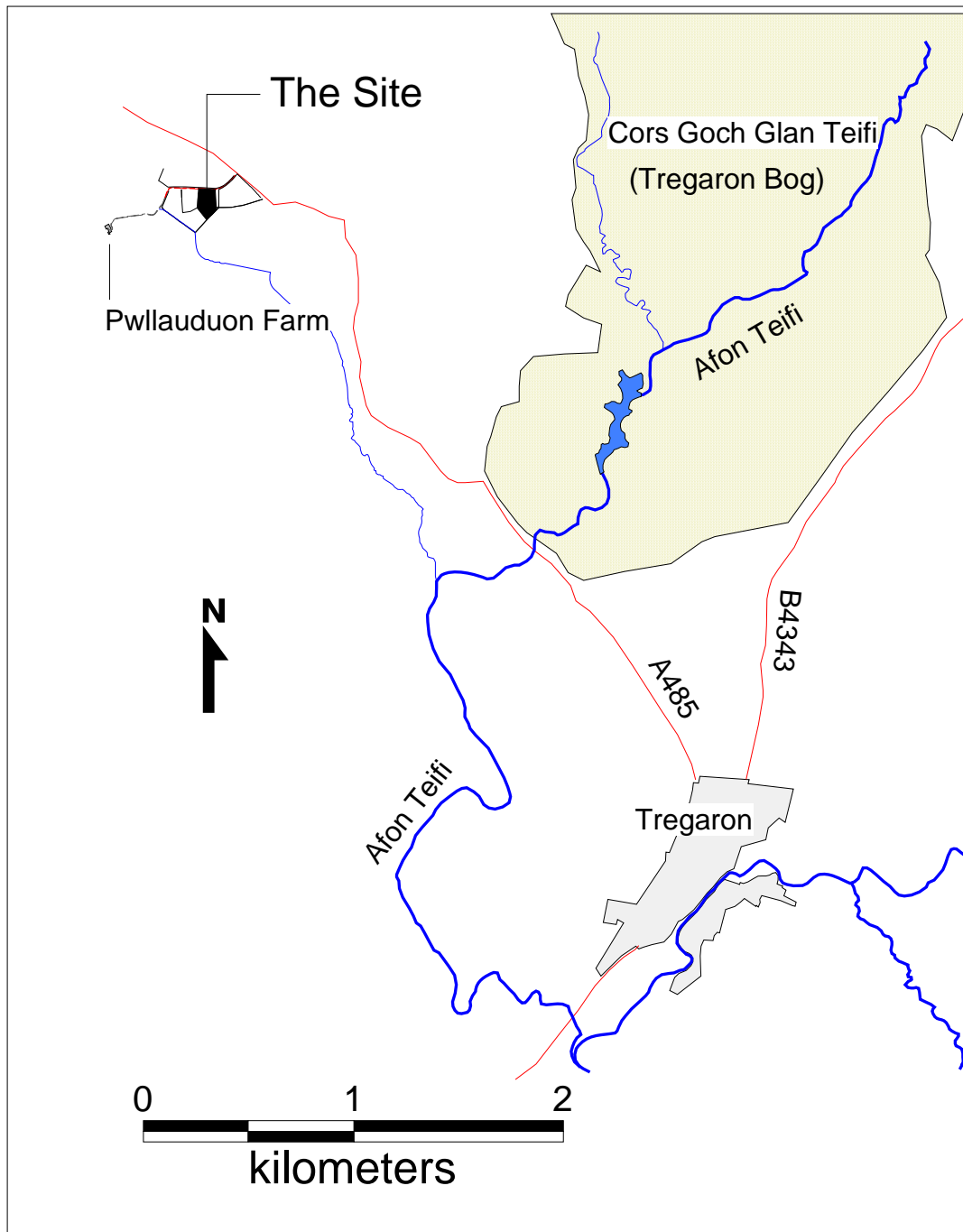


Figure 1 Location map showing Pwllauduon farm and the field containing the burnt mounds.

METHODOLOGY

The site was re-visited on February 13th 2004. Both sections had undergone some weathering since the original field visit was carried out, and a small amount of mound material had fallen from the sections into the base of the ditch. The north-facing section was the least weathered, and was consequently the easiest to see and to draw.

The north-facing section was cleaned back by hand and a section drawing was produced at a scale of 1:20 (Fig. 2). The cut through the mound had been created by a digger bucket. Therefore, the faces were not vertical, but leaned outwards from the ditch at an angle. In order to compensate for this, vertical measurements had to be taken from a projected ground level, running horizontally out from the actual ground level and using a plumb bob to determine the vertical.

A simple contour survey of the visible edges of the burnt mound (PRN 49194), a further probable burnt mound (PRN 49195) and the slope on which they are situated was also produced (Fig. 3).

Once the section drawing was completed, four samples were taken by Astrid Caseldine (University of Wales, Lampeter) for environmental analysis. The positions of the four sample tins were noted on the section drawing. Charcoal was also collected from noted locations, in order to provide material for radiocarbon dating.

SITE DESCRIPTION

Burnt Mound – PRN 49194

In section, the mound was revealed to be around 15m long, and just over 1m in height. It shows as a lens of charcoal, earth and cracked stone that contrasts sharply with the surrounding soils. Appendix 1 contains site photographs that should be referred to alongside this description. The section drawing is included as Figure 2.

Context 01 (turf and topsoil) covers the whole site. There is a clear division between this and context 02.

Context 02 is a layer of peat. This very dark peat contains visible organic material and overlies the burnt mound. In the centre of the mound, the peat layer is not visible and the mound is directly overlain by turf and topsoil (01). There may be two explanations for this – either the peat never formed sufficient depth to completely cover the mound, or the peat from the top of the mound has been lost through erosion, drying and wind-blow. There are no stone inclusions.

Context 03 is visible only at the east end of the site. It lies below the peat (02) and is above a thin ‘tail’ of stones that form the very end of the burnt mound material (04). 03 is a small pocket of a fine, mid brown and clay-rich deposit. Stone inclusions (a mixture of pea-grit and cracked stone – probably mound material) make up <10% of this context.

Context 04 is the burnt mound material. This comprises around 60 % stone inclusions, mostly appearing to be heat shattered sandstone with a scattering of small quartz pieces. The majority of the stones are less than 70mm in length, and sharp and angular in shape. The matrix is very dark – almost black – and seems to be mostly formed of charcoal and ash with some peat mixed in. In a few places, larger concentrations of charcoal pieces were noted, and these are marked on the section drawing.

Two distinct tip lines could be picked out in this context, sloping down from the east side of the mound. Faint traces of numerous other possible tip-lines attest to the gradual build-up of the mound. These lines were too faint and too ephemeral to be measured and drawn but are an important part of the character of this context. In general, it was noticeable that there was less stone at the base of the mound. The mound material overlies a white clay (06) at the east end, and a dark brown clay layer (05) at the west end. Towards the western end of the site there is a dip in context 04. This may be a small cut or pit that has been infilled.

Context 05 This is only visible beneath the centre and west side of the mound where it overlies the waterlogged white clay (06). It is thickest at the far western edge of the site. The context is dark brown in colour, in places almost black, and has a very high clay content. Partly waterlogged, it contains almost no stones and, except for the colour, is similar to the underlying white clay (06). However, it does contain a few traces of what appear to be degraded organic materials and patches that may be peat later engulfed by clay.

Context 06 A layer of almost pure white waterlogged clay with no inclusions. The only disturbance is at the very west of the site where a small, dark patch of organic material is enclosed within the clay. This may have been a decomposed root. This clay underlies the whole site and the base of the ditch is cut into it.

Context 07 A small lens of pure grey clay, overlying 05 and underneath the mound material (04).

Burnt Mound? – PRN 49195

This second mound appears as a gentle rise in the ground, just to the east of PRN 49195. It is similar in dimensions and height to the disturbed mound, and is under an even turf-covering. It seems likely that this is another burnt mound.

RADIOCARBON DATES

Two radiocarbon dates have been obtained from charcoal recovered from the section. The locations of the two samples and indicated on the section drawing (Fig. 2).

Pwllauduon 5

Lab Number: Beta – 191062

Conventional radiocarbon age: 2890±90BP

2 sigma calibrated result (95% probability): Cal BC 1380 to 830

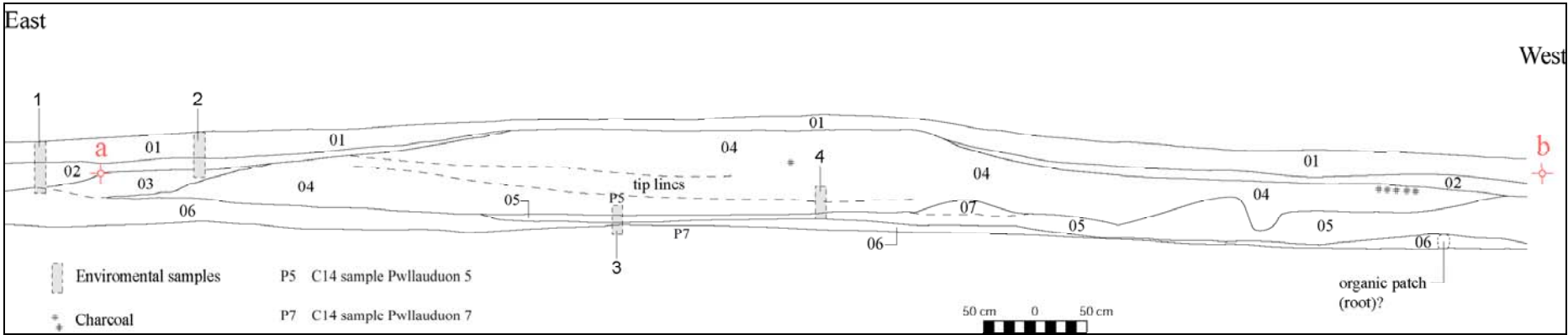
Pwllauduon 7

Lab Number: Beta – 191063

Conventional radiocarbon age: 3130±40BP

2 sigma calibrated result (95% probability): Cal BC 1490 to 1390

Figure 2 Section drawing of the burnt mound (PRN 49194)



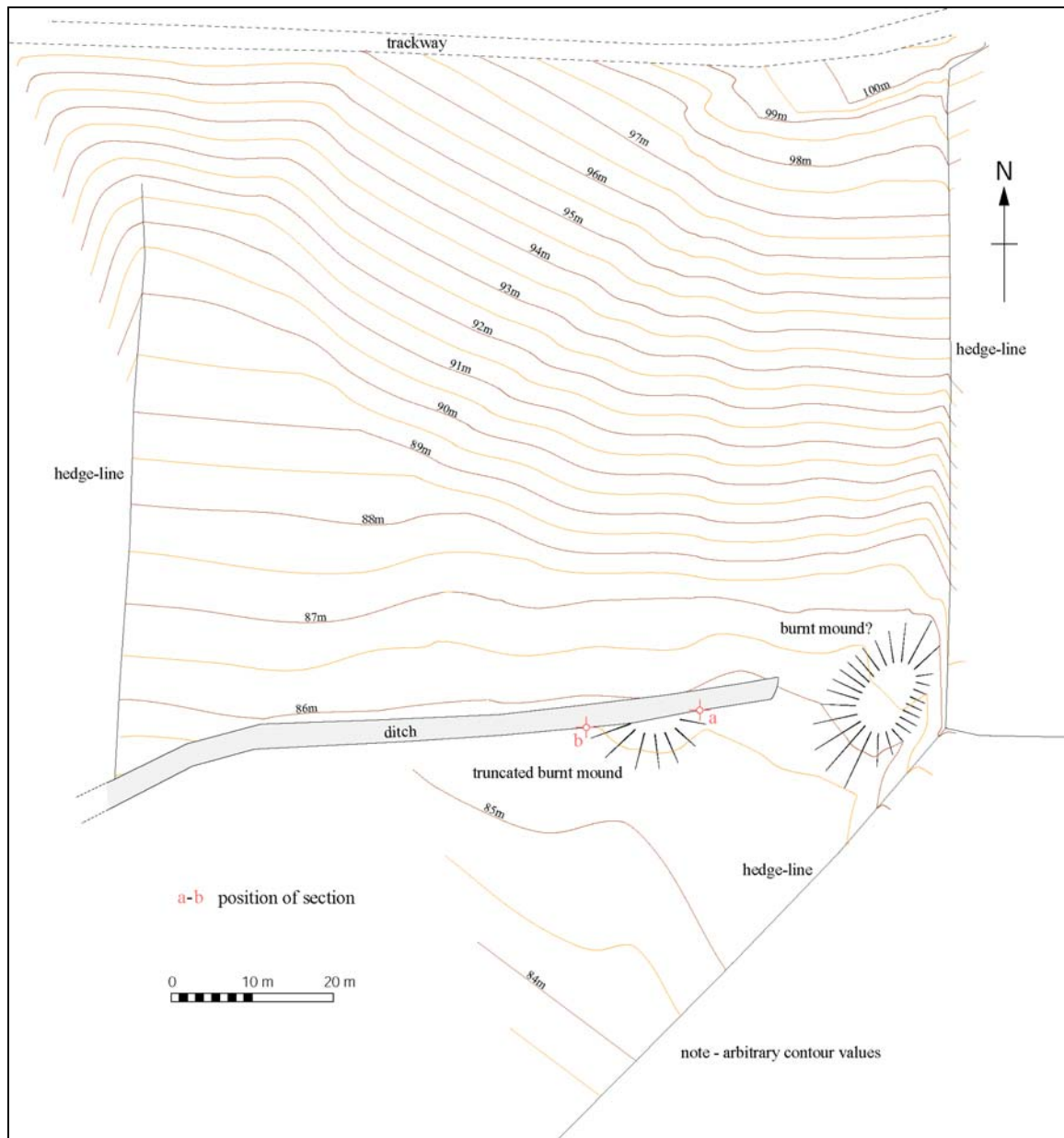


Figure 3 Survey of the two features, highlighting their location at the break of slope.

DISCUSSION

Burnt Mounds

The function of burnt mounds has long been discussed. Interpretations vary, but the two main opinions are that they were either cooking sites, or were a form of sauna or sweat lodge. There is also discussion as to whether these sites served a ritual function as well as a practical one.

Burnt mounds are almost invariably found in association with springs or streams (e.g. Williams 1995, 3 and Crane 2002,110) and, when excavated, sometimes reveal a small pit or trough, often wood-lined. It is thought that the trough would be filled with water that could then be heated by the addition of hot stones. The debris from the fires and the cracked stone is what forms the burnt mound.

Around 350 known or suspected burnt mound locations are recorded in west Wales. However the distribution of these sites is very much skewed towards Pembrokeshire, due in part to a geographical bias in fieldwork carried out at the beginning of the 20th century (Crane 2002,11). Consequently, the discovery of a well-preserved burnt mound in Ceredigion is very significant.

Radiocarbon dates have now been obtained from several burnt mounds in the region. As can be seen in Table 1 the majority of dates obtained from burnt mounds within the region fall within the Bronze Age (with one or two exceptions). The two dates for the Pwllauduon mound are at the more recent end of the spectrum of dates although they do both still fall within the Bronze Age. It is to be hoped that analysis of the environmental samples will provide valuable information about prehistoric land-use and environment in this area.

Site name	Lab No	Uncalibrated date
Carne (Pembs)	CAR-589	3960±65BP
	CAR-591	3710±65BP
	CAR-292	3790±70BP
	CAR-496	3400±70BP
	CAR-498	3205±70BP
	CAR-497	80±90BP
Felin Fulbrook (Pembs)	CAR-469	3875±70 BP
Morfa Mawr (Pembs)	CAR-458	1180±60BP
Parry's Castle (Carms)	Beta-159459	3750±80BP
Plasgwyn Farm (Carms)	Beta-159460	3660±70BP
Llancynfelin (Cer)	Beta-189526	3210±60BP
	Beta-189527	3280±60BP
Pwllauduon (Cer)	Beta-191062	2890± 90BP
	Beta-191063	3130± 40BP

Table 1 – Radiocarbon dates from Burnt Mounds in southwest Wales

Topographic Setting

Both burnt mounds (PRNs 49194 and 49195) are situated at the base of a gentle slope – the break of slope today marks the division between wet and dry land. This positioning is typical of other burnt mounds, both in Wales and elsewhere. Located in wet areas, the tanks commonly associated with burnt mounds could fill with water unaided. In the ditch section to the west of the mound is an indistinct feature that may be an infilled stream channel. This would have provided a direct, accessible source of water. The mound is also located very close to a natural spring, the result of which is a constant flow of water running across the west edge of the south-facing section.

To the northeast, in a prominent position on the end of a ridge of high ground and less than 300m from the burnt mounds, is a substantial hillfort - Castell Flemish (PRN 5167, SAM Cd21).

Archaeological Potential

The wetland area of Pwllauduon farm seems to have undergone very little disturbance or drainage. Consequently, there is considerable potential for the survival of further archaeological features and palaeo-environmental evidence, possibly associated with the burnt mounds.

Environmental Evidence

The environmental report is not yet available.

CONDITION AND MANAGEMENT RECOMMENDATIONS

The burnt mound (PRN 49194) seems to be generally stable, but its exposure in the ditch section makes it vulnerable to erosion and to weathering. At present, the rate of erosion appears to be slow. Some loose stones had fallen from the mound faces into the base of the ditch, but it was a very small quantity. The effects of weathering are potentially more serious. The north section (south facing) was already showing signs of weathering, with algae growth obscuring parts of the feature. There is a constant flow of water across the western edge of this section, probably originating from a small spring nearby.

The impact of the modern enlargement and cleaning of drains is currently unknown. It will inevitably affect drainage patterns and water levels, which may result in substantial damage to waterlogged archaeological sites. On the day the site was re-visited, the ditch was running with water (flowing west, into the heart of the wetland area).

In order to enter the Tir Gofal scheme, the landowner is obliged to partially infill the drainage ditch.

- i. No machinery should be brought into this area, since this will cause further damage to the upstanding mound.
- ii. The ditch through the mound should be infilled by hand only. Partial infilling should help to prevent the area acting as a form of 'sump' and pooling water.
- iii. The site will then be included in a regime of very light grazing by sheep, and should be allowed to turf over.

POSSIBILITIES FOR FUTURE WORK

The scope of this project was necessarily limited. It was an opportunity to find out more about the burnt mound, through sampling for dating and environmental analysis, and also an opportunity to make an appropriate archaeological record of a threatened feature.

However, Pwllauduon has thrown up several interesting questions.

- i. What other archaeological features may survive within the wetland area?
- ii. What – if anything – is the significance of the close proximity of these burnt mounds to Castell Flemish hillfort? Does the hillfort represent a continuity of landscape use?
- iii. What will be the long-term impact of the ditch clearance and disturbance to the mound on its future preservation? Could a monitoring programme help to inform the ways in which other waterlogged or semi-waterlogged sites are managed?

SOURCES

Cambria Archaeology: Regional Sites and Monuments Record

Crane, P 2002 *Pontyates to Bancyfelin Gas Pipeline –archaeological watching brief and excavation on two burnt mounds and a ring ditch*. Unpublished client report produced by Cambria Archaeology

Groom, P 2003 *Tir Gofal Farm Visit Report – Pwllauduon*. Unpublished Cambria Archaeology report, produced for CCW

Williams, G 1995 *A Pilot Assessment of Burnt Mounds in Dyfed* Unpublished Cambria Archaeology/DAT report produced for Cadw

APPENDIX 1 – SITE PHOTOGRAPHS



Plate 1 (above) Looking west along the ditch, the burnt mound showing in section on both sides.

Plate 2 (below) Eastern end of the drawn section





Plate 3 (above) Middle of the drawn section

Plate 4 (below) West end of the drawn section





Plate 5 (above) Extreme western part of the drawn section of the burnt mound

Plate 6 (below) Weathering and algae growth obscuring the details of the south-facing section





Plate 7 Photo-montage of the north facing section of Pwllauduon burnt mound – PRN 49194

APPENDIX 2 – ARCHIVE CATALOGUE

The project archive has been indexed and catalogued according to the National Monument Record (NMR) categories and contains the following:

- A. Copy of final report
- B. Site records, including site notes
- C. Site drawings
- D. Site photographs – digital only
- F. Environmental report (not yet received) and radiocarbon dates

There is no material for categories E,G,H,I,J,K,L,M and N.

The archive is currently held by Cambria Archaeology, Llandeilo, Carmarthenshire, under project record number 50625.

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Paratowyd yr adroddiad hwn gan / This report has been prepared by Polly Groom

Swydd / Position: Archaeologist

Llofnod / Signature Dyddiad / Date

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

Gwilym Hughes

ar ran Archaeoleg Cambria, Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Cambria Archaeology, Dyfed Archaeological Trust Ltd.

Swydd / Position: Director

Llofnod / Signature Dyddiad / Date

Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau sydd gennych ar
gynnwys neu strwythur yr adroddiad hwn

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