A487 CASTELL CADW, FELINDRE FARCHOG, PEMBROKESHIRE ROAD IMPROVEMENTS ARCHAEOLOGICAL WATCHING BRIEF

Report No 2008/32



Prepared by Dyfed Archaeological Trust For: Mid Wales Trunk Road Agency





DYFED ARCHAEOLOGICAL TRUST

RHIF YR ADRODDIAD / REPORT NO. 2008/32 RHIF Y PROSIECT / PROJECT RECORD NO. 61998

> Hydref 2008 October 2008

A487 CASTELL CADW, FELINDRE FARCHOG, PEMBROKESHIRE ROAD IMPROVEMENTS ARCHAEOLOGICAL WATCHING BRIEF

Gan / By

Pete Crane BA Hons MIFA

Paratowyd yr adroddiad yma at ddefnydd y cwsmer yn unig. Ni dderbynnir cyfrifoldeb gan Ymddiriedolaeth Archaeolegol Dyfed Cyf am ei ddefnyddio gan unrhyw berson na phersonau eraill a fydd yn ei ddarllen neu ddibynnu ar y gwybodaeth y mae'n ei gynnwys

The report has been prepared for the specific use of the client. Dyfed Archaeological Trust Limited can accept no responsibility for its use by any other person or persons who may read it or rely on the information it contains.

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: <u>info@dyfedarchaeology.org.uk</u> Gwefan: www.archaeolegdyfed.org.uk 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: info@dyfedarchaeology.org.uk Website: www.dyfedarchaeology.org.uk

Cwmni cyfyngedig (1198990) ynghyd ag elusen gofrestredig (504616) yw'r Ymddiriedolaeth. The Trust is both a Limited Company (No. 1198990) and a Registered Charity (No. 504616)

CADEIRYDD CHAIRMAN: C R MUSSON MBE B Arch FSA MIFA. CYFARWYDDWR DIRECTOR: K MURPHY BA MIFA

A487 CASTELL CADW, FELINDRE FARCHOG, PEMBROKESHIRE ROAD IMPROVEMENTS ARCHAEOLOGICAL WATCHING BRIEF

RHIF YR ADRODDIAD / REPORT NUMBER 2008/32

Hydref 2008 October 2008

Paratowyd yr adroddiad hwn gan / This report has been prepared by
Pete Crane
Swydd / Position: Senior 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
Ken Murphy
ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf. on behalf of Dyfed Archaeological Trust Ltd.
Swydd / Position: Trust 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

As part of our desire to provide a quality service we would welcome any comments you may have on the content or presentation of this report

CONTENTS

Summary	1
Acknowledgements	1
1. Introduction	2
2. The Site	2
3. Methodology and Results	3
4. Discussion	2 2 3 6 7
5. Conclusion	
6. Sources	7
Appendix 1: Radiocarbon date for burnt mound pit	9
Appendix 2: Radiocarbon date for early medieval pit	10
Appendix 3: The Wood Charcoal (Dana Challinor)	11
Appendix 4: Charred plant remains (Wendy Carruthers)	12
Figure 1: Site Location	13
Figure 2: Nevern Tithe map	13
Figure 3: Test Pit 3	14
Figure 4: Plan of north part of balance pond area	15
Figure 5: Sections	16
Photo. 1: Old quarry	17
Photo. 2: Burnt mound and test pit 3	17
Photo. 3: Surface of burnt mound	18
Photo. 4: Test pit 3, pit 104	18
Photo. 5: Test pit 3, pit 104 detail	19
Photo. 6: Boundary 001	19
Photo. 7: Boundary 002	20
Photo. 8: Boundary 003	20
Photo. 9: Deep ditch sectioned by pipe trench	21
Photo. 10: Area for balance pond	21
Photo. 11: Possible heat reddened area	22
Photo. 12: Zigzag feature	22
Photo. 13: Area of zigzag feature	23
Photo. 14: Pit 102	23

Cover Photo.: West end of road improvements. View NE

SUMMARY

An intermittent archaeological watching brief was undertaken during road improvements on the A487 just to the west of Felindre Farchog. Nothing of archaeological interest was found on the road scheme itself, but in the area of a new pond intended to take water run-off, a burnt mound was radiocarbon dated to early Bronze Age, (Cal BC 2340 - 2030) was discovered and preserved in situ. Adjacent to this was another probable burnt mound, but this area was later associated with a pit and post-holes, the pit was radiocarbon dated to the end of the early medieval period (Cal AD 890 – 1020).

ACKNOWLEDGEMENTS

Many thanks to Richard Ramsey of DAT for assistance with the excavation. Jim Ward Highways and Construction Division, Pembrokeshire County Council. Peter Wheeler, landowner of the area around the burnt mound.

1. INTRODUCTION

1.1 Project Commission

Cambria Archaeology, the then working name of Dyfed Archaeological Trust, was commissioned by the Highways and Construction division of Pembrokeshire County Council in June 2004 to undertake this project in advance of road improvements. Standing building recording of two cottages adjacent to the road scheme took place that year (Crane 2004), but then the rest of the project was postponed until 2006 and 2007.

1.2 Scope of the Project

This report is on the watching brief during the groundworks for the road scheme only and does not cover the earlier standing building project (Crane 2004).

1.3 Report outlines

This report describes the physical environment of the site (Section 2) before summarising the watching brief (Section 3), discussion (Section 4), and conclusion (Section 5). Supporting data are given in the appendices.

1.4 Abbreviations

The archaeological advisor for this scheme was Cadw (Welsh Historic Monuments) but this was later taken over by the Local Planning Authority (LPA) archaeological advisor. Sites are recorded on the regional county Heritage Environment Record (HER), are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). All these records are held at Dyfed Archaeological Trust (DAT).

1.5 Archive Deposition

Dyfed Archaeological Trust will initially hold the archive. A copy of the report will also be deposited with the National Monuments Record, Aberystwyth.

2. THE SITE

2.1 Location

The location of the road improvements is on the A487, approximately 3km east of Newport, Pembrokeshire and 5km west of Eglwyswrw. The works entailed alterations to a 0.5km stretch of road from NGR SN09053896 to SN09503874 (Figure 1). The old road here was particularly narrow, with a blind bend around the abandoned cottage of Castell Cadw. This road was terraced into the hill, the south side being cut into the hillslope and built up on the north side where the ground falls away quite steeply, especially in the eastern sector of this improvement. At the western end of the scheme the ground slopes very gently northward from the road before a steep slope down past some former springs to a small stream. The new road was partly terraced further south into the hillslope, and also partly a new cut into the hillside. As part of the scheme a balancing pond, to control water run off, was constructed 150m to the north by the site of former springs.

The surrounding fields are all improved pasture, with a few small areas of rougher pasture or scrub. A cottage called Look-about, PRN 51686, on the north side of the road, was quite ruinous and overgrown with maturing trees. The cottage known as Castell-cadw, PRN 5710, was quite intact but the walls have now been reduce to about 1m in height and the area landscaped as part of the road improvement scheme. This cottage was originally given a PRN because of its site name, *Castell-cadw* possibly indicating a much older site. Three mine adits named as Gallt Coed-Cadw, PRN 25476, were recorded in the HER as adjacent to the

road scheme, but the grid reference was found to only be approximate and they are in fact at the bottom of the slope adjacent to the Afon Nevern and were not affected by the road improvements.

There was the site of a possible old quarry 90m to south of Castell-cadw, SN0922038835 and is not the same as the one shown on the Ordnance Survey First Edition which lies 250m to the south-south-east, SN0934038670.

2.2 Historical sources

The earliest references for the buildings are in the Bishops' Transcripts of parish registers (Charles 1992), in 1815 for Look-about Cottage, and 1845 for Castell-cadw Cottage. The Nevern tithe schedule of 1840 indicates that Look-about was occupied by David George and owned by Thomas Charles Longcroft; a Roland Daniel occupied Castell-cadw which was owned by Thomas Lloyd.

3. METHODOLOGY AND RESULTS

3.1 Old Quarry

The first phase of the watching brief was begun on 18th September 2006 with a site visit after removal of trees, but before any groundworks were started. The topsoil was removed from the lower part of the possible old quarry (Photo. 1), as this was to be used as an area to deposit excess material. The quarry measured c.40m east west and was cut back by possibly 25m to 30m south into the hillslope. There was a slight hump c.20m to the north, which was probably the result of quarry tailings. The machine did not reach bedrock and there was up to 0.6m of silty topsoil in the base of the quarry.

3.2 Balance pond test pits

The second phase of works, which took place on 16 November 2006, was the examination of test pits in the area of a proposed balance pond (to control water run-off during heavy rain). This area, SN 0916023970, was located about 20m southeast of a former well and adjacent to probable former springs immediately to the south and was, therefore, an area of archaeological potential. A medium-sized 360°-tracked excavator using a toothed bucket dug the test pits. All of the test pits were about 4m long by 1.2m wide and all except Test Pit 3 cut well into natural, with depths of between 1.6 and 1.8m.

Six test pits were excavated, but only test pit 3 produced archaeological deposits. This Test Pit was in the outer part of a slight mound 0.3m high by approximately 12.5m diameter (Photo. 2) which initially appeared to be a natural feature but some very dark soil and small quartz stone could be seen in the surface (Photo. 3). Immediately on starting the test pit fire-cracked stone and very dark charcoal rich soil was encountered, material typical of burnt-mounds. Machine excavation was therefore halted and the trench was hand cleaned, revealing the possibility of part of a shallow pit in the southeast corner of the test pit (Photos 4 and 5). The fill of this pit, like the soil above, was very dark, with fire-cracked stone, but also contained a few small lumps and flecks of charcoal. A sample of this charcoal was sent for radiocarbon dating and this produced a determination of Cal BC 2340 to 2030 (Beta-224477) at 95% probability (Appendix 1*).

The other five test trenches produced no archaeological deposits. There was some peat build up in the hollow at the base of the hillslope to the east of the burnt mound. This peat had evidence of root disturbance, animal poached surface and was cut by at least one land drain. It was not therefore considered worth taking samples of this peat for analysis.

3.3 Western field entrance and field boundaries

Having discussed the details of this project with the Local Development Authority's (LPA) archaeological advisor, it was agreed that most of the eastern end of the scheme did not need a watching brief, as the hillslope was too steep to be a likely location for any archaeological features. This part of the watching brief took place on 24 October 2006.

Only the new western entrance opposite Look-about cottage was observed, with nothing noted of archaeological interest other than the hedge bank (001)(Fig.1), grid ref. SN 0915538940, on the south side of the road (Photo. 6). This boundary appeared to have a buried soil layer below bank material of light mid brown silty soil with 5% angular shaley stone. On the top of the bank there was darker more humic topsoil on which there were the remains of the mature trees and scrub already cut down. These trees were of sycamore, hazel, thorn and holly and some rosehip. This bank was about 1.2m above the level of the old road with around 0.75m of make up above the buried soil. On the south side there was a considerable amount of hill-wash that was almost up to the top of the bank.

Further to the west of Look-about Cottage there was a north-south boundary (002)(Photo. 7), grid ref. SN 0909538935. This was an earth and stone bank c. 1m high with trees and scrub (sycamore, hazel and thorn) but no hedge. There was a post and wire fence on its east side and some barbed wire on its west side. There was no indication that this boundary ever had a deep ditch.

Almost opposite Look-about Cottage there was another north-south boundary (003)(Photo. 8), grid ref. SN 09163038920. This bank was smaller than the one to the west, only being c. 0.6m high, covered with similar scrub and trees, but with a post and wire fence on top. All three of these field boundaries are shown on the 1843 Nevern Tithe Map (Fig. 2).

Two former boundaries existed to the east, both running north-south. One of these was directly behind Castell-cadw Cottage (004), grid ref. SN 0922538840. The other boundary (005) was approximately 130m further east, grid ref. SN 0935038800. Both of these were shown on the 1964 Ordnance Survey map. Between the locations of these former boundaries there is now a modern post and wire fence, grid ref. SN 0929038875.

3.4 Road Construction Watching Brief

This was undertaken as an intermittent watching brief starting on 6 July 2007 and continued to 17 September 2007. The monitoring commenced with some test pits and a drain trench dug along part of the south side of the new road. The western end of the topsoil strip was observed eastwards to a point roughly between Lookabout and Castell-cadw cottages, along with some areas further east. However, the machining methods being utilised made further useful observations unlikely and with the permission of the LPA Archaeological Advisor the watching brief was discontinued.

3.5 Pipe Trench from road to Balance Pond

The majority of the length of trench from the road to the slope above the balance pond was topsoil stripped and cut into the top of the subsoil without archaeological observation, but was examined soon after on 12 July 2007. It had been dug using a toothless bucket and any substantial archaeological features would have been visible in the area between the machine tracks. The only feature visible was one of the former field boundary ditches which can be seen on the tithe map and Ordnance Survey First Edition just to the south of the footpath

(Figs. 1 and 2). This appeared to be a substantial ditch possibly up to 2m deep, but close access was inadvisable (Photo. 9). There were no finds in the trench topsoil except a couple of fragments of recent china.

The pipe-trench was excavated later on 24 September 2007; the cut for the ditch was about 2m deep and not quite fully reached by the bottom of the pipe trench.

3.6 Balance Pond Watching Brief

After an on-site meeting with Cadw in December 2006 it was agreed that the redesigned pond could be adjacent to the east and south of the burnt mound discovered by the test pit, subject to it being excavated under archaeological control.

This phase took place between 19 September and 2 November 2007. The area (Location on Fig. 1) was initially machined as before but later a toothed bucket was used on the southern part. The weather was overcast with heavy rain at times.

Machine clearance of the topsoil started in the northwest corner or the excavation against the fence line, and to the east of the burnt mound found earlier (Photo. 10). Almost immediately heat-affected shattered stone and very dark soil was found around the edges of the excavation and a number of small features filled with dark soil were observed within this corner of the site. Machining was therefore stopped at the top of the subsoil, which was then hand-shovelled and trowelled clean.

This area was quite wet and animal hooves had obviously poached it in the past. There were root disturbances, not just from the adjacent trees but also from trees long felled. There was one quite large apparent root hole or tree bowl 105 (Fig. 4), although this area may have been reddened by heat (Photo 11)

After machining, a short zigzag feature or features with a dark soil fill was observed (Photo. 12). However, after further cleaning these became less continuous (Photo. 13) and resolved into a few small shallow features, possibly shallow postholes (107, 109, 111, and 113), cut up to 0.17m into the subsoil, and possibly linked by root disturbances (115, and 117) (Figs. 4 and 5 sections 203-6). It was considered that one of these features (111) could be modern, possibly machine infill from when the trial trenches were dug. Another feature (107) may be a root hole or a cattle poach due to its shape and its grey brown fill (106), whereas the fills of the other two features (109 and 113) had very dark grey brown fills, but differing amounts of fire-cracked stone in them. All of these features were half excavated and soil samples taken from the latter two features (109 and 113) as these appeared to be more archeologically significant (Appendix 4).

At the north end of the Test Pit there was the remains of a shallow pit (102)(Figure 5 section 202, Photo. 14) with some root-disturbed edges. This pit was dug 0.25m deep into the subsoil, some 0.70m wide and at least 1m long, but as it was truncated by the Test Pit it can only have been a little longer otherwise it would have been noted previously.

The lower fill (103) of this pit (102) was grey silty clay with occasional flecks of charcoal. The upper fill (101) was also root disturbed (Fig. 5 section 202). Where undisturbed, this fill (101) was very dark grey/black silt, however there was far less heat-affected and shattered stone than in the burnt mound and in the material at the edge of this area. Some charcoal fragments were hand collected (Sample 301) from this upper fill (101) and were sent later for identification and

radiocarbon dating. The date obtained, Cal AD 890 – 1020 (Beta-23959) at 95% probability (Appendix 2), was not prehistoric as had been expected, but early medieval. Alder dominated all of this hand-collected charcoal (Appendix 3). A soil sample (Sample 302) was also taken from this upper fill, and this was floatated and the flot sent for analysis (Appendix 4). The charcoal from the flot contained some oak and possible willow, but only one carbonised grass seed.

Other than the features listed above, all in the northern part of the balance pond area, there were no anomalies apart from an apparently natural small stream filled with peat-type material, but with a lot of recent root disturbances, and two modern land drains containing plastic pipes.

4. DISCUSSION

Other than the discovery of the prehistoric burnt mound and the adjacent early medieval features, little of archaeological significance was discovered.

4.1 Burnt Mound

The burnt mound discovered in one of the balance pond test pits is one of just over 150 now known in Pembrokeshire (Crane and Manning 1998). However, very few of these have been excavated or dated. Where dates have been obtained they are normally a little later in the Bronze Age than this example.

Burnt Mounds consist of a mound of stones, with evidence that they have been heated and often rapidly cooled, causing them to fracture. This rapid cooling was probably due to the stones either being dropped into water, to heat it, or having water poured over them to create steam. These sites vary in date – most are Bronze Age (c.2500 BC – 700 BC) but can date, rarely, to as late as the medieval period (1066-1536).

The function of burnt mounds has been discussed for a considerable time both in publications and more recently on the Internet. The two main opinions are that they were used either for cooking or for bathing (Williams 1985, Buckley 1990 and Hodder and Barfield 1991) with additional discussion as to whether they had a ritual element. The more recent analyses suggest that some, but not all, burnt mounds were used for cooking and a ritual element cannot be ruled out from all sites (University of Leicester Archaeological Services 2007). What is certain is that the vast majority of these sites have an association with springs or streams (Crane 2002). When excavated they have frequently been found to contain a pit or pits, sometimes with evidence of wood lining. These pits appear to be clean and very little animal bone has been recovered, certainly insufficient to suggest feasting, in nearly all cases in Britain. Only a very little charred grain has been found associated with these sites, also suggesting that food preparation may not be their main function. Possibly these sites are sometimes used for boiling a mash (not necessarily grain), as a base for a simple beer (Crane 2002).

In west Wales there is almost no evidence for settlement associated with burnt mounds. However, very little work has been undertaken on areas adjacent to burnt mounds to allow any meaningful conclusions.

It would appear that there was another burnt mound to the east, as there was a considerable amount of fire-cracked stone and very dark charcoal rich soil just in the edge of the field and off the slope of a natural mound. However, there was no sign of any such material on the top of this area. Possibly any such deposit was removed during by early medieval activity. Unfortunately this area had suffered from considerable root activity and probably also poaching by cattle feet.

4.2 Early Medieval Features

The smaller early medieval features appeared to be truncated postholes and probably formed part of a structure. The sides of the small shallow pit were not heat-affected and therefore it would not appear to be the remains of a fire-pit or hearth; its function is unknown. The scarcity of features suggests that this site was the remains of a short-lived settlement, in the later part of the early medieval period. Evidence for settlement at this period is very rare, other than graves or ecclesiastical sites (there are early medieval monuments in the church at Nevern only 1.25km downstream to the north west). Therefore the immediate area that survives around the balance pond should be regarded as of significant archaeological potential. Again this highlights that any relatively level land around springs or wells is generally of archaeological potential.

4.3 The Old Quarry

The Old Quarry, to the south of the road, was probably to provide material for the construction of Look-about Cottage, Castell-cadw Cottage, or the old road. The field boundaries 001, 002, 003 and 005 are all on the tithe map of 1843 and there was nothing about them to suggest that they date much before the early 1800s or were ever banks of any size. However, the ditch of the field boundary seen in the balance pond pipe trench (Fig. 1) appeared to be far more substantial, although it may have been more of a drainage ditch than than a boundary, like the others.

4.4 Watching Brief on Topsoil Stripping

Only a few pieces of china or post medieval pottery were recovered from the topsoil strip and nearly all of these were close to the two cottages, which is probably where they originated, although it is possible that they were deposited with farmyard manure from elsewhere.

5. CONCLUSION

Although nothing of archaeological importance was found on the road improvements, the location of at least one burnt mound and an early medieval site, near the location of the run off pond for the scheme is of considerable archaeological significance. The area adjacent to this site is now known to be of prime archaeological potential and therefore it is recommended that any further activity in this vicinity be subject to archaeological investigation.

6. SOURCES

Buckley V (ed) 1990 'Burnt Offerings' International Contributions to Burnt Mound Archaeology, Dublin: Wordwell Ltd. Academic Publications

Hodder M A and Barfield L H (ed) 1991 'Burnt Mounds and Hot Stone Technology', Sandwell: Sandwell Metropolitan Borough Council

Charles T 1992 *The Place-names of Pembrokeshire*: Aberystwyth: The National Library of Wales

Crane P and Manning 1998 The Burnt Mounds of Dyfed: The 1997-8 Archaeological Assessment Survey. Un-published report copy held by DAT HER

Crane P 2002 Pontyates to Bancyfelyn Gas Pipeline, Archaeological watching brief and excavation on two burnt mounds and a ring ditch April-June 2001. Unpublished report copy held by DAT HER

Crane P 2004 A487 Road Improvement at Castell Cadw, Felindre Farchog, Pembrokeshire. Standing Building Recording. Un-published report, copy held by DAT HER

Williams G 1985 A group of Burnt Mounds at Morfa Mawr, Aberaeron, Ceredigion Vol 10 Number 2 181-187

Nevern Tithe 1840, map 1843

Ordnance Survey 1891 First edition 6 inch, Pembs VI SE

Ordnance Survey 1907 Second edition 6 inch, Pembs VI SE

Ordnance Survey 1964 6 inch SN 03 NE

APPENDIX 1 Radiocarbon date for burnt mound pit

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.6:lab. mult=1)

Laboratory number: Beta-224477

Conventional radiocarbon age: 3770±50 BP

2 Sigma calibrated result: Cal BC 2340 to 2030 (Cal BP 4290 to 3980)

(95% probability)

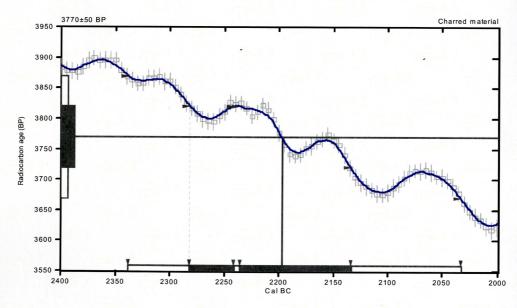
Intercept data

Intercept of radiocarbon age

with calibration curve: Cal BC 2200 (Cal BP 4150)

1 Sigma calibrated results: Cal BC 2280 to 2240 (Cal BP 4230 to 4190) and

(68% probability) Cal BC 2240 to 2130 (Cal BP 4190 to 4080)



References:

Database used Intcal04 Calibration Database

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Math em atics

A Simplified Approach to Calibrating C14 Dates
Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

Beta Analytic Radiocarbon Dating Laboratory

4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • E-Mail: beta@radiocarbon.com

APPENDIX 2 Radiocarbon date for early medieval pit

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-28.4:lab. mult=1)

Laboratory number: Beta-239590

Conventional radiocarbon age: 1080±40 BP

2 Sigma calibrated result: Cal AD 890 to 1020 (Cal BP 1060 to 930)

(95% probability)

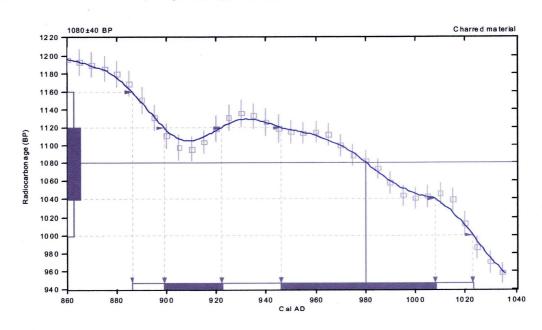
Intercept data

Intercept of radiocarbon age

Cal AD 980 (Cal BP 970) with calibration curve:

1 Sigma calibrated results: Cal AD 900 to 920 (Cal BP 1050 to 1030) and

Cal AD 950 to 1010 (Cal BP 1000 to 940) (68% probability)



References:

Data base used
INTCA L04
Calibration Data base
INTCA L04 Radiocarb on Age Calibration

IntCal04: Calibration Issue of Radio carbon (Volume 46, nr 3, 2004).

Beta Analytic Radiocarbon Dating Laboratory

4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • E-Mail: beta@radiocarbon.com

APPENDIX 3

The Wood Charcoal from sample 301

Dana Challinor

INTRODUCTION AND METHODOLOGY

Sample 301 (context 101) came from burnt mound material of probable Bronze Age date and was entirely composed of wood charcoal. The assemblage undoubtedly represents the remains of the fuelwood used for heating the stones recovered in the burnt mound material. The charcoal was gently washed and dried prior to identification. Since the sample was rich in charcoal, a representative 50% of the whole was examined. Each fragment was then fractured and mounted in sand for examination using a Meiji incident-light microscope at up to X400 magnification. A total of 108 fragments were identified, according to the anatomical characteristics as defined by Schweingruber (1990) and with reference to modern material.

RESULTS

The sample was entirely dominated by *Alnus glutinosa* (alder) charcoal. All 108 fragments were confirmed as alder, and a scan of the remaining (non-identified) 50% revealed no other taxa. The preservation of the charcoal was very good, with some large >10mm fragments and a clear pore structure. A number of small diameter roundwood fragments were noted in the assemblage, though none were complete enough to measure age.

DISCUSSION

Alder would have flourished in the wetland environment of the site and been easily available for use as fuelwood. It is interesting that the entire assemblage was dominated by alder, since many burnt mound features tend to exhibit a diverse range of taxa (e.g. Reading Business Park, Gale 2003), which is also common in domestic hearth assemblages. Nonetheless, since these features are nearly always close to springs or streams, there are other examples of the consistent and sometimes exclusive use of alder fuelwood, Troedrhiwgwinau, Caseldine and Murphy 1989; Anslow's Cottages, Gale 1992; Cox Bank Farm, Gale 2006). Alder is generally considered to make a poor fuelwood, though it does make a good charcoal fuel. Depending on the function of these burnt mound features, it might have been beneficial to use charcoal rather wood fuel, though it would probably not be worth the effort and cost of converting the wood to charcoal for general domestic purposes.

REFERENCES

Gale, R 2006. *Cox Bank Farm Burnt Mound, CBF 6: charcoal.* http://www.stokearchaeologysociety.org.uk/coxbank/pdf/CoxBankFarmBurntMoundWoodReport.pdf

Gale, R 2003. The Wood Charcoal in A Brossler, R Early & C Allen, *Green Park* (Reading Business Park) Phase 2 Excavations 1995: Neolithic and Bronze Age Sites (Thames Valley Landscapes Monograph)

Gale, R 1992. Charcoal, in C A Butterworth and S J Lobb, *Excavations in the Burghfield Area, Berkshire; developments in the Bronze Age and Saxon*

Internet

University of Leiceter Archaeological Services 26 Feb 2007 ... The *functions* of *burnt mounds* www.le.ac.uk/ulas/projects/willington.html

APPENDIX 4

Charred Plant Remains from samples 302, 303 and 304

Wendy Carruthers

(this report was undertaken before the early medieval radiocarbon date was submitted and probable interpretation that these features may not be contemporary with the burnt mound or mounds)

A small burnt mound adjacent to a larger burnt mound at Felindre Farchog was excavated by Cambria Archaeology. The larger mound has been dated to 2300-2030 BC (Pete Crane, pers comm.). Flots from the following samples were sent to the author to be examined for charred plant remains;

sample 302 (from 8 litres of soil) – a pit associated (102, upper fill 101) with the burnt mound. Hand picked charcoal (sample 301) from this feature was examined by Dana Challinor (see report) and sent on for dating.

sample 303 (from 7 litres soil) – small feature (109. fill 108), possibly a posthole.

sample 304 (from 8 litres soil) – small feature (113, fill 112), possibly a posthole.

The soil samples had been processed by Cambria Archaeology staff using standard methods of floatation (minimum mesh size for flot = 250 microns).

Results, Discussion and Recommendations

All of the flots were relatively large, containing frequent modern rootlets with frequent silt-impregnated large charcoal fragments. A little oak and possible willow-type charcoal was observed in the larger of the flots, sample 302, demonstrating that at least some non-alder woods were being burnt. This is of note because of 108 fragments examined by Dana Challinor from sample 301 (context 101), all were of alder (*Alnus glutinosa*) (see report by Dana Challinor). It would be worth sending the identifiable charcoal from these samples to Dana Challinor, therefore, to add to the information from this site.

```
sample 302 – c.50ml large charcoal, c. 40 % 2-4mm size, the rest >4mm sample 303 – c. 20ml large charcoal, c. 50% 2-4mm size, the rest >4mm sample 304 – c.20ml large charcoal, c. 60% 2-4mm size, the rest >4mm
```

The only identifiable charred plant macrofossil from the three flots was a single small grass seed (cf. *Poa*-type), of the type typically found in a wide range of disturbed and grassland habitats. This seed may have become burnt in a variety of ways, such as hay being used for tinder, turf on which the mound was placed etc. No further work is needed on the samples, apart from the charcoal analysis.

Although the soil samples were small and few in number so further comments must be tentative, the samples were characteristic of this kind of site. Burnt mounds typically produce very few (if any) charred plant macrofossils other than charcoal, and they are never associated with cereal-rich assemblages or domestic waste. This makes the discovery of their possible function difficult. The recovery of occasional burnt wetland plant seeds (e.g. Anslows Cottages, Carruthers, 1992) and the siting of these features adjacent to flowing water suggests that steam was being generated for some purpose.

REFERENCES

W.J. Carruthers (1992) Plant remains. *In* C.A.Butterworth & S.J.Lobb *Excavations in the Burghfield area.* Wessex Archaeological Reports 1, p.149-158.

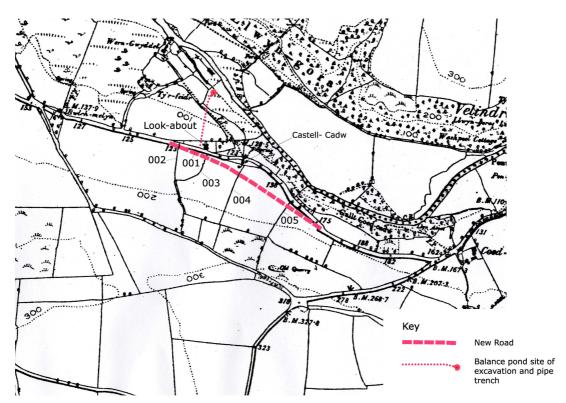
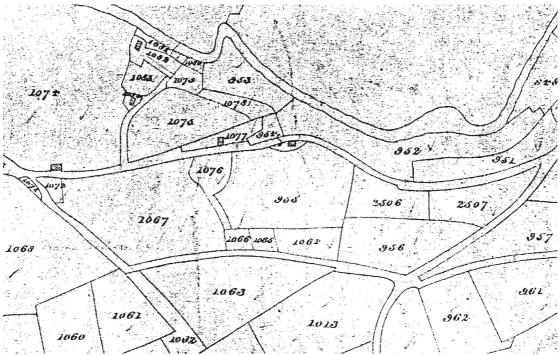


Figure 1: Location. Based the Ordnance Survey First Edition 1891 6 inch to 1 mile



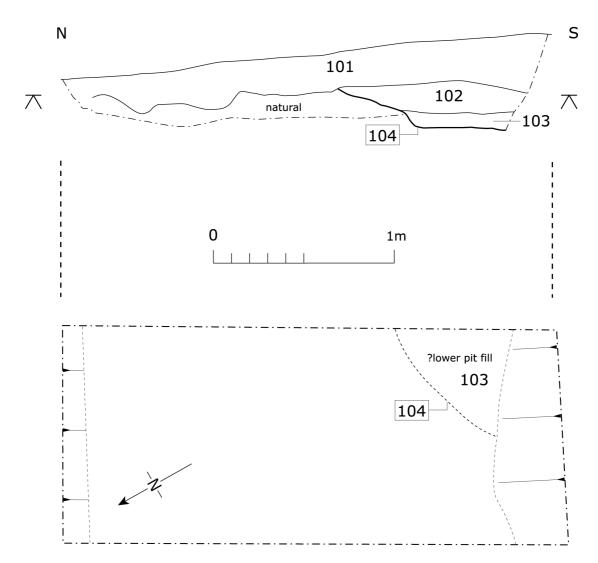


Figure 3: Test Pit

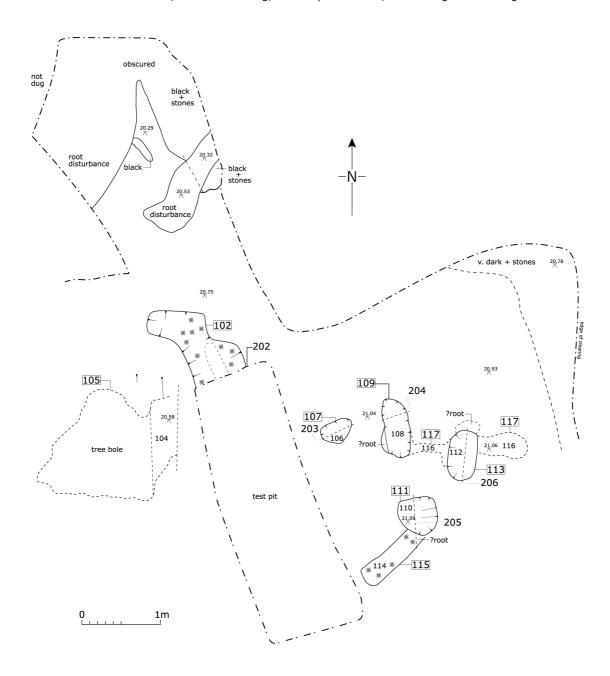
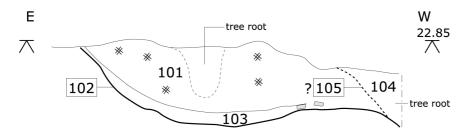
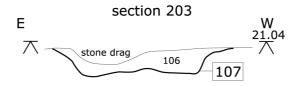
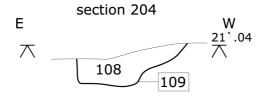


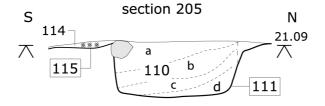
Figure 4: Plan of northern part of balance pond area

section 202









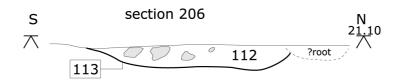




Figure 5: Sections



Photo 1: Old Quarry at SN 0922038835. View SW



Photo. 2: Burnt mound and test pit 3. View NW



Photo. 3: Surface of burnt mound. Scale 0.5m



Photo. 4: Test pit 3, pit 104. View NE. Scale 0.5



Photo. 5: Test pit 3, pit 104 detail. View NE. Scale 0.5



Photo. 6: Boundary 001. View E. Scale 1m



Photo. 7: Boundary 002. View S. Scale 1m



Photo. 8: Boundary 003. View S. Scale 1m



Photo. 9 Deep ditch sectioned by pipe trench from road to balance pond. View E. Scale 1m



Photo. 10: Area for balance pond. View N



Photo. 11 Possible heat reddened area, around scale. View NNE. Scale 1m



Photo. 12: Zigzag feature with dark fill as observed after machining. View E



Photo. 13: Area of Zigzag feature after hand cleaning. View N. Scale 1m



Photo. 14: Pit 102 as sectioned (202). View S. Scale 0.5m